



Australian Government
Australian Transport Safety Bureau

ATSB

Annual Report 2020–21

Australia's national transport safety investigator

INFORMATION ABOUT THIS REPORT

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LETTER OF TRANSMITTAL



Australian Government
Australian Transport Safety Bureau

ATSB

Chief Commissioner

1 October 2021

The Hon Barnaby Joyce MP
Deputy Prime Minister
Minister for Infrastructure, Transport and Regional Development
Parliament House
CANBERRA ACT 2600

Dear Deputy Prime Minister

I am pleased to present the Annual Report of the Australian Transport Safety Bureau (ATSB), reporting on our operations for the year ended 30 June 2021.

This annual report has been prepared in accordance with the requirements for non-corporate Commonwealth entities under section 46 of the *Public Governance, Performance and Accountability Act 2013* (PGPA Act) and summarises the ATSB's performance for the year.

The report includes the ATSB's financial statements as required by section 42 of the PGPA Act and an audit report on those statements in accordance with section 43 of the same Act.

In addition to fulfilling the requirements of the PGPA Act, the report satisfies section 63A of the *Transport Safety Investigation Act 2003* (TSI Act).

I also certify that I am satisfied that the ATSB has prepared risk assessment 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 Commonwealth Fraud Control Framework.

Yours sincerely,

Angus Mitchell
Chief Commissioner and Chief Executive Officer
Australian Transport Safety Bureau

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Introduction

The *Australian Transport Safety Bureau 2020–21 Annual Report* outlines performance against the outcome and program structure in the *Infrastructure, Transport, Regional Development and Communications Portfolio Budget Statements 2020–21*.

Guide to the report

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Before making decisions on the basis of information contained in this report, you are advised to contact the ATSB. This report was up-to-date at the time of publication, but details may change over time due to legislative, policy and other developments.

SECTION 1 – CHIEF COMMISSIONER'S REVIEW 2020–21

Chief Commissioner's review 2020–21

I am pleased to deliver this annual report for the Australian Transport Safety Bureau (ATSB), my first as Chief Commissioner and Chief Executive Officer.

While continuing to navigate the challenges of the COVID-19 pandemic, 2020–21 saw the ATSB commence, progress and complete a series of complex transport safety investigations; continue to deploy to transport accident sites; develop and implement a new core enterprise investigation information management system; and implement key elements of our strategic property plan.

For this sustained performance in a complex operational environment, I would like to acknowledge the leadership and service of my predecessor, Mr Greg Hood, who retired on 30 June on the completion of his five-year term as Chief Commissioner and Chief Executive Officer.

Mr Hood drove an innovation and transformation agenda at the ATSB, which saw the introduction of world-leading practices like a multi-modal teams approach to investigations, new recruitment practices, a tertiary partnership for transport safety investigator training with RMIT University, and new technologies to support investigations such as remotely piloted aircraft and 3D modelling.

The ATSB has a well-deserved reputation of excellence – and for that I acknowledge Mr Hood's transformational stewardship. It is without doubt that the ATSB has grown in both stature and importance under his watch.

I would also like to acknowledge and thank our Chief Operating Officer, Mr Colin McNamara, who acted as Chief Commissioner and Chief Executive Officer from Mr Hood's retirement until my appointment took effect on 2 September 2021. Mr McNamara shouldered a substantial load in acting as Chief Commissioner during an incredibly dynamic and demanding operating environment.

May I also acknowledge the contributions of Ms Carolyn Walsh, who finished her more than 10-year term as an ATSB Commissioner in September 2020. The ATSB benefited greatly from her expertise in transport safety, occupational health and safety, risk management, and regulatory frameworks and governance.

In turn during 2020–21, we welcomed Ms Catherine Scott, who has extensive experience in rail safety and road transport, finance and risk management, and board directorships, with her appointment to the ATSB Commission in September 2020.

I look forward to working with Ms Scott and her fellow Commissioners, Chris Manning and Gary Prosser, to continue to ensure all ATSB staff are resourced and empowered to bring their expertise to the forefront. This then will allow me to deliver on my other responsibility to build on the ATSB's long-term success by continuing to increase the relevance and value that our work brings to all those whom we are entrusted to deliver safety outcomes.

Achievements

The ATSB continues to work towards achieving our new performance measures established in our 2020–21 Corporate Plan. Through revised performance criteria, we are focused on improving our timeliness, demonstrating safety action taken in response to our investigations, ensuring our findings are defensible, and using our resources efficiently and effectively to achieve the greatest safety outcomes across our multiple modes of transport.

With fewer safety occurrence notifications reported to the ATSB during the year, we were not required to commence as many new investigations when compared to previous years. This allowed the ATSB to focus on, and close, several complex older investigations from early 2020. ATSB investigator resources were also allocated to support the design and build of the new purpose-built investigation management software system. The ATSB's new Investigation Management System (AIMS) comes online in 2021–22 and is set to deliver significant productivity improvements through the removal of time-intensive manual processes. Additionally, the system's cloud-based functionality will allow investigators to access data and upload evidence in-the-field on any device.

During 2020–21, the ATSB completed 62 occurrence investigations. Among the higher profile investigations published during the year were:

- The collision with water of a de Havilland Canada DHC-2 Beaver aircraft at Jerusalem Bay, Hawkesbury River, New South Wales, on 31 December 2017.
- Signal ME45 passed at danger involving suburban passenger train TP43 and near collision with another suburban passenger train, Bowen Hills, Queensland, on 10 January 2018.
- The loss of control and collision with water of a Eurocopter EC120B helicopter at Hardy Reef, Whitsundays, Queensland, on 21 March 2018.
- The fire on board the self-unloading bulk carrier *Iron Chieftain* at Port Kembla, New South Wales, on 18 June 2018.
- The collision with terrain involving an AS350 helicopter during powerline stringing operations 60 km east of Woomera, South Australia, on 20 March 2019.

ATSB investigations place considerable focus on identifying safety issues that can be addressed by the parties that are ultimately responsible and best positioned for managing risk. This includes both operators and regulators. In 2020–21, 59% of our completed *systemic*, *defined* and *safety study* investigations identified new safety issues.

In all, 60 safety issues were identified in the reporting period, of which the ATSB determined 33 had been adequately addressed by 30 June 2021.

The ATSB is steadfast in its commitment that all published investigations are factually accurate, defensible and evidence-based. Accuracy of investigation findings remain integral to ensuring industry and government confidence in ATSB safety information in order to take action to improve transport safety. Consequently, I am pleased to confirm no changes to published investigations findings were required in 2020–21.

In the delivery of rail safety investigation services in New South Wales and Victoria, the ATSB has a collaboration agreement with independent investigation agencies in those states who conduct investigations under the Commonwealth's *Transport Safety Investigation Act 2003* (TSI Act). In 2020–21, the ATSB published and promoted eight rail safety investigations conducted by the New South Wales Office of Transport Safety Investigations (OTSI) and four rail safety investigations conducted by Victoria's Chief Investigator, Transport Safety (CITS).

In 2020–21, the ATSB also:

- Initiated 49 aviation occurrence investigations, three marine occurrence investigations and five rail occurrence investigations.
- Published the statistical report, *Aviation Occurrence Statistics 2010 to 2019 (rates update)*.
- Published 39 occurrence briefs (38 aviation occurrences and one marine occurrence). Occurrence briefs are short reports that allow us to share safety learnings from a transport safety occurrence notification where the occurrence has not met the threshold of being subject to a transport safety investigation.
- Processed 10,634 aviation transport safety occurrence notifications, 716 marine notifications and 882 rail notifications. From those, the ATSB safety reporting team identified 4,073 aviation and 294 marine accidents, serious incidents and incidents for the year. (In rail, the Office of the National Rail Safety Regulator (ONRSR) is responsible for processing all notifications from industry into occurrences in the Australian national rail occurrence database shared with the ATSB.)
- Received and processed 198 notifications under the REPCON confidential reporting scheme, of which 75 were assessed and classified as meeting the REPCON criteria. During the year, 47 REPCON reports were completed, of which 18 (38%) resulted in safety action being taken by stakeholders.
- Despite the limitations of the pandemic, participated in 27 key industry engagement events, including the International Confidential Aviation Safety Systems, the Rail Industry Safety and Standards Board's Rail Safety Conference, and the Australian Association for Unmanned Systems' RPAS in Australian Skies Conference. Former Chief Commissioner, Greg Hood also hosted the International Transportation Safety Association's Annual Conference.
- Managed 361 media inquiries, used our in-house media studio to produce and distribute 32 packages of pre-recorded audio, video and video overlay content for distribution to national radio and TV outlets, and logged the publication and airing of 1,997 stories about the ATSB and its investigation activities by mainstream and transport industry media outlets. Of those, 1,261 stories (approximately 63%) carried safety messaging relating to our investigations.
- Promoted a number of safety education campaigns, including highlighting the dangers of CO gas exposure in piston-engined aircraft, reminding pilots of the need to be aware of stop bars at major airports across Australia, and supported the TrackSAFE Foundation's Rail Safety Week in August 2020 to promote safety for road users and rail passengers when interacting with the rail network.

- Published a video to promote the safety messaging from the investigation into Beaver aircraft the collision with water accident on the Hawkesbury River, which included a high-fidelity animation of the aircraft's flight path. This video has been viewed more than 6,700 times across all of our social media channels.
- Continued to support our regional partners build transport safety investigation capacity, in particular via the ongoing involvement in the Australian Government Indonesia Transport Safety Assistance Package (ITSAP), and assisting Papua New Guinea consistent with the Memorandum of Understanding on Cooperation in the Transport Sector.
- Supported external agencies by assisting Recreational Aviation Australia and the Civil Aviation Authority of the Philippines – Aircraft Accident Investigation and Inquiry Board to recover and analyse data from damaged recording devices.
- Progressed the rationalisation of our accommodation footprint with the leasing of new premises for the Canberra central office and the Melbourne regional office. This ensures we have highly capable technical facilities to support our operational requirements and a more dispersed workforce that will enhance our ability to deploy to transport accident sites throughout Australia.
- Established a project to transfer our website onto the GovCMS content management system website platform.
- Supported the delivery of the third Graduate Certificate in Transport Safety Investigation course in partnership with RMIT University. The course was delivered online to a cohort of 22 consisting of six ATSB investigators, two investigators from the Office of Transport Safety Investigation NSW, and 14 students from a broad range of industry organisations.


Outlook

In a challenging year for the transport industry, the ATSB continued to focus on improving transport safety through our independent transport safety investigations.

The COVID-19 pandemic has been a time of great uncertainty for the transport industry in general, none more so than aviation. Cognisant of these challenges, I am committed to ensuring that the ATSB continues to effectively apply our safety knowledge and expertise in identifying safety risks in industry, and in monitoring the return to safe and reliable air transport operations as the pandemic eases.

And as an operational agency, the ATSB will continue to deploy accident investigation teams where and when necessary during the pandemic, whenever it is safe to do so.

The challenges experienced by workplaces and workforces across the country over the past year are both generic as well as very individual and personal. One of my key responsibilities and my initial focus as Chief Commissioner and Chief Executive Officer will be to ensure we continue to have a well-supported workforce that delivers world-class transport safety investigations that contribute to a safe and efficient Australian transport industry.



Angus Mitchell
Chief Commissioner

SECTION 2 – AGENCY OVERVIEW

Agency overview

The ATSB is Australia's national transport safety investigation agency. Its primary function is to improve aviation, rail and marine safety. It does this by receiving information about accidents and other safety occurrences, analysing data, and investigating occurrences and safety issues in order to identify and communicate factors that affect, or might affect, transport safety.

The ATSB is part of the Australian Government's Infrastructure, Transport, Regional Development and Communications portfolio. Within the portfolio are other important transport agencies, with roles focused on delivering an efficient, sustainable, competitive, safe and secure transport system for all transport users, through regulation, financial assistance and safety investigations. These include:

- Civil Aviation Safety Authority (CASA)
- Airservices Australia
- Australian Maritime Safety Authority (AMSA)
- National Transport Commission.

Purpose

The ATSB is an independent statutory agency of the Australian Government. It is governed by a Commission and is entirely separate from transport regulators, policy makers and service providers. At the same time, it is required to cooperate with others who have a role in maintaining and improving transport safety. The ATSB's purpose is defined by its mission statement:

- *Improve transport safety for the greatest public benefit through our independent investigations and influencing safety action.*

The mission statement reflects the ATSB's outcome and functions to improve the safety of aviation, rail, and interstate and overseas shipping through:

- the independent investigation of transport accidents and other safety occurrences
- safety data recording, analysis and research
- fostering safety awareness, knowledge and action

The ATSB performs its functions in accordance with the provisions of the *Transport Safety Investigation Act 2003* (TSI Act) and, where applicable, relevant international agreements. The TSI Act makes it clear that the ATSB cannot apportion blame, assist in determining liability or, as a general rule, assist in court proceedings. Its sole focus remains the prevention of future accidents and the improvement of safety.

The TSI Act also sets out the independence of the ATSB, in the interests of avoiding conflicts of interest and external interference in its role in transport safety investigation, research and analysis, and fostering public awareness of transport safety.

The ATSB maintains a national information dataset of all safety-related occurrences in aviation and accidents, and significant safety occurrences in the rail and marine sectors. The information it holds is essential to its capacity to analyse broad safety trends and to inform its investigation and safety education work.

The ATSB participates in overseas investigations involving Australian-registered aircraft and ships, and cooperates more broadly with its overseas counterparts.

The ATSB has a specific mandate to report publicly on its analysis and investigations, and to conduct public education programs to improve transport safety.

The ATSB's role

While independent, the ATSB is accountable to Parliament through the Minister for Infrastructure, Transport and Regional Development. Consistent with the Minister's Statement of Expectations, the ATSB gives primacy to

transport safety investigations that have the potential to deliver the greatest public benefit. The ATSB does this through:

- receiving and assessing reports on transport safety matters, including notifications of safety occurrences and confidential reporting
- independently conducting 'no-blame' investigations of accidents and other safety occurrences
- conducting research into transport statistics and technical issues
- identifying factors that contribute to accidents and other safety occurrences that affect, or have the potential to affect, transport safety
- encouraging safety action in response to safety factors by acknowledging action taken by operators, and by issuing safety recommendations and advisory notices
- raising awareness of safety issues by reporting publicly on investigations and conducting educational programs
- assisting Australia to meet its international regulatory and safety obligations and conducting an active program of regional engagement with other transport safety agencies.

The ATSB's objectives

In fulfilling its role 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 perform its safety role
- conducts impartial, systemic and timely investigations
- identifies safety issues clearly and objectively without attributing blame or liability
- ensures the significance of safety issues are clearly understood by all concerned
- promotes effective safety action.

Cooperation with the transport industry

The ATSB works cooperatively with the aviation, rail and marine industries, as well as with transport regulators and governments at state, national and international levels, to improve safety standards for all Australians.

The ATSB relies on its ability to build trust and cooperation with the transport industry and the community. The TSI Act requires the ATSB to cooperate with government agencies, private organisations and individuals with transport safety functions and responsibilities, or that may be affected by the ATSB's transport safety activities. The ATSB also cooperates with equivalent national bodies in other countries and international organisations with responsibilities for worldwide transport safety standards.

The ATSB actively targets communications to ensure that transport industry stakeholders understand the importance of no-blame investigations. In order to cultivate a strong reporting culture within the transport industry, the ATSB promotes an appropriate level of confidentiality and protection for sensitive safety information provided during the course of an investigation.

Mandatory occurrence reporting

The TSI Act requires any responsible person who has knowledge of any accident or serious incident (or any *immediately reportable matter*) to report it as soon as it is reasonably practicable. Immediately reportable matters also require a written notification within 72 hours, as do safety incidents (or routine reportable matters).

While the terms of this requirement may seem broad, the *Transport Safety Investigation Regulations 2003* (TSI Regulations) provide a list of persons who, by the nature of their qualifications, experience or professional association, would be likely to have knowledge of an immediate or routine reportable matter for their mode of transport.

In addition, responsible persons are not required to report a transport safety matter if they believe, on reasonable grounds, that another responsible person has already reported, or is in the process of reporting, that matter.

The ATSB maintains a 24-hour service to receive notifications, including a toll-free telephone number (for immediately reportable matters in all modes). In aviation, a secure online form for written notifications is available on the ATSB website. In rail, all immediately notifiable matters are reported to ONRSR, which then report to the ATSB. The written notifications are provided to the ATSB via reporting to ONRSR. In marine, both immediately reportable and routine reportable matters are reported to the ATSB via AMSA.

Generally, the ATSB's safety reporting team receives more than 16,000 notifications of safety occurrences per year. These are spread over aviation, marine and rail. Inevitably, there are duplicate notifications and many of the notifications submitted are about matters not required to be reported under the TSI Act. Nevertheless, each one is reviewed and recorded.

In 2020–21, the ATSB's safety reporting team received 10,634 aviation notifications, 716 marine notifications and 882 rail notifications in the form of telephone calls, emails and website contact. From those, the team has identified 4,073 aviation and 294 marine accidents, serious incidents and incidents for the year. In rail, ONRSR was responsible for processing all notifications from industry into occurrences in the Australian national rail occurrence database shared with the ATSB.

While not all reported occurrences are investigated, the details of each occurrence are retained within the ATSB's occurrence database. These records are a valuable resource, providing a detailed portrait of transport safety in Australia. The searchable public version of the aviation occurrence database is available on the ATSB website at www.atsb.gov.au and contains data from July 2003 onwards. The online database is used by industry, academics, the media and regulators to search and research past events.

Aviation

The ATSB investigates accidents and incidents involving civil aircraft in Australia and Australian-registered aircraft overseas. It does so in a manner consistent with the Convention on International Civil Aviation (Chicago Convention 1944) Aircraft Accident and Incident Investigation (Annex 13). The ATSB also assists with the investigations of overseas agencies involving Australian-registered aircraft and may assist with foreign aircraft if an overseas investigation authority seeks assistance and the ATSB has suitable resources available. The ATSB may also have observer status in important overseas investigations. This provides valuable opportunities to learn from overseas organisations and to benchmark knowledge and procedures against counterpart organisations.

The ATSB cooperates with organisations that are best placed to improve safety, such as CASA, Airservices Australia and the DFSB, as well as aircraft manufacturers and operators. The ATSB also works collaboratively with the Department of Infrastructure, Transport, Regional Development and Communications and other safety agencies to assist the Australian Government in implementing transport safety initiatives.

Marine

The ATSB investigates incidents and accidents 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, AMSA and other transport safety investigation agencies, as well as ship owners and operators.

Marine investigations are conducted in a manner consistent with the International Maritime Organization's Casualty Investigation Code.

The ATSB publishes and distributes a range of marine transport safety reports and safety educational material to the international maritime community, the International Maritime Organization, educational institutions, and maritime administrators in Australia and overseas.

From 1 July 2018, AMSA's regulator role extended to include service delivery for all domestic commercial vessels (DCVs) as part of the Council of Australian Governments' 2011 national maritime reforms. The national reforms do not include funding for the ATSB to conduct DCV investigations, so the ATSB's marine jurisdiction continues to be limited to interstate and overseas shipping.

Rail

As of 1 July 2017, the ATSB became the single national rail safety investigator for all states and territories in Australia.

This role includes collecting occurrence information, and investigating rail transport safety matters on the metropolitan, regional and freight networks.

The ATSB works cooperatively with organisations such as ONRSR and rail operators – all of whom share a responsibility to improve safety. The ATSB also has collaboration agreements with New South Wales (NSW Office

of Transport Safety Investigations – OTSI) and Victoria (Victorian Office of Chief Investigators – CITS) state safety investigation organisations.

Specialist investigation capabilities

Material failure analysis

The ATSB maintains in-house capabilities for examining any physical evidence relating to transport safety investigations. The group of engineering specialists comprise experts across multidisciplinary engineering fields to conduct forensic analysis of components and structures from aviation, rail and marine occurrences at the ATSB's engineering facility in Canberra. The experts collaborate with other ATSB investigators, external stakeholders and subject matter experts from similar agencies around the world to provide detailed insight into the often-complex set of technical factors that contribute to transport safety occurrences.

Data and recorder recovery

The ATSB maintains a centre of excellence for aviation, marine and rail 'black box' data recovery and analysis. Flight data recorders, cockpit voice recorders, quick access recorders, ground proximity warning systems, voyage data loggers and train data loggers can all be downloaded and analysed at the ATSB.

The data from other electronics installed in aircraft, such as GPS, mobile phones and digital cameras, can also be recovered using in-house chip recovery expertise.

Human factors

The ATSB has investigators with qualifications and specialist expertise in the capabilities and limitations of human performance in relation to the design, manufacture, operation and maintenance of products and systems. Human factors are a core component of every ATSB safety investigation, and this area includes the examination of elements such as decision-making, focus of attention, the role of workload and fatigue management.

Licensed aircraft maintenance engineers

The ATSB employs a number of investigators with a background as licensed aircraft maintenance engineers to undertake technical work necessary for investigations into aviation accidents and incidents. These investigators combine their extensive industry knowledge of the installation, maintenance and repair of aircraft, aircraft systems, structure and surfaces to determine whether any part of the aircraft system contributed to an occurrence.

Other transport specialists

ATSB investigators come from a variety of backgrounds and have a range of specialist skills, which are combined to ensure investigations are considered from multiple angles. In addition to those mentioned above, specialists on staff at the ATSB include:

- pilots
- aeronautical, mechanical and civil engineers
- ship captains and officers
- ship engineers
- train drivers
- rail signal and system experts
- data scientists.

Site survey

The strength of the ATSB's investigation analysis, and its findings, rests on the ability to collect as much data as possible about and from an accident. In addition to the expertise of its investigators, the ATSB incorporates technology to collect and process information about accident sites. This technology includes laser scanning and remotely piloted aircraft systems (RPAS) combined with high accuracy differential GPS data to produce a range of outputs from videos to three-dimensional models of accident sites and vehicles.

Since 2010, the ATSB has used FARO Focus 3D laser site scanning equipment. This equipment has allowed accident sites and vehicles to be captured from ground level in high detail, enabling analysis of the accident site and for the development of accurate stakeholder engagement materials such as 3D models and re-creations of accident sequences.

Since 2017, the ATSB's RPAS program has complemented laser scanning, allowing us to capture larger areas and angles that would not otherwise have been possible without a helicopter. Under a remotely piloted aircraft operator's certificate (ReOC), issued by CASA, the ATSB operates a fleet of seven DJI Phantom 4 series aircraft. These aircraft, located in ATSB's offices across Australia, assist in conducting initial site safety assessments, capture of photogrammetric site mapping data and other on-site evidence collection. Seventeen personnel have been trained to operate these aircraft and gather data.

To support both these technologies the ATSB makes use of a highly accurate differential GPS data unit, allowing personnel to record the location and dimensions of wreckage, ground scars and key points on the accident site more precisely. This data can also more accurately position images and models captured on an accident site.

The ATSB is able to post-process data using a variety of software applications, including Pix4DMapper, FARO Scene, Trimble GPS Pathfinder office and Google Earth Pro, facilitating access to highly accurate and usable information.

As new technologies, software and equipment become available, the ATSB seeks to embrace their use to provide our investigators with the best available tools.

Range of investigation and other products

The ATSB produces a final report for all its investigations. Reports communicate important safety issues, safety actions and information, and provide transparency into the ATSB investigation process.

The main products produced are occurrence investigations, occurrence briefs, safety studies and statistical reports. The ATSB also produces an up-to-date online searchable aviation occurrence database and weekly summaries of marine occurrences and concerns raised via the REPCON (confidential reporting) system.

Occurrence investigations

Occurrence investigations typically examine a single accident or incident in detail. The sequence of events and factual background information are documented, and findings are presented along with a safety analysis to explain those findings. These investigations may identify safety issues – ongoing systemic risks to safety – and the safety actions taken by organisations to address these safety issues. The ATSB may also issue formal safety recommendations.

Safety studies

Safety studies typically investigate multiple occurrences of a similar nature, or a potential or emerging safety issue. Conducted as an investigation under the TSI Act, they aim to uncover safety issues through the analysis of occurrence and other data.

Statistical publications

The ATSB produces official Australian aviation occurrence statistics each year, and aviation wildlife strike statistics every two years. The ATSB also conducts trend monitoring of all aviation occurrences – the results of which are used to help decide which occurrences the ATSB investigates and which safety studies are conducted. Statistical reports are not conducted under the TSI Act.

Occurrence briefs

Introduced in 2018, occurrence briefs are concise reports that detail the facts surrounding a transport safety occurrence, as received in the initial notification and any follow-up enquiries. They provide an opportunity to share safety messages in the absence of an investigation. Occurrence briefs are not conducted under the TSI Act.

Investigation levels

The ATSB's response to reported safety matters is classified by the level of resources and/or time they require, as well as their complexity. The following safety investigation levels were used by the ATSB for occurrence investigations and safety studies in 2020–21. Each level presented below (in order) builds on the previous level.

Short investigations

Short investigations are limited-scope and generally office-based investigations conducted under the TSI Act. Investigation activities generally include sourcing photos and documentation of any transport vehicle damage and/or the accident site, interviews with involved parties, the collection of documents, such as procedures, and

internal investigations by manufacturers and operators. Occurrences investigated are normally simple and common accidents and incidents. A short summary report of up to eight pages will be produced, which includes a description of the sequence of events, limited contextual factual information, a short analysis and findings. Findings include safety factors (events and conditions that increase risk) which are limited to those relating to the occurrence. Any proactive safety actions taken by industry will also be reported. Short investigations usually require only one ATSB staff member.

Defined investigations

Defined investigations may involve in-the-field activity or may be conducted as an office-based investigation. They require numerous ATSB resources and result in an agreed-scope product with a limited set of findings and a defined-size report. Evidence collected for defined investigations can also include recorded information, multiple interviews, analysis of similar occurrences, and a review of procedures and other risk controls related to the occurrence or set of occurrences. Occurrences investigated are generally less complex accidents and incidents. Investigation reports are typically 10–20 pages, with an expanded analysis to support the broader set of findings that may also include safety factors not relating directly to or contributing to the occurrence(s). Defined investigations may also identify safety issues (safety factors with an ongoing risk) relating to ineffective or missing risk controls. Identified safety issues are documented in the investigation report, along with proactive safety action taken by industry and ATSB safety recommendations.

Systemic investigations

Systemic investigations generally involve in-the-field activity, and a range of ATSB and possibly external resources. They are less confined in scope and will involve a significant effort collecting evidence across many areas. The breadth of the investigation will often cover multiple organisations. Occurrences and sets of occurrences investigated normally involve very complex systems and processes. In addition to investigating failed and missing risk controls, systemic investigations also investigate the organisational processes, systems, cultures and other factors that relate to those risk controls, including from the operator, regulator, and certifying and standards authorities. Systemic investigations result in substantial reports, often with several safety issues identified.

Major investigations

Major investigations are reserved for very significant accidents and are likely to involve significant ATSB and external resources and additional one-off government funding. They result in a comprehensive report.

Confidential reporting (REPCON)

The ATSB operates the voluntary and confidential reporting scheme (REPCON) for the aviation, rail and marine industries. Any person within these industries, or member of the travelling public, may submit a REPCON report of a reportable safety concern. The scheme is designed to capture safety concerns – including unsafe practices, procedures and risk controls within an organisation or affected part of the industry.

Each reported safety concern is de-identified by the ATSB by removing all personal details concerning the reporter and any individual named in the report. This de-identified text is passed back to the reporter, who must authorise the content before the REPCON can be proceeded further. The de-identified text is then forwarded to the relevant organisation that is best placed to address the safety concern. The organisation's response will then be forwarded to the relevant regulator for further action, as deemed necessary.

The aim of the REPCON scheme is to ensure safety action is taken to address the reported safety concerns. This can include variations to standards, orders, practices and procedures, or an education campaign. The ATSB may use the de-identified version of the reported safety concern to issue an information brief or alert bulletin to whichever person or organisation is best placed to take safety action in response to the safety concern. The ATSB publishes the outcome of each REPCON on its website.

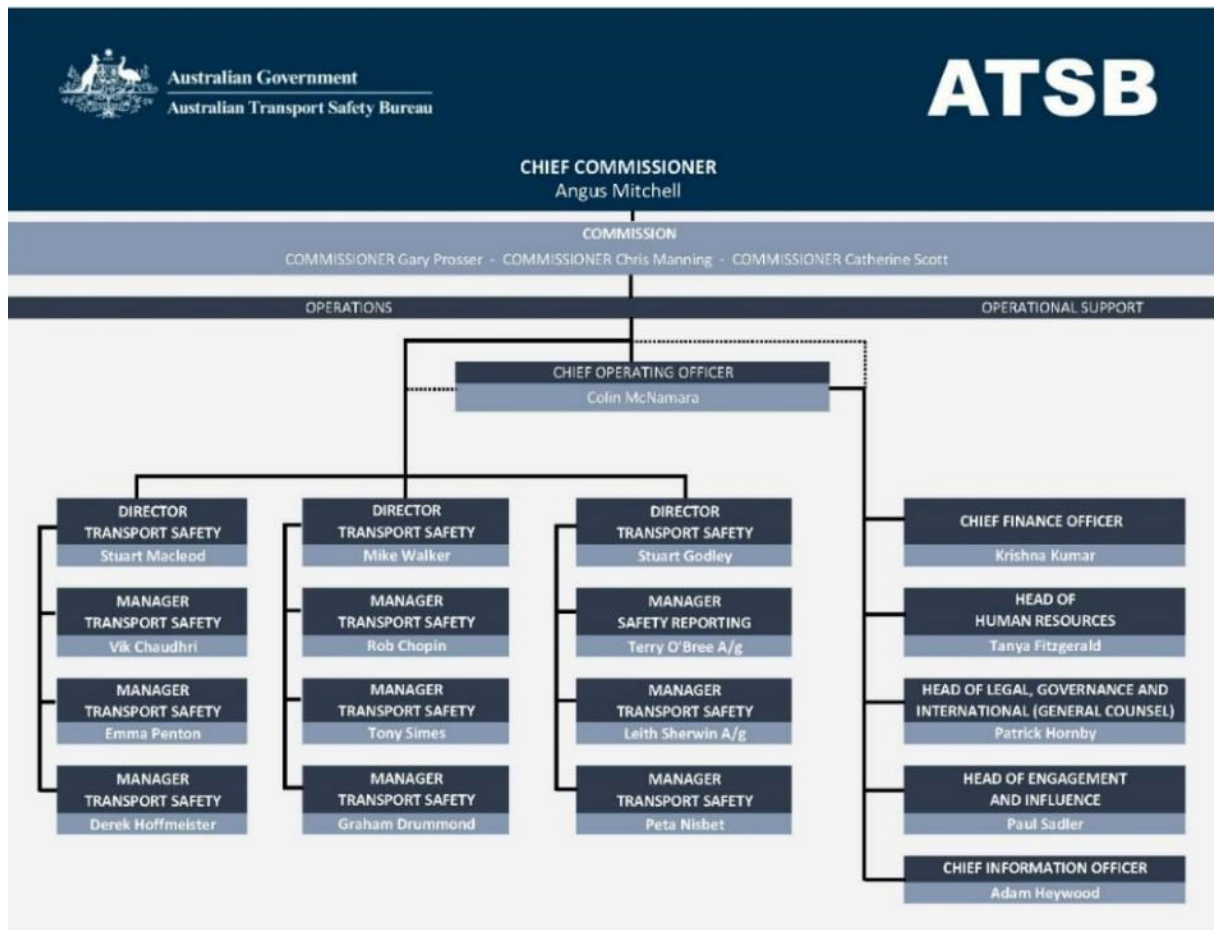
International cooperation

The ATSB is committed to close engagement with its international counterpart agencies and relevant multilateral organisations. In line with Australian Government policy, the ATSB places a specific emphasis on engagement with countries in the Asia Pacific region, particularly with Indonesia and Papua New Guinea.

The ATSB is actively involved in the work of the International Civil Aviation Organization (ICAO), specifically the ICAO Asia Pacific (APAC) Accident Investigation Group (AIG) and the International Maritime Organization (IMO). The ATSB is an active member of ITSA, with previous Chief Commissioner, Greg Hood completing a two-year term as the Chair.

The ATSB continues to make its expertise and resources widely available in support of transport safety. Every year, the ATSB cooperates with international state aviation investigation agencies, in accordance with clause 5.18 of Annex 13 to the Convention on International Civil Aviation, by appointing accredited representatives to their investigations that involve an Australian-registered aircraft, an Australian operator, or an Australian manufacturer.

Organisational structure



Commission and Executive Management team

CHIEF COMMISSIONER AND CHIEF EXECUTIVE OFFICER

Mr Angus Mitchell

Angus Mitchell has extensive experience in organisational leadership and management, maritime operations and safety investigation.

He joined the ATSB from Maritime Safety Queensland, where as General Manager, he oversaw the safe and efficient movement of vessels into and out of Queensland's 21 ports, and was responsible for compliance activities and safety investigations for Australia's largest recreational maritime fleet.

During his tenure with Maritime Safety Queensland Mr Mitchell was recognised with the 2020 Australian Industry and Shipping Award for his role in managing international shipping throughout the COVID-19 pandemic, and supporting the welfare and safety of international seafarers.

Prior to leading Maritime Safety Queensland, Mr Mitchell was the Executive Director of NSW Maritime, where he oversaw Australia's largest state's primary maritime regulatory, investigative and compliance agency. He has also served as Deputy Harbour Master – Operations for Sydney Ports, where he was responsible for managing day-to-day port operations for both Sydney Harbour and Port Botany.

Mr Mitchell served as an officer in the Royal Australian Navy for 17 years, undertaking a number of operational and Joint Operations Command roles. Mr Mitchell commenced his five-year term as ATSB Chief Commissioner and Chief Executive Officer on 2 September 2021.



COMMISSIONER

Mr Chris Manning

Chris Manning has over 40 years' experience in the aviation industry. Beginning his aviation career in the early 1970s, Mr Manning was a Qantas cadet pilot from 1970 until 1972. He then became an air traffic controller from 1973 until 1975 before returning to Qantas as a pilot.

During his Qantas career, Mr Manning gained his command on the Boeing 767 in 1989, and was a check and training captain throughout the 1990s. From 2003 until his retirement from the airline in 2008 he held the position of Chief Pilot and Group General Manager Flight Operations. He also held the position of president of the Australian and International Pilots' Association from 1999 until 2002.

Since retiring from flying, Mr Manning has been a Chair of The Australian Aviation Associations' Forum, is a Director of AMDA (organisers of the Avalon Airshow), a founding Director of the Australian Aviation Hall of Fame, Chair of Airport Coordination Australia, and a Director of the Historical Aircraft Restoration Society Foundation.

Mr Manning was appointed as an ATSB Commissioner in March 2015.



COMMISSIONER

Mr Gary Prosser

Gary Prosser has over 40 years' experience in the maritime industry, coming from a seagoing career and serving on a wide variety of Australian ships in both the international and domestic trades. He was part of the inaugural intake to the Australian Maritime College (AMC) in 1980 and went on to lecture at the college.

For a number of years, Mr Prosser managed offshore supply vessel operations in Bass Strait prior to moving to Tasmania where he headed the Polar Division of P&O Australia managing Antarctic and Marine Science Vessels for the Australian Antarctic Division and the CSIRO.

Initially joining AMSA in 1997, Mr Prosser had a variety of senior management roles with the authority and was appointed Deputy Chief Executive Officer in 2007.

In 2009, Mr Prosser was elected as Secretary General of IALA, headquartered in Paris, prior to returning to AMSA in 2015 and retiring in 2019.

In addition to his maritime qualifications, Mr Prosser has a Bachelor of Education degree and is a member of the Australian Institute of Company Directors.

Mr Prosser was appointed as an ATSB Commissioner in October 2019.



COMMISSIONER

Ms Catherine Scott

Catherine Scott has extensive experience in rail safety, aviation and road transport, finance and risk management, and board directorships.

From 2012 to 2020, Ms Scott served as a non-executive director of ONRSR, and was previously Deputy Chair and Chair of the Committee of VLine Passenger Pty Ltd.

In her earlier professional career, she held senior positions in the investment banking and finance industries, including five years as a senior executive at Australian Airlines (which subsequently merged with Qantas Airways) as Treasurer Capital Markets.

Ms Scott also currently serves as a non-executive board member and member of the Finance, Risk and Audit Committee of the National Heavy Vehicle Regulator.

Ms Scott has held a board membership with VicWater, and has been Chairperson, Deputy Chair and Audit Committee Chair of the Goulburn Valley Region Water Corporation. She has served as a non-executive director, Deputy Chair and Chair of the Audit and Risk Committee at VicForests.

A Fellow of the Australian Institute of Company Directors, Ms Scott holds Bachelor of Science (Honours) and Bachelor of Commerce degrees from the University of Melbourne.

Ms Scott was appointed as an ATSB Commissioner in September 2020.



COMMISSIONER

Ms Carolyn Walsh

Carolyn Walsh has over 35 years' experience in policy development, regulation and safety management at both the Commonwealth and state levels. She has 20 years' experience in the transport sector, initially as Executive Director of Strategy in the New South Wales Office of the Coordinator General of Rail, and then as Chief Executive of the New South Wales Independent Transport Safety and Reliability Regulator.

Ms Walsh is currently Chair of the National Transport Commission and a member of the board of the NSW Environment Protection Authority. She is also a member of the Audit and Risk Committees for the New South Wales Law Enforcement Conduct Commission, New South Wales Public Service Commission, State Transit Authority of New South Wales, Ministry of Health, Western Sydney Local Health District, and the City of Sydney.

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.

Ms Walsh has a Bachelor of Economics degree and is a graduate of the Australian Institute of Company Directors. Ms Walsh finished her more than 10-year term as a Commissioner with the ATSB in September 2020.



PREVIOUS CHIEF COMMISSIONER AND CHIEF EXECUTIVE OFFICER

Mr Greg Hood

Greg Hood was the Chief Commissioner and Chief Executive Officer of the ATSB during 2020–21 and concluded his five-year tenure on 30 June 2021.

In his time as Chief Commissioner, Mr Hood oversaw several significant transport safety investigations and report releases across the three modes of aviation, rail and marine.

With almost 40 years' experience across a wide range of operational, training and management roles within the Department of Defence and the civil aviation industry, Mr Hood was well positioned to drive an innovation agenda at the ATSB. This included the ATSB's 'Evolution Program' which saw enhancements made to world-leading practices, including streamlining operations, a multidisciplinary teams-based approach to transport safety investigations, and the introduction of remotely piloted aircraft to capture evidence following accidents and other safety occurrences. Mr Hood also signed a partnership agreement between the ATSB and RMIT University to deliver transport safety investigator training at the tertiary level to benefit the Australian transport industry.



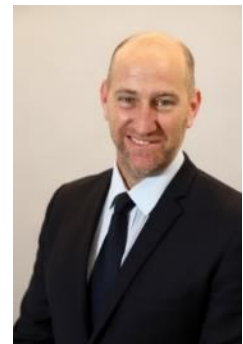
Mr Hood began his career as an air traffic controller in the Royal Australian Air Force (RAAF). In the civil aviation industry, Mr Hood has had the unique experience of acting as Director of Aviation Safety at CASA and acting Chief Executive of Airservices Australia, before his appointment as Chief Commissioner and Chief Executive Officer at the ATSB. Mr Hood is also the previous Chair of ITSA, which is the international network of the heads of independent transport safety investigation agencies from 17 nations.

CHIEF OPERATING OFFICER

Mr Colin McNamara

Colin McNamara joined the Australian Public Service in 2004. Prior to this, he served as a General Service Officer in the Australian Army and was awarded the Australian Active Service Medal in 1999.

Prior to his appointment as the ATSB's Chief Operating Officer, Mr McNamara managed a range of corporate functional areas including human resources, governance, finance, communications, ICT business services and major projects. Through his appointment, Mr McNamara continues to play a critical role in contributing to the strategic direction of the ATSB, and in achieving relevant objectives of the Australian Government. Mr McNamara holds a range of professional qualifications in personnel management and is a professional member of the Australian Human Resources Institute.



Mr McNamara has recently gained a graduate qualification in Transport Safety Investigation through RMIT.

Outcome and program structure

Program 1.1 objective

The ATSB will work actively with the aviation, marine and rail industries, transport regulators and governments at a local, state, national and international level to improve transport safety standards for the greatest public benefit. Investigations and related activities seek to raise awareness of identified safety issues and to encourage stakeholders to implement actions to improve future safety.

There are three core objectives which arise from the ATSB's functions under the TSI Act:

1. 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.

2. Safety data recording, analysis and research

Timely receipt and assessment of transport accident and other safety occurrence notifications allows 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, safety study and occurrence investigation reports) enables stakeholders and researchers to gain a better understanding of safety trends and safety issues.

3. Fostering safety awareness, knowledge and action

Awareness and understanding of transport safety issues is increased through a range of activities, including consultation, education, and the dissemination of occurrence investigation and safety study 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.

How the ATSB reports

Section 63A of the TSI Act requires that:

The annual report prepared by the Chief Executive Officer and provided to the Minister under section 46 of the *Public Governance, Performance and Accountability Act 2013* (PGPA Act) for a period must include the following:

- prescribed particulars of transport safety matters investigated by the ATSB during the period
- a description of investigations conducted by the ATSB during the period that the Chief Commissioner considers raises significant issues in transport safety.

The ATSB observes and complies with *Resource Management Guide No 135—Annual report for non-corporate Commonwealth entities* issued by the Department of Finance.

This annual report details the ATSB's performance against the program objectives, deliverables and key performance indicators published in the *Infrastructure, Regional Development and Communications Portfolio Budget Statements 2020–21*. The ATSB annual report also includes audited financial statements in accordance with the PGPA Act.

Priorities for investigation

The ATSB focuses on transport safety as the highest priority. In 2020–21, the ATSB gave priority to transport safety investigations that have the potential to deliver the best safety outcomes for the travelling public. A new Statement of Expectations from the Minister for Infrastructure, Transport and Regional Development, provided to the ATSB in June 2021, sets the direction for the ATSB to give priority to transport safety investigations that have the highest risk or potential to deliver the greatest public benefit through systemic improvements to transport safety. The evolution in the ATSB's mission from focusing on the travelling public to driving safety that is for the greatest public benefit is necessary to reflect the contribution the ATSB makes to preventing loss of life, as well as avoiding significant local, state and national economic costs that can be associated with an accident. The ATSB is not resourced to investigate every single accident or incident that is reported but allocates priorities within the

transport modes to ensure that investigation effort achieves the best outcomes for safety improvement. The ATSB recognises that there is often more to be learned from serious incidents and patterns of incidents, and gives focus to these investigations, as well as specific accident investigations.

Three ways to action

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

1. A report of an occurrence that suggests a safety issue may exist will be investigated immediately (occurrence investigation). Investigations may lead to the identification/confirmation of the safety issue and evaluation of its significance. It will then set out the case for safety action to be taken in response.
2. A report of an occurrence that does not warrant full investigation may benefit from an office-based short investigation for safety education and promotion, and enable a richer dataset for future safety analysis, to identify safety issues or trends (such as inclusion in a safety study).
3. Basic details of an occurrence, based primarily on the details provided in the initial occurrence notification, will be recorded in the ATSB's occurrence database to be used in future safety analysis to identify safety issues and trends (including safety studies), and in aviation, will be available in the online searchable occurrence database. These may be published individually as occurrence briefs.

Aviation broad hierarchy

The ATSB allocates its investigation resources to be consistent with the following broad hierarchy of aviation operation types:

1. passenger transport – large aircraft
2. passenger transport – small aircraft:
 - a) regular public transport and charter of small aircraft
 - b) humanitarian aerial work (for example, the Royal Flying Doctor Service, search and rescue flights)
3. commercial with passengers (fare-paying and recreation – for example, joy flights)
4. aerial work with participating passengers (for example, news reporters, geological surveys)
5. flying training
6. other aerial work:
 - a) non-passenger carrying work (for example, agriculture, cargo)
 - b) private transport or personal business
7. higher-risk personal recreation/sports aviation/experimental aircraft operations.

The ATSB endeavours to investigate all fatal accidents involving VH-registered powered aircraft subject to the potential transport safety learnings and resource availability.

Marine broad hierarchy

The ATSB allocates its investigative resources to be consistent 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 to be consistent with the following hierarchy of rail operation types:

1. mainline operations that impact on passenger services
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 (expressed in no particular order) may vary in the degree to which they influence the ATSB's decisions to investigate and respond. Factors include:

- the anticipated safety value of an investigation, including the likelihood of furthering the understanding of the scope and impact of any safety system failures
- the likelihood of safety action arising from the investigation, particularly of national or global significance
- the existence and extent of fatalities/serious injuries and/or structural damage to transport vehicles or other infrastructure
- the unique value an ATSB investigation will provide over any other investigation by industry, regulators or police
- the obligations or recommendations under international conventions and codes
- the nature and extent of public interest – in particular, the potential impact on public confidence in the safety of the transport system
- the existence of supporting evidence, or requirements, to conduct a special investigation based on trends
- the relevance to identified and targeted safety programs
- 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
- the timeliness of notification
- the training benefit for ATSB investigators.


SECTION 3 – REPORT ON PERFORMANCE

Report on performance

This section reviews the ATSB's results against the performance criteria set out in the *Portfolio Budget Statements 2020–21* and the *ATSB Corporate Plan 2020–21*. The ATSB's effectiveness in achieving planned outcomes during 2020–21 is also reviewed here.

Annual performance statement

I, as the accountable authority of the Australian Transport Safety Bureau, present the annual performance statement of the Australian Transport Safety Bureau for the year ended 30 June 2021, as required under paragraph 39(1)(a) of the *Public Governance, Performance and Accountability Act 2013* (PGPA Act). In my opinion, this annual performance statement is based on properly maintained records, accurately reflects the performance of the entity, and complies with subsection 39(2) of the PGPA Act.

A handwritten signature in blue ink, appearing to read 'A Mitchell', is positioned above the printed name and title of the signatory.

Angus Mitchell

Chief Executive Officer

1 October 2021

Results against performance criteria

Table 1: Results against performance criteria

Purpose			
<p>As set out in the <i>Portfolio Budget Statements 2020–21</i>, the ATSB's purpose is defined by its mission statement: <i>Improve transport safety for the greatest public benefit through our independent investigations and influencing safety action.</i></p> <p>In reference to the public benefit:</p> <ul style="list-style-type: none"> ➤ The ATSB focuses on the public interest where the safety of passengers and workers on an aircraft, train or ship is concerned. ➤ The ATSB focuses on the public interest when it comes to the significant costs that can result from an accident, particularly where there is significant damage to public infrastructure or an impact on the national economy. 			
Performance Criterion	Target for 2020–21	Result	Page
Number of safety issues that are addressed through safety action.	65% of safety issues addressed in the last financial year	56% of safety issues identified in 2020–21 adequately addressed through safety action	29
	85% of safety issues addressed in the previous financial year	72% of safety issues identified in 2019–20 adequately addressed through safety action	29
Number of systemic, defined, and safety study investigations completed by ATSB that identify safety issues.	65% of investigations identify a safety issue	59% of systemic, defined, and safety study investigations completed in 2020–21 identified safety issues	30
Percentage of all investigations that identify at least one safety issue not already identified by others.	Establish a baseline	Not established	31
On an average annual basis, the ATSB will be conducting around twice the number of investigations as it has available investigators.	Projecting 90 active investigations	An average of 89 active investigations	32
Median time to complete investigations.	Short: 9 months	11.4 months	33
	Defined: 18 months	20.7 months	33
	Systemic: 24 months	36.9 months	33
Number of changes to the ATSB's published investigation findings over the previous financial year.	Zero	Zero	34

Performance at a glance

New performance criteria for the ATSB were introduced in 2020–21. The new criteria aim to:

- better articulate the agency's evolving services and contributions to transport safety
- reflect the best practice recommendations from the Australian National Audit Office's (ANAO) PGPA Act, Implementation and Corporate Planning audits – *ANAO report 33 2017–18* and *ANAO report 36 2017–18*.

The revised criteria balance effectiveness, efficiency and outputs by demonstrating the safety action taken in response to ATSB investigations, ensuring that ATSB resources are being used efficiently and that our investigations deliver the greatest public benefit. Performance results against the new performance criteria will improve as the agency works to further refine and embed these into business processes.

In a challenging year for the transport industry, the ATSB continued to focus on improving transport safety through ongoing investigations into large-scale accidents that occurred in early 2020. These investigations included:

- Collision with terrain of the C-130 firefighting aircraft near Cooma, New South Wales, in January 2020.
- Train derailment near Wallan, Victoria, in February 2020.
- Mid-air collision of two aircraft near Mangalore, Victoria, in February 2020.
- Controlled flight into terrain of a Cessna 402 aircraft at Lockhart River, New South Wales, in March 2020.

This number of investigations challenged the ATSB's capacity to complete investigations in timeframes shorter than those outlined in its key performance indicators. There was also a significant effort made to complete older investigations during the financial year. Publication of a number of these in the financial year affected timeliness targets. These investigations included:

- Collision with water involving a de Havilland Canada DHC-2 Beaver aircraft, VH-NOO, at Jerusalem Bay, Hawkesbury River, New South Wales, on 31 December 2017.
- Signal ME45 passed at danger involving suburban passenger train TP43 and near collision with another suburban passenger train, at Bowen Hills, Queensland, on 10 January 2018.
- Loss of control and collision with water involving Eurocopter EC120B, VH-WII, Hardy Reef, Whitsundays, Queensland, on 21 March 2018.
- Loss of cyclic control and in-flight break-up involving Robinson R22 helicopter, VH-HGU, 7 km north-north-west of Cloncurry Airport, Queensland, on 2 August 2017.
- Collision with terrain involving AS350, VH-SZS, 60 km east of Woomera, South Australia, on 20 March 2019.
- Fire on board *Iron Chieftain*, Port Kembla, New South Wales, on 18 June 2018.

The replacement of the ATSB's obsolete investigation management system was a key focus in 2020–21. This significant and essential project required the redirection of several investigator resources to ensure the design and build of the new purpose-built system, which uses cloud technologies and software, meets the ATSB's investigation information management needs for many years. In the short-term, fewer investigators were available to progress investigations, however, in the longer term, investigators will be able to access data and upload evidence to the new system anywhere on any device, while the removal of labour-intensive processes promises to improve our productivity.

Key results

Table 2 summarises the ATSB's performance against key indicators published in the *Portfolio Budget Statements 2020–21*.

Table 2: ATSB performance against key performance indicators

Outcome		
Improve transport safety for the greatest public benefit through independent investigations and influencing safety action.		
Performance Criterion		
Number of safety issues that are addressed through safety action.		
Target	Result	Achieved
65% of safety issues addressed in the last financial year	56% of safety issues identified in 2020–21 adequately addressed through safety action	x
85% of safety issues addressed in the previous financial year	72% of safety issues identified in 2019–20 adequately addressed through safety action	x
Detail		
Year	Number identified ¹	Number addressed
2020–21	59	33
2019–20	46	33
2018–19	54	43
Analysis		
<p>To be effective against the ATSB's purpose, safety action needs to be taken once safety issues are identified by ATSB investigations. This performance criterion measures the effectiveness of the ATSB to influence entities to address identified safety issues and therefore improve transport safety.</p> <p>Safety issues:</p> <ul style="list-style-type: none"> • can reasonably be regarded as having the potential to adversely affect the safety of future operations • are 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. <p>Some safety issues will take time to be actioned by stakeholders. We expect that some safety issues not actioned in the year they are identified will be addressed the ensuing year. There also needs to be some tolerance for a minority of safety issues identified not being actioned. The ATSB does not have powers to force operators, manufacturers and regulators to take action – the ATSB relies on its ability to influence.</p> <p>The ATSB is currently putting in place systems which will allow for easier identification of safety actions that have not been addressed.</p> <p>As this is the first year of measuring this performance criterion, it has been retrospectively applied to previous financial years for comparative purposes.</p> <p>Further details of the safety issues identified and actioned in 2020–21 are included in Section 5 – Formal safety issues and actions.</p>		
Data source: The ATSB's investigation management system.		
Methodology: Analysis of safety issues identified through investigations and safety studies that have been addressed through safety action.		
Reference: 2020–21 Portfolio Budget Statements, page 244; 2020–21 Corporate Plan, page 12.		

¹ Includes safety issues identified by rail investigations conducted on behalf of the ATSB by OTSI NSW and CITS Victoria. The figures do not include safety issues which have been closed (no longer relevant).

Outcome			
Identify safety issues additional to those identified by industry and government safety agencies for the greatest public benefit through ATSB occurrence investigations and safety studies.			
Performance Criterion			
Number of systemic, defined, and safety study investigations completed by ATSB that identify safety issues.			
Target		Result	Achieved
65% of investigations identify a safety issue		59%	X
Detail			
Investigation type	Year	Number completed ²	Number with safety issues
Defined investigations			
All modes	2020–21	32	16
	2019–20	34	10
	2018–19	19	6
	2017–18	18	2
Systemic investigations			
All modes	2020–21	7	7
	2019–20	13	6
	2018–19	14	12
	2017–18	14	4
Analysis			
<p>To be effective against the ATSB’s purpose, the ATSB needs to demonstrate value through the identification of safety issues. This performance criterion measures the effectiveness of the ATSB in identifying safety issues so that others can act and therefore improve transport safety.</p> <p>Defined investigations may include safety issues, and systemic investigations will likely identify several safety issues. Safety studies may be either defined or systemic investigations, and may be referred to as safety issues or research investigations conducted under the TSI Act by ATSB.</p> <p>Improvements to investigation management processes in 2020–21 resulted in a 25% increase in the number of investigations which identify a safety issue compared with the level achieved in 2019–20. There has been a 40% increase in the number of investigations which identify a safety issue compared with the level achieved in 2017–18.</p> <p>As this is the first year of measuring this performance criterion, it has been retrospectively applied to previous financial years for comparative purposes.</p> <p>Examples of investigations with identified safety issues (AO-2017-118, AO-2018-026, RO-2018-002, RO-2019-002, 346-MO-2018-011) are summarised in Section 4 – Significant safety investigations.</p> <p>Further details of the safety issues identified and actioned in 2020–21 are included in Section 5 – Formal safety issues and actions.</p>			
Data source: The ATSB’s investigation management system.			
Methodology: Analysis of investigations containing a safety issue.			
Reference: 2020–21 Portfolio Budget Statements, page 244; 2020–21 Corporate Plan, page 13.			

² Includes occurrence, safety issues and research investigations conducted under the TSI Act by ATSB. The figures do not include rail investigations conducted on behalf of the ATSB by OTSI NSW and CITS Victoria or assistance to investigations conducted by an external party. Note, in 2016–17 and earlier, ATSB annual reports include assistance to investigations conducted by an external party. The figures will, therefore, appear higher in previous annual reports. Note, previous ATSB annual reports reported 'complex investigations' to refer to the combination of 'defined' and 'systemic' investigations.

Outcome		
Identify safety issues additional to those identified by industry and government safety agencies for the greatest public benefit through ATSB occurrence investigations and safety studies.		
Performance Criterion		
Percentage of all investigations that identify at least one safety issue not already identified by others.		
Target	Result	Achieved
Establish a baseline	Baseline not established and will be completed in 2021–22	–
Analysis		
<p>To be effective against the ATSB's purpose, the ATSB needs to demonstrate value and relevance through the identification of safety issues not already identified by others. As an independent agency, the ATSB can investigate where others cannot. This performance criterion measures the effectiveness of the ATSB in identifying systemic safety issues across transport systems so that others can act and therefore improve transport safety.</p> <p>With investigator capacity reduced in 2020–21 due to the redirection of resources to build the new investigation management system and staff on long-term leave, the establishment of a baseline for this performance criterion was postponed to 2021–22 which will be aided by the new investigation management system.</p>		
Data source: The ATSB's investigation management system.		
Methodology: Analysis of investigations containing a safety issue and confirmation of which safety issues were identified first by the ATSB.		
Reference: 2020–21 Portfolio Budget Statements, page 244; 2020–21 Corporate Plan, page 13.		

Outcome

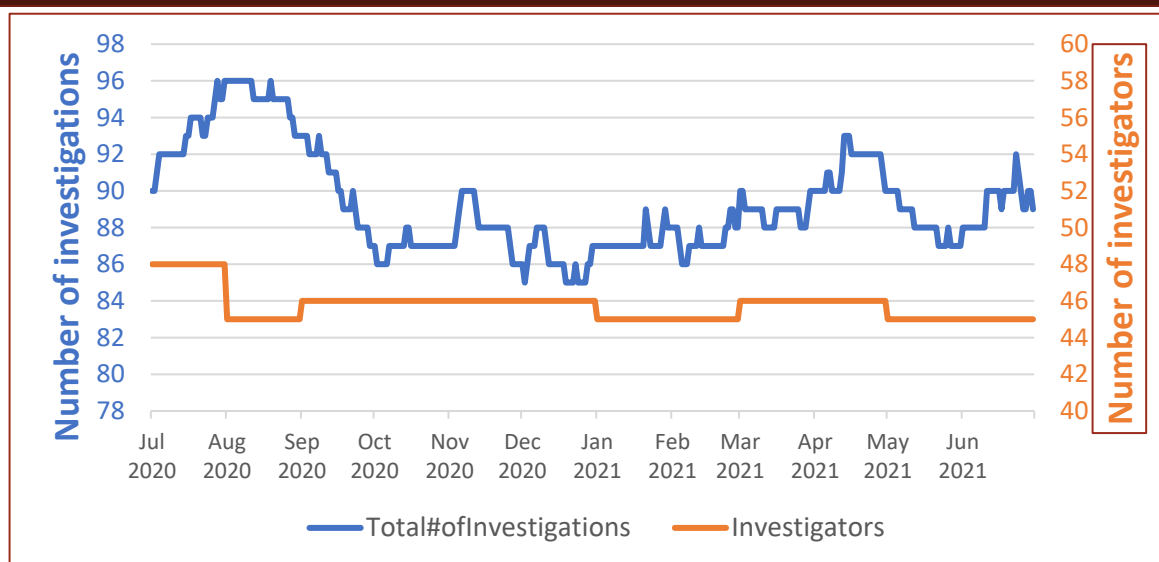
Efficiently use resources to conduct investigations through selective investigation processes and project management discipline.

Performance Criterion

On an average annual basis, the ATSB will be conducting around twice the number of investigations as it has available investigators.

Target	Result	Achieved
Projecting 90 active investigations	An average of 89 active investigations	✓

Detail



Analysis

To be efficient against the ATSB's purpose, the ATSB needs to ensure that limited resources are prioritised to investigations with the broadest safety effect on transport systems. This performance criterion measures the efficiency of the ATSB in balancing investigation demand (the number of investigations commenced each year) and capacity (resources available to complete investigations).

The target is consistent with resourcing and investigation output expectations for similar investigation agencies internationally.

The ATSB's workload over the previous three reporting periods, with investigation numbers well in excess of 100 active investigations, demonstrates demand has been greater than capacity, resulting in a large volume of older investigations. The impact of COVID-19 on the transport industry has enabled a focus on completing older investigations to achieve an **average of 2 active investigations per investigator conducted in 2020-21**.

During 2020-21, the ATSB intended to set a baseline target for the cost of investigations to be calculated considering recorded labour inputs. With investigator capacity reduced in 2020-21 due to the redirection of resources to build the new investigation management system and staff on long-term leave, the establishment of a baseline for this performance criterion was postponed to 2021-22.

Data source: The ATSB's investigation management system and workforce planning records.

Methodology: Quarterly reviews of investigations compared to the number of available investigators. Investigators may be unavailable due to extended leave, training or diversion to enabling projects.

Reference: 2020-21 Portfolio Budget Statements, page 244; 2020-21 Corporate Plan, page 13.

Outcome			
ATSB safety-related information is shared in a timely manner for the benefit of those needing awareness of relevant hazards, risks and trends or taking safety action, through publishing information in accordance with committed timeframes.			
Performance Criterion			
Median time to complete investigations			
Target		Result	Achieved
Short investigations	9 months	11.4 months	X
Defined investigations	18 months	20.7 months	X
Systemic investigations	24 months	36.9 months	X
Detail			
Investigation type	Year	Number completed ³	Median time to complete investigations (in months)
Short investigations			
All modes	2020–21	23	11.4
	2019–20	22	12.9
	2018–19	34	10.3
	2017–18	43	5.3
Defined investigations			
All modes	2020–21	32	20.7
	2019–20	34	22.1
	2018–19	19	18.1
	2017–18	18	15.9
Systemic investigations			
All modes	2020–21	7	36.9
	2019–20	13	33.1
	2018–19	14	27.0
	2017–18	14	31.9
Analysis			
<p>This performance criterion focuses on the timeliness of the ATSB's investigation products. Timely sharing of safety information is important for our stakeholders with responsibility for managing risk.</p> <p>The result indicates the concerted efforts made during 2020–21 to clear the backlog of older investigations, and this is reflected in the median times taken to complete investigations being above the targets.</p> <p>As this is the first year of measuring this performance criterion, it has been retrospectively applied to previous financial years for comparative purposes, noting that there have been adjustments to the definitions of short, defined and systemic investigations over financial years.</p>			
Data source: The ATSB's investigation management system.			
Methodology: Calculation of median time (from decision to investigate to publication).			
Reference: 2020–21 Portfolio Budget Statements, page 244; 2020–21 Corporate Plan, page 14.			

³ Includes occurrence, safety issues and research investigations conducted under the TSI Act by ATSB. The figures do not include rail investigations conducted on behalf of the ATSB by OTSI NSW and CITS Victoria or assistance to investigations conducted by an external party. Note, in 2016–17 and earlier, ATSB annual reports include assistance to investigations conducted by an external party. The figures will, therefore, appear higher in previous annual reports.

Outcome			
Investigations of transport occurrences, safety studies are defensible, to ensure industry and government confidence in the ATSB’s work, through the use of evidence-based and systemic investigation processes.			
Performance Criterion			
Number of changes to the ATSB’s published investigation findings over the previous financial year			
Target		Result	Achieved
Zero		Zero	✓
Detail			
Investigation type	Year	Number completed ⁴	Number of changes to published findings
Short investigations			
All modes	2020–21	23	0
	2019–20	22	0
	2018–19	34	0
	2017–18	43	0
Defined investigations			
All modes	2020–21	32	0
	2019–20	34	0
	2018–19	19	0
	2017–18	18	0
Systemic investigations			
All modes	2020–21	7	0
	2019–20	13	0
	2018–19	14	0
	2017–18	14	0
Analysis			
The ATSB is committed to ensuring that all published investigations are factually accurate, defensible and evidence-based, with the accuracy of the public record for all investigation findings continuing to be maintained. Accuracy of investigation findings remain integral to ensuring industry and government confidence in ATSB safety information in order to take action to improve transport safety.			
Data source: The ATSB’s investigation management system.			
Methodology: Review of investigations published during the previous financial year.			
Reference: 2020–21 Portfolio Budget Statements, page 244; 2020–21 Corporate Plan, page 14.			

⁴ Includes occurrence, safety issues and research investigations conducted under the TSI Act by ATSB. The figures do not include rail investigations conducted on behalf of the ATSB by OTSI NSW and CITS Victoria or assistance to investigations conducted by an external party. Note, in 2016–17 and earlier, ATSB annual reports include assistance to investigations conducted by an external party. The figures will, therefore, appear higher in previous annual reports. Note, previous ATSB annual reports reported 'complex investigations' to refer to the combination of 'defined' and 'systemic' investigations

Independent 'no-blame' investigations of transport accidents and other safety occurrences

This section describes the ATSB's performance relating to the ATSB's role as the independent 'no-blame' transport safety investigator, as published on page 7 of the *ATSB Corporate Plan 2020–21*.

Aviation investigations

In 2020–21, the ATSB initiated or upgraded 11 systemic investigations, six defined safety investigations and 31 short investigations. In addition, six external investigations commenced.

During this reporting period, the ATSB completed five systemic and 26 defined occurrence investigations, and nine external investigations. The ATSB also completed 23 short aviation occurrence investigations.

As at 30 June 2021, there were eight ongoing systemic, 29 ongoing defined and 28 ongoing short investigations, and six external investigations.

Marine investigations

In 2020–21, the ATSB initiated two defined investigations, one short occurrence investigation and two external investigations.

During this reporting period, the ATSB completed one systemic, one defined and one external investigation.

As at 30 June 2021, the ATSB continues to investigate five marine occurrences (four as defined investigations, one as a short investigation) and one external investigation.

Rail investigations

In 2020–21, the ATSB initiated or upgraded four systemic rail occurrence investigations and six short rail occurrence investigations.

During this reporting period, the ATSB completed one systemic and five defined rail occurrence investigations.

As at 30 June 2021, the ATSB continues to investigate 16 rail safety occurrences (four systemic, seven defined and five short investigations).

Preparedness for a major accident

Being prepared to respond quickly and effectively to a major aviation, rail or marine accident is a key function of the ATSB. To maintain preparedness, the ATSB actively participates in practical exercises to test the effectiveness of response arrangements. The ATSB also has a *Major Investigation Preparedness Plan* (MIPP). The MIPP includes a comprehensive suite of procedures and information. The MIPP and preparedness activities ensure that the ATSB is ready to respond effectively to a major transport accident.

Safety data recording, analysis and research

This section describes the ATSB's performance relating to the ATSB's role in safety data recording, analysis and research, as published on page 7 of the *ATSB Corporate Plan 2020–21*.

Data analysis capability

The ATSB continued a data analysis capability expansion program in 2020–21 by:

- completing a data repository to house copies of all databases used by the ATSB
- participating in feasibility planning with the Bureau of Infrastructure and Transport Research Economics for a shared multi-agency aviation data warehouse
- expanding the number of staff trained in the new ATSB Investigation Management System (AIMS).

In 2020–21, the ATSB continued to analyse occurrence data held in its aviation safety occurrence database as part of Australia's international obligation to determine if preventative safety measures are required.

The ATSB continued to support active aviation occurrence investigations. During 2020–21, the ATSB completed significant data analysis for most aviation occurrence investigations. This work helped to determine the investigation scope, inform investigation conclusions and safety issue risk assessments, and document past occurrences of similar incidents.

Data and recorder recovery

The ATSB's data and recorder recovery staff maintain support and readiness for the recovery and download of recorded data from a variety of damaged and undamaged sources across the aviation, rail and marine transport modes.

Over this reporting period, the ATSB continued to support external agencies by providing assistance to Recreational Aviation Australia and the Civil Aviation Authority of the Philippines – Aircraft Accident Investigation and Inquiry Board to recover and analyse data from damaged recording devices. The ATSB also made plans to assist the Ministry of Transport, Thailand – Office of the Aircraft Accident and Incident Investigation Commission to download a flight data and cockpit voice recorder in the near future when shipment of the recorders is arranged.

Material failure analysis

The ATSB possesses expertise and specialised facilities to enable the detailed examination of physical evidence, allowing for significant insights into the causes of factors of transport safety occurrences. During 2020–21, transport safety investigators with engineering specialist backgrounds have provided technical input and analysis across a variety of investigations. A selection of tasks included:

- Examination of components from the ongoing investigation into the Robinson R44 in-flight break-up in Broome, Western Australia (AO-2020-033).
- Analysis of engine components from the ongoing investigation into the engine failure and forced landing of the Morane-Saulnier MS-893A at Lyons, Queensland (AO-2020-060).
- A review of the rail wheel disintegration that contributed to the derailment of freight train 2PM9 between Lake Julia and Koolyanobbing, Western Australia (RO-2020-018).
- Assistance to the Papua New Guinea Accident Investigation Commission in the examination of a fractured landing gear (AE-2020-039).
- Assistance to CASA in the examination of several aircraft structural components with material failures or suspected defects (AE-2021-029).

Reporting

The ATSB's target for assessing, classifying and publishing summaries of accidents and incidents is:

- one day for occurrences being investigated (all modes)
- 10 days for summaries of other incidents (aviation).

Of 73 occurrences investigated, 42 (58%) were processed with summaries published on the ATSB website within one working day of the start of the investigation.

In 2020–21, 91% of aviation occurrence notifications were processed and ready for publication within 10 working days.

In 2020–21, the ATSB completed 39 occurrence briefs (38 aviation occurrences and one marine occurrence). Eighteen per cent of occurrence briefs were completed within one month.

Confidential reporting

In 2020–21, the ATSB's Confidential Reporting Scheme (REPCON) received 198 notifications (of which 75 were classified as REPCONs). Of these 198 notifications, 98 concerned aviation (34 REPCONs), 98 concerned rail (39 REPCONs) and two concerned marine (two REPCONs).

Of the 47 REPCON reports completed in 2020–21, 18 (38%) resulted in safety action by stakeholders.

Confidential reports are assessed for clarity, completeness and significance for transport safety. Twenty-eight per cent of de-identified summaries of confidential reports were provided to any relevant third party within 10 working days.

The following summaries provide examples of safety concerns that were raised, along with the safety action taken after the concerns were reported through REPCON. Some information has been redacted to preserve confidentiality.

Aviation REPCON Example

The reporter raised a safety concern relating to an operator's policy on restraining service dogs on passenger flights. The reporter advised that they had been instructed by the operator's cabin crew to untie their service dog from the seat or be in breach of complying with a cabin crew direction. As a result, on one occasion, the reporter's service dog was unrestrained during expected severe turbulence. On that occasion, the turbulence was not as severe as predicted and was uneventful, however, a turbulence event in 2013 resulted in a guide dog being injured and striking another passenger.

The reporter subsequently sought clarification from the operator on their policy for restraining service dogs and was provided with the following response:

The *Civil Aviation Act 1988* prohibits a person from tampering with an aircraft if tampering with it may endanger the safety of the aircraft or any person or property. Due to the seat configurations on our aircraft and the different aircraft in our fleet, assistance dogs cannot be consistently and safely tethered to all seats in our aircraft.

Our review has also indicated tethering may damage some seats. We also note that tethering to business class seats is not possible because of the way in which these seats are designed. As part of our review, we have considered alternative means of tethering guide, hearing and assistance dogs (for example, through the seatbelt or under the seat of the guest), however, we determined that these alternatives would also breach CASA requirements preventing tampering with the aircraft. Further, in the event of an evacuation, tethering of the assistance dogs may pose a threat to the safety of others by becoming an obstacle in the row or aisle. For future flights, we ask that you ensure you hold the dog's lead or place the lead under your person.

The reporter contacted the ATSB to seek clarification on:

- How the operator determined that tethering the dog to a seat could potentially damage the seat, when all other operators have determined that tethering the dog to the seat does not interfere with aircraft equipment.
- The relevance of aircraft type, when all aircraft seats, regardless of type of aircraft, must be rated to the same standard.
- How the service dog is deemed a potential obstacle in an evacuation when the service dog is tethered to a window seat (which is all other carriers' policy) with their owner beside it. An unrestrained dog in the cabin would likely pose a greater risk of being an obstruction during an evacuation and a violation of CAR 256A.
- How holding a service dog's lead or sitting on the lead would comply with the regulations in the event of large acceleration forces that may be encountered.

The reporter was concerned about the risk of injury to a service dog and/or passengers on an aircraft unless the operator amends their policy to align with other airline operators.

As a result of the REPCON, the operator advised they would commence a review of the different seat types in their aircraft fleet to assess whether any of them could be safely used for tethering purposes and without causing damage to the seat. The operator stated that this process would require expert analysis from a range of stakeholders, including an internal engineering team and the seat manufacturers. The operator advised that a decision about its tethering policy would be made on completion of the review, taking into account the review findings and all operational and safety considerations.

The ATSB sought clarification as to whether CASA was satisfied that the operator's policy for unrestrained dogs was a safety concern. CASA's response to the REPCON was:

- CASA has advised AOC holders and updated its website to advise that a suitable way of restraining an assistance dog carried in the aircraft cabin with its handler or trainer would not be achieved by holding the leash or sitting on the leash during times when passengers are required to wear seatbelts. At other times, holding the leash would be satisfactory. Advice will be provided about tethering the dog at other times in the same way as passengers are normally advised to secure their seatbelts at all times when seated.
- Tethering a dog to a seat rail (or seatbelt) would not breach any airworthiness requirements and would not be 'tampering' with an aircraft provided the seat or seatbelt is not physically affected.

CASA updated the information on its website to clarify the requirement to restrain assistance dogs when carried in the aircraft cabin to ensure compliance with CAO 20.16.2. It included advice about tethering and a caution about not interfering with a seat or seatbelt. This information will be included in the new advisory circular on this subject that will come into effect in December 2021.

Marine REPCON Example

A previous REPCON was reopened following the reporter's concerns that previously agreed safety actions had not been actioned.

The concern related to the safety of cruise ship operations at [Location withheld] operating without tugs in operation or on standby. The reporter was concerned that the risk assessment process to preclude the use of tugboats was insufficient and did not consider any human factor error, which is documented to be a cause or contributing factor in 70% of marine incidents.

The operator initially advised that the procedures for cruise ships entering and departing would be reviewed and risk assessed, and the regulator agreed to review those procedures. However, the reporter advised that this process had not yet occurred despite ample time to do so.

Given the lack of resolution to this safety concern, in 2020 the ATSB contacted the Port Authority outlining residual risk concerns with respect to inclusion of human factors, cyber threats and recent cruise vessel berthing incidents. The Port Authority invited the ATSB to review the draft hazard identification study and navigation risk assessment.

Following a review of the risk assessment, the ATSB advised the Port Authority and the state regulator that:

- The hazard identification exercise and most of the report's recommendations appear to be directed at identifying the hazards and mitigating the risks associated with tug-exempt cruise ship scenarios.
- It is the ATSB's view that in excluding the option of a mandatory tug escort for cruise ships in the hazard identification and risk assessment exercises, a valuable opportunity was lost to consider and analyse all potential risk control measures.
- The ATSB notes the report's assessment that the likelihood of the worst credible scenario – a cruise ship grounding on infrastructure or colliding with a landmark – is extremely low. The assessment is also clear that the consequence of either of these events has the potential to result in a catastrophic loss of life and/or infrastructure.
- The ATSB acknowledges that implementation of some or all of the recommendations in the Port Authority's most recent independent commissioned report would likely reduce the risk of an incident involving a tug-exempt cruise ship.
- The ATSB considered the following points:
 - The number of recommendations aimed at reducing the consequences of an incident involving a tug-exempt cruise ship, including potential modifications to cruise ship departure manoeuvres.
 - The magnitude of any consequences associated with a landmark incident, noting that the landmarks could potentially affect 6,000 people in peak hour traffic, and the force of a cruise ship grounding would most likely lead to an infrastructure collapse.

- Lack of any evidence to suggest that there is a negative safety impact of tug-escorted cruise ships.
- Based on this consideration, it is the ATSB's view that the most demonstrable, effective measure to mitigate the identified risks, is the use of at least one tug for cruise ships navigating the particular location. As such, the ATSB encourages the Port Authority and the regulator to review the current criteria for granting tug exemptions to cruise ships.

The ATSB received advice in early 2021 from the newly appointed Harbour Master, and subsequently confirmed by the reporter, that there are no more tug exemptions being issued to large passenger vessels berthing at the particular location.

Rail REPCON Example

The reporter raised a safety concern about the removal of safety check rails on bridges throughout the operator's network. The reporter advised that safety check rails were specifically fitted to ensure rolling stock remained on a bridge if derailed. While the check rails have limitations, for lower speed and more minor derailments, the check rails are intended to keep the wheels on the sleepers and prevent the rolling stock from departing the track. The reporter stated that the removal of the rails at a particular bridge location, was a major safety concern.

The reporter stated that this section of track frequently carries high speed passenger services and should a rail vehicle derail on or before crossing the bridge, there would be nothing stopping the rail traffic from plunging into the river below, which obviously has potentially catastrophic consequences.

The operator advised that check rails create maintenance difficulties with loosening fastenings affecting structural integrity and creating a hazard to rail traffic, while restricting ballast tamping at bridge ends and across ballast top bridges.

An expert risk assessment was conducted which determined that safety risks were lowered for bridges without check rails, compared to bridges with check rails. The operator has subsequently worked on the progressive removal of bridge check rails and clarified that new or replacement bridges do not need check rails fitted. A copy of the Risk Assessment and the resultant letter notifying the then Rail Safety Regulator were provided to the ATSB and ONRSR as part of this REPCON.

Particular clauses in the document outline the structural standard that check rails are not fitted to bridges on the operator's rail network. The operator is working within the requirements of our Safety Management System (SMS) as accredited by ONRSR, and regards our existing standards on bridge check rails as lowering risks So Far As Is Reasonably Practicable (SFAIRP).

ONRSR reviewed the reporter's concerns and the operator's response, including additional information accompanying the REPCON report. ONRSR will make further enquiries with the rail transport operator and seek additional information and assurances that risks are being managed SFAIRP.

Statistical reports

In 2020–21, the ATSB published one statistical report:

- *Aviation Occurrence Statistics 2010 to 2019 (rates update).*

This report is available on the ATSB website at www.atsb.gov.au.

Fostering safety awareness, knowledge and action

This section describes the ATSB's performance relating to the ATSB's role in building capability, education and promotion, as published on page 8 of the *ATSB Corporate Plan 2020–21*.

Industry engagement and events

The ATSB works to build awareness of its functions and enhance its reputation through its communication and stakeholder engagement activities. This is vital to ensure the industry is receptive to safety messaging and that the ATSB meets its aim of fostering public awareness of transport safety. The ATSB continues its strong record of engagement with industry through:

- participation in consultative forums with industry and other safety agencies
- representation at conferences and events
- bilateral engagement with operators, associations and other stakeholders
- active involvement in safety education forums.

The ATSB regularly participates in national and international conferences and industry events where doing so presents an opportunity to share safety messages and engage with relevant stakeholders. In 2020–21, our participation was again impacted by the COVID-19 pandemic, which saw a number of planned industry engagements cancelled or postponed.

CASA FlySafe

Following on from the success of the joint FlySafe 2019 safety forum delivered in 2018–19, the ATSB is a regular participant in CASA's newly launched FlySafe forums, which began nationally during the reporting period.

In joining with CASA, Airservices Australia, Bureau of Meteorology, and Department of Defence, the ATSB presented to a wide range of aviation industry participants under the FlySafe banner, with a key focus on influencing the fitment of active carbon monoxide detectors in piston-engine aircraft. FlySafe was held in Adelaide and Darwin during 2020–21, with further forums scheduled in Brisbane, Melbourne, Perth and Sydney during 2021–22.

International Convention of Aviation Regulation and Safety

The ATSB partnered with the Defence Aviation Safety Authority (DASA) and CASA in organising and hosting the inaugural International Convention of Aviation Regulation and Safety (ICARAS) event, which focused on safety management systems and regulation. More than 270 civilian and defence aviation industry delegates, including a number of overseas participants from 10 countries, attended the two-day 'virtual' convention in November 2020.

The ATSB's Chief Commissioner, a Director Transport Safety, and the Head of Engagement and Influence gave pre-recorded video presentations focusing on safety management systems and how the ATSB communicates with influence to improve transport safety after an investigation.

Joining DASA and CASA to discuss a range of themes around safety management at ICARAS in 2020 was an important step to improve safety for all airspace users.

Other industry engagement

Due to the continued pandemic, the ATSB harnessed video conferencing and other digital technology to continue its engagement with industry at conferences and forums, where practicable.

In 2020–21, the ATSB participated in 27 external industry engagement events, including:

- Australian Airports Association's Emergency Management Forum
- Australian Airports Association's Airport Safety Week activities
- Australian Association for Unmanned Systems' RPAS in Australian Skies Conference
- Australian Helicopter Industry Association's Rotortech Conference and Exposition
- CASA's FlySafe forums
- Centenary of Civil Aviation conference
- Centenary of the Royal Australian Air Force activities
- International Transportation Safety Association Annual Conference
- International Confidential Aviation Safety Systems forum

- Regional Aviation Association of Australia's Regional Roadshow Rail Industry Safety and Standards Board's Rail Safety Conference
- Rail Industry Safety and Standards Board's Sharing Investigations forums
- Rail Industry Safety and Standards Board's Rail Safety Managers Group forums.

The ATSB also hosted a number of industry visitors to its office in Canberra throughout the year, providing an opportunity for representatives from the aviation, marine and rail sectors to meet key staff and tour the technical facilities and media studio.

SafetyWatch

In 2020–21, the ATSB continued to promote its SafetyWatch initiative. SafetyWatch highlights the broad safety concerns that come from the ATSB's investigation findings and occurrence data reported by industry.

The ATSB encourages the transport industry to give heightened attention to the following priority areas (where more can be done to improve safety):

- too low on approach
- fatigue
- in-flight decision-making
- safe work on track
- data input errors
- non-controlled airspace
- safety risk of RPAS
- marine pilotage.

Throughout the year, the ATSB undertook a range of communication activities (website news stories, social media and general media) to raise awareness of these issues within the transport industry.

To remain contemporary, the ATSB will regularly review its SafetyWatch priority areas and the effectiveness of the initiative during 2021–22.

Social media

The ATSB continued to make effective use of its social media platforms to engage with the transport industry, the media and the travelling public during 2020–21. The ATSB continued to focus on measuring the overall number of engagements with its published content.

For the reporting period, the ATSB posted 125 times to Facebook, 159 times to Twitter, 85 times to Instagram and 109 times to LinkedIn.

The ATSB Facebook page had the highest number of engagements (the total number of likes, comments, reposts, clicks, reactions, forwards), with our followers recording 20,773 post engagements during the period. The Facebook post with the highest engagement was a news story supporting the publication of the pilot incapacitation involving Cessna 208B, VH-DQP, near Brisbane Airport, Queensland, on 2 July 2020 ([AO-2020-032](#)).

The ATSB Instagram page recorded 6,775 engagements, followed by our LinkedIn page with 4,852 engagements, and our Twitter account with 2,507 engagements.

In 2020–21, overall engagement with the ATSB's suite of social media channels increased by 22%, compared with 2019–20 engagement figures.

Since launching in 2015, the ATSB Facebook page has attracted more than 21,000 followers. This channel has been particularly effective in referring followers to view content published on the ATSB website.

The ATSB's Twitter account continues to be a key channel for highlighting the release of reports and investigation updates, particularly to the media. Through this social media platform, the ATSB provides a short safety message along with a link to more information on its website.

By the end of June 2021, the ATSB's Twitter followers had increased to over 9,000, including journalists, transport industry specialists and members of the general public. Engagement with this channel decreased by 19% in 2020–21 (compared with 2019–20 engagement figures).

The ATSB uses the LinkedIn professional networking social media platform, with more than 14,000 followers – a 40% increase in followers across the year. Engagement with this channel increased 33% in 2020–21 (compared with 2019–20 engagement figures).

In May 2019, the ATSB launched its Instagram account, which has since attracted more than 2,000 followers. Engagement with this channel increased 29% in 2020–21 (compared with 2019–20 engagement figures).

In 2019–20, the ATSB increased its engagement with audiences through videos, which were distributed to traditional media outlets and published across all of its social media channels.

The ATSB's YouTube channel saw a 23% increase in subscribers across the year – the second highest percentage increase in seven years – and now has over 1,350 subscribers. During the reporting period, the ATSB published four videos to support the release of SANs and final reports, including:

- In July 2020, the ATSB published a video to promote two SANs arising from the then ongoing investigation into the collision with water involving a de Havilland Canada DHC-2 Beaver aircraft, VH-NOO, at Jerusalem Bay, Hawkesbury River, New South Wales on 31 December 2017 (AO-2017-118). The video achieved significant positive feedback from viewers about our delivery of safety messaging through the use of video. The video has been watched more than 14,000 times across all of our social media channels.
- In July 2020, the ATSB published a video to promote the safety messaging of the final investigation report into the loss of control and collision with terrain of a Eurocopter AS350BA helicopter at Hobart Airport on 7 November 2017 (AO-2017-109). This video included an animated flight path of the accident sequence, a professional voiceover, and still images from the accident report while highlighting the report's key safety messaging. The video has been viewed more than 6,000 times across all of our social media channels.
- In August 2020, the ATSB published a video to promote the release of the final report into the fatal collision with terrain involving experimental ASH-25E glider, VH-GOA, 13 km west-north-west of Bathurst, New South Wales, on 21 January 2018 (AO-2018-009). The video included a detailed animated flight path of the accident flight. The video was distributed through the ATSB's social media channels and has been viewed more than 800 times across all of our social media channels.
- In January 2021, the ATSB published a video to promote the safety messaging associated with the final report into the collision with water involving a de Havilland Canada DHC-2 Beaver aircraft, VH-NOO, at Jerusalem Bay, Hawkesbury River, New South Wales on 31 December 2017 (AO-2017-118). The detailed video, which includes a high-fidelity animation of the aircraft's flight path, along with drone footage provided by the NSW Police Force, and a professional voiceover, has been viewed more than 6,700 times across all of our social media channels.

Traditional media

The ATSB undertakes proactive and responsive media activities in conjunction with media outlets to inform the transport industry and travelling public of its investigations and safety messaging. During the year, the ATSB worked closely with local, state, national and international media to promote community and industry awareness of its transport safety messages.

The ATSB's proactive media management activities include media conferences, interviews, media statements, pitches to journalists, opinion pieces and the distribution of pre-recorded content.

Throughout the year, the ATSB utilised its in-house media studio facility to produce and distribute 32 pieces of pre-recorded audio, video and video overlay content for distribution to national radio and TV outlets.

The ATSB also managed responses to 361 media enquiries during 2020–21.

During 2020–21, a total of 1,997 stories about the ATSB and its investigation activities were published or aired by mainstream and transport industry media outlets. Of these, 1,261 stories (approximately 63%) carried safety messaging relating to a final investigation report, with 95 stories (approximately 5%) carrying safety messaging published by transport industry media outlets.

Communication and education

As Australia's national transport safety investigator, the ATSB is committed to communicating the safety lessons from its investigation findings, research activities and occurrence reports. This information has valuable safety messages which can help improve transport safety and, ultimately, save lives.

In 2020–21, the ATSB continued to highlight emerging safety issues and trends, using a range of communication channels and activities, for the benefit of industry and the travelling public.

During the year, the ATSB focused on promoting the use of active warning carbon monoxide detectors, following the release of its final report into the collision with water involving a de Havilland Canada DHC-2 Beaver aircraft, VH-NOO, at Jerusalem Bay, Hawkesbury River, New South Wales on 31 December 2017 (AO-2017-118). The 'Know CO – Use an active warning carbon monoxide detector' safety promotion activity encouraged pilots as operators of piston-engine aircraft to carry and use a detector, while alerting them to the dangers of exposure to the insidious gas.

In October 2020, the ATSB and Airservices Australia reminded all pilots and operators to be aware that stop bar lights at runway intersections are now in operation at five capital city airports around Australia, and not to cross a lit stop bar at any time, as part of the Australian Airports Association's Airport Safety Week campaign.

Following the publishing of the final report into a runway incursion and subsequent rejected take-off event at Perth Airport on 28 April 2018 (AO-2018-032), the 'Don't cross it, STOP IT' safety promotion activity highlighted the need for all pilots, no matter their experience or what aircraft they fly, to always observe for, and comply with, the stop bar directions.

The ATSB also found several opportunities to continue promoting its 'Don't Push It, DON'T GO – Know Your Limits Before Flight' safety messaging, which was originally launched in December 2019.

The ATSB was also involved in supporting the TrackSAFE Foundation's Rail Safety Week in August 2020 to promote safety for road users and rail passengers when interacting with the rail network.

Website

The [atsb.gov.au](https://www.atsb.gov.au) website continues to be the ATSB's principal communication channel. In 2020–21, the ATSB website supported 2,040,406 page views and 803,339 user sessions.

The ATSB continually evolves its website to meet audience needs and allow for new and emerging technologies, and is a central element of the ATSB's response to the Australian Government's 'digital first' agenda.

During 2020–2021, the ATSB established a project to transfer its website onto the GovCMS content management system website platform. The ATSB's new GovCMS-based website is anticipated to go live before the end of November 2021.

Online aviation database

The ATSB National Aviation Occurrence Database contains de-identified information on aviation accidents and incidents in a searchable format. The database has been designed to fulfil searches for information involving the most common requests received by the ATSB, including date range, aircraft and operation type, injury level, occurrence category and type, location, and airspace type and class. Users are able to search aviation occurrence statistics from the ATSB website at www.atsb.gov.au/avdata.

In 2020–21, the National Aviation Occurrence Database had 5,844 page views.

Partnership with the RMIT University

The partnership the ATSB has formed with RMIT University provides industry bodies in Australia and throughout the Asia Pacific region with access to high-quality training in transport accident investigation as well as providing a framework to facilitate important transport safety-related research through a credible university-based methodology.

Given the unpredictable COVID-19 conditions being experienced around the world, the ATSB and RMIT moved the Graduate Certificate in Transport Safety Investigation to an online environment. In October 2020, our second cohort of students began their studies for the Graduate Certificate in Transport Safety Investigation. The cohort totalled 22, consisting of six ATSB investigators, two investigators from the Office of Transport Safety Investigation NSW and 14 students from a broad range of industry organisations.

The ATSB and RMIT are investing more time and resources in co-designing a Graduate Diploma in Transport Safety Investigation ready for delivery in 2022.

Regional cooperation

The ATSB has a significant program of regional engagement, underpinned by the ATSB's reputation as a world-leading transport safety investigation agency. This content addresses the deliverable to produce a report on the transport safety contribution of this engagement.

In support of the Australian Government's transport safety agenda in the Asia Pacific region, the ATSB takes a leading role in the ICAO Asia Pacific Accident Investigation Group and the Marine Accident Investigators Forum in Asia. Australia was re-elected as the Vice-Chair of the ICAO Asia Pacific Accident Investigation Group at its eighth meeting in October 2020.

The ATSB places a specific emphasis on engagement with Indonesia, through the ongoing involvement in the Australian Government Indonesia Transport Safety Assistance Package (ITSAP), and Papua New Guinea (PNG), consistent with the Memorandum of Understanding on Cooperation in the Transport Sector. COVID-19 affected the ATSB's international programs over 2020–21, with remote delivery used to deliver the capacity building programs.

Indonesia

Under the ITSAP program, funded by the Department of Foreign Affairs and Trade, the ATSB continues to help develop capability within the National Transportation Safety Committee (NTSC), the Indonesian agency responsible for the investigation of aviation, rail, marine and land transport accidents and incidents.

The three main strands of the ATSB–NTSC program of activities include:

- provision of NTSC investigator training and professional development
- guiding and mentoring of NTSC investigators by ATSB investigators
- development of the NTSC transport recorder capability.

Significant ATSB–NTSC achievements under the ITSAP program in the reporting period included:

- a number of professional development and training opportunities for NTSC investigators across specialist working groups
- well-developed NTSC capability for the download and analysis of aircraft flight data recorder (FDR) and cockpit voice recorder (CVR) 'black boxes'.

Papua New Guinea

Under the PNG Memorandum of Understanding on Cooperation in the Transport Sector, the ATSB has an ongoing program of cooperation and capability-building with the PNG Accident Investigation Commission (AIC), PNG's aviation safety investigation agency.

Key elements of the ATSB–AIC program include:

- mentoring and coaching of AIC investigators
- training and professional development for AIC investigators
- technical support for AIC investigations.

Financial performance update

This section should be read in conjunction with the ATSB's audited financial statements for 2020–21 that appear in section 6 of this report.

The ATSB operates as a separate non-corporate Commonwealth entity, having been established on 1 July 2009. The main assets of the ATSB were transferred from the (then) Department of Infrastructure and Regional Development and include plant and equipment, specialised technical assets and intangible software assets.

The ATSB recorded a deficit after income tax on continuing operations of \$0.34 million (2019–20: \$0.95 million) as reported within the Statement of Comprehensive Income (page 79); and the operating surplus was \$0.48 million (2019–20: \$0.15 million operating deficit) as reported within Note 3.2 Net Cash Appropriation Arrangements of the financial statements (page 96). This includes adjustments for depreciation, amortisation, principal repayments for leased assets and changes in the asset revaluation reserve.

The ATSB's new capital requirements are detailed in its Departmental Capital Budget published in the *2020–21 Portfolio Budget Statements*. Over time, the ATSB's estimated capital injections fall short of the deficits associated with the non-funding of depreciation and amortisation. Without adequate capital injections by the Government, this presents a challenge to the ATSB in maintaining its underlying equity and asset capability going forward.

The Government no longer provides appropriation funding to cover non-cash expenses of depreciation and amortisation to non-corporate Commonwealth entities. In the absence of revenue for depreciation and amortisation, the ATSB and other non-corporate entities are more likely to deliver a negative operating result or deficit, and these will accumulate. Offsetting this build-up of retained deficits requires a commitment by the Government to provide annual capital injections to meet new capital requirements.

Table 3: Summary of financial performance and position

	2020–21 \$M	2019–20 \$M
Revenue from Government	20.9	20.2
Own-source income	4.4	5.0
Total income	25.3	25.2
Employee expenses	16.0	16.0
Supplier expenses	7.3	7.9
Depreciation and amortisation	2.3	2.2
Finance Costs	0.1	0.1
Total expenses	25.7	26.2

		2020–21 \$M	2019–20 \$M
Operating surplus/(deficit)		(0.4)	(0.8)
Financial assets	A	9.5	8.6
Non-financial assets	B	13.6	11.0
Liabilities	C	13.6	14.4
Net Assets – A + B – C		9.5	5.2

SECTION 4 – SIGNIFICANT SAFETY INVESTIGATIONS

Significant safety investigations

The following is a summary of the significant safety investigations that were completed and published during 2020–21 across aviation, marine and rail.

Aviation

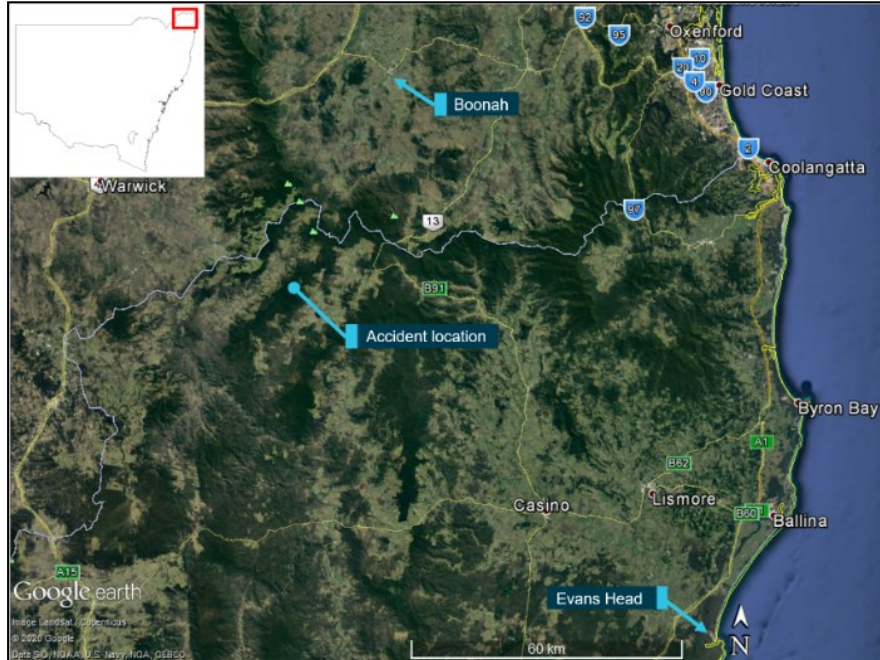
VFR into IMC and loss of control involving Wittman Tailwind, VH-TWQ, Tooloom National Park, New South Wales, on 12 January 2020 (AO-2020-004)

On the afternoon of 12 January 2020, the pilot of an amateur-built Wittman Tailwind aircraft, registered VH-TWQ (TWQ), departed Evans Head Airport, New South Wales, with one passenger on board. The pilot was conducting a private flight under the visual flight rules from Evans Head, to Boonah, Queensland.

The pilot flew in a north-north-westerly direction towards Boonah via the Richmond River valley. At 1353, the pilot commenced a 180° turn overhead the township of Kyogle and diverted, due to the weather, south back down the valley to Casino Aerodrome, landing at 1406.

At 1454, the pilot took off from Casino and flew in a west-north-westerly direction. At 1512 TWQ commenced a series of rapid descents and climbs followed by a descending left turn. The turn and descent continued until TWQ collided with terrain. The pilot and passenger were fatally injured, and the aircraft was destroyed.

Figure 1: Accident flight departure, destination and accident locations



Source: Google Earth, annotated by the ATSB

The full ATSB investigation report (AO-2020-004) is available on the ATSB website at www.atsb.gov.au.

Collision with water involving a de Havilland Canada DHC-2 Beaver aircraft, VH-NOO, at Jerusalem Bay, Hawkesbury River, New South Wales on 31 December 2017 (AO-2017-118)

On the afternoon of 31 December 2017, the pilot and five passengers of a de Havilland Canada DHC-2 Beaver floatplane, registered VH-NOO, boarded the aircraft for a return charter flight from Cottage Point to Rose Bay, New South Wales. Shortly after take-off, the aircraft conducted a 270° right turn in Cowan Water and then entered Jerusalem Bay, below the height of the terrain. The aircraft stopped climbing, continued along the bay and then made a very steep right turn. The aircraft's nose then dropped and the aircraft collided with the water. All on board were fatally injured and the aircraft destroyed.

Figure 2: Engine and forward fuselage deformation post-accident (top) with pre-accident nose to rear fuselage angle (bottom)



Source: ATSB (upper) and image provided by previous passenger (lower)

The full ATSB investigation report (AO-2017-118) is available on the ATSB website at www.atsb.gov.au.

Loss of control and collision with water involving Eurocopter EC120B, VH-WII, Hardy Reef, Whitsundays, Queensland, on 21 March 2018 (AO-2018-026)

On 21 March 2018, a Eurocopter EC120B helicopter, registered VH-WII and operated by Whitsunday Air Services, departed Hamilton Island Airport, Queensland on a charter flight to Hardy Reef. On board were the pilot and four passengers.

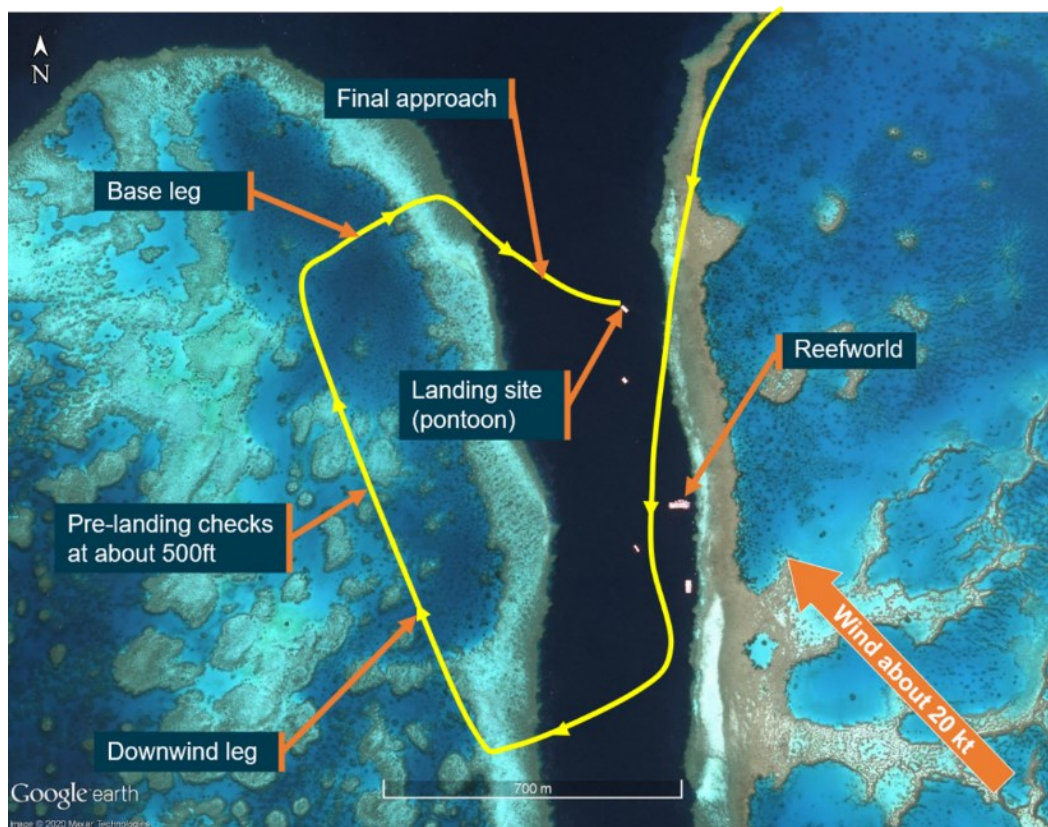
The pilot conducted the approach to the pontoon landing site at Hardy Reef into wind. During the approach, the pilot slowed the helicopter to allow birds to disperse. The pilot was then planning to yaw the helicopter left into the intended landing position, and there was about 20 kt crosswind from the right of the intended position.

When the helicopter was yawing left into position, just over the pontoon, the pilot noticed a message illuminate on the helicopter's vehicle engine multifunction display (VEMD) and elected to conduct a go-around. During the go-around, after the helicopter climbed to about 30–40 ft, there was a sudden and rapid yaw to the left. In response to the unanticipated rapid yaw, the pilot lowered the collective but was unable to recover the situation.

In the limited time available after the unsuccessful action to recover from the rapid left yaw, the pilot did not deploy the helicopter's floats and conduct a controlled ditching. The helicopter collided with the water in a near-level attitude, with forward momentum and front-right corner first. Almost immediately, the helicopter rolled to the right and started rapidly filling with water. The pilot and two of the three rear seat passengers evacuated from the helicopter with minor injuries. Although the impact forces were survivable, the other two passengers were unconscious following the impact and did not survive the accident.

The helicopter sank and, associated with unfavourable weather conditions in the days following the accident, subsequent searches were unable to locate and recover the helicopter.

Figure 3: Pilot recollection of approach to Hardy Reef pontoon



Source: Google Earth, annotated by the ATSB

The full ATSB investigation report (AO-2018-026) is available on the ATSB website at www.atsb.gov.au.

Loss of control and collision with water involving Bell UH-1H, VH-UVC, 5 km south-west of Anna Bay, New South Wales, on 6 September 2019 (AO-2019-050)

On 6 September 2019, at 1430 EST, the pilot of a Bell Helicopter Company UH-1H helicopter registered VH-UVC (UVC) departed Archerfield Airport, Queensland, on a private flight with four passengers for Bankstown, New South Wales.

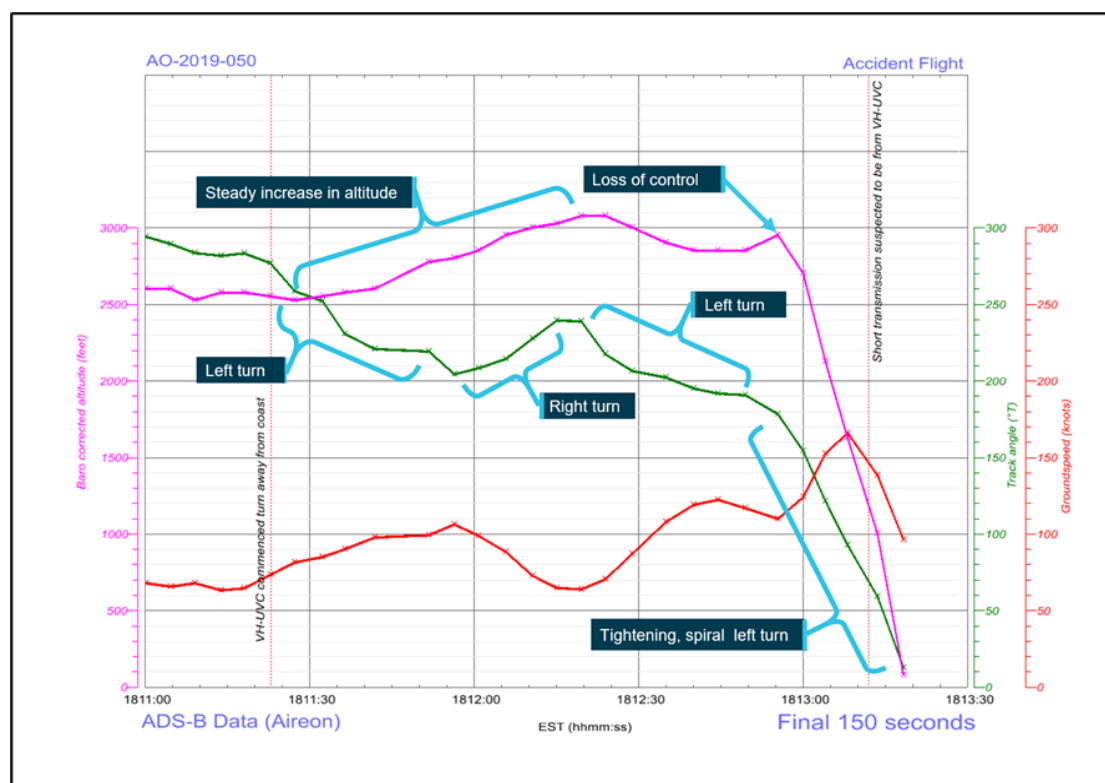
Following a refuelling stop at Coffs Harbour, New South Wales, the pilot contacted Williamtown air traffic control (ATC), while north-east of Broughton Island, and requested clearance to track south via the visual flight rules (VFR) coastal route. The initial radio calls between the pilot and Williamtown ATC, occurred about six minutes prior to the published time of last light. The radio calls indicated that the helicopter was being affected by turbulence and as a result the pilot was having difficulty maintaining a constant altitude. In response, the controller issued a clearance for the aircraft to operate between 2,400 and 3,500 ft.

Once past Anna Bay, and about 11 minutes past published last light, UVC was observed on Williamtown ATC radar to make a left turn to the south, depart the coastal route and head offshore, on a direct track to Bankstown Airport. The turn likely resulted in the pilot losing visual cues and encountering dark night conditions.

The helicopter continued to track offshore to the south-west for about 90 seconds, maintaining between about 2,500 and 3,200 ft before commencing a rapidly descending, left spiral turn. It disappeared from Williamtown radar coverage about 12 minutes after published last light. Attempts by the controller to contact the pilot were unsuccessful and authorities were subsequently advised of a missing helicopter.

On 25 September 2019, wreckage from the destroyed helicopter was located in about 30 m of water, 5 km south-west of Anna Bay. Two of the five persons on board the helicopter were confirmed to have received fatal injuries. The bodies of the pilot and two of the passengers were not found but they were presumed to have similarly not survived the accident.

Figure 4: UVC flight parameter variation over the final 150 seconds of flight



Source: ADS-B data (Aireon) with ATSB analysis

The full ATSB investigation report (AO-2019-050) is available on the ATSB website at www.atsb.gov.au.

Rail

Derailment of XPT ST23, Wallan, Victoria, on 20 February 2020 (RO-2020-002)

On 20 February 2020, passenger train ST23 departed Central Station in Sydney, New South Wales at 0741, just after the scheduled departure time of 0740. ST23 was to travel through New South Wales, and into Victoria to its destination in Melbourne. The service was scheduled to stop at several stations en route to arriving at its final destination at Southern Cross Station (Melbourne) at 1830 that evening. ST23 comprised leading power car XP2018, five passenger cars of varying configuration, and a trailing power car.

At about 1943, ST23 was approaching the northern end of Wallan Loop at about the track's line speed. A brake application was made a short distance before the turnout, probably between 50 and 153 m from the points. This slowed the train a small amount before it entered the turnout travelling at a speed probably between 114 and 127 km/h. The train was not able to negotiate the turnout to the crossing loop track at this speed and derailed. The leading power car rolled onto its left side. All vehicles derailed excepting the rear power car.

Figure 5: Aerial photograph of derailment site



Source: ATSB

The ATSB interim investigation report (RO-2020-002) is available on the ATSB website at www.atsb.gov.au.

Signal ME45 passed at danger involving suburban passenger train TP43 and near collision with another suburban passenger train, Bowen Hills, Queensland, on 10 January 2018 (RO-2018-002)

On 10 January 2018, a Queensland Rail (QR) Citytrain suburban passenger train (TP43) was en route to Brisbane Domestic Airport, Queensland, with a scheduled crew change at Bowen Hills. While the train was stopped at Bowen Hills, the departure signal (ME25) at the northern end of No.2 platform was displaying a yellow aspect, which meant that at that time the next signal (ME45) was displaying a red aspect (stop indication).

After departing the platform, TP43 exceeded its limit of authority by passing signal ME45, which was still displaying a red aspect (stop indication). After receiving a signal passed at danger (SPAD) alarm, the network control officer broadcast an emergency stop command to the driver of TP43. The train was stopped 220 m past signal ME45, and 126 m prior to a conflict point. At the time that TP43 came to a stop, another suburban passenger train had just cleared the conflict point.

Figure 6: Automatic warning system (AWS) magnet and signal ME45 displaying a red (stop) aspect



The front-of-train image from TP43 shows the AWS magnet, and signal ME45, which was displaying red aspect (stop) indication. The AWS magnet was located 79.5 m from signal ME45.

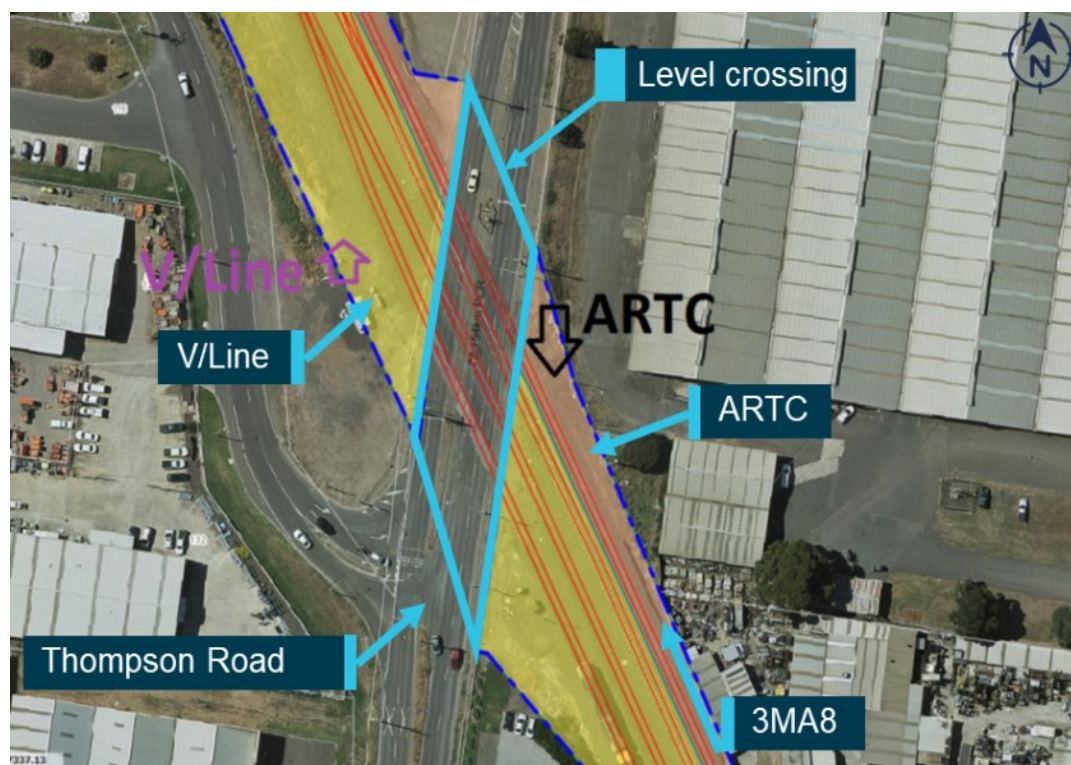
Source: Queensland Rail, annotated by the ATSB

The full ATSB investigation report (RO-2018-002) is available on the ATSB website at www.atsb.gov.au.

Level crossing irregularity involving passenger train 3MA8, North Geelong, Victoria, on 8 January 2019 (RO-2019-002)

On 8 January 2019, as The Overland passenger train, 3MA8, approached the Thompson Road level crossing at North Geelong, Victoria, the train crew noticed that the flashing lights had not activated and the boom gate had not lowered as expected. While the crew noticed the irregularity, it was too late to take substantive action and the train passed through the level crossing unprotected. The crew reported that several road vehicles were in the vicinity of the level crossing at that time, but none were in the danger zone.

Figure 7: Aerial view of Australian Rail Track Corporation (ARTC) and V/Line responsibility boundaries



Source: VicTrack, annotated by the ATSB

The full ATSB investigation report (RO-2019-002) is available on the ATSB website at www.atsb.gov.au.

Marine

Fire on board *Iron Chieftain*, Port Kembla, New South Wales on 18 June 2018 (346-MO-2018-011)

On 18 June 2018, during cargo discharge operations while alongside Port Kembla, New South Wales, a fire broke out in the internal cargo handling spaces of the self-unloading (SUL) bulk carrier *Iron Chieftain*.

The ship's crew initiated an emergency response but shipboard efforts to control the fire were ineffective. The fire soon established itself and spread to the exterior of the ship, setting the discharge boom on deck alight. The ship's crew were evacuated and shore firefighting services from Fire and Rescue New South Wales (FRNSW) took charge of the response to the fire. The fire was contained and eventually extinguished about five days after it started.

The ship sustained substantial structural damage, including breaches of two fuel oil tanks, and key components of the SUL system were largely destroyed. The ship was declared a constructive total loss and subsequently dispatched to be recycled. There were no serious injuries or pollution of the sea reported.

Figure 8: *Iron Chieftain* on fire at Port Kembla



Source: ATSB

The full ATSB investigation report (346-MO-2018-011) is available on the ATSB website at www.atsb.gov.au.

Engine room fire on board *MPV Everest*, Southern Ocean, 5 April 2021 (MO-2021-003)

On the evening of 31 March 2021, the Bahamas-flagged multipurpose vessel *MPV Everest* departed a location approximately 100 nautical miles (NM) off Mawson research station in the Australian Antarctic Territory, bound for Hobart, Tasmania. There were 37 crew and 72 expedition staff on board for the 3,328 NM passage to Hobart. The ship had been on location for the previous 17 days to effect a changeover of Australian Antarctic Division (AAD) station personnel and conduct station resupply and refuelling operations via helicopter.

At about 0925, recorded data from the ship's integrated automation system (IAS) showed a routine fuel transfer to top-up the port fuel oil settling tank (located in the port engine room) was started. About an hour later, the ship's master and doctor were in the master's office, located one deck below the navigation bridge, which overlooks the main and upper accommodation decks aft. Shortly before 1100, they saw large flames erupting from the open louvres in the port engine room's exhaust casing located one deck above the upper accommodation deck, aft of the accommodation block. The fire was extinguished and no injuries on board were reported. The investigation is continuing.

Figure 9: *MPV Everest* in Antarctica



Source: Australian Antarctic Division

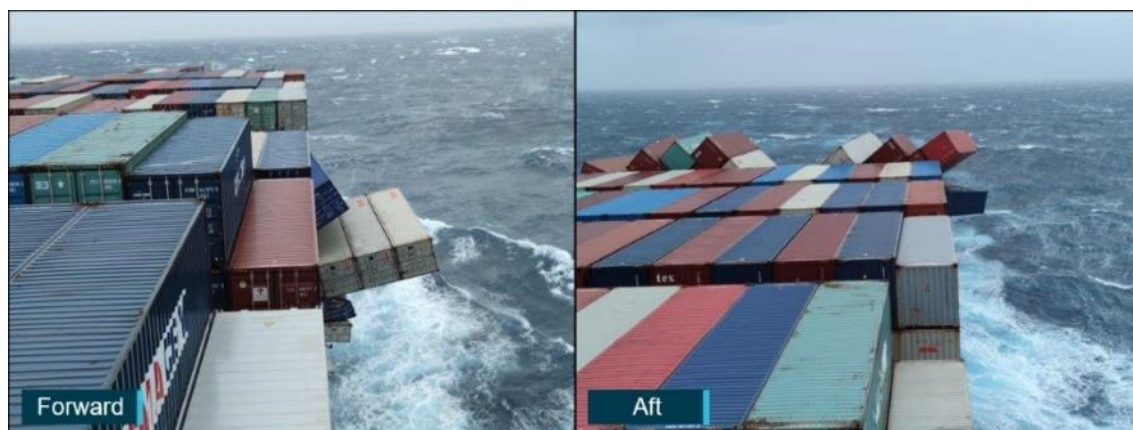
The ATSB preliminary investigation report (MO-2021-003) is available on the ATSB website at www.atsb.gov.au.

Loss of containers overboard involving *APL England*, 46 NM south-east of Sydney, New South Wales, on 24 May 2020 (351-MO-2020-002)

At 0610 AEST, during heavy weather, the vessel's main engine tripped, resulting in loss of propulsion for a short time. During this period, the vessel was rolling heavily – up to 25 degrees – causing 50 containers to fall onto the deck and into the sea. Sixty-three containers were damaged but remained on board.

The investigation is continuing and will include review and analysis into vessel cargo systems, maintenance, weather preparations, procedures and personnel actions.

Figure 10: Looking forward and aft from navigation bridge at about 0700



Source: CMA-CGM ANL

The ATSB preliminary investigation report (351-MO-0202-002) is available on the ATSB website at www.atsb.gov.au.

SECTION 5 – FORMAL SAFETY ISSUES AND ACTIONS

Formal safety issues and actions

ATSB investigations primarily improve transport safety by identifying and addressing safety issues. Safety issues are events or conditions that increase safety risk and:

- can reasonably be regarded as having the potential to adversely affect the safety of future operations
- are characteristics of an organisation or a system, rather than of a specific individual, or operational environment at a specific point in time.

Safety issues will usually refer to an organisation's risk controls, or to a variety of internal and external organisational influences that impact the effectiveness of its risk controls. They are factors for which an organisation has some level of control and responsibility and, if not addressed, will increase the risk of future accidents.

The ATSB prefers to encourage stakeholders to take proactive safety action to address safety issues identified in its reports. Nevertheless, the ATSB may use its powers under the TSI Act 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 taken.

When safety recommendations are issued, they clearly describe the safety issue of concern, but they do not provide instructions or opinions on a preferred corrective action. Like equivalent overseas organisations, the ATSB has no power to enforce the implementation of its recommendations. It is a matter for the organisation to which an ATSB recommendation is directed to assess the costs and benefits of any means of addressing a safety issue, and act appropriately.

When the ATSB issues a safety recommendation to a person, organisation or agency, they 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 a safety advisory notice (SAN) suggesting that an organisation, or an industry sector, consider a safety issue and take appropriate action. There is no requirement for a formal response to a SAN.

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

- 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.
- Other safety issue – associated with a risk level regarded as unacceptable unless it is kept as low as reasonably practicable. Where there is a reasonable expectation that safety action could be taken in response to reduce risk, the ATSB will issue a safety recommendation to the appropriate agency when proactive safety action is not forthcoming.

All ATSB safety issues and associated safety actions, along with the most recent status, are published on the ATSB website for all investigation reports released since July 2010.

Safety issues identified through ATSB investigations

All safety issues are risk assessed by the ATSB. In 2020–21, the ATSB identified the following number of safety issues.⁵

Table 4: Number of safety issues identified in 2020–21

Safety issue risk	Aviation	Marine	Rail	Total
Critical	0	0	0	0
Other	33	6	21	60
Total	33	6	21	60

Safety action is sought to address any safety issues when proactive safety action is not forthcoming. Once safety action has been undertaken, the ATSB conducts another risk assessment of the safety issue. When the post-action risk assessment results in either an acceptable level of risk or a risk as low as reasonably practicable, the safety issue status is categorised as 'adequately addressed'.

The *Portfolio Budget Statements 2020–21* specify, as two of the ATSB's key performance indicators (KPIs), that:

- 65% of safety issues are addressed in the last financial year
- 85% of safety issues are addressed in the previous financial year.

KPI status of safety issues identified in 2020–21

There were no critical safety issues identified through ATSB investigations in 2020–21.

The breakdown of other safety issues, by transport mode, is summarised in Table 5.

Table 5: Status of other safety issues identified in 2020–21

Status of safety issues	Aviation	Marine	Rail	Percentage
Adequately addressed	14	4	15	55%
Partially addressed	3	0	3	10%
Not addressed	1	0	0	2%
No longer relevant	1	0	0	2%
Safety action still pending	14	2	3	32%
Total	33	6	21	100%

⁵ Includes safety issues identified through rail investigations conducted on behalf of the ATSB by OTSI NSW and CITS Victoria.

Responses to safety issues identified in 2020–21

The tables below document each safety issue identified in 2020–21 and its current status assigned by the ATSB, along with the justification for that status.

Aviation

Table 6: Aviation – Responses to other safety issues identified in 2020–21

Safety issue	Status	Status justification
AO-2016-155 Engine failure and forced landing involving Cessna 208B, VH-LNH, 8 km north-west of Solomon Airport, WA, on 16 November 2016		
AO-2016-155-SI-01: Pratt & Whitney Canada (PWC) PT6A-114A engines fitted with compressor turbine vane rings that have been repaired in accordance with the United States Federal Aviation Administration-approved scheme STI 72-50-254 have a significantly increased likelihood of CMSX-6 compressor turbine blade fracture and subsequent failure of the engine compared to those engines fitted with PWC-manufactured compressor turbine vane rings.	Safety action still pending	
Safety issue	Status	Status justification
AO-2017-078 Loss of cyclic control and in-flight break-up involving Robinson R22 helicopter, VH-HGU, 7 km north-west of Cloncurry Airport, Qld, on 2 August 2017		
AO-2017-078-SI-01: Cloncurry Air Maintenance had adopted a number of practices, which included using abbreviated inspection checklists, not recording all flight control disturbances and not progressively certifying for every inspection item as the work was completed, which increased the risk of memory-related errors and the omission of tasks.	Adequately addressed	The ATSB is satisfied that improvements in Cloncurry Air Maintenance's use of the job sheets to track the progress of maintenance should reduce their reliance on human memory for the condition of helicopters under maintenance and therefore reduce the risk of memory-related errors.
Safety issue	Status	Status justification
AO-2017-118 Collision with water involving a de Havilland Canada DHC-2 Beaver aircraft, VH-NOO, at Jerusalem Bay, Hawkesbury River, NSW, on 31 December 2017		
AO-2017-118-SI-01: There was no regulatory requirement from CASA for piston-engine aircraft to carry a carbon monoxide detector with an active warning to alert pilots to the presence of elevated levels of carbon monoxide in the cabin.	Safety action still pending	
AO-2017-118-SI-02: Although detectors were not required to be fitted to their aircraft, Sydney Seaplanes had no mechanism for monitoring the serviceability of the carbon monoxide detectors.	Adequately addressed	The ATSB is satisfied that the inclusion of a monthly check addresses the safety issue risk with regard to monitoring the serviceability of the carbon monoxide detectors fitted to Sydney Seaplanes aircraft.
AO-2017-118-SI-03: Australian civil aviation regulations did not mandate the fitment of flight recorders for passenger-carrying aircraft under 5,700 kg. Consequently, the determination of factors that influenced this accident, and other accidents, have been hampered by a lack of recorded data pertaining to the flight. This has likely resulted in the non-identification of safety issues, which continue to present a hazard to current and future passenger-carrying operations.	Safety action still pending	

AO-2017-118-SI-04: Annex 6 to the Convention of International Civil Aviation did not mandate the fitment of flight recorders for passenger-carrying aircraft under 5,700 kg. Consequently, the determination of factors that influenced this accident, and numerous other accidents, have been hampered by a lack of recorded data pertaining to the flight. This has likely resulted in important safety issues not being identified, which may remain a hazard to current and future passenger carrying operations.	Safety action still pending	
Safety issue	Status	Status justification
AO-2018-006 Rotor RPM decay and hard landing involving Robinson R44, VH-HGX, 5 km south of Ayers Rock Airport, NT, on 17 January 2018		
AO-2018-006-SI-01: Professional Helicopter Services did not have a calibration schedule for their passenger scales, which were under-reading. This increased the risk of their helicopters not achieving their expected take-off performance.	Adequately addressed	A calibration schedule introduced by Professional Helicopter Services addresses the safety issue risk for their other bases in addition to their Uluru Base, where the accident occurred.
AO-2018-006-SI-02: The Robinson R44 pilot's operating handbook low rotor RPM recovery procedure did not include reference to the minimum power airspeed for the helicopter as a consideration, which may assist a pilot to recover from a low rotor RPM condition.	Not addressed	Robinson Helicopter Company have conducted two internal reviews of the safety issue and have concluded that safety action to address this safety issue is not necessary. Therefore, the ATSB have elected to close the safety issue as not addressed.
Safety issue	Status	Status justification
AO-2018-019 Fuel exhaustion and forced landing involving Cessna 441, VH-LBY, 39 km East of Broome Airport, WA, on 2 March 2018		
AO-2018-019-SI-01: Although the operator had specified multiple methods of cross-checking fuel quantity gauge indications for its C441 fleet, there were limitations in the design, definition and/or application of these methods. These included: <ul style="list-style-type: none"> The primary method used (indicated versus calculated fuel) was self-referencing in nature, and not able to detect gradual changes in the reliability of fuel quantity gauge indications. Pilots did not record (and were not required to record) sufficient information on flight logs to enable trends or patterns in fuel quantity gauge indications to be effectively identified. Pilots did not routinely crosscheck information from fuel quantity gauge indications with information from the independent fuel totaliser. 	Adequately addressed	The ATSB is satisfied that Skippers' amendments to, and increased focus on, fuel management policy and procedures addresses the safety issue risk with regard to the limitations of its fuel quantity assessment methods.
Safety issue	Status	Status justification
AO-2018-026 Loss of control and collision with water involving Eurocopter EC120B, VH-WII, Hardy Reef, Whitsundays, Qld, on 21 March 2018		
AO-2018-026-SI-01: Although the operator complied with the regulatory requirements for training and experience of pilots, it had limited processes in place to ensure pilots with minimal time and experience on a new and technically different helicopter type had the opportunity to effectively consolidate their skills on the type required for conducting the operator's normal operations to pontoons.	Adequately addressed	The ATSB is satisfied that the action introduced by the operator, particularly the requirement to undertake 20 hours on helicopter type prior to conducting crosswind landings at pontoons, will reduce the risk of this safety issue.
AO-2018-026-SI-02: There was no requirement for operators of passenger transport flights in aircraft with six or fewer seats to provide passengers with a verbal briefing, or written briefing material, on the method for operating the emergency exits.	Adequately addressed	The ATSB notes that the requirement for briefings is limited to those seated in emergency exit rows, even for small aircraft, but overall is satisfied that the safety action taken by CASA has reduced the risk of this safety issue.
AO-2018-026-SI-03: Due to multiple factors, the design of the rear left sliding door (emergency exit) on the EC120B helicopter was not simple and obvious to use unless the	Safety action still pending	

<p>occupant was provided with specific instructions about how to operate the exit. In particular:</p> <ul style="list-style-type: none"> the door required three actions to open (pull handle up, push door out, slide door back), and the second action was not indicated in either the design of the handle or the placard next to the handle the design of the inside handle was such that its purpose may not have been readily apparent to many users. 		
<p>AO-2018-026-SI-04: The operator's system used to identify passengers with reduced mobility and/or required additional safety briefing information relied on passengers self-reporting a problem.</p>	Partially addressed	<p>The operator has provided more information about when and how the pilot in command must seek to identify those passengers who may require an additional safety briefing, however the operator had the same system in place at the time of the accident, whereby the operator relied on the pilot in command to identify the passengers, which in some cases would be as they were boarding the aircraft, as was the case on the day of the accident. Therefore the ATSB has assessed the safety issue as partially addressed.</p>
<p>AO-2018-026-SI-05: Although the operator had calibrated scales available for use at two of their check-in locations, they were not routinely used to ascertain actual passenger and/or baggage weights. Instead, the operator's personnel relied on passengers' volunteered weights (without an additional allowance) and only weighed passengers when the volunteered weights were perceived to be inaccurate.</p>	Adequately addressed	<p>The ATSB is satisfied that the safety action taken by the operator has reduced the risk of this safety issue.</p>
<p>AO-2018-026-SI-06: There was often a significant number of birds located on the pontoons at Hardy Reef used by the operator. However, the operator did not have a process to systematically manage the risk of birdstrike. For example:</p> <ul style="list-style-type: none"> The operator had not conducted a formal risk assessment of the bird hazard at the pontoons. The operator did not record birdstrike occurrences, which reduced its ability to accurately assess the ongoing hazard associated with birdstrikes at the pontoons. Birdstrike occurrences were also not notified to the ATSB (as required). The operator did not provide guidance or appropriate equipment to enable pilots to effectively conduct visual inspections following an actual or suspected birdstrike at the pontoons. 	Partially addressed	<p>The ATSB notes that no additional action has been taken to reduce the concentration of birds at the pontoons, and that there are limited options available for reducing this concentration. However, given the location and the operational environment where the operator conducts flights (where all bird species are protected), the ATSB is satisfied that the safety action taken by the operator has reduced the risk of the safety issue.</p>
<p>AO-2018-026-SI-07: It was common practice for the operator's pilots to leave the controls of their helicopter, while the rotors were turning and the friction locks applied, to escort passengers to and from the helicopter.</p>	Partially addressed	<p>The ATSB notes that the operator has now specified that control friction locks are not considered a suitable means of locking a control. The ATSB also notes that, according to the operator's procedure, pilots should not be leaving the controls of a helicopter, with rotors turning, unless the helicopter was pointed into wind and the wind strength was less than 15 kt. Nevertheless, the ATSB is still concerned that the operator's procedures will allow the pilot to leave the controls of a helicopter to escort passengers, even though CASA has advised that is not a suitable reason for doing so.</p>

Safety issue	Status	Status justification
AO-2018-027 Controlled flight into terrain involving Kavanagh Balloons G-525, VH-HVW, Pokolbin, NSW, on 30 March 2018		
AO-2018-027-SI-01: The visual flight rules permitted balloons to arrive and depart in foggy conditions without assurance that sufficient visibility existed to see and avoid obstacles.	Safety action still pending	The ATSB acknowledges CASA's publication of the AC 131-02. The ATSB will continue to monitor this safety issue pending CASA's risk assessment of the reduced visibility exemption to the visual flight rules for balloons, to determine whether it assures an adequate level of safety and any mitigating factors required to operate safely in those conditions.
Safety issue	Status	Status justification
AO-2018-032 Runway incursion involving Boeing 737, VH-XZM, resulting in a rejected take-off involving Boeing 737, VH-VZL, Perth Airport, WA, on 28 April 2018		
AO-2018-032-SI-01: Although Qantas provided detailed guidance to flight crews about the content of departure and approach briefings, it did not specifically require aerodrome hot spots to be briefed.	Adequately addressed	The ATSB is satisfied that the action taken by Qantas addresses this safety issue.
AO-2018-032-SI-02: The location and design of taxiway J2 at Perth Airport significantly increased the risk of a runway incursion on runway 06/24 for aircraft landing on runway 03. Taxiway J2 was published as the preferred exit taxiway for jet aircraft and, although mitigation controls were in place, they were not sufficient to effectively reduce the risk of a runway incursion.	Adequately addressed	The ATSB is satisfied that the action taken by Airservices Australia and Perth Airport Pty Ltd has addressed this safety issue.
AO-2018-032-SI-03: Airservices Australia's configuration of the integrated tower automation suite (INTAS) at Perth Airport had resulted in a situation where controllers performing some combined roles had the INTAS aural and visual alerts inhibited at their workstation. As a result, controllers performing such combined roles would not receive a stop bar violation alert or runway incursion alert at their workstation.	Adequately addressed	The ATSB is satisfied that the action taken by Airservices Australia addresses this safety issue.
Safety issue	Status	Status justification
AO-2018-049 Uncommanded Engine shutdown involving De Havilland Aircraft of Canada DHC-8, VH-LQD, 77 km north-north-west of Brisbane Airport, Qld on 26 June 2018		
AO-2018-049-SI-01: The procedures in the aircraft maintenance manual relating to chip detector debris analysis were written in a way that could cause confusion and error. This probably influenced the actions of the maintenance personnel to release the aircraft to service with a deteriorating bearing.	Safety action still pending	While the safety action removes some of the ambiguity, the ATSB considers that there is still a possibility that the procedures could be misread resulting in an engine being erroneously released to service.
Safety issue	Status	Status justification
AO-2019-015 Collision with terrain involving AS350, VH-SZS, 60 km east of Woomera, SA, on 20 March 2019		
AO-2019-015-SI-01: There were no requirements in Aeropower procedures to provide any post-training supervision for powerline operations. What supervision was provided was ineffective in identifying that a modified stringing method was being used by the pilot.	Adequately addressed	The actions taken by the operator address the key concern of the safety issue, that being the supervision of pilots recently trained/authorised in a new specialist task. The mandated extension of command under supervision time, the introduction of periodic consolidation flight checks, and the mandated extension of mentoring time are all expected to help better prepare newly trained pilots for solo operations and provide them with additional defences to the hazards associated with specialist flight tasks.

Safety issue	Status	Status justification
AO-2019-025 Engine power loss and collision with terrain, Bell 206B3 helicopter, VH-FHW 107 km south-west of Jabiru, NT, on 21 May 2019		
AO-2019-025-SI-01: Although the Director of National Parks' safe operating procedures required shooters and spotters to wear helmets during aerial culling tasks, helmets were not provided or used on a routine basis.	Safety action still pending	The Director of National Parks has committed to procurement of helmets and implementation of procedures for ongoing conformance to safe operating procedures and use of helmets for aerial culling tasks. This safety action will be reviewed in December 2021 or sooner if advised as completed.
AO-2019-025-SI-02: The Director of National Parks did not actively manage the risk of the aerial culling task being conducted in the Kakadu National Park, or effectively supervise the operation. As a result, an increase in the number of crew, a change in helicopter type and change of helicopter operator all progressed without requisite risk management. This exposed crew to avoidable harm during low-level aerial shooting operations.	Safety action still pending	Engaging an aviation specialist in task design has negated the immediate risk. The Director of National Parks has developed a path and committed to the necessary steps to make proactive risk management a well-supported function in planning and developing aviation activities. This safety action will be reviewed in December 2021 or sooner if advised as completed.
AO-2019-025-SI-03: Recurrency training and drills in aircraft emergencies were not required for reissue of an aerial platform shooting permission. Some shooters last conducted training about 20 years prior, during initial issue of their permissions.	Safety action still pending	The ATSB is satisfied that the proposed changes to be made on 2 December 2021 will reduce the risk of this safety issue. As this is a regulatory change, the timeframe is recognised and this safety action will be reviewed in December 2021.
AO-2019-025-SI-04: A harness instrument, commonly issued by CASA, stated that a harness could be used instead of a seatbelt for take-off and landing. Although not intended by CASA, this instrument was easily able to be misinterpreted as indicating that a seatbelt was not required to be used during take-off and landing.	Safety action still pending	The ATSB is satisfied that the proposed changes to be made on 2 December 2021 will reduce the risk of this safety issue. As this is a regulatory change, the timeframe is recognised and this safety action will be reviewed in December 2021.
AO-2019-025-SI-05: Although required by the harness instrument commonly issued by the CASA, the operator did not appraise shooting crews of the risks of using only a harness for restraint during low-level flight.	Adequately addressed	The advised changes will ensure participants are aware of the risks of using a harness at low-level. This will enable crew to make decisions around their safety with full knowledge of the risks they face.
Safety issue	Status	Status justification
AO-2019-045 Landing gear failures involving a GA8 Airvan, VH-BFS, Fraser Island, Qld, 24 August 2019 and 31 October 2019		
<p>AO-2019-045-SI-01: The operator did not place appropriate emphasis on ensuring the continuing airworthiness of the landing gear of its GA8 fleet, although being aware of:</p> <ul style="list-style-type: none"> the increased loads on the landing gear when routinely operating from beach landing areas up to 20–30 times daily, and being subjected to a salt-laden and humid environment the axle failure of VH-BFS in 2009 the mandatory inspection requirements of service bulletin SB-GA8-2016-169. 	Adequately addressed	The ATSB acknowledges the operator's action regarding its changes to the control and conduct of maintenance on their aircraft. However, the ATSB notes that the prescribed maintenance program for any aircraft should be considered the minimum requirement, and when frequently operating in challenging environments such as a beach ALA additional activities or risk controls should also be considered. Nevertheless, the safety action taken by the operator has reduced the risk of this safety issue.

Safety issue	Status	Status justification
AO-2019-055 Runway incursion and take-off commenced on incorrect runway involving GIE Avions de Transport Régional ATR72, VH-VPJ, Canberra Airport, ACT, on 25 September 2019		
AO-2019-055-SI-01: Virgin Australia Airlines did not require ATR flight crews to complete the before take-off procedure prior to reporting 'ready' to air traffic control. This increased the risk of flight crews completing this procedure while entering the runway, diverting their attention to checklist items at a time when monitoring and verifying was critical.	No longer relevant	Due to the cessation of ATR72 operations by Virgin Australia Airlines, the ATSB has closed this safety issue as it is no longer relevant.
AO-2019-055-SI-02: Virgin Australia Airlines did not require flight crew to confirm and verbalise external cues such as runway signs, markings, and lights to verify an aircraft's position was correct prior to entering and lining up on the runway.	Safety action still pending	
Safety issue	Status	Status justification
AO-2019-060 Engine failure during take-off involving Bombardier Dash 8, VH-ZZE, at Darwin Airport, NT, on 11 November 2019		
AO-2019-060-SI-01: The power turbine shaft in Pratt & Whitney Canada PW100 series engines operating in certain marine environments is susceptible to corrosion pitting, which can grow undetected between scheduled inspections. This increases the risk of shaft fracture resulting in engine failure.	Safety action still pending	
Safety issue	Status	Status justification
AO-2020-036 Door failure and depressurisation involving a Cessna 441, VH-LBY near Broome, WA, on 22 July 2020		
AO-2020-036-SI-01: The inspection procedures in the West Star Aviation maintenance manual supplement for extended life program Cessna 441 aircraft were inadequate to detect the progressive disbonding of the emergency exit door.	Adequately addressed	The ATSB accepts the response provided by West Star Aviation as the introduction of Textron Aviation Conquest Service Letter (CQL-99-02) supplemental inspection 52-20-03 (specific inspection details for A522005) post-dates the incident and is applicable to all the life extension aircraft.
Safety issue	Status	Status justification
AO-2020-041 Depressurisation involving a Fokker 100, VH-NHC, 167 km SSE Geraldton Airport, WA, on 10 August 2020		
AO-2020-041-SI-01: While the manufacturer's instructions for the zonal inspections detailed that installation blankets could be removed 'as necessary', they did not reference the insulation blanket installation procedure. This resulted in insulation blankets not being secured to the structure.	Safety action still pending	

Marine

Table 7: Marine – Responses to other safety issues identified in 2020–21

Safety issue	Status	Status justification
MO-2018-004 Grounding of bulk carrier <i>Bulk India</i>, Dampier, WA, on 11 March 2018		
MO-2018-004-SI-01: No procedure or system was in place to ensure critical spares were identified and their inventory controlled to ensure availability when required. As a consequence, the fan belts for the emergency generator had been on order for several months.	Adequately addressed	Kowa Marine Service has put in place procedures and systems which adequately address this issue.
Safety issue	Status	Status justification
MO-2018-011 Fire on board <i>Iron Chieftain</i>, Port Kembla, NSW, on 18 June 2018		
MO-2018-011-SI-01: <i>Iron Chieftain</i> 's operators had formally identified the fire risk in the ship's cargo self-unloading system spaces, particularly the C-Loop, as being unacceptably high five years before the fire due to the absence of fire detection or fixed fire extinguishing system. However, at the time of the fire, the prevention and recovery risk mitigation measures had not reduced the risk to an acceptable level.	Adequately addressed	The installation of systems to provide early heat and fire detection as well as the provision of fixed fire-extinguishing capability in the self-unloading system spaces should reduce the high level of fire risk associated with these spaces to an acceptable level.
MO-2018-011-SI-02: The cargo handling spaces of specialised self-unloading bulk carriers continue to present a very high fire risk due to the inadequacy of standards or regulations for self-unloading systems, including for conveyor belts, and dedicated fire detection/fixed fire-extinguishing systems. This has been a factor in at least three major fires over a 25-year period, including <i>Iron Chieftain</i> 's constructive total loss.	Safety action still pending	The ATSB acknowledges the proposals of the AMSA and Lloyd's Register to initiate action to address this safety issue by raising it with the International Maritime Organization (IMO) and the International Association of Classification Societies (IACS), respectively. As the process of progressing safety action at IMO and IACS can be prolonged, the ATSB will monitor progress to regularly reassess the status of the safety issue and publish updates on its website.
MO-2018-011-SI-03: <i>Iron Chieftain</i> 's Emergency Contingency Plan did not include a response plan to fire in the high fire risk self-unloading system spaces. Consequently, there was no clear plan or practised sequence of actions that could aid emergency preparedness.	Adequately addressed	The development of ship-specific emergency contingency plans for responding to fire in the self-unloading system spaces should provide a useful framework to build and improve upon. These plans, exercised in conjunction with regular and realistic emergency drills, should adequately address this safety issue.
MO-2018-011-SI-04: The capability of Fire and Rescue NSW to effectively respond to a shipboard fire in Port Kembla was limited by: <ul style="list-style-type: none"> • a lack of specialised marine firefighting expertise • outdated marine training for firefighters • relative inexperience in shipboard firefighting associated with the rarity of major shipboard fires • an absence of marine-specific firefighting resources and aids for use by first responders. 	Safety action still pending	The ATSB welcomes the action taken by Fire and Rescue NSW but considers that further action is required to adequately address the safety issue.
MO-2018-011-SI-05: Regulatory safety oversight of <i>Iron Chieftain</i> , which comprised flag state audits, surveys and inspections had not identified safety deficiencies with respect to the ship's fire safety, risk management, emergency preparedness and emergency response.	Adequately addressed	The safety action taken by AMSA should serve to augment the existing regulatory oversight activity of Australian flagged ships, particularly with regard to the fire safety risk and risk management on board self-unloading ships and therefore address the identified safety issue.

Rail

Table 8: Rail – Responses to other safety issues identified in 2020–21

Safety issue	Status	Status justification
RO-2018-002 Signal ME45 passed at danger involving suburban passenger train TP43 and near collision with another suburban passenger train, Bowen Hills, Qld, on 10 January 2018		
RO-2018-002-SI-02: QR's management oversight of the Citytrain driver MOC process did not include planned assurance activities or regular and effective auditing of how the MOC assessments were being conducted, even after there were multiple indications that the process was not being conducted as designed.	Adequately addressed	The ATSB acknowledges the significant increase in assurance activities undertaken by QR in this area and is satisfied that, if such activities continue to be undertaken, the risk of the safety issue will be reduced.
RO-2018-002-SI-03: The automatic warning system (AWS) provided the same audible alarm and visual indication to a driver on the approach to all restricted signals (that is, double yellow, yellow, flashing yellow and red aspects). The potential for habituation, and the absence of a higher priority alert when approaching a signal displaying a red aspect, reduced the effectiveness of the AWS to prevent signals passed at danger (SPADs). This placed substantial reliance on procedural or administrative controls to prevent SPADs, which are fundamentally limited in their effectiveness.	Partially addressed	The ATSB notes the safety action to change the auditory volume of the AWS for restricted signals versus green signals, but believes that this will not have a significant impact in reducing the risk of the safety issue as it does not help differentiate red signals from other restricted signals. The ATSB also appreciates that there would be substantial difficulty in redesigning the AWS to provide a clear distinction between the alerts that occur in response to signals with a red aspect compared to other restricted signals. However, the ATSB welcomes the safety action to introduce the European Train Control System (ETCS) and believes that this system will reduce the risk of SPADs where and when it is implemented.
RO-2018-002-SI-04: After mandating the use of risk triggered commentary driving (in 2011) to mitigate the risk of signals passed at danger, Queensland Rail Citytrain did not provide the necessary support to its trainers, assessors and drivers to effectively maximise the potential benefits of the technique and minimise the potential limitations or risks associated with the technique.	Adequately addressed	The ATSB notes the safety action already undertaken and being undertaken to clarify the requirements of risk triggered commentary driving (RTCD) and facilitate more consistent application of the technique, and to simplify some of the recommended word strings. The ATSB still has concerns about potential problems with the mandatory nature of the technique in all situations. However, overall the ATSB is satisfied that the safety action undertaken and being undertaken will reduce the risk of this safety issue.
RO-2018-002-SI-05: Prior to the SPAD occurrence in January 2018, Queensland Rail did not routinely and systematically analyse recorded data to determine driver compliance with key operational rules that had been designed to minimise the risk of SPADs.	Adequately addressed	The ATSB acknowledges the significant increase in activity that QR has undertaken in this area since 2017. Although the ATSB notes that there are some limitations with the data for measuring compliance rates with some SPAD mitigation rules, the ATSB is satisfied that the action undertaken by QR has reduced the risk of this safety issue, and that the risk of this safety issue would be further reduced with the introduction of automatic event recorder analytics software.

Safety issue	Status	Status justification
RO-2018-008 Track obstruction due to loss of freight involving train 6WM2 and subsequent impact of passenger train 8615 with track obstruction, near Winton, Vic, on 30 March 2018		
RO-2018-008-SI-01: Pacific National's Freight Loading Manual, specific to the loading and unitising of jumbo coils, did not require the use of rubber load mat on cradles. Consequently, there was no requirement to consider the condition of load mat during inspection and maintenance. This allowed the continued use of cradles without load mat, which decreased their effectiveness at restraining loads.	Adequately addressed	The routine inspection of rubber load mats fitted to cradles carrying jumbo coils will allow Pacific National to maintain the condition of the mats sufficient to reduce the risk of the load restraint capabilities being compromised.
RO-2018-008-SI-02: Pacific National's Freight Loading Manual did not require a combination of radial unitising straps on jumbo coils positioned such that a strap was always free from contact with the cradle. The provision of straps in this configuration would have reduced the risk of the coil telescoping in the event of strap breakage due to contact with the cradle.	Partially addressed	<p>Pacific National has not implemented any actions to prevent coils from being 'loaded in an orientation where all the radial straps are positioned within the contact zone between the coils and cradle'.</p> <p>However, the responses provided by Pacific National do include other actions (ensuring that coil cradles are fitted with rubber mat and requiring the condition of the mat to be inspected and maintained) that address the risk of straps breaking. In addition, Pacific National has undertaken to continue to 'further investigate and explore options to reduce the risk of ... the radial straps becoming damaged from coming into contact with the cradle, so far as is reasonably practicable'. Based on this, the ATSB is satisfied that the requirement for, and ongoing maintenance of, rubber matting will assist in reducing the risk of the unitising straps breaking.</p>
RO-2018-008-SI-03: Pacific National did not demonstrate that the load restraint system provided by demountable cradles carrying jumbo coils was safe and fit for purpose.	Adequately addressed	<p>Pacific National has indicated it believes, based on calculations and measured data, that its jumbo coil carrying demountable cradles provide, at minimum, restraint capable of resisting about 0.75 g acceleration. This was greater than the actual accelerations measured by instrumentation during operation, at about 0.3 g typical (0.372 g maximum peak).</p> <p>Therefore, Pacific National stated that the level of load restraint offered by current demountable cradles demonstrates that they sufficiently restrain jumbo coils against lateral accelerations and prevent coils from moving and falling during transit.</p> <p>The ATSB acknowledges that Pacific National has provided a demonstration that the demountable cradle design is safe and fit for purpose.</p>

RO-2018-008-SI-04: Pacific National's Freight Loading Manual did not require the use of radial unitising straps to prevent telescoping on jumbo coils where the thickness of the steel was greater than 2 mm.	Adequately addressed	The ATSB is satisfied that the use of a minimum of two radial unitising straps on jumbo coils will reduce the risk of telescoping during transit.
Safety issue	Status	Status justification
RO-2018-009 Derailment of freight train 6MP4 near Glenalta, SA, on 21 April 2018		
RO-2018-009-SI-01: Pacific National's inspection processes did not identify key structural points for inspection on RRYT class wagons, including the susceptibility to cracking in the junction between container loading outriggers, pull rod boxed opening, and the bottom centre sill sections. This reduced the likelihood of cracks being detected.	Adequately addressed	The ATSB is satisfied that the action taken by Pacific National will ensure that maintenance inspections and train examinations will be directed to key areas of the RRYT wagon design that are susceptible to cracking.
Safety issue	Status	Status justification
RO-2018-011 Derailment involving freight train YC77, Cooroy, Qld, on 18 August 2018		
RO-2018-011-SI-01: Aurizon did not have an effective system in place for ensuring personnel required to check the securing of unusual loads (such as empty flat racks) prior to departure had sufficient knowledge of their responsibilities, and had ready access to relevant procedures, guidance and checklists.	Adequately addressed	The ATSB is satisfied that the safety action taken by Aurizon will reduce the risk of this safety issue in the areas under its influence.
RO-2018-011-SI-02: Aurizon did not provide drivers with ready access to Queensland Rail's procedures for driver only operations and overhead line equipment emergencies when they were operating on the Queensland Rail network. In addition, Aurizon did not have procedures for driver only operations that applied to its own network.	Adequately addressed	The ATSB is satisfied that the safety action taken by Aurizon will reduce the risk of this safety issue.
RO-2018-011-SI-03: Queensland Rail did not have an effective process in place to ensure that safety-critical actions were coordinated and completed when multiple network control officers were involved in responding to an overhead line equipment emergency.	Safety action still pending	
Safety issue	Status	Status justification
RO-2019-002 Level crossing irregularity involving passenger train 3MA8, North Geelong, Vic, on 8 January 2019		
RO-2019-002-SI-01: VicTrack's contractor, UGL Engineering Limited, did not provide signalling testers with specific instructions detailing the scope of work to be conducted at each stage of a project, but rather, only provided packaged isolation plans for the entire project. The absence of these instructions increased the risk of the works being incorrectly implemented.	Adequately addressed	The ATSB is satisfied that the action taken by VicTrack will reduce the risk of works being incorrectly implemented in relation to isolation plans.
Safety issue	Status	Status justification
RO-2019-003 Derailment of freight train 6BM9 at Creighton, Vic, on 21 January 2019		
RO-2019-003-SI-01: The ARTC systems for managing track lateral stability did not lead to the location being managed as a location potentially vulnerable to instability.	Safety action still pending	
Safety issue	Status	Status justification
RO-2019-013 Derailment of loaded Pacific National coal service TM94, near Moss Vale, NSW, on 28 June 2019		
RO-2019-013-SI-01: Axle testing on wheelset number 7E5S 831444 was not carried out during the two most recent wheelset maintenance events in January 2016 and November 2016. It is likely the axle crack existed at the time of these maintenance activities.	Adequately addressed	ATSB is satisfied that the actions taken by Pacific National have addressed the safety issue.
RO-2019-013-SI-02: Inspection records for the December 2010 wheelset maintenance activity and wheel change on wheelset number 7E5S 831444 were not available. It is a requirement specified in Pacific National's Wagon Maintenance Manual that records be retained for a period of 12 years.	Adequately addressed	ATSB is satisfied that the actions taken by Pacific National have addressed the safety issue.

Safety issue	Status	Status justification
RO-2019-014 Near miss with maintenance worker on Skitube Alpine Railway, Bullocks Flat, NSW, on 3 July 2019		
RO-2019-014-SI-01: The Skitube system for managing access to track did not detect the conflict of the rail maintenance worker under the train at the same time the train was being shunted.	Adequately addressed	Re-iteration of the procedure and form requirements has merit in keeping current employees aware of the procedures' purpose. Re-iteration of these requirements would be required at regular intervals to maintain awareness of the risks controlled by the procedures. A refresher of the safe working rules and procedures prior to each operating season would achieve this.
RO-2019-014-SI-02: Elements of the safety and environment management system are reliant on procedures being followed to manage safety risks. There is little scope for the system to recover when there has been a human error or other procedural error.	Partially addressed	A broadcast radio call to make all operations staff aware of a red flagged train and its whereabouts provides another layer of control to strengthen existing controls. The requirement to confirm all controls are in place decreases the opportunity for a procedural error to occur. The Safeworking Check is a suitable method of monitoring compliance with procedures. The process for implementing independent verification of work when returning vehicles to service will be monitored.
RO-2019-014-SI-03: The system of placing protection flags on both ends of a train set does not provide a positive isolation of energy to ensure a train cannot be moved while it is being worked on.	Adequately addressed	The requirement to lower the pantograph and the additional, brakes applied, keys removed and driver's cab locked with do not operate tag placed on the driver cab effectively isolates power from the train. Locking the driver's cab and placing the do not operate tag is an effective mechanism of stopping another person from re-powering and moving a train without understanding why the cab is locked and the do not operate tag is in place.
Safety issue	Status	Status justification
RO-2020-005 Uncontained battery failure involving Sydney Light Rail Vehicle 053, Randwick LRV Depot, NSW, on 3 April 2020		
RO-2020-005-SI-01: Neither Alstom's validation processes nor fault monitoring processes were sufficient to detect the overcharging of batteries prior to the event.	Adequately addressed	The ATSB is satisfied that the safety actions taken by Alstom will reduce the risk of this safety issue.
Safety issue	Status	Status justification
RO-2020-006 Near hit with rail worker by passenger train 283D, Dora Creek, NSW, on 9 May 2020		
RO-2020-006-SI-01: There was an unapproved practice occurring during Track Work Authority of asking the Outer Handsignaller to remove Railway Track Signals from the track as a train was closely approaching in order to let it run free, which placed the Outer Handsignaller at risk of being struck by the train.	Safety action still pending	Sydney Trains has included this issue in their change request process for Network Rules. The amendment will be to reinforce the existing requirement in step 12 of NPR 702 as it relates to a TWA using an inner and outer handsignaller protection, in that both the inner and outer protection must be replaced immediately after the passage of each rail traffic movement.

Safety actions

Table 9: Number of safety actions released in 2020–21

Safety action type	Aviation	Marine	Rail	Total
Proactive safety action ⁶	41	8	16	65
Safety advisory notice	3	0	0	3
Safety recommendation	8	2	2	12
Total	52	10	18	80

ATSB recommendations closed in 2020–21

There were no aviation or marine safety recommendations closed in 2020–21.

Rail

Table 10: Rail – ATSB recommendations closed in 2020–21

Investigation	RO-2014-001: Derailment of Sydney Trains passenger train 602M near Edgecliff station, Sydney, NSW, on 15 January 2014
Safety issue	The lack of an appointed Officer in Charge of the incident site prior to the arrival of an Incident Rail Commander led to a fragmented response with no single employee having a recognised leadership role on site.
Number	RO-2014-001-SR-026
Organisation	Sydney Trains
Recommendation	The ATSB recommends that Sydney Trains, through a revision to its Incident Management Framework, adopts the positive appointment of an Officer in Charge for Level 2, 3 & 4 incidents once they have been reported. This requirement and the functions of an Officer in Charge must be included in the training of all operational Rail Management Centre (RMC) staff and all positions which may be required to adopt this role.
Released	3 December 2015
Final action	17 June 2021
Final action	Sydney Trains accepted the recommendation and advised ATSB that a revision to its Incident Management Framework amended Part 3 to state: 'Before the Rail Commander arrives on-site, the "Officer in Charge" (e.g. Train Driver, Station Manager, Infrastructure, Facilities or Maintenance Centre Manager) is responsible for first response activities and to be the point of contact for the Rail Management Centre (RMC). Upon arrival of the Rail Commander, the Officer in Charge hands over to the Rail Commander...' The recommendation has been partially addressed.
Investigation	RO-2018-004: Collision of Waratah passenger train A42 with buffer stop at Richmond Station, NSW, on 22 January 2018
Safety issue	The rostering of the driver in the days leading up to the incident was inconsistent with Sydney Trains' rostering principles.
Number	RO-2018-004-SR-020
Organisation	Sydney Trains
Recommendation	The ATSB recommends that Sydney Trains take safety action to ensure that existing procedures regarding adequate rest breaks between shift cycles and start time rotations are reinforced to safeguard against fatigue impairment of train crew.
Released	20 December 2019
Final action	13 October 2020

⁶ Only includes proactive safety action taken by industry linked to an ATSB-identified safety issue.

Final action	<p>Sydney Trains provided the following information about the action it has taken regarding this safety issue:</p> <ul style="list-style-type: none"> • Train Crew rosters are designed in accordance with SMS Rostering Principles as detailed in SMS-08-OP-3128 Managing Shift Work and Rostering at master roster level with controls in place at period roster level. Where there is departure from the rostering principles owing to operational requirements, fatigue risk control measures are identified and implemented as part of a risk management approach which includes consultation with affected workers. • Train Crew specific procedures such as STOTC-14-005 Train Crew Fatigue Management Procedure (which references Sydney Trains' fatigue management systems), the Guards Rostering and Working Arrangements (GRWA) document and Drivers Working and Rostering Arrangements (DRWA) documents provide a level of operational and employee flexibility and control. Train Crew manage potential fatigue and other lifestyle issues primarily to the intent of these documents. • The offer of overtime that creates a deviation from the rostering principles is facilitated in these procedures and arrangements and requires acknowledgment by the Train Crew to the Rostering Officer that they are OK to work the offered shift. • The Sydney Trains Fatigue Risk Management Improvement Program (FRMIP) Phase 1 (Technical Development) provided for, among other things, developing a revised and improved Fatigue Risk Management System (FRMS). Phase 2 (Change Management) involves communication of the improved FRMS to all relevant business areas within Sydney Trains. The business units are expected to resource and workshop the FRMS in order to effectively enable, and sustain, its implementation for their specific needs. • Strategy, Portfolio and Investment Directorate (SPID) has been tasked by Sydney Trains Executive to establish a governance framework and a governance lead to manage the second phase (Change Management) of the FRMIP. • As part of the change management process, the Fatigue Management Control System (FMCS) is in the final stages of deployment with a target of end of 2020. As part of the deployment, integration plans for a number of nominated business areas are being developed to integrate the FMCS into their specific rostering practices. This will inform the progressive rollout of the FMCS across the organisation which will enhance the ability for the relevant business areas to more readily identify the possibility of a rostering principle deviation and provide improved opportunities for the business areas to respond and manage the situation. Starting initially with 'Shift Length' and 'Rest Between Shifts' the FMCS will eventually cover all of the revised rostering principles detailed in the FRMIP. <p>The ATSB is satisfied that the action taken by Sydney Trains addresses this safety issue.</p>
Investigation	RO-2018-008: Track obstruction due to loss of freight involving train 6WM2 and subsequent impact of passenger train 8615 with track obstruction, near Winton, Vic, on 30 March 2018
Safety issue	Pacific National's Freight Loading Manual did not require a combination of radial unitising straps on jumbo coils positioned such that a strap was always free from contact with the cradle. The provision of straps in this configuration would have reduced the risk of the coil telescoping in the event of strap breakage due to contact with the cradle.
Number	RO-2018-008-SR-040
Organisation	Pacific National Pty Ltd
Recommendation	The ATSB recommends that Pacific National address the risk presented by continuing to allow jumbo coils to be loaded in an orientation where all the radial straps are positioned within the contact zone between the coil and cradle.
Released	10 December 2020
Final action	5 May 2021
Final action	<p>Pacific National engineers briefed the ATSB on the results of further work. The briefing addressed the four items indicated in correspondence dated 30 March 2021.</p> <p>Pacific National also told the ATSB that all cradles, demountable and fixed, are being fitted with rubber load mat and that details of the mat and the requirement to inspect and maintain have been included in a draft (currently being reviewed for implementation) section of their Wagon Maintenance Manual.</p>

Investigation	RO-2018-008: Track obstruction due to loss of freight involving train 6WM2 and subsequent impact of passenger train 8615 with track obstruction, near Winton, Vic, on 30 March 2018
Safety issue	Pacific National did not demonstrate that the load restraint system provided by demountable cradles carrying jumbo coils was safe and fit for purpose.
Number	RO-2018-008-SR-042
Organisation	Pacific National Pty Ltd
Recommendation	The ATSB recommends that Pacific National review the load restraint system provided by the demountable cradle design to demonstrate that they sufficiently restrain jumbo coils against lateral accelerations and prevent coils from moving and falling during transit.
Released	10 December 2020
Final action	5 May 2021
Final action	Pacific National engineers briefed the ATSB on the results of further work. The briefing addressed the four items indicated in correspondence dated 30 March 2021. Pacific National has indicated that it believes, based on calculations and measured data, that its jumbo coil carrying demountable cradles provide, at minimum, restraint capable of resisting about 0.75 g acceleration. This was greater than the actual accelerations measured by instrumentation during operation, at about 0.3 g typical (0.372 g maximum peak). Therefore, Pacific National stated that the level of load restraint offered by current demountable cradles demonstrates that they sufficiently restrain jumbo coils against lateral accelerations and prevent coils from moving and falling during transit.

Safety recommendations released in 2020–21

Aviation

Table 11: Aviation – Safety recommendations released in 2020–21

Investigation	AO-2017-118 Collision with water involving a de Havilland Canada DHC-2 Beaver aircraft, VH-NOO, at Jerusalem Bay, Hawkesbury River, NSW on 31 December 2017
Safety issue	Annex 6 to the Convention of International Civil Aviation did not mandate the fitment of flight recorders for passenger-carrying aircraft under 5,700 kg. Consequently, the determination of factors that influenced this accident, and numerous other accidents, have been hampered by a lack of recorded data pertaining to the flight. This has likely resulted in important safety issues not being identified, which may remain a hazard to current and future passenger-carrying operations.
Number	AO-2017-118-SR-048
Organisation	International Civil Aviation Organization
Recommendation	The ATSB recognises that the International Civil Aviation Organization has developed technical standards for lightweight recorders and airborne image recorders. However, despite the known benefits for the identification of safety issues, the fitment of such devices for passenger-carrying aircraft with a maximum take-off weight less than 5,700 kg is not mandated. The ATSB recommends that the International Civil Aviation Organization takes safety action to consider the safety enhancement of these devices to passenger-carrying operations.
Released	29 January 2021
Investigation	AO-2017-118 Collision with water involving a de Havilland Canada DHC-2 Beaver aircraft, VH-NOO, at Jerusalem Bay, Hawkesbury River, NSW on 31 December 2017
Safety issue	Australian civil aviation regulations did not mandate the fitment of flight recorders for passenger-carrying aircraft under 5,700 kg. Consequently, the determination of factors that influenced this accident, and other accidents, have been hampered by a lack of recorded data pertaining to the flight. This has likely resulted in the non-identification of safety issues, which continue to present a hazard to current and future passenger-carrying operations.
Number	AO-2017-118-SR-049
Organisation	Civil Aviation Safety Authority
Recommendation	The ATSB recommends that CASA consider mandating the fitment of onboard recording devices for passenger-carrying aircraft with a maximum take-off weight less than 5,700 kg.
Released	29 January 2021

Investigation	AO-2017-118 Collision with water involving a de Havilland Canada DHC-2 Beaver aircraft, VH-NOO, at Jerusalem Bay, Hawkesbury River, NSW on 31 December 2017
Safety issue	There was no regulatory requirement from CASA for piston-engine aircraft to carry a carbon monoxide detector with an active warning to alert pilots to the presence of elevated levels of carbon monoxide in the cabin.
Number	AO-2017-118-SR-050
Organisation	Civil Aviation Safety Authority
Recommendation	The ATSB recommends that CASA takes further safety action to enable it to consider mandating the carriage of carbon monoxide detectors in piston-engine aircraft, particularly passenger-carrying operations.
Released	29 January 2021
Investigation	AO-2018-006 Rotor RPM decay and hard landing involving Robinson R44, VH-HGX, 5 km south of Ayers Rock Airport, NT, on 17 January 2018
Safety issue	The Robinson R44 pilot's operating handbook low rotor RPM recovery procedure did not include reference to the minimum power airspeed for the helicopter as a consideration, which may assist a pilot to recover from a low rotor RPM condition.
Number	AO-2018-006-SR-053
Organisation	Robinson Helicopter Company
Recommendation	The ATSB recommends that the Robinson Helicopter Company reviews the R44 pilot's operating handbook low rotor RPM recovery procedure for consideration to include a reference to the minimum power airspeed (Vy) for pilot awareness.
Released	7 October 2020
Investigation	AO-2018-026 Loss of control and collision with water involving Eurocopter EC120B, VH-WII, Hardy Reef, Whitsundays, Qld, on 21 March 2018
Safety issue	Due to multiple factors, the design of the rear left sliding door (emergency exit) on the EC120B helicopter was not simple and obvious to use unless the occupant was provided with specific instructions about how to operate the exit. In particular: <ul style="list-style-type: none"> the door required three actions to open (pull handle up, push door out, slide door back), and the second action was not indicated in either the design of the handle or the placard next to the handle the design of the inside handle was such that its purpose may not have been readily apparent to many users.
Number	AO-2018-026-SR-073
Organisation	Airbus Helicopters
Recommendation	The ATSB recommends that Airbus Helicopters takes safety action to address the safety issue associated with the design of the rear left sliding door on the EC120B helicopter to ensure that, as best as possible, the door is simple and obvious to use and/or passengers are provided with sufficient instructions so that it is simple and obvious to use.
Released	16 June 2021
Investigation	AO-2018-027 Controlled flight into terrain involving Kavanagh Balloons G-525, VH-HVW, Pokolbin, NSW, on 30 March 2018
Safety issue	The visual flight rules permitted balloons to arrive and depart in foggy conditions without assurance that sufficient visibility existed to see and avoid obstacles.
Number	AO-2018-027-SR-044
Organisation	Civil Aviation Safety Authority
Recommendation	The ATSB recommends that CASA undertake a risk assessment of the reduced visibility exemption to the visual flight rules for balloons, to determine whether it assures an adequate level of safety. Furthermore, that CASA publishes any required mitigating factors identified from the risk assessment that are necessary to operate safely in the reduced visibility conditions.
Released	11 August 2020

Investigation	AO-2018-049 Uncommanded engine shutdown involving De Havilland Aircraft of Canada DHC-8, VH-LQD, 77 km north-north-west of Brisbane Airport, Qld, on 26 June 2018
Safety issue	The procedures in the aircraft maintenance manual relating to chip detector debris analysis were written in a way that could cause confusion and error. This probably influenced the actions of the maintenance personnel to release the aircraft to service with a deteriorating bearing.
Number	AO-2018-049-SR-050
Organisation	Pratt & Whitney Canada
Recommendation	The ATSB recommends that Pratt & Whitney Canada takes safety action to improve the clarity of procedures within the chip detector debris analysis section of the aircraft maintenance manual.
Released	16 September 2020
Investigation	AO-2019-060 Engine failure during take-off involving Bombardier Dash 8, VH-ZZE, at Darwin Airport, NT, on 11 November 2019
Safety issue	The power turbine shaft in Pratt & Whitney Canada PW100 series engines operating in certain marine environments is susceptible to corrosion pitting, which can grow undetected between scheduled inspections. This increases the risk of shaft fracture resulting in engine failure.
Number	AO-2019-060-SR-043
Organisation	Pratt & Whitney Canada
Recommendation	The ATSB recommends that Pratt & Whitney Canada takes safety action to address the risk of corrosion-related fracture of the power turbine shaft in its PW100 series engines.
Released	10 March 2021

Marine

Table 12: Marine – Safety recommendations released in 2020–21

Investigation	MO-2018-011 Fire on board <i>Iron Chieftain</i>, Port Kembla, NSW, on 18 June 2018
Safety issue	The capability of Fire and Rescue NSW to effectively respond to a shipboard fire in Port Kembla, was limited by: <ul style="list-style-type: none"> • a lack of specialised marine firefighting expertise • outdated marine training for firefighters • relative inexperience in shipboard firefighting associated with the rarity of major shipboard fires • an absence of marine-specific firefighting resources and aids for use by first responders.
Number	MO-2018-011-SR-014
Organisation	Fire and Rescue NSW
Recommendation	The ATSB recommends that Fire and Rescue NSW takes further action to address the limited marine firefighting capability in Port Kembla due to the lack of specialised marine firefighting expertise, experience, updated training and resources.
Released	11 May 2021
Investigation	MO-2018-011 Fire on board <i>Iron Chieftain</i>, Port Kembla, NSW, on 18 June 2018
Safety issue	The cargo handling spaces of specialised self-unloading bulk carriers continue to present a very high fire risk due to the inadequacy of standards or regulations for self-unloading systems, including for conveyor belts, and dedicated fire detection/fixed fire-extinguishing systems. This has been a factor in at least three major fires over a 25-year period, including <i>Iron Chieftain's</i> constructive total loss.
Number	MO-2018-011-SR-015
Organisation	Australian Maritime Safety Authority
Recommendation	The ATSB recommends that AMSA takes steps to formally raise this safety issue with the International Maritime Organization to seek safety action aimed at addressing the risk of fire in the cargo handling spaces of self-unloading bulk carriers due to the inadequacy of the current associated standards/regulations.
Released	11 May 2021

Rail

Table 13: Rail – Safety recommendations released in 2020–21

Investigation	RO-2018-008 Track obstruction due to loss of freight involving train 6WM2 and subsequent impact of passenger train 8615 with track obstruction, near Winton, Vic, on 30 March 2018
Safety issue	Pacific National's Freight Loading Manual did not require a combination of radial unitising straps on jumbo coils positioned such that a strap was always free from contact with the cradle. The provision of straps in this configuration would have reduced the risk of the coil telescoping in the event of strap breakage due to contact with the cradle.
Number	RO-2018-008-SR-040
Organisation	Pacific National Pty Ltd
Recommendation	The ATSB recommends that Pacific National address the risk presented by continuing to allow jumbo coils to be loaded in an orientation where all the radial straps are positioned within the contact zone between the coil and cradle.
Released	10 December 2020
Investigation	RO-2018-008 Track obstruction due to loss of freight involving train 6WM2 and subsequent impact of passenger train 8615 with track obstruction, near Winton, Vic, on 30 March 2018
Safety issue	Pacific National did not demonstrate that the load restraint system provided by demountable cradles carrying jumbo coils was safe and fit for purpose.
Number	RO-2018-008-SR-042
Organisation	Pacific National Pty Ltd
Recommendation	The ATSB recommends that Pacific National review the load restraint system provided by the demountable cradle design to demonstrate that they sufficiently restrain jumbo coils against lateral accelerations and prevent coils from moving and falling during transit.
Released	10 December 2020

Safety advisory notices released in 2020–21

Table 14: Safety advisory notices released in 2020–21

Investigation	AO-2017-118 Collision with water involving a de Havilland Canada DHC-2 Beaver aircraft, VH-NOO, at Jerusalem Bay, Hawkesbury River, NSW on 31 December 2017
Safety issue	N/A
Number	AO-2017-118-SAN-001
Organisation	Maintainers of piston-engine aircraft
Safety advisory notice	The thorough inspection of piston-engine exhaust systems and the timely repair or replacement of deteriorated components is the primary mechanism for preventing carbon monoxide exposure. This, in combination with the assured integrity of the firewall, decreases the possibility of carbon monoxide entering the cabin. The ATSB reminds maintainers of the importance of conducting detailed inspections of exhaust systems and firewalls, with consideration for potential carbon monoxide exposure.
Released	3 July 2020
Investigation	AO-2017-118 Collision with water involving a de Havilland Canada DHC-2 Beaver aircraft, VH-NOO, at Jerusalem Bay, Hawkesbury River, NSW on 31 December 2017
Safety issue	N/A
Number	AO-2017-118-SAN-002
Organisation	Operators, owners and pilots of piston-engine aircraft
Safety advisory notice	The use of an attention attracting carbon monoxide detector in the cockpit provides pilots with the best opportunity to detect carbon monoxide exposure before it adversely affects their ability to control the aircraft or become incapacitated. The ATSB strongly encourages operators and owners of piston-engine aircraft to install a carbon monoxide detector with an active warning to alert pilots to the presence of elevated levels of carbon monoxide in the cabin. If not provided, pilots are encouraged to carry a personal carbon monoxide detection and alerting device.
Released	3 July 2020
Investigation	AO-2020-064 Loss of control and collision with terrain involving Robinson R44, VH-HOB, near Clare, SA, on 22 December 2020
Safety issue	N/A
Number	AO-2020-064-SAN-014
Organisation	R44 helicopter operators
Safety advisory notice	The ATSB advises operators of R44 helicopters to note the preliminary finding of this accident and to look for the presence of corrosion, fretting or cracking, which may not be visually obvious, during all inspections of the clutch shaft yoke. Any identified defects should be notified to both the ATSB and CASA.
Released	7 June 2021

SECTION 6 – FINANCIAL STATEMENTS



Australian Government

Australian Transport Safety Bureau

Financial Statements 2020-21

Australian Transport Safety Bureau

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INDEPENDENT AUDITOR'S REPORT

To the Minister for Infrastructure, Transport and Regional Development

Opinion

In my opinion, the financial statements of the Australian Transport Safety Bureau (the Entity) for the year ended 30 June 2021:

- (a) comply with Australian Accounting Standards – Reduced Disclosure Requirements and the *Public Governance, Performance and Accountability (Financial Reporting) Rule 2015*; and
- (b) present fairly the financial position of the Entity as at 30 June 2021 and its financial performance and cash flows for the year then ended.

The financial statements of the Entity, which I have audited, comprise the following as at 30 June 2021 and for the year then ended:

- Statement by the Chief Commissioner and Chief Financial Officer;
- Statement of Comprehensive Income;
- Statement of Financial Position;
- Statement of Changes in Equity;
- Cash Flow Statement; and
- Notes to the financial statements, comprising a summary of significant accounting policies and other explanatory information.

Basis for opinion

I conducted my audit in accordance with the Australian National Audit Office Auditing Standards, which incorporate the Australian Auditing Standards. My responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of my report. I am independent of the Entity in accordance with the relevant ethical requirements for financial statement audits conducted by the Auditor-General and his delegates. These include the relevant independence requirements of the Accounting Professional and Ethical Standards Board's APES 110 *Code of Ethics for Professional Accountants (including Independence Standards)* (the Code) to the extent that they are not in conflict with the *Auditor-General Act 1997*. I have also fulfilled my other responsibilities in accordance with the Code. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Accountable Authority's responsibility for the financial statements

As the Accountable Authority of the Entity, the Chief Commissioner is responsible under the *Public Governance, Performance and Accountability Act 2013* (the Act) for the preparation and fair presentation of annual financial statements that comply with Australian Accounting Standards – Reduced Disclosure Requirements and the rules made under the Act. The Chief Commissioner is also responsible for such internal control as the Chief Commissioner determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Chief Commissioner is responsible for assessing the ability of the Entity to continue as a going concern, taking into account whether the Entity's operations will cease as a result of an administrative restructure or for any other reason. The Chief Commissioner is also responsible for disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the assessment indicates that it is not appropriate.

Auditor's responsibilities for the audit of the financial statements

My objective is to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the Australian National Audit Office Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with the Australian National Audit Office Auditing Standards, I exercise professional judgement and maintain professional scepticism throughout the audit. I also:

- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- obtain an understanding of internal control relevant to the audit 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 Entity's internal control;
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Accountable Authority;
- conclude on the appropriateness of the Accountable Authority's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Entity's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Entity to cease to continue as a going concern; and
- evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

I communicate with the Accountable Authority regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

Australian National Audit Office



Colin Bienne
Audit Principal

Delegate of the Auditor-General

Canberra
30 September 2021

STATEMENT BY THE CHIEF COMMISSIONER AND CHIEF FINANCIAL OFFICER

In our opinion, the attached financial statements for the year ended 30 June 2021 comply with subsection 42(2) of *the Public Governance, Performance and Accountability Act 2013* (PGPA Act), and are based on properly maintained financial records as per subsection 41(2) of the PGPA Act.

In our opinion, at the date of this statement, there are reasonable grounds to believe that the non-corporate Commonwealth entity will be able to pay its debts as and when they fall due.



Angus Mitchell
Chief Commissioner

29 September 2021



Krishna Kumar
Chief Financial Officer

29 September 2021

Statement of Comprehensive Income
for the period ended 30 June 2021

	Notes	2021 \$'000	2020 \$'000	Original Budget \$'000
NET COST OF SERVICES				
Expenses				
Employee benefits	1.1A	15,972	15,978	15,973
Suppliers	1.1B	7,208	7,871	7,452
Depreciation and amortisation	2.2A	2,297	2,229	2,198
Finance costs	1.1C	86	102	84
Write-down and impairment of other assets	1.1D	119	7	-
Total expenses		25,682	26,187	25,707
Own-source income				
Own-source revenue				
Revenue from contracts with customers	1.2A	1,121	1,184	1,164
Other revenue	1.2B	3,280	3,843	2,829
Total own-source revenue		4,401	5,027	3,993
Gains				
Other gains	1.2C	4	3	-
Total gains		4	3	-
Total own-source income		4,405	5,030	3,993
Net cost of services		(21,277)	(21,157)	(21,714)
Revenue from government	1.2D	20,933	20,205	20,933
Deficit after income tax on continuing operations		(344)	(952)	(781)
OTHER COMPREHENSIVE INCOME				
Items not subject to subsequent reclassification to net cost of services				
Changes in asset revaluation surplus		(18)	109	-
Total other comprehensive income		(18)	109	-
Total comprehensive loss		(362)	(843)	(781)

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

Statement of Financial Position

as at 30 June 2021

	Notes	2021 \$'000	2020 \$'000	Original Budget \$'000
ASSETS				
Financial assets				
Cash and cash equivalents	2.1A	336	145	145
Trade and other receivables	2.1B	9,033	8,384	8,391
Accrued revenue		90	71	68
Total financial assets		9,459	8,600	8,604
Non-financial assets¹				
Buildings	2.2A	7,724	8,570	6,963
Heritage and cultural	2.2A	16	16	16
Plant and equipment	2.2A	2,730	1,085	2,954
Computer software	2.2A	2,641	1,136	3,353
Prepayments		536	225	225
Total non-financial assets		13,647	11,032	13,511
Assets held for sale		-	-	-
Total assets		23,106	19,632	22,115
LIABILITIES				
Payables				
Suppliers	2.3A	288	569	1,035
Other payables	2.3B	354	480	4
Total payables		642	1,049	1,039
Interest bearing liabilities				
Leases	2.4A	8,118	8,862	7,358
Total interest bearing liabilities		8,118	8,862	7,358
Provisions				
Employee provisions	4.1A	4,811	4,559	4,609
Total provisions		4,811	4,559	4,609
Total liabilities		13,571	14,470	13,006
Net assets		9,535	5,162	9,109
EQUITY				
Contributed equity		4,939	204	4,939
Reserves		521	539	539
Retained surplus		4,075	4,419	3,631
Total equity		9,535	5,162	9,109

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

¹: Right-of-use assets are included in the buildings and plant and equipment asset categories.

Statement of Changes in Equity
for the period ended 30 June 2021

	Notes	2021 \$'000	2020 \$'000	Original Budget \$'000
CONTRIBUTED EQUITY				
Opening balance				
Balance carried forward from previous period		204	13,546	204
Adjusted opening balance		204	13,546	204
Transactions with owners				
Distributions to owners				
Other ¹ - Appropriation returned		-	(14,000)	-
Contributions by owners				
Equity injection - Appropriations		-	68	-
Departmental capital budget		4,735	590	4,735
Total transactions with owners		4,735	(13,342)	4,735
Transfers between equity components		-	-	-
Closing balance as at 30 June		4,939	204	4,939
RETAINED EARNINGS				
Opening balance				
Balance carried forward from previous period		4,419	5,371	4,412
Adjusted opening balance		4,419	5,371	4,412
Comprehensive Income				
Deficit for the period		(344)	(952)	(781)
Total comprehensive income		(344)	(952)	(781)
Closing balance as at 30 June		4,075	4,419	3,631
ASSET REVALUATION RESERVE				
Opening balance				
Balance carried forward from previous period		539	430	539
Adjusted opening balance		539	430	539
Comprehensive Income				
Other comprehensive income		(18)	109	-
Total comprehensive income		(18)	109	-
Closing balance as at 30 June		521	539	539
Total Equity as at 30 June		9,535	5,162	9,109

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

¹ An unspent amount of \$14.0m relating to missing Malaysia Airlines Flight 370 (MH370) was quarantined under section 51 of the Constitution of Australia during 2019-20.

Cash Flow Statement*for the period ended 30 June 2021*

		2021	2020	Original Budget
	Notes	\$'000	\$'000	\$'000
OPERATING ACTIVITIES				
Cash received				
Appropriations		20,935	18,911	20,933
Sale of goods and rendering of services		1,176	1,362	1,164
GST received		726	259	-
Other		156	182	-
Total cash received		22,993	20,714	22,097
Cash used				
Employees		15,852	15,245	15,923
Suppliers		5,326	4,181	4,673
Interest payments on lease liabilities		86	102	84
Other		150	186	-
Total cash used		21,414	19,714	20,680
Net cash from/(used by) operating activities		1,579	1,000	1,417
INVESTING ACTIVITIES				
Cash received				
Proceeds from sales of property, plant and equipment		11	6	-
Total cash received		11	6	-
Cash used				
Purchase of property, plant and equipment		2,151	161	4,735
Purchase of computer software		1,862	280	-
Total cash used		4,013	441	4,735
Net cash from/(used by) investing activities		(4,002)	(435)	(4,735)
FINANCING ACTIVITIES				
Cash received				
Contributed Equity		4,088	852	4,735
Total cash received		4,088	852	4,735
Cash used				
Principal payments of lease liabilities		1,474	1,424	1,417
Total cash used		1,474	1,424	1,417
Net cash from/(used by) financing activities		2,614	(572)	3,318
Net increase/(decrease) in cash held		191	(7)	-
Cash and cash equivalents at the beginning of the reporting period		145	152	145
Cash and cash equivalents at the end of the reporting period	2.1A	336	145	145

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

Budget Variances Commentary

The explanations provide a comparison of the original budget as presented in the 2020-21 Portfolio Budget Statements (PBS) to the 2020-21 final outcome as presented in accordance with Australian Accounting Standards for the Australian Transport Safety Bureau (ATSB). The Budget is not audited.

Variances are considered to be 'major' based on the following criteria:

- the variance between budget and actual is greater than 10%; and
- the variance between budget and actual is greater than 2% of total expenses or total own-source revenues; or
- the variance between budget and actual is below this threshold but is considered important for the reader's understanding or is relevant to an assessment of the discharge of accountability and to an analysis of performance of the agency.

In some instances, a budget has not been provided for in the PBS, for example non-cash items such as asset revaluations and sale of assets adjustments. Unless the variance is considered to be 'major' no explanation has been provided.

Explanations of major variances	Affected line items (and statement)
Application of Australian Accounting Standards Board Standard 16 - Leases (AASB16) With the application of AASB16 Leases, there was a large shift from supplier expenses to depreciation and interest within the Statement of Financial Position, in relation to the ATSB's office accommodation and vehicle leases.	Statement of Comprehensive Income Expenses - Suppliers Expenses - Depreciation and amortisation Expenses - Finance costs Statement of Financial Position Non-financial assets - Buildings Interest-bearing liabilities - Leases
Income A decrease in funding received in relation to the ATSB's international projects occurred after the original budget was set.	Statement of Comprehensive Income Own-source revenue - Revenue from contracts with customers
Other Revenue An increase in other revenue is as a result of higher than projected investigation services completed during the financial year. The ATSB receives the services free of charge from the Chief Investigator Transport Safety, Victoria and the NSW Office of Transport Safety Investigations.	Statement of Comprehensive Income Own-source revenue - Other revenue
Financial Assets The budgeted estimate for cash and accrued revenue is made on a rolling three-year historical trend, which has resulted in an estimate being less than the 2020-21 actual.	Statement of Financial Position Financial assets - Cash and cash equivalents Financial assets - Accrued revenue
Non-Financial Assets The ATSB experienced significant delays in implementing a major internally developed software projects during 2020-21. It is expected that the implementation of this project will occur early in 2021-22.	Statement of Financial Position Non-financial assets - Computer software

Budget Variances Commentary (continued)

Other Payables

The variance between the budget within the PBS and the actual outcome for the 2020-21 financial year, is mainly attributable to the unprojected employee cessation entitlements payable.

Statement of Financial Position

Payables - Other payables

Provisions

Employee provisions are higher than expected due to leave transferred in for new staff not budgeted for.

Statement of Financial Position

Provisions - Employee provisions

Statement of Changes in Equity

Total equity is greater than projected in the budget mainly due the differences between the actual and budgeted operating result, with the larger variance identified above.

Statement of Changes in Equity

Cash Flow Statement

Variances in the Cash Flow Statement are broadly consistent with the variances explained above for income and expenses.

Cash Flow Statement

Overview

Objective of the Australian Transport Safety Bureau

The ATSB is an Australian Government controlled entity. It is a not-for-profit entity. The objective of the entity is to improve transport safety in Australia through: independent 'no blame' investigation of transport safety accidents and other safety occurrences; safety data recording, analysis and research; and fostering safety awareness, knowledge and action.

The Basis of Preparation

The financial statements are general purpose financial statements and are required by section 42 of the *Public Governance, Performance and Accountability Act 2013*.

The financial statements have been prepared in accordance with:

- a) *Public Governance, Performance and Accountability (Financial Reporting) Rule 2015* (FRR); and
- b) Australian Accounting Standards and Interpretations – Reduced Disclosure Requirements 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 at fair value. 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.

New Accounting Standards

The following new standard was issued prior to the signing of the statement by the Chief Commissioner and Chief Financial Officer, was applicable to the current reporting period and did not have a material effect on the ATSB's financial statements:

AASB 1059 Service Concession Arrangements: Grantors	<p>AASB 1059 became effective from 1 July 2020.</p> <p>The new standard addresses the accounting for a service concession arrangement by a grantor that is a public sector entity by prescribing the accounting for the arrangement from a grantor's perspective.</p> <p>Prior to the issuance of AASB 1059, there was no definitive accounting guidance in Australia for service concession arrangements, which include a number of public private partnerships (PPP) arrangements. The AASB issued the new standard to address the lack of specific accounting guidance and based the content thereof broadly on its international equivalent: International Public Sector Accounting Standard 32: <i>Service Concession Arrangements: Grantor</i>.</p>
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Taxation

The entity is exempt from all forms of taxation except Fringe Benefits Tax and the Goods and Services Tax (GST).

Events After the Reporting Period

There were no events subsequent to 30 June 2021 that had the potential to significantly effect the ongoing structure and financial activities of the ATSB.

Financial Performance

This section analyses the financial performance of the Australian Transport Safety Bureau for the year ended 30 June 2021.

1.1 Expenses

	2021	2020
	\$'000	\$'000
1.1A: Employee benefits		
Wages and salaries	12,187	12,139
Superannuation		
Defined contribution plans	1,744	1,531
Defined benefit plans	393	572
Leave and other entitlements	1,309	1,313
Separation and redundancies	237	317
Other Employee Expenses	102	106
Total employee benefits	15,972	15,978

Accounting Policy

Accounting policies for employee related expenses is contained in the People and Relationships section.

1.1B: Suppliers

Goods and services supplied or rendered

Investigation services	3291	3887
Information technology	1903	1659
Services from the Department of Infrastructure, Transport, Regional Development and Communications	487	479
Contracted Services	318	478
Travel	120	384
Training and conferences	149	257
Communications	168	162
Audit fees	82	104
Office rent ¹	35	30
Publications and printing	17	33
Consultants	296	22
Legal	25	16
Other	227	254
Total goods and services supplied or rendered	7,118	7,765
Goods supplied	222	149
Services rendered	6,896	7,616
Total goods and services supplied or rendered	7,118	7,765
Other suppliers		
Workers compensation expenses	90	106
Total other suppliers	90	106
Total suppliers	7,208	7,871

¹The ATSB does not have any short-term or low-value lease commitments as at 30 June 2021.

The above lease disclosures should be read in conjunction with the accompanying notes 1.1C, 1.2C, 2.2 and 3.2.

1.1 Expenses (continued)**Accounting Policy****Short-term leases and leases of low-value assets**

The ATSB has elected not to recognise right-of-use assets and lease liabilities for short-term leases of assets that have a lease term of 12 months or less and leases of low-value assets (less than \$10,000). The ATSB recognises the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

	2021	2020
	\$'000	\$'000
1.1C: Finance costs		
Interest on lease liabilities	86	102
Total finance costs	86	102

The above lease disclosures should be read in conjunction with the accompanying notes 1.1B, 1.2C, 2.2 and 3.2.

Accounting Policy

All borrowing costs are expensed as incurred.

1.1D: Write-down and impairment of other assets

Impairment of property, plant and equipment	119	5
Impairment of non-current assets held for sale	-	2
Total write-down and impairment of other assets	119	7

1.2 Own-Source Revenue and Gains

	2021	2020
	\$'000	\$'000
Own-Source Revenue		
1.2A: Revenue from contracts with customers		
Rendering of services	1,121	1,184
Total revenue from contracts with customers	1,121	1,184

Accounting Policy

Revenue from the sale of goods is recognised when control has been transferred to the buyer.

AASB 15 has been applied to all new and uncompleted contracts from the date of initial application.

The following is a description of principal activities from which the ATSB generates its revenue:

- Government appropriations
- International programmes of work
- Cost recovery rail investigations

The ATSB's revenue in relation to its international programmes and cost recovery activities are agreement based and within scope for AASB 15. There are separate agreements, with separate terms, based on performance over time obligations and point in time obligations.

The transaction price is the total amount of consideration to which the ATSB expects to be entitled in exchange for transferring promised goods or services to a customer. The consideration promised in a contract with a customer may include fixed amounts, variable amounts, or both.

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 at end of the reporting period. Allowances are made when collectability of the debt is no longer probable.

1.2B: Other revenue

Resources received free of charge		
Remuneration of auditors ¹	51	51
Investigation Services	3,229	3,781
Other	-	11
Total other revenue	3,280	3,843

¹: The ANAO does not provide any other services other than an audit of the Financial Statements.

Accounting Policy

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.

1.2 Own-Source Revenue and gains (continued)

	2021	2020
	\$'000	\$'000
Gains		
1.2C: Other gains		
Sale proceeds	4	3
Total other gains	4	3

Accounting Policy

Sale of Assets

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

1.2D: Revenue from government

Departmental appropriations	20,933	20,205
Total revenue from Government	20,933	20,205

Accounting Policy

Revenue from Government

Amounts appropriated for departmental appropriations for the year (adjusted for any formal additions and reductions) are recognised as Revenue from Government when the ATSB gains control of the appropriation, except for certain amounts relating to activities that are reciprocal in nature, in which case revenue is recognised only when it has been earned. Appropriations receivable are recognised at their nominal amounts.

Financial Position

This section analyses the Australian Transport Safety Bureau's assets used to conduct its operations and the operating liabilities incurred as a result. Employee related information is disclosed in the People and Relationships section.

2.1 Financial Assets

	2021	2020
	\$'000	\$'000

2.1A: Cash and cash equivalents

Cash on hand or on deposit	336	145
Total cash and cash equivalents	336	145

Accounting Policy

Cash is recognised at its nominal amount. Cash and cash equivalents includes:

- a) cash on hand; and
- b) 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.

2.1B: Trade and other receivables

Goods and services receivables

Goods and services	14	1
Total goods and services receivables	14	1

Appropriations receivables

Appropriation receivable	8,955	8,311
Total appropriations receivables	8,955	8,311

Other receivables

Statutory receivables	64	72
Total other receivables	64	72
Total trade and other receivables (gross)	9,033	8,384

Total trade and other receivables (net)	9,033	8,384
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Trade and other receivables have been assessed for impairment and none was identified.

Accounting Policy

Financial assets

Trade receivables and other receivables that are held for the purpose of collecting the contractual cash flows where the cash flows are solely payments of principal and interest, that are not provided at below-market interest rates, are subsequently measured at amortised cost using the effective interest method adjusted for any loss allowance.

2.2 Non-Financial Assets

2.2A: Reconciliation of the Opening and Closing Balances of Property, Plant and Equipment and Intangibles

Reconciliation of the opening and closing balances of property, plant and equipment for 2021

	Buildings \$'000	Heritage and cultural \$'000	Plant and equipment \$'000	Computer Software ¹ \$'000	Total \$'000
As at 1 July 2020					
Gross book value	10,153	16	1,154	6,935	18,258
Accumulated depreciation, amortisation and impairment	(1,583)	-	(69)	(5,799)	(7,451)
Total as at 1 July 2020	8,570	16	1,085	1,136	10,807
Additions					
Purchase	-	-	2,151	-	2,151
Internally developed	-	-	-	1,862	1,862
Right-of-use assets	780	-	46	-	826
Revaluations and impairments recognised in other comprehensive income ²	-	-	(18)	-	(18)
Impairments recognised in net cost of services ²	-	-	(97)	(22)	(119)
Depreciation and amortisation	-	-	(368)	(335)	(703)
Depreciation on right-of-use assets	(1,578)	-	(16)	-	(1,594)
Other movements					-
Other ³	-	-	(8)	-	(8)
Other movements of right-of-use assets	(48)	-	(45)	-	(93)
Total as at 30 June 2021	7,724	16	2,730	2,641	13,111
		Heritage and cultural	Plant and equipment	Computer Software	Total
	Buildings \$'000	\$'000	\$'000	\$'000	\$'000
Total as at 30 June 2021 represented by					
Gross book value	10,753	16	3,128	8,759	22,656
Accumulated depreciation, amortisation and impairment	(3,029)	-	(398)	(6,118)	(9,545)
Total as at 30 June 2021	7,724	16	2,730	2,641	13,111
Carrying amount of right-of-use assets	7,724	-	98	-	7,822

¹ The carrying amount of computer software included \$2,523k internally generated and \$118k purchased software.

² The assets impairments of \$119k recognised in net cost of services and \$18k recognised in other comprehensive income

³ Other movements included disposal of assets

The ATSB Management ensured that the appropriate assessments were made for impairment, useful lives and the valuation of non-financial assets at 30 June 2021

Revaluation of non-financial assets

All revaluations were conducted in accordance with the revaluation policy stated at Note 5.3. An independent valuer, Jones Lang LaSalle Public Sector Valuations Pty Ltd revalued all non-financial assets with effect at 30 June 2020.

Accounting Policy

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's accounts immediately prior to the restructuring.

Asset Recognition Threshold

Purchases of property, plant and equipment are recognised initially at cost in the statement of financial position, except for purchases costing less than \$5,000 excluding GST, 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).

Leased Right of Use (ROU) Assets

Leased ROU assets are capitalised at the commencement date of the lease and comprise of the initial lease liability amount, initial direct costs incurred when entering into the lease less any lease incentives received. These assets are accounted for by Commonwealth lessees as separate asset classes to corresponding assets owned outright, but included in the same column as where the corresponding underlying assets would be presented if they were owned.

On initial adoption of AASB 16 the ATSB has adjusted the ROU assets at the date of initial application by the amount of any provision for onerous leases recognised immediately before the date of initial application. Following initial application, an impairment review is undertaken for any ROU lease asset that shows indicators of impairment and an impairment loss is recognised against any ROU asset that is impaired. Leased ROU assets continue to be measured at cost after initial recognition in Commonwealth agency, GGS and Whole of Government financial statements.

Revaluations

Following initial recognition at cost, property, plant and equipment (**excluding ROU assets**) are carried at fair value (or an amount not materially different from fair value) less subsequent accumulated depreciation and accumulated impairment losses. Valuations are conducted with sufficient frequency to ensure that the carrying amounts of assets did not differ materially from the assets' fair values as at the reporting date. The regularity of independent valuations depended upon the volatility of movements in market values for the relevant assets.

Revaluation adjustments are made on a class basis. Any revaluation increment is credited to equity under the heading of asset revaluation reserve except to the extent that it reversed a previous revaluation decrement of the same asset class that was previously recognised in the surplus/deficit. Revaluation decrements for a class of assets are recognised directly in the surplus/deficit except to the extent that they reversed a previous revaluation increment for that class.

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.

Depreciation rates applying to each class of depreciable asset are based on the following useful lives:

	2021	2020
Plant and equipment	3 to 10 years	3 to 10 years
Computer equipment	4 years	4 years
Office equipment	3 to 10 years	3 to 10 years
Heritage and cultural	100 years	100 years

The ATSB has items of property, plant and equipment that are heritage and cultural assets that have limited useful lives and are depreciated.

The depreciation rates for ROU assets are based on the commencement date to the earlier of the end of the useful life of the ROU asset or the end of the lease term.

Impairment

All assets were assessed for impairment at 30 June 2021.

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 of disposal 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 the ATSB were deprived of the asset, its value in use is taken to be its depreciated replacement cost.

Derecognition

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

Heritage and Cultural Assets

The ATSB has a Pegasus Mark II Propellor from a Supermarine Walrus aircraft. The Supermarine Walrus was a British single-engine amphibious biplane reconnaissance aircraft first flown in 1933.

The ATSB has classified this item as a heritage and cultural asset as its primary purpose relates to its heritage and cultural significance.

Intangibles

The ATSB's intangibles comprise of purchased software and internally developed software for internal use. These 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. The useful lives of the ATSB's software is five years.

All software assets were assessed for indications of impairment as at 30 June 2021.

2.3 Payables

	2021	2020
	\$'000	\$'000

2.3A: Suppliers

Trade creditors and accruals	84	47
Accrued expenses	204	522
Total suppliers	288	569

Settlement is usually made within 31 days.

2.3B: Other payables

Salaries and wages	312	260
Superannuation	42	33
Separations and redundancies	-	185
Unearned income	-	2
Total other payables	354	480

Accounting Policy

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

Parental Leave Payments Scheme

Amounts received under the Parental Leave Payments Scheme by the ATSB not yet paid to employees were presented gross as cash and a liability (payable). The total amount received under this scheme was \$1,000 (2020: \$2,000).

2.4 Interest Bearing Liabilities

	2021	2020
	\$'000	\$'000

2.4A: Leases

Lease Liabilities

Buildings	8,020	8,749
Plant and equipment	98	113
Total leases	8,118	8,862

Total cash outflow for leases for the year ended 30 June 2021 was \$1.560m

Maturity analysis - contractual undiscounted cash flows

Within 1 year	1,679	1,560
Between 1 to 5 years	6,556	6,657
More than 5 years	-	1,579
Total leases	8,237	9,796

The ATSB signed two new 5 year leases in Perth and Melbourne and as at 30 June 2021, the ATSB has in total three operating leases and two Memorandum of Understanding (MOU) arrangements with other government entity's for property. The ATSB has applied AASB 16 for all leases and the cash outflow for leases for the year ended 30 June 2021 was \$1.560m

Funding

This section identifies the Australian Transport Safety Bureau's funding structure.

3.1 Appropriations

3.1A: Annual appropriations ('recoverable GST exclusive')

Annual Appropriations for 2021

	Annual appropriation \$'000	Adjustments to appropriation ¹ \$'000	Total appropriation \$'000	Appropriation applied in 2021 (current and prior years) \$'000	Variance ² \$'000
Departmental					
Ordinary annual services	20,933	1,255	22,188	22,083	105
Capital Budget	4,735	-	4,735	4,013	722
Total departmental	25,668	1,255	26,923	26,096	827

¹ PGPA Act Section 74 receipts.

² The variance between appropriations and appropriations applied in 2020-21 is due to a combination of underspends within supplier expenses, accrued supplier invoices and a delay with the finalisation of capital projects.

Annual Appropriations for 2020

	Annual appropriation \$'000	Adjustments to appropriation ¹ \$'000	Total appropriation \$'000	Appropriation applied in 2020 (current and prior years) \$'000	Variance ² \$'000
Departmental					
Ordinary annual services	20,205	1,459	21,664	20,761	903
Capital Budget	590	-	590	441	149
Other services	-	-	-	-	-
Equity Injections	68	-	68	-	68
Loans	-	-	-	-	-
Assets and liabilities	-	-	-	-	-
Total departmental	20,863	1,459	22,322	21,202	1,120

¹ PGPA Act Section 74 receipts.

² The variance between appropriations and appropriations applied in 2019-20 is due to a combination of underspends within supplier expenses, accrued supplier invoices and a delay with the finalisation of capital projects.

3.1B: Unspent annual appropriations ('recoverable GST exclusive')

	2021 \$'000	2020 \$'000
Departmental		
Appropriation Act (No. 1) 2018-19 ¹	14,000	14,000
Appropriation Act (No. 1) 2019-20		7,680
Appropriation Act (No. 1) 2019-20 (DCB)		563
Appropriation Act (No. 2) 2019-20 (Equity Injection)		68
Appropriation Act (No. 1) 2019-20 (Cash at Bank - 30 June)		145
Appropriation Act (No. 1) 2020-21	7,677	
Appropriation Act (No. 1) 2020-21 (DCB)	1,278	
Appropriation Act (No. 2) 2020-21 (Equity Injection)	-	
Appropriation Act (No. 1) 2020-21 (Cash at Bank - 30 June)	336	
Total departmental	23,291	22,456

¹ An unspent amount of \$14.0m relating to missing Malaysia Airlines Flight 370 was quarantined under section 51 during 2019-20.

3.2 Net Cash Appropriation Arrangements

	2021	2020
	\$'000	\$'000
Total comprehensive loss as per the Statement of Comprehensive Income	(362)	(843)
Plus: depreciation/amortisation expenses previously funded through revenue appropriation	703	643
Plus: depreciation right-of-use assets	1,594	1,586
Less: principal repayments - leased assets	(1,474)	(1,424)
Net Cash Operating Surplus/(Deficit)	461	(38)
Changes in Asset Revaluation Reserve	18	(109)
Operating Surplus/(Deficit)	479	(147)

From 2010-11, the Government introduced net cash appropriation arrangements where revenue appropriations for depreciation/amortisation expenses ceased. Entities now receive a separate capital budget provided through equity appropriations. Capital budgets are to be appropriated in the period when cash payment for capital expenditure is required.

The inclusion of depreciation/amortisation expenses related to ROU leased assets and the lease liability principal repayment amount reflects the cash impact on implementation of AASB 16 Leases, it does not directly reflect a change in appropriation arrangements.

People and Relationships

This section describes a range of employment and post-employment benefits provided to our people and our relationships with other key people.

4.1 Employee Provisions

	2021	2020
	\$'000	\$'000

4.1A: Employee provisions

Leave	4,811	4,559
Total employee provisions	4,811	4,559

Accounting policy

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

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.

The leave liabilities are calculated on the basis of employees' remuneration at the estimated salary rates that will be applied at the time the leave is taken, including the entity'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 the Australian Government Shorthand Method outlined in the FRR as at 30 June 2021. The estimate of the present value of the liability takes into account attrition rates and pay increases through promotion and inflation.

Separation and Redundancy

A provision is made for separation and redundancy benefit payments. The entity recognises a provision for termination when it has developed a detailed formal plan for the terminations and has informed those employees affected that it will carry out the terminations.

Superannuation

The ATSB's staff are members of the Commonwealth Superannuation Scheme (CSS), the Public Sector Superannuation Scheme (PSS), the PSS accumulation plan (PSSap), or other superannuation funds held outside the Australian Government.

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 in the Department of Finance's administered schedules and notes.

The ATSB makes employer contributions to the employees' defined benefit 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.

4.2 Key Management Personnel Remuneration

Key management personnel (KMP) are those persons having authority and responsibility for planning, directing and controlling the activities of the ATSB, directly or indirectly, including any director (whether executive or otherwise) of that entity.

The ATSB has determined the KMP to be the Chief Commissioner and other senior executive who the Chief Commissioner considers to be KMP because of their responsibilities and the nature of their work. KMP is reported in the table below:

	2021 \$'000	2020 \$'000
Short-term employee benefits	716	949
Post-employment benefits	69	107
Other long-term employee benefits	70	92
Total key management personnel remuneration expenses¹	855	1,147

The total number of KMP that are included in the above table is 3 individuals (2020: 3 individuals).

¹ The above key management personnel remuneration excludes the remuneration and other benefits of the Portfolio Minister. The Portfolio Minister's remuneration and other benefits are set by the Remuneration Tribunal and are not paid by the ATSB.

4.3 Related Party Disclosures

Related party relationships:

The ATSB is an Australian Government controlled entity. Related parties to this entity are KMP including the Portfolio Minister and Executive, their close family members, and other Australian Government entities.

Transactions with related parties:

Given the breadth of Government activities, related parties may transact with the government sector in the same capacity as ordinary citizens. Such transactions include the payment or refund of taxes, receipt of a Medicare rebate or higher education loans. These transactions have not been separately disclosed in this note.

Significant transactions with related parties can include:

- the payments of grants or loans;
- purchases of goods and services;
- asset purchases, sales transfers or leases;
- debts forgiven; and
- guarantees.

Giving consideration to relationships with related entities, and transactions entered into during the reporting period by the ATSB, it has been determined that there are no related party transactions to be separately disclosed (2020: Nil).

Managing uncertainties

This section analyses how the Australian Transport Safety Bureau manages financial risks within its operating environment.

5.1 Contingent Assets and Liabilities

Quantifiable contingencies

At 30 June 2021, the ATSB had no quantifiable contingencies (2020: Nil).

Unquantifiable contingencies

At 30 June 2021, the ATSB had no unquantifiable contingencies (2020: Nil).

Accounting Policy

Contingent liabilities and contingent assets are not recognised in the statement of financial position but are reported in the 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.

5.2 Financial Instruments

	2021	2020
	\$'000	\$'000
5.2A: Categories of financial instruments		
Financial assets at amortised cost		
Cash and cash equivalents	336	145
Trade and other receivables	14	1
Total financial assets at amortised cost	350	146
Total financial assets	350	146
Financial liabilities		
Financial liabilities measured at amortised cost		
Trade creditors	84	47
Finance leases	-	-
Total financial liabilities measured at amortised cost	84	47
Total financial liabilities	84	47

5.2 Financial Instruments (continued)

Accounting Policy**Financial assets**

In accordance with AASB 9 *Financial Instruments*, the ATSB classifies its financial assets in the following categories:

- a) financial assets at fair value through profit or loss;
- b) financial assets at fair value through other comprehensive income; and
- c) financial assets measured at amortised cost.

The classification depends on both the ATSB's business model for managing the financial assets and contractual cash flow characteristics at the time of initial recognition. Financial assets are recognised when the ATSB becomes a party to the contract and, as a consequence, has a legal right to receive or a legal obligation to pay cash and derecognised when the contractual rights to the cash flows from the financial asset expire or are transferred upon trade date.

Financial Assets at Amortised Cost

Financial assets included in this category need to meet two criteria:

- 1. the financial asset is held in order to collect the contractual cash flows; and
- 2. the cash flows are solely payments of principal and interest (SPPI) on the principal outstanding amount.

Amortised cost is determined using the effective interest method.

Effective Interest Method

Income is recognised on an effective interest rate basis for financial assets that are recognised at amortised cost.

Impairment of Financial Assets

Financial assets are assessed for impairment at the end of each reporting period based on Expected Credit

Losses, using the general approach which measures the loss allowance based on an amount equal to *lifetime expected credit losses* where risk has significantly increased, or an amount equal to *12-month expected credit losses* if risk has not increased.

The simplified approach for trade, contract and lease receivables is used. This approach always measures the loss allowance as the amount equal to the lifetime expected credit losses.

A write-off constitutes a derecognition event where the write-off directly reduces the gross carrying amount of the financial asset.

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 Amortised Cost

Financial liabilities, including borrowings, are initially measured at fair value, net of transaction costs. These liabilities are subsequently measured at amortised cost using the effective interest method, with interest expense recognised on an effective interest basis.

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).

	2021	2020
	\$'000	\$'000
5.2B: Net gains or losses on financial liabilities		
Financial liabilities measured at amortised cost		
Interest expense	86	102
Net gains/(losses) on financial liabilities measured at amortised cost	86	102
 Net losses from financial liabilities	 86	 102

The net interest expense from financial liabilities not at fair value through profit or loss is \$86k (2020: \$102k).

5.3 Fair Value Measurement

Accounting Policy

The ATSB has Heritage and Cultural, and Property, Plant and Equipment assets and the fair value for each asset is 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, property, plant and equipment are carried at fair value. Valuations are conducted with sufficient frequency to ensure that the carrying amounts of assets do not differ materially from the asset's fair value as at the reporting date. The regularity of independent valuations depends on the volatility of movements in market values for the relevant assets.

The ATSB previously engaged Jones Lang LaSalle Public Sector Valuations Pty Ltd (JLL) to undertake a revaluation of all plant and equipment assets with effect at 30 June 2020 and confirm that the models developed comply with AASB 13 *Fair Value Measurement*.

Revaluation adjustments were made on a class basis. Any revaluation increment was credited to equity under the heading of asset revaluation reserve except to the extent that it reversed a previous revaluation decrement of the same asset class that was previously recognised in the surplus/deficit. Revaluation decrements for a class of assets were recognised directly in the surplus/deficit except to the extent that they reversed a previous revaluation increment for that class.

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

The ATSB's property, plant and equipment assets under the fair value hierarchy, are valued at Level 3. The ATSB Management ensured that the appropriate assessments were made for impairment, useful lives and the valuation of non-financial assets at 30 June 2021.

Fair value measurements at the end of the reporting period

2021	2020
\$'000	\$'000

5.3 Fair value measurement

Non-financial assets

Heritage and cultural	16	16
Property, plant and equipment	2,730	1,085
	2,746	1,101

Other information

6.1 Current/non-current distinction for assets and liabilities

6.1A: Current/non-current distinction for assets and liabilities

	2021	2020
	\$'000	\$'000
Assets expected to be recovered in:		
No more than 12 months	9,986	8,786
Cash and cash equivalents	336	145
Trade and other receivables	9,123	8,455
Prepayments	527	186
More than 12 months	13,120	10,846
Land & Building	7,724	8,570
Heritage and cultural	16	16
Plant and equipment	2,730	1,085
Computer software	2,641	1,136
Prepayments	9	39
Total assets	23,106	19,632
Liabilities expected to be settled in:		
No more than 12 months	3,770	4,165
Suppliers	288	569
Other payables	354	480
Leases	1,501	1,467
Employee Provision	1,627	1,649
More than 12 months	9,801	10,305
Leases	6,617	7,395
Employee Provision	3,184	2,910
Total liabilities	13,571	14,470

SECTION 7 – MANAGEMENT AND ACCOUNTABILITY

Management and accountability

The Commission

The ATSB is governed by a Commission, comprising a Chief Commissioner and three part-time Commissioners.

The Commission provides guidance on the selection of accidents and other safety incidents to be investigated. The Commission is responsible for exercising the power to publish reports of accident investigations. It also supports the ATSB in encouraging safety action ahead of final reports, thus reducing the need to issue safety recommendations.

The Commission operates within the corporate governance framework of the *ATSB Commission Governance Manual*. The manual sets out the Commission's legislative requirements, parliamentary and ministerial accountability, membership and functions, administrative policies and procedures, and reporting obligations.

The Commission meets at least four times a year and manages ATSB business through regular teleconferences and electronic communications in accordance with its obligations under the TSI Act and its agreed policies.

Senior Leadership Team

During 2020–21, the ATSB Senior Leadership Team (SLT) met fortnightly to discuss strategic management issues and priorities. The SLT consisted of the Chief Commissioner, the Chief Operating Officer, the Directors Transport Safety and the Heads of Operational Support.

Audit and Risk Committee

The Audit and Risk Committee provides independent assurance and advice to the Chief Commissioner (and to the Commission and SLT) on the ATSB's financial and performance reporting responsibilities, risk oversight and management, and system of internal control. The Audit and Risk Committee consists of an independent chair, an independent member and an ATSB management nominee. The Committee held four meetings throughout the financial year, in September and December 2020, and March and June 2021.

In 2020–21, the Committee advised and provided assurance on a range of matters including the ATSB's:

- Internal Audit Annual Program
- enterprise risk management, fraud control and business continuity frameworks
- performance reporting
- financial statement preparations
- work health and safety management
- compliance with the PGPA Act and the associated Rule
- internal audit governance framework – including the Internal Audit Charter and *Internal Audit Strategic Plan 2020–23*.

The internal audit program for 2020–21 focused on assuring the ATSB's legislative compliance and performance against its core functions including a review of funding model arrangements.

The Audit and Risk Committee continues to monitor the implementation of the recommendations coming out of the Australian National Audit Office's (ANAO) efficiency audit of the ATSB in 2018–19. A copy of the Audit and Risk Committee Charter is available on the ATSB website at www.atsb.gov.au.

Business planning and reporting

Each year, the ATSB develops an Annual Plan to set business objectives for the financial year. The Annual Plan is consistent with the strategic direction provided through the Corporate Plan, published on the ATSB website. The

Annual Plan incorporates the operational priorities, activities, deliverables and key performance indicators for the financial year.

The *ATSB Annual Plan 2020–21* gave priority to:

- independent investigation of transport accidents and other safety occurrences, and research
- implementing systems and programs enabling greater efficiency and effectiveness
- strategic projects
- further embedding governance and assurance processes
- enhancing stakeholder engagement.

Risk management

Consistent with the PGPA Act, the ATSB maintains a risk management framework. The framework includes a Risk Management Policy, Risk Management Strategy, Risk Management Plan and Enterprise Risk Register. The framework is an integral element of the ATSB's broader governance, planning and management framework. The ATSB has integrated risk assessment and mitigation into business practices, planning and performance reporting – at both corporate and business unit levels.

The ATSB is committed to a comprehensive, coordinated and systematic approach to the management of risk – directed towards supporting managers at all levels to anticipate and plan for risk, and to respond appropriately. For 2020–21, the ATSB focused on risks related to capability, reputation, health and safety, and jurisdictional reach.

During 2020–21, the ATSB implemented a new risk management framework and software-supported risk management system for undertaking risk assessments.

Business continuity plan

The ATSB's business continuity management framework details the policies and procedures for the agency to respond to a business disruption. The framework ensures the ATSB is well placed to implement recovery processes and return to business-as-usual as quickly as possible while preserving the safety of staff and limiting the damage and disruption to business operations.

Fraud control

In accordance with the PGPA Act, the ATSB maintains a fraud management framework which includes a Fraud Policy and Strategy Statement and a Fraud Control Plan.

The ATSB manages a fraud risk register to identify potential fraud risks and subsequently minimise the incidence of fraud. This process is accompanied by development, implementation and regular assessment of fraud prevention, detection and response strategies.

The ATSB's staff awareness program incorporates activities for existing and new staff.

The Audit and Risk Committee and the Commission receives reports on fraud risks and the implementation of controls and treatments.

Ethical standards

During the reporting period, the ATSB continued to demonstrate its commitment to promoting ethical standards and behaviours relating to workplace and employment.

Initiatives for 2020–21 included:

- providing information on the APS values, Employment Principles and Code of Conduct in induction packages and during training sessions
- promoting the APS Values, Employment Principles and Code of Conduct through individual performance development plans
- providing staff with access to information on ethical standards via the ATSB's intranet and the Australian Public Service Commission's (APSC) website
- providing staff with guidance on Public Interest Disclosure policy and procedures
- ensuring all staff review their conflict of interest declarations twice a year
- providing staff with information and guidance on bullying and harassment policy and procedures

- providing staff with training on the ATSB's fraud control policy and procedures and acceptance of gifts and benefits policy
- promoting the APS Values, Employment Principles and Code of Conduct in recruitment and selection activity.

Staff management

The ATSB's workforce planning approach ensured we had a flexible workforce and were able to recognise the immediate and emerging capabilities required to respond to business requirements.

During 2020–21, the ATSB continued to dedicate time and resources to supporting our people through the coronavirus pandemic. The ATSB recognised the critical role of our senior leaders and managers to maintain regular connections with staff, encourage staff to keep themselves and their families safe, and support access to a COVID-19 vaccine as soon as was advisable.

Initiatives for 2020–21 included:

- regular performance and career conversations throughout the performance and development cycle
- leadership development and coaching skills for managers
- health and wellbeing sessions
- a refresh of human resource procedures to ensure consistency with our enterprise agreement
- providing data and research to support better workplace conditions and arrangements.

Staffing profile

In accordance with workforce planning projections, the ATSB's staffing profile has shifted slightly, from 104 at the end of June 2020 to 109 by the end of June 2021. The associated staff turnover rate was approximately 9%. Table 15 displays the ATSB staff numbers, by classification, as at 30 June 2021.

Table 15: The ATSB's staffing profile at 30 June 2021

Substantive Classification	Gender x (full-time)	Female (full-time)	Female (part-time)	Male (full-time)	Male (part-time)	Non-ongoing	Total
Statutory office holders	-	-	1	1	2	-	4
Senior Executive Service (SES)	-	-	-	1	-	0	1
EL 2	-	4	2	29	-	1	35
EL 1	-	10	4	19	-	-	33
APS 6	-	7	2	12	-	3	21
APS 5	-	6	-	8	-	7	14
APS 4	-	1	-	-	-	1	1
Total	-	28	9	70	2	8	109

This total is comprised of the following employment arrangements:

- 104 staff (representing all non-SES employees) covered by the enterprise agreement
- one SES employee covered by section 24(1) determinations, established in accordance with the ATSB's SES remuneration policy
- four statutory office holders (representing the Commissioners) determined by the remuneration tribunal.

There are no other employment arrangements in place and there is no provision for performance pay.

Of the 105 SES and non-SES employees, 73 employees were based in Canberra, 15 based in Brisbane, three based in Adelaide, six based in Perth, seven based in Melbourne and one based in Sydney.

Non-salary benefits provided to employees under the enterprise agreement include:

- options for home-based work
- ability to work part-time
- flexible working arrangements
- access to different leave types

- influenza vaccinations and health checks
- access to the Employee Assistance Program.

Indigenous employees

At 30 June 2021, the ATSB had no employees who identified as Indigenous.

Salary rates

Table 16 displays the salary rates supporting the above employment arrangements at 30 June 2021.

Table 16: The ATSB's salary rates at 30 June 2021

Substantive classification	Lower(\$)		Upper(\$)
Statutory office holders	As determined by the remuneration tribunal		
EL 2	123,914		152,296
EL 1	104,234		126,365
APS 6	81,369		96,791
APS 5	75,045		81,031
APS 4	67,221		73,045

* Maximums include transport safety investigator and respective supervisor salaries, representing a \$2,125–\$10,865 increase on standard APS 6–EL 2 rates.

** Senior executive remuneration for the 2020–21 financial year is captured and presented in Table 20: Information about remuneration for key management personnel.

Training and development

The ATSB is committed to building a strong, capable and resilient workforce. It does so by embracing greater opportunities for learning through on-the-job activities, relational learning through peers and networks, and blended training.

During 2020–21, the ATSB expanded and refreshed its suite of self-paced and online learning following the implementation of a new learning management system in April 2020. The ATSB now offers a suite of 114 courses through our learning management system, ranging from induction and management skills to specialist training supporting the unique training requirements of ATSB investigators.

Other key training and development activities in 2020–21 included:

- 18 managers and staff completed a workplace coaching program, providing them with the skills to effectively coach and develop their staff
- over 15 internal training courses to address critical skill requirements, including first aid, records management, and specialist technical knowledge
- 14 staff training sessions to support the implementation of AIMS.

Purchasing

The ATSB purchases goods and services in accordance with the Commonwealth Procurement Rules (CPRs). These rules are applied through the accountable authority instructions. The ATSB's procurement policies and processes have been developed to ensure that:

- it undertakes competitive, non-discriminatory procurements
- it uses resources efficiently, effectively, economically and ethically
- it makes all procurement decisions in an accountable and transparent manner.

Consultants

The ATSB engages consultants when it lacks specialist expertise, or when independent research, review or assessment is required. Consultants are typically engaged to:

- investigate or diagnose a defined issue or problem
- carry out defined reviews or evaluations
- provide independent advice, information or creative solutions to assist in the ATSB's decision-making.

The ATSB policies on selection and engagement of consultants are in accordance with the CPRs. Before engaging consultants, the ATSB considers the skills and resources required for the task, the skills available internally and the cost effectiveness of engaging an external contractor.

During 2020–21, seven new reportable consultancy contracts were entered into involving total actual expenditure of \$2,482,752 (GST inclusive). There were no ongoing consultancy contracts carried over from 2019–20.

During 2020–21, 38 new reportable non-consultancy contracts were entered into involving total actual expenditure of \$6,824,577 (GST inclusive). There were nine ongoing non-consultancy contracts totalling \$335,965 carried over from 2019–20.

Annual reports contain information about actual expenditure on reportable contracts for consultancies and non-consultancies. Information on the value of contracts and consultancies is available from the AusTender website at www.tenders.gov.au.

Australian National Audit Office access clauses

There were no contracts during 2020–21 that did not provide for the Auditor-General to have access to the contractors' premises.

Exempt contracts

No contracts were exempted on public interest grounds from publication on AusTender during 2020–21.

Procurement initiatives to support small business

The ATSB supports small business participation in the Commonwealth Government procurement market. Small and medium enterprises (SME) and small enterprise participation statistics are available on the Department of Finance's website at www.finance.gov.au.

The ATSB seeks to support SMEs, consistent with paragraph 5.4 of the CPRs. It ensures that its communications are expressed in clear and simple language. Its finance system is set up to ensure prompt payments to all contractors and suppliers, and it makes use of credit cards.

Legal services and expenditure

Paragraph 11.1(a) of the Legal Services Directions 2017, 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 amounts are exclusive of GST.

The ATSB's expenditure on legal services for 2020–21 was \$244,769 comprising:

- \$25,154 on external legal services
- \$219,615 on internal legal services.

External scrutiny and participation

Senate Rural and Regional Affairs and Transport Legislation Committee

Report into the policy, regulatory, taxation, administrative and funding priorities for Australian shipping

On 20 December 2020 the Senate Committee handed down its report from the above inquiry. The report included the following recommendation relevant to the ATSB:

The committee recommends that the Australian Government improves safety on domestic vessels, including by expanding the jurisdiction of the Australian Transport Safety Bureau to include incidents on domestic vessels; and that the Australian Government commissions an independent review of the *Marine Safety (Domestic Commercial Vessel) National Law Act 2012* to consider whether it provides clear and simple standards for training, crewing, and qualifications to improve marine safety on domestic commercial vessels.

The ATSB will be prepared to provide necessary input to address the Australian Government's response to this recommendation.

SECTION 8 – APPENDICES

Appendix A: Other mandatory information

Work health and safety

The ATSB seeks to safeguard the health and safety of its employees, contractors and visitors by providing and maintaining a safe working environment, with the aim to prevent work-related injuries and illness, and support employee wellbeing.

The ATSB monitored and reviewed the rehabilitation management system in 2020–21 as part of our commitment to continuous improvement.

In 2020–21, no notifiable incidents occurred under Part 3 or Part 5 of the *Work Health and Safety Act 2011*. One compensation claim was accepted by Comcare and efficiently managed, through the application of the ATSB's rehabilitation management system.

Initiatives under the ATSB's health and wellbeing program are developed in consultation with employees and the Work Health Safety and Wellbeing Committee. Initiatives for 2020–21 included:

- continued availability of the Employee Assistance Program for employees and their families
- implementation of the health and wellbeing plan
- training for first aid officers
- workstation assessments, including providing special equipment to prevent injury and to support recovery for illness or injury
- early intervention support to employees
- support for employees requiring reasonable adjustments
- facilitation of flexible working arrangements
- influenza vaccinations
- staff access to employee-initiated cycling or walking activities
- work health and safety induction programs delivered to all new employees.

Advertising and market research

During 2020–21, the ATSB spent \$562 (GST inclusive) on advertising for recruitment. There were no further payments for advertising or market research.

Ecologically sustainable development and environmental performance reporting

(Section 516A of the *Environment Protection and Biodiversity Conservation Act 1999*)

The ATSB is fully committed to the principles of ecologically sustainable development. The nature of its work as Australia's national transport safety investigator – with a focus on the investigation of transport accidents, research into transport safety and dissemination of safety information – means that the ATSB's commitment is expressed through its day-to-day activities within its offices.

The ATSB operates under the Energy Efficiency in Government Operations (EEGO) policy, and through its sublease office accommodation arrangements with the Department of Infrastructure, Transport, Cities and Regional Development, the ATSB's environmental management system complies with ISO 14001:2004 – the international standard for environmental management systems. The system is focused on the ATSB's office-based activities in Canberra. Initiatives are applied at regional office premises, where appropriate.

The ATSB has contracted its data centres to private providers, with the result that servers and information and communication technology (ICT) infrastructure are located outside the ATSB premises. This produced a significant saving in energy use. The ATSB has limited its energy use through various initiatives that focus on improving the energy efficiency of the property portfolio, for example:

- operating a virtualised and cloud IT infrastructure environment
- using 7% green energy

- ensuring that desktop IT equipment uses energy-saving policies, such as automatic turn-off for monitors and hard drives after periods of inactivity
- reducing the number of printers in the network
- setting each printer default to mono (black) and double-sided printing
- using photocopy paper containing 60% recycled paper for internal use
- conserving energy, water, paper and other natural resources, yet still maintaining a comfortable work environment
- actively recycling paper waste
- promoting the separation of general waste into recyclable and non-recyclable items before disposal
- promoting video conferencing as an alternative to travel, where practicable
- using motion-sensor lighting in offices
- reducing the effect of direct sunlight on air conditioning systems by installing blinds or tinting, where appropriate.

Grant programs

The ATSB did not administer any grant programs during 2020–21.

Diversity and inclusion

During 2020–21, the ATSB focused on initiatives to provide an inclusive workforce diverse in background, thinking and experiences, including:

- a sourcing strategy to attract more people from diverse backgrounds into a career as a transport safety investigator
- employee participation at APS-wide diversity networks and forums
- assigning a new diversity and inclusion champion.

Disability reporting mechanism

The *National Disability Strategy 2010–2020* is Australia’s overarching framework for disability reform. It acts to ensure the principles underpinning the *United Nations Convention on the Rights of Persons with Disabilities* are incorporated into Australia’s policies and programs that affect people with a disability, their families and carers.

All levels of government will continue to be held accountable for the implementation of the strategy through biennial progress reports to the Council of Australian Governments. Progress reports can be found at www.dss.gov.au.

Disability reporting is included in the Australian Public Service Commission’s State of the Service reports and APS Statistical Bulletin. These reports are available at www.apsc.gov.au.

Freedom of Information

The following information explains how to request access to documents held by the ATSB under the *Freedom of Information Act 1982* (FOI Act). It also explains what records the ATSB holds, and what arrangements the ATSB has in place for outside participation.

Entities subject to the FOI Act are required, under Part II of the Act, to publish information as part of the information publication scheme. Information including an Agency Plan showing what information it published, is available on the ATSB website at www.atsb.gov.au.

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 Federal Register of Legislation website at www.legislation.gov.au.

How to lodge a request for information

Information about how to make an application under the FOI Act can be found on the ATSB's website at www.atsb.gov.au.

A request under the FOI Act for access to documents must:

- be in writing
- state that the request is an application for the purposes of the FOI Act
- provide enough information to enable the documents sought to be identified
- give details of how notices under the FOI Act may be sent.

Submission of FOI requests, or enquiries about access, should be directed to:

Freedom of Information Coordinator

Australian Transport Safety Bureau
PO Box 967
CIVIC SQUARE ACT 2608

Phone: (02) 6122 1601

Email: FOI-ATSB@atsb.gov.au

Charges

There are no application fees payable to lodge an FOI request.

The ATSB may impose a charge for the work involved in providing access to documents required through a request under the FOI Act. These charges are imposed in accordance with the FOI Act and the *Freedom of information (Charges) Regulations 2019*. These charges may relate to the time spent searching for and retrieving relevant documents, decision-making time, photocopying and other costs. The FOI Act also provides that the first five hours of decision-making time is waived. The applicant will be notified as soon as possible with an estimate of the charges associated with the 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 remission of the charges, the criteria considered by the ATSB include whether:

- 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
- giving access to documents 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, to explain why they meet the criteria, or to inform the agency of overall circumstances which justify non-payment of charges. Requests 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.

The ATSB is required to perform its functions under section 12AA of the 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.

Freedom of Information requests

In 2020–21, the ATSB received 22 FOI requests.

Table 17: Freedom of Information activity⁷

2020–21		Numbers
Requests		
On hand at 1 July 2020 (A)		0
New requests received (B)		22
Requests withdrawn (C)		11
Requests transferred in full to another agency (D)		0
Requests on hand at 30 June 2021 (E)		3
Total requests completed at 30 June 2021 (A+B-C-D-E)		8
Action on requests		
Access in full		0
Access in part		6
Access refused		2
Access transferred in full		0
Request withdrawn		11
2020–21		Numbers
Response times (excluding withdrawn)		
0–30 days		7
31–60 days		1
61–90 days		0
90+ days		0
Internal review		
Requests received		1
Decision affirmed		1
Decision amended		0
Request withdrawn		0
Review by Office of the Australian Information Commissioner		
Applications received		0
Administrative Appeals Tribunal (AAT) review of FOI decisions		
Applications received		0

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, parliamentary committees, the Cabinet and the Executive Council (most of these are classified documents)
- business papers, briefing notes and meeting records for committees, and conferences in which the ATSB services or participates
- documents prepared by international agencies
- documents relating to the development of legislation
- internal administration documents
- internal treaties, memoranda of understanding and international conventions
- legal documents, including legislation, contracts, leases and court documents
- maps and other geographical information

⁷ These statistics cannot be compared directly with the deadlines set in the *Freedom of Information Act 1982*, as the FOI Act provides for extensions of time to allow for consultation with third parties, negotiation of charges and other issues.

- 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.

To view a list of manuals and other documents the ATSB uses when making decisions or recommendations that affect the public, visit the ATSB website at www.atsb.gov.au.

Under section 8C of the FOI Act, exempt matter is not required to be published. The ATSB reserves the right to delete exempt matter from its information prior to providing access.

To find out more about the types of personal information the ATSB holds, please refer to the ATSB Privacy Policy on the ATSB website at www.atsb.gov.au.

For further information, please contact the ATSB either by telephone on 1800 020 616 or by email at atsbinfo@atsb.gov.au.

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 the Federal Register of Legislation website at www.legislation.gov.au.

To assist ATSB employees in exercising their powers appropriately, and enable access to their decision-making authorities, the ATSB uses an intranet site which allows employees to view 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 PGPA Act and the *Public Service Act 1999*. Powers delegated under the TSI Act are recorded on the back of identity cards for all investigators.

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. The ATSB may also contact a very broad range of stakeholders for particular policy issues.

Appendix B: Entity resource statement 2020–21

Table 18: ATSB resource statement 2020–21

	Actual available appropriation 2020–21 \$'000 (a)	Payments made 2020–21 \$'000 (b)	Balance remaining 2020–21 \$'000 (a) - (b)
Ordinary Annual Services¹			
Departmental appropriation ²	35,166	26,096	9,070
Total	35,166	26,096	9,070
Total ordinary annual services A	35,166	26,096	9,070
Other services			
Departmental non-operating			
Equity injections	68	68	-
Total	68	68	-
Total other services B	68	68	-
Total net resourcing and payments for the Australian Transport Safety Bureau	35,234	26,164	9,070

1 Appropriation Act (No. 1) 2020–21 and includes prior year departmental appropriation and section 74 Retained Revenue Receipts.

2 Includes an amount of \$4.735m in 2020–21 for the Departmental Capital Budget. For accounting purposes, this amount has been designated as 'contributions by owners'.

Expenses for Outcome 1

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.

Table 19: Expenses for outcome

	Budget* 2020–21 \$'000 (a)	Actual Expenses 2020–21 \$'000 (b)	Variation 2020–21 \$'000 (a) - (b)
Program 1.1: Australian Transport Safety Bureau			
Departmental expense			
Departmental appropriation ¹	22,097	22,188	(91)
Expenses not requiring appropriation in the Budget year	3,610	3,494	116
Total for Program 1.1	25,707	25,682	25
Total expenses for Outcome 1	25,707	25,682	25

* Full year budget, including any subsequent adjustment made to the 2020–21 Budget at Additional Estimates.

1 Departmental Appropriation combines Ordinary annual services (Appropriation Act Nos. 1 and 5) and Retained Revenue Receipts under section 74 of the PGPA Act.

	2019–20	2020–21
Average Staffing Level (number)	101	101

Appendix C: Executive remuneration

Table 20: Information about remuneration for key management personnel⁸

Name	Position title	Short-term benefits			Post-employment benefits	Other long-term benefits		Termination benefits	Total remuneration
		Base salary	Bonuses	Other benefits and allowances		Long service leave	Other long-term benefits		
G Hood	Chief Commissioner	418,931	-	6,017	21,694	9,426	32,122		488,190
C McNamara	Chief Operating Officer	268,502	-	4,203	45,070	6,041	20,588		344,404
N Nagy	Executive Director	17,472	-	1,313	2,691	393	1,340		23,209

Table 21: Information about remuneration for other highly paid staff

Total remuneration bands	Number of other highly paid staff	Short-term benefits			Post-employment benefits	Other long-term benefits		Termination benefits	Total remuneration
		Average base salary	Average bonuses	Average other benefits and allowances		Average long service leave	Average other long-term benefits		
\$230,001-\$245,000	3	151,138	-	41,552	34,169	3,304	11,258	-	241,421
\$245,001-\$270,000	-	-	-	-	-	-	-	-	-
\$270,001-\$295,000	-	-	-	-	-	-	-	-	-
\$295,001-\$320,000	-	-	-	-	-	-	-	-	-
\$320,001-\$345,000	-	-	-	-	-	-	-	-	-
\$345,001-\$370,000	-	-	-	-	-	-	-	-	-
\$370,001-\$395,000	-	-	-	-	-	-	-	-	-
\$395,001-\$420,000	-	-	-	-	-	-	-	-	-
\$420,001-\$445,000	-	-	-	-	-	-	-	-	-
\$445,001-\$470,000	-	-	-	-	-	-	-	-	-
\$470,001-\$495,000	-	-	-	-	-	-	-	-	-
\$495,001-....	-	-	-	-	-	-	-	-	-

⁸ An additional table about remuneration for senior executives (including total remuneration bands) is not required, as all senior executive remuneration within the ATSB have been detailed through the above table.

Appendix D: Management of human resources

Table 22: All ongoing employees current report period (2020–21)

	Male			Female			Indeterminate			Total
	Full-time	Part-time	Total Male	Full-time	Part-time	Total Female	Full-time	Part-time	Total Indeterminate	
NSW	1	-	1	-	-	-	-	-	-	1
Qld	13	-	13	-	1	1	-	-	-	14
SA	3	-	3	-	-	-	-	-	-	3
Tas	-	-	-	-	-	-	-	-	-	-
Vic	6	-	6	1	-	1	-	-	-	7
WA	5	-	5	-	1	1	-	-	-	6
ACT	34	-	34	23	5	28	-	-	-	62
NT	-	-	-	-	-	-	-	-	-	-
External Territories	-	-	-	-	-	-	-	-	-	-
Overseas	-	-	-	-	-	-	-	-	-	-
Total	62	-	62	24	7	31	-	-	-	93

Table 23: All non-ongoing employees current report period (2020–21)

	Male			Female			Indeterminate			Total
	Full-time	Part-time	Total Male	Full-time	Part-time	Total Female	Full-time	Part-time	Total Indeterminate	
NSW	-	-	-	-	-	-	-	-	-	-
Qld	-	-	-	-	1	1	-	-	-	1
SA	-	-	-	-	-	-	-	-	-	-
Tas	-	-	-	-	-	-	-	-	-	-
Vic	-	-	-	-	-	-	-	-	-	-
WA	-	-	-	-	-	-	-	-	-	-
ACT	7	-	7	4	-	4	-	-	-	11
NT	-	-	-	-	-	-	-	-	-	-
External Territories	-	-	-	-	-	-	-	-	-	-
Overseas	-	-	-	-	-	-	-	-	-	-
Total	7	-	7	4	1	5	-	-	-	12

Table 24: All ongoing employees previous report period (2019–20)

	Male			Female			Indeterminate			Total
	Full-time	Part-time	Total Male	Full-time	Part-time	Total Female	Full-time	Part-time	Total Indeterminate	
NSW	1	-	1	-	-	-	-	-	-	1
Qld	12	-	12	-	1	1	-	-	-	13
SA	3	-	3	-	-	-	-	-	-	3
Tas	-	-	-	-	-	-	-	-	-	-
Vic	4	-	4	1	-	1	-	-	-	5
WA	4	-	4	1	-	1	-	-	-	5
ACT	38	-	38	23	4	27	-	-	-	65
NT	-	-	-	-	-	-	-	-	-	-
External Territories	-	-	-	-	-	-	-	-	-	-
Overseas	-	-	-	-	-	-	-	-	-	-
Total	62	-	62	25	5	30	-	-	-	92

Table 25: All non-ongoing employees previous report period (2019–20)

	Male			Female			Indeterminate			Total
	Full-time	Part-time	Total Male	Full-time	Part-time	Total Female	Full-time	Part-time	Total Indeterminate	
NSW	-	-	-	-	-	-	-	-	-	-
Qld	-	-	-	-	-	-	-	-	-	-
SA	-	-	-	-	-	-	-	-	-	-
Tas	-	-	-	-	-	-	-	-	-	-
Vic	-	-	-	-	-	-	-	-	-	-
WA	-	-	-	-	-	-	-	-	-	-
ACT	3	1	4	2	-	2	-	-	-	6
NT	-	-	-	-	-	-	-	-	-	-
External Territories	-	-	-	-	-	-	-	-	-	-
Overseas	-	-	-	-	-	-	-	-	-	-
Total	3	1	4	2	-	2	-	-	-	6

Appendix E: Australian Public Sector (APS) classification and gender

Table 26: Australian Public Service Act ongoing employees current report period (2020–21)

	Male			Female			Indeterminate			Total
	Full-time	Part-time	Total Male	Full-time	Part-time	Total Female	Full-time	Part-time	Total Indeterminate	
SES 3	-	-	-	-	-	-	-	-	-	-
SES 2	1	-	1	-	-	-	-	-	-	1
SES 1	-	-	-	-	-	-	-	-	-	-
EL 2	28	-	28	4	2	6	-	-	-	34
EL 1	19	-	19	10	4	14	-	-	-	33
APS 6	11	-	11	6	1	7	-	-	-	18
APS 5	3	-	3	4	-	4	-	-	-	7
APS 4	-	-	-	-	-	-	-	-	-	-
APS 3	-	-	-	-	-	-	-	-	-	-
APS 2	-	-	-	-	-	-	-	-	-	-
APS 1	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Total	62	-	62	24	7	31	-	-	-	93

Table 27: Australian Public Service Act non-ongoing employees current report period (2020–21)

	Male			Female			Indeterminate			Total
	Full-time	Part-time	Total Male	Full-time	Part-time	Total Female	Full-time	Part-time	Total Indeterminate	
SES 3	-	-	-	-	-	-	-	-	-	-
SES 2	-	-	-	-	-	-	-	-	-	-
SES 1	-	-	-	-	-	-	-	-	-	-
EL 2	1	-	1	-	-	-	-	-	-	1
EL 1	-	-	-	-	-	-	-	-	-	-
APS 6	1	-	1	1	1	2	-	-	-	3
APS 5	5	-	5	2	-	2	-	-	-	7
APS 4	-	-	-	1	-	1	-	-	-	1
APS 3	-	-	-	-	-	-	-	-	-	-
APS 2	-	-	-	-	-	-	-	-	-	-
APS 1	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
TOTAL	7	-	7	4	1	5	-	-	-	12

Table 28: Australian Public Service Act ongoing employees previous report period (2019–20)

	Male			Female			Indeterminate			Total
	Full-time	Part-time	<i>Total Male</i>	Full-time	Part-time	<i>Total Female</i>	Full-time	Part-time	<i>Total Indeterminate</i>	
SES 3	-	-	-	-	-	-	-	-	-	-
SES 2	1	-	1	-	-	-	-	-	-	1
SES 1	1	-	1	-	-	-	-	-	-	1
EL 2	27	-	27	4	2	6	-	-	-	33
EL 1	16	-	16	8	-	8	-	-	-	24
APS 6	13	-	13	8	3	11	-	-	-	24
APS 5	4	-	4	5	-	5	-	-	-	9
APS 4	-	-	-	-	-	-	-	-	-	-
APS 3	-	-	-	-	-	-	-	-	-	-
APS 2	-	-	-	-	-	-	-	-	-	-
APS 1	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Total	62	-	62	25	5	30	-	-	-	92

Table 29: Australian Public Service Act non-ongoing employees previous report period (2019–20)

	Male			Female			Indeterminate			Total
	Full-time	Part-time	<i>Total Male</i>	Full-time	Part-time	<i>Total Female</i>	Full-time	Part-time	<i>Total Indeterminate</i>	
SES 3	-	-	-	-	-	-	-	-	-	-
SES 2	1	-	1	-	-	-	-	-	-	1
SES 1	-	-	-	-	-	-	-	-	-	-
EL 2	-	-	-	1	-	1	-	-	-	1
EL 1	1	-	1	1	-	1	-	-	-	2
APS 6	1	-	1	-	-	-	-	-	-	1
APS 5	-	-	-	2	-	2	-	-	-	2
APS 4	1	-	1	-	-	-	-	-	-	1
APS 3	-	-	-	-	-	-	-	-	-	-
APS 2	-	-	-	-	-	-	-	-	-	-
APS 1	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
TOTAL	4	-	4	4	-	4	-	-	-	8

Appendix F: Employment type by full-time and part-time status

Table 30: Australian Public Service Act employees by full-time and part-time status current report period (2020–21)

	Ongoing			Non-Ongoing			Total
	Full-time	Part-time	Total Ongoing	Full-time	Part-time	Total Non-Ongoing	Total
SES 3	-	-	-	-	-	-	-
SES 2	1	-	1	-	-	-	1
SES 1	-	-	-	-	-	-	-
EL 2	32	2	34	1	-	1	35
EL 1	29	4	33	-	-	-	33
APS 6	17	1	18	2	1	3	21
APS 5	7	-	7	7	-	7	14
APS 4	-	-	-	1	-	1	1
APS 3	-	-	-	-	-	-	-
APS 2	-	-	-	-	-	-	-
APS 1	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
Total	86	7	93	11	1	12	105

Table 31: Australian Public Service Act employees by full-time and part-time status previous report period (2019–20)

	Ongoing			Non-Ongoing			Total
	Full-time	Part-time	Total Ongoing	Full-time	Part-time	Total Non-Ongoing	Total
SES 3	-	-	-	-	-	-	-
SES 2	-	-	-	1	-	1	1
SES 1	1	-	1	-	-	-	1
EL 2	31	2	33	1	-	1	34
EL 1	25	-	25	2	-	2	27
APS 6	21	3	24	1	-	1	25
APS 5	9	-	9	2	-	2	11
APS 4	-	-	-	1	-	1	1
APS 3	-	-	-	-	-	-	-
APS 2	-	-	-	-	-	-	-
APS 1	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
Total	87	5	92	8	-	8	100

Appendix G: Employment type by location

Table 32: Australian Public Service Act employment type by location current report period (2020–21)

	Ongoing	Non-Ongoing	Total
NSW	1	-	1
Qld	14	1	15
SA	3	-	3
Tas	-	-	-
Vic	7	-	7
WA	6	-	6
ACT	62	11	73
NT	-	-	-
External Territories	-	-	-
Overseas	-	-	-
Total	93	12	105

Table 33: Australian Public Service Act employment type by location previous report period (2019–20)

	Ongoing	Non-Ongoing	Total
NSW	1	-	1
Qld	13	-	13
SA	3	-	3
Tas	-	-	-
Vic	5	-	5
WA	5	-	5
ACT	65	8	73
NT	-	-	-
External Territories	-	-	-
Overseas	-	-	-
Total	92	8	100

Appendix H: Indigenous employment

Table 34: Australian Public Service Act Indigenous employment current report period (2020–21)

	Total
Ongoing	-
Non-Ongoing	-
Total	-

Table 35: Australian Public Service Act Indigenous employment previous report period (2019–20)

	Total
Ongoing	-
Non-Ongoing	-
Total	-

Appendix I: Employment arrangements of SES and non-SES employees

Table 36: Australian Public Service Act employment arrangements current report period (2020–21)

	SES	Non-SES	Total
ATSB Enterprise Agreement 2015	-	104	104
24(1) Determination	1	-	1
Total	1	104	105

Appendix J: Salary ranges by classification level

Table 37: Australian Public Service Act employment salary ranges by classification level (minimum/maximum) current report period (2020–21)

	Minimum Salary (\$)	Maximum Salary (\$)
SES 3	-	-
SES 2	277,267	277,267
SES 1	234,610	234,610
EL 2	123,914	152,296
EL 1	104,234	126,365
APS 6	81,369	96,791
APS 5	75,045	81,031
APS 4	67,221	73,045
APS 3	60,669	65,508
APS 2	53,175	58,707
APS 1	46,954	51,718
Other	-	-
<i>Minimum/Maximum range</i>	46,954	277,267

Appendix K: Performance pay by classification level

Australian Public Service Act employment performance pay by classification level current report period (2020–21)

A table detailing performance pay by classification level for the reporting period (2020-21) has been removed as it is not applicable for the ATSB.

Appendix L: Accountable authority

Table 38: Details of accountable authority during the reporting period current report period (2020–21)

Period as the accountable authority or member within the reporting period			
Name	Position Title/Position held	Date of Commencement	Date of cessation
Greg Hood	Chief Commissioner/CEO	1 July 2016	30 June 2021

Appendix M: Significant non-compliance with the finance law

Table 39: Significant non-compliance with the finance law

Description of non-compliance	Remedial Action
N/A	-

Appendix N: Audit committee 2020–21

Table 40: Audit committee 2020–21

Member name	Qualifications, knowledge, skills or experience (include formal and informal as relevant)	Number of meetings attended / total number of meetings	Total annual remuneration \$ (GST inc.)	Additional information
Clare Kitcher (Chair)	<ul style="list-style-type: none"> GAICD CPRM BSc (Hons) Dunelm Experienced public sector executive and non-executive director specialising in risk management and business transformation Prequalified independent member of Audit and Risk Committees in NSW 	4/4	15,400	N/A
Cheryl-Anne Navarro	A Certified Practising Accountant with over 21 years of public sector experience, including 16 years in senior finance roles. <ul style="list-style-type: none"> FCPA MBA, Deakin University Bachelor of Commerce, Australian National University 	4/4	-	N/A
Neville Blyth	<ul style="list-style-type: none"> B.App.Sc (Metallurgy) DipTSI Experienced APS senior manager Internal member 	4/4	4,000.20	N/A

Appendix O: Reportable consultancy contracts

Table 41: Expenditure on reportable consultancy contracts current report period (2020–21)

	Number	Expenditure \$ (GST inc.)
New contracts entered into during the reporting period	7	2,482,752
Ongoing contracts entered into during a previous reporting period	-	-
Total	7	2,482,752

Appendix P: Reportable non-consultancy contracts

Table 42: Expenditure on reportable non-consultancy contracts current report period (2020–21)

	Number	Expenditure \$ (GST inc.)
New contracts entered into during the reporting period	38	6,824,577
Ongoing contracts entered into during a previous reporting period		
Total	38	6,824,577

Appendix Q: Additional information about organisations receiving amounts under reportable consultancy contracts or reportable non-consultancy contracts

Table 43: Organisations receiving a share of reportable consultancy contract expenditure current report period (2020–21)

Name of Organisation (ABN)	Expenditure \$ (GST inc.)
ChartSmart Consulting Pty Ltd (88133375112)	62,707
Dialog Pty Ltd - Colin Bunn (26127218482)	1,931
Ionize Pty Ltd - Richard North (62132569941)	87,491
L & B Worldwide Australia Pty Ltd (82123245278)	22,748
NTT Australia Digital Pty Ltd (31100103268)	2,270,994
ProAllied Australia Pty Ltd (50631285651)	17,160
Puzzle Partners Consulting Pty Ltd (69107246926)	19,721
Total New Consultancy Expenditure 2020–21:	2,482,752

Table 44: Organisations receiving a share of reportable non-consultancy contract expenditure current report period (2020–21)

Name of Organisation (ABN)	Expenditure \$ (GST inc.)
AcronymIT Pty Ltd (68096077422)	41,713
AMP Capital Management Pty Ltd (44099105094)	1,980,000
Aurion Corporation Pty Ltd (63050431868)	69,990
Broadspectrum Property Pty Ltd (16618028676)	30,972
Capital Recruit Unit Trust (19621492261)	32,728
Catapult BI Pty Ltd (26127218482)	79,827
Computers Now Pty Ltd (48592886118)	17,557

Name of Organisation (ABN)	Expenditure \$ (GST inc.)
Confertel Communications Group Pty Ltd (14088121359)	32,315
Data3 Ltd (31010545267)	237,318
Dell Australia Pty Ltd (46003855561)	26,319
Edge Integration Pty Ltd (89074677311)	61,284
ELMO Software Ltd (13102455087)	27,500
Ethan Group Pty Ltd (93099503456)	100,100
Executive Intelligence Group Pty Ltd (88088137071)	9,625
Faro Singapore Pte. Ltd. (81611406743)	31,486
FUJIFILM Business Innovation Australia Pty Ltd (63000341819)	5,389
Generation-E Productivity Solutions Pty Ltd (25163718714)	20,240
Investa Asset Management (QLD) Pty Ltd (35098527167)	277,855
Karlka Recruiting Group (78167536978)	3,287
Kitcher Risk Solutions (85983112392)	15,814
Konica Minolta Business Solutions Australia Pty Ltd (50001065096)	6,040
MasterDocs Pty Ltd (33164120861)	13,200
Michael Page International Australia Pty Ltd (58002872264)	16,393
Mills Oakley (51493069734)	18,529
Major Training Services Pty Ltd (57064001270)	13,805
NTT Australia Pty Ltd (65003371239)	943,380
Protiviti Pty Ltd (27108473909)	42,445
Randstad Pty Limited (28080275378)	46,200
Roy Weston Corporate Pty Ltd Regents Commercial (81075243006)	17,611
SG Fleet Australia Pty Limited (15003429356)	13,973
Sliced Tech Pty Ltd (53165997008)	661,096
Sofrina Pty Ltd ATF The Sofrina Trust (63157232513)	8,734
SYFA Solutions Pty Ltd (50114131387)	11,077
Technology One Ltd (84010487180)	43,443
Telstra Corporation Ltd (33051775556)	48,775
The Learning Deli (12918256412)	26,400
The Open Door Coaching Group Pty Ltd (63087429472)	11,550
THE TRUSTEE FOR DEXUS WHOLESALE PROPERTY TRUST 1 (75942337384)	28,702
Ventia Property Pty Ltd (16618028676)	1,751,907
Total Non-Consultancy Expenditure 2020–21	6,824,577

Appendix R: Aids to access

Table 45: Aids to access details current report period (2020–21)

Annual report Contact Officer (Title/Position held)	Annual Report Coordinator
Contact Phone Number	1800 020 616
Contact Email	atsbinfo@atsb.gov.au
Entity website (URL)	www.atsb.gov.au

Appendix S: Report on financial performance summary

Table 46: Entity resource statement subset summary current report period (2020–21)

	Actual Available appropriation - current year (a)	Payments made (b)	Balance remaining (a)-(b)
	\$'000	\$'000	\$'000
Departmental			
Annual appropriations - ordinary annual services	35,166	26,096	9,070
Annual appropriations - other services - non-operating	68	68	-
Total departmental annual appropriations	35,234	26,164	9,070
Departmental special appropriations			
Total special appropriations			
Special accounts			
Total special accounts			
<i>less departmental appropriations drawn from annual/special appropriations and credited to special accounts</i>			
Total departmental resourcing (A)	35,234	26,164	9,070
Administered			
Annual appropriations - ordinary annual services			
Annual appropriations - other services - non-operating			
Annual appropriations - other services - specific payments to States, ACT, NT and local government			
Annual appropriations - other services - new administered expenses			
Total administered annual appropriations			
Administered special appropriations			
Total administered special appropriations			
Special accounts			
Total special accounts receipts			
<i>less administered appropriations drawn from annual/special appropriations and credited to special accounts</i>			
<i>less payments to corporate entities from annual/special appropriations</i>			
Total administered resourcing (B)			
Total resourcing and payments for entity X (A + B)	35,234	26,164	9,070

Appendix T: Financial statements summary

Table 47: Statement of comprehensive income current report period (2020–21)

	30 June 2021	30 June 2020	Budget 30 June 2021
	\$'000	\$'000	\$'000
NET COST OF SERVICES			
Expenses			
Employee Benefits Expense	15,972	15,978	15,973
Suppliers Expense	7,208	7,871	7,452
Depreciation and Amortisation Expense	2,297	2,229	2,198
Total Expenses	25,682	26,187	25,707
Income			
Total Own-Source Income	4,401	5,027	3,993
Net cost of services			
Net cost of services	-21,277	-21,157	-21,714
Revenue from Government			
Revenue from Government	20,933	20,205	20,933
Surplus/(Deficit) after Tax			
Surplus/(Deficit) after Tax	-344	-952	-781
OTHER COMPREHENSIVE INCOME			
Total comprehensive Income/(Loss)	-18	109	0

Table 48: Statement of financial position current report period (2020–21)

	30 June 2021	30 June 2020	Budget 30 June 2021
	\$'000	\$'000	\$'000
ASSETS			
Total Financial Assets	9,459	8,600	8,604
Total Non-Financial Assets	13,647	11,032	13,511
Total Assets	23,106	19,632	22,115
LIABILITIES			
Total Payables	642	1,049	1,039
Total Interest Bearing Liabilities	8,118	8,862	7,358
Total Provisions	4,811	4,559	4,609
Total Liabilities	13,571	14,470	13,006
Net Assets	9,535	5,162	9,109
EQUITY			
Total Equity	9,535	5,162	9,109

Table 49: Statement of changes in equity current report period (2020–21)

	30 June 2021	30 June 2020	Budget 30 June 2021
	<u>\$'000</u>	<u>\$'000</u>	<u>\$'000</u>
Opening balance			
Balance Carried Forward from Previous Period	5,162	19,347	9,109
Adjusted Opening Balance	5,162	19,347	9,109
Comprehensive income			
Total Comprehensive Income	-362	-843	0
Closing balance as at 30 June	9,535	5,162	9,109

Table 50: Cash flow statement current report period (2020–21)

	30 June 2021	30 June 2020	Budget 30 June 2021
	<u>\$'000</u>	<u>\$'000</u>	<u>\$'000</u>
OPERATING ACTIVITIES			
Total Cash Received (OPERATING ACTIVITIES)	22,993	20,714	22,097
Total Cash Used for (OPERATING ACTIVITIES)	21,414	19,714	20,608
Net Cash from OPERATING ACTIVITIES	1,579	1,000	1,417
INVESTING ACTIVITIES			
Total Cash Received (INVESTING ACTIVITIES)	11	6	0
Total Cash Used (INVESTING ACTIVITIES)	4,013	441	4,735
Net Cash from INVESTING ACTIVITIES	-4,002	-435	-4735
Purchase of Property, Plant and Equipment	2,151	161	4,735
Purchase of Intangibles	1,862	280	0
FINANCING ACTIVITIES			
Total Cash Received (FINANCING ACTIVITIES)	4,088	852	4,735
Total Cash Used (FINANCING ACTIVITIES)	1,474	1,424	1,417
Net Cash from FINANCING ACTIVITIES	2,614	-572	3,318
Cash at the End of the Reporting Period			
Cash at the End of the Reporting Period	336	145	145

Table 51: Aggregate assets and liabilities

	30 June 2021	30 June 2020	Budget 30 June 2021
	<u>\$'000</u>	<u>\$'000</u>	<u>\$'000</u>
Assets – No more than 12 months	9,986	8,786	8,829
Liabilities – No more than 12 months	3,700	4,165	4,084

Table 52: Commonwealth lessees – Departmental leases under AASB 16 (2020–21)

	30 June 2021	30 June 2020	Budget 30 June 2021
	<u>\$'000</u>	<u>\$'000</u>	<u>\$'000</u>
Note to Depreciation – Depreciation on right-of-use assets	1,594	1,586	1,602
Cash Flow – Operating Activities – Interest Payments on Lease Liabilities	86	102	84
Cash Flow – Financing Activities – Principal Payments of Lease Liabilities	1,474	1,424	1,417

Table 53: Regulatory charging summary note

	30 June 2021	30 June 2020
	<u>\$'000</u>	<u>\$'000</u>
Expenses		
Total expenses	0	0
External revenue		
Total external revenue	0	0

Appendix U: List of requirements

The list below outlines compliance with key annual performance reporting information, as required in section 17AJ(d) of the *Public Governance, Performance and Accountability Rule 2014*.

PGPA Rule Reference	Part of Report	Description	Requirement	Page
17AD(g)	Letter of transmittal			
17AI	-	A copy of the letter of transmittal signed and dated by accountable authority on date final text approved, with statement that the report has been prepared in accordance with section 46 of the Act and any enabling legislation that specifies additional requirements in relation to the annual report.	Mandatory	1
17AD(h)	Aids to access			
17AJ(a)	-	Table of contents.	Mandatory	2
17AJ(b)	-	Alphabetical index.	Mandatory	138
17AJ(c)	-	Glossary of abbreviations and acronyms.	Mandatory	133-137
17AJ(d)	-	List of requirements.	Mandatory	129-132
17AJ(e)	-	Details of contact officer.	Mandatory	7
17AJ(f)	-	Entity's website address.	Mandatory	7
17AJ(g)	-	Electronic address of report.	Mandatory	7
17AD(a)	Review by accountable authority			
17AD(a)	-	A review by the accountable authority of the entity.	Mandatory	8-10
17AD(b)	Overview of the entity			
17AE(1)(a)(i)	-	A description of the role and functions of the entity.	Mandatory	11–17
17AE(1)(a)(ii)	-	A description of the organisational structure of the entity.	Mandatory	18
17AE(1)(a)(iii)	-	A description of the outcomes and programmes administered by the entity.	Mandatory	23
17AE(1)(a)(iv)	-	A description of the purposes of the entity as included in corporate plan.	Mandatory	27
17AE(1)(aa)(i)	-	Name of the accountable authority or each member of the accountable authority.	Mandatory	122
17AE(1)(aa)(ii)	-	Position title of the accountable authority or each member of the accountable authority.	Mandatory	122
17AE(1)(aa)(iii)	-	Period as the accountable authority or member of the accountable authority within the reporting period.	Mandatory	122
17AE(1)(b)	-	An outline of the structure of the portfolio of the entity.	Portfolio departments - mandatory	N/A
17AE(2)	-	Where the outcomes and programs administered by the entity differ from any Portfolio Budget Statement, Portfolio Additional Estimates Statement or other portfolio estimates statement that was prepared for the entity for the period, include details of variation and reasons for change.	If applicable, mandatory	N/A
17AD(c)	Report on the performance of the entity			
Annual performance Statements				
17AD(c)(i); 16F	-	Annual performance statement in accordance with paragraph 39(1)(b) of the Act and section 16F of the Rule.	Mandatory	26–34
17AD(c)(ii)	Report on financial performance			
17AF(1)(a)	-	A discussion and analysis of the entity's financial performance.	Mandatory	45
17AF(1)(b)	-	A table summarising the total resources and total payments of the entity.	Mandatory	113
17AF(2)	-	If there may be significant changes in the financial results during or after the previous or current reporting period, information on those changes, including: the cause of any operating loss of the entity; how the entity has responded to the loss and the actions that have been taken in relation to the loss; and any matter or circumstances that it can reasonably be	If applicable, mandatory.	45

		anticipated will have a significant impact on the entity's future operation or financial results.		
17AD(d)	Management and accountability			
	<i>Corporate governance</i>			
17AG(2)(a)	-	Information on compliance with section 10 (fraud systems).	Mandatory	104
17AG(2)(b)(i)	-	A certification by accountable authority that fraud risk assessments and fraud control plans have been prepared.	Mandatory	1
17AG(2)(b)(ii)	-	A certification by accountable authority that appropriate mechanisms for preventing, detecting incidents of, investigating or otherwise dealing with, and recording or reporting fraud that meet the specific needs of the entity are in place.	Mandatory	1
17AG(2)(b)(iii)	-	A certification by accountable authority that all reasonable measures have been taken to deal appropriately with fraud relating to the entity.	Mandatory	1
17AG(2)(c)	-	An outline of structures and processes in place for the entity to implement principles and objectives of corporate governance.	Mandatory	103–107
17AG(2)(d) – (e)	-	A statement of significant issues reported to Minister under paragraph 19(1)(e) of the Act that relates to non-compliance with Finance law and action taken to remedy non-compliance.	If applicable, mandatory	N/A
	<i>Audit Committee</i>			
17AG(2A)(a)	-	A direct electronic address of the charter determining the functions of the entity's audit committee.	Mandatory	103
17AG(2A)(b)	-	The name of each member of the entity's audit committee.	Mandatory	122
17AG(2A)(c)	-	The qualifications, knowledge, skills or experience of each member of the entity's audit committee.	Mandatory	122
17AG(2A)(d)	-	Information about the attendance of each member of the entity's audit committee at committee meetings.	Mandatory	122
17AG(2A)(e)	-	The remuneration of each member of the entity's audit committee.	Mandatory	122
	<i>External scrutiny</i>			
17AG(3)	-	Information on the most significant developments in external scrutiny and the entity's response to the scrutiny.	Mandatory	107
17AG(3)(a)	-	Information on judicial decisions and decisions of administrative tribunals and by the Australian Information Commissioner that may have a significant effect on the operations of the entity.	If applicable, mandatory	N/A
17AG(3)(b)	-	Information on any reports on operations of the entity by the Auditor-General (other than report under section 43 of the Act), a Parliamentary Committee, or the Commonwealth Ombudsman.	If applicable, mandatory	N/A
17AG(3)(c)	-	Information on any capability reviews on the entity that were released during the period.	If applicable, mandatory	N/A
	<i>Management of human resources</i>			
17AG(4)(a)	-	An assessment of the entity's effectiveness in managing and developing employees to achieve entity objectives.	Mandatory	105–106
17AG(4)(aa)	-	Statistics on the entity's employees on an ongoing and non-ongoing basis, including the following: (a) statistics on full-time employees; (b) statistics on part-time employees; (c) statistics on gender; (d) statistics on staff location.	Mandatory	115–118
17AG(4)(b)	-	Statistics on the entity's APS employees on an ongoing and non-ongoing basis; including the following: · Statistics on staffing classification level; · Statistics on full-time employees; · Statistics on part-time employees; · Statistics on gender; · Statistics on staff location; · Statistics on employees who identify as Indigenous.	Mandatory	119–121
17AG(4)(c)	-	Information on any enterprise agreements, individual flexibility arrangements, Australian workplace agreements, common law contracts and determinations under subsection 24(1) of the <i>Public Service Act 1999</i> .	Mandatory	121–122
17AG(4)(c)(i)	-	Information on the number of SES and non-SES employees covered by agreements etc. identified in paragraph 17AG(4)(c).	Mandatory	121

17AG(4)(c)(ii)	-	The salary ranges available for APS employees by classification level.	Mandatory	121
17AG(4)(c)(iii)	-	A description of non-salary benefits provided to employees.	Mandatory	121
17AG(4)(d)(i)	-	Information on the number of employees at each classification level who received performance pay.	If applicable, mandatory	122
17AG(4)(d)(ii)	-	Information on aggregate amounts of performance pay at each classification level.	If applicable, mandatory	122
17AG(4)(d)(iii)	-	Information on the average amount of performance payment, and range of such payments, at each classification level.	If applicable, mandatory	121–122
17AG(4)(d)(iv)	-	Information on aggregate amount of performance payments.	If applicable, mandatory	121–122
Assets management				
17AG(5)	-	An assessment of effectiveness of assets management where asset management is a significant part of the entity's activities.	If applicable, mandatory	N/A
Purchasing				
17AG(6)	-	An assessment of entity performance against the <i>Commonwealth Procurement Rules</i> .	Mandatory	106
Reportable consultancy contracts				
17AG(7)(a)	-	A summary statement detailing the number of new reportable consultancy contracts entered into during the period; the total actual expenditure on all such contracts (inclusive of GST); the number of ongoing reportable consultancy contracts that were entered into during a previous reporting period; and the total actual expenditure in the reporting period on those ongoing contracts (inclusive of GST).	Mandatory	107
17AG(7)(b)	-	A statement that “During [reporting period], [specified number] new reportable consultancy contracts were entered into involving total actual expenditure of \$[specified million]. In addition, [specified number] ongoing reportable consultancy contracts were active during the period, involving total actual expenditure of \$[specified million]”.	Mandatory	107
17AG(7)(c)	-	A summary of the policies and procedures for selecting and engaging consultants and the main categories of purposes for which consultants were selected and engaged.	Mandatory	106–107
17AG(7)(d)	-	A statement that “Annual reports contain information about actual expenditure on reportable consultancy contracts. Information on the value of reportable consultancy contracts is available on the AusTender website.”	Mandatory	107
Reportable non-consultancy contracts				
17AG(7A)(a)	-	A summary statement detailing the number of new reportable non-consultancy contracts entered into during the period; the total actual expenditure on such contracts (inclusive of GST); the number of ongoing reportable non-consultancy contracts that were entered into during a previous reporting period; and the total actual expenditure in the reporting period on those ongoing contracts (inclusive of GST).	Mandatory	107
17AG(7A)(b)		A statement that “Annual reports contain information about actual expenditure on reportable non-consultancy contracts. Information on the value of reportable non-consultancy contracts is available on the AusTender website.”	Mandatory	107
17AD(daa)	Additional information about organisations receiving amounts under reportable consultancy contracts or reportable non-consultancy contracts			
17AGA		Additional information, in accordance with section 17AGA, about organisations receiving amounts under reportable consultancy contracts or reportable non-consultancy contracts.	Mandatory	123–124
Australian National Audit Office Access Clauses				
17AG(8)	-	If an entity entered into a contract with a value of more than \$100 000 (inclusive of GST) and the contract did not provide the Auditor-General with access to the contractor's premises, the report must include the name of the contractor, purpose and value of the contract, and the reason why a clause allowing access was not included in the contract.	If applicable, mandatory	107

		<i>Exempt contracts</i>		
17AG(9)	-	If an entity entered into a contract or there is a standing offer with a value greater than \$10 000 (inclusive of GST) which has been exempted from being published in AusTender because it would disclose exempt matters under the FOI Act, the annual report must include a statement that the contract or standing offer has been exempted, and the value of the contract or standing offer, to the extent that doing so does not disclose the exempt matters.	If applicable, mandatory	107
		<i>Small business</i>		
17AG(10)(a)	-	A statement that " <i>[Name of entity] supports small business participation in the Commonwealth Government procurement market. Small and Medium Enterprises (SME) and Small Enterprise participation statistics are available on the Department of Finance's website.</i> "	Mandatory	107
17AG(10)(b)	-	An outline of the ways in which the procurement practices of the entity support small and medium enterprises.	Mandatory	107
17AG(10)(c)	-	If the entity is considered by the Department administered by the Finance Minister as material in nature—a statement that " <i>[Name of entity] recognises the importance of ensuring that small businesses are paid on time. The results of the Survey of Australian Government Payments to Small Business are available on the Treasury's website.</i> "	If applicable, mandatory	N/A
		<i>Financial Statements</i>		
17AD(e)	-	Inclusion of the annual financial statements in accordance with subsection 43(4) of the Act.	Mandatory	74-102
		<i>Executive Remuneration</i>		
17AD(da)	-	Information about executive remuneration in accordance with Subdivision C of Division 3A of Part 2-3 of the Rule.	Mandatory	114
17AD(f)		Other mandatory information		
17AH(1)(a)(i)	-	If the entity conducted advertising campaigns, a statement that " <i>During [reporting period], the [name of entity] conducted the following advertising campaigns: [name of advertising campaigns undertaken]. Further information on those advertising campaigns is available at [address of entity's website] and in the reports on Australian Government advertising prepared by the Department of Finance. Those reports are available on the Department of Finance's website.</i> "	If applicable, mandatory	108
17AH(1)(a)(ii)	-	If the entity did not conduct advertising campaigns, a statement to that effect.	If applicable, mandatory	108
17AH(1)(b)	-	A statement that " <i>Information on grants awarded by [name of entity] during [reporting period] is available at [address of entity's website].</i> " .	If applicable, mandatory	109
17AH(1)(c)	-	Outline of mechanisms of disability reporting, including reference to website for further information.	Mandatory	109
17AH(1)(d)	-	Website reference to where the entity's Information Publication Scheme statement pursuant to Part II of FOI Act can be found.	Mandatory	109
17AH(1)(e)	-	Correction of material errors in previous annual report.	If applicable, mandatory	N/A
17AH(2)	-	Information required by other legislation.	Mandatory	108–112

Appendix V: Glossary

Term	Description
AAD	Australian Antarctic Division.
AAO	Administrative Arrangements Order.
AAT	Administrative Appeals Tribunal.
Accident	An investigable matter involving a transport vehicle occurs when: <ul style="list-style-type: none"> ➤ a person dies, or suffers serious injury, as a result of an occurrence associated with the operation of the vehicle ➤ the vehicle is destroyed, or seriously damaged, as a result of an occurrence associated with the operation of the vehicle ➤ 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, surveying and photography.
Agricultural operations	Operations involving the carriage and/or spreading of chemicals, seed, fertiliser or other substances for agricultural purposes—including the purposes of pest and disease control.
AIG	Accident Investigation Group.
AIMS	ATSB Investigation Management System.
Airworthiness directive	A notification to owners and operators of certified aircraft that a known safety deficiency with a particular model of aircraft, engine, avionics or other system exists and must be corrected. If a certified aircraft has outstanding airworthiness directives that have not been complied with, the aircraft is not considered airworthy.
Amateur-built aircraft	Aircraft not built in a factory but for the user's personal use or recreation. May include ultra-light, original design, plans built, kit built or experimental aircraft.
AMC	Australian Maritime College.
AMSA	Australian Maritime Safety Authority.
ANAO	Australian National Audit Office.
APAC	ICAO Asia Pacific.
APS	Australian Public Service.
APSC	Australian Public Service Commission.
ARTC	Australian Rail Track Corporation.
ATC	Air traffic control.
ATSB	Australian Transport Safety Bureau.
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 representative who is appointed in the case of safety occurrences involving Australian-registered aircraft outside Australian territory, normally an ATSB investigator.
AWS	Automatic warning system.
CASA	Civil Aviation Safety Authority.
Catastrophic accident	A 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 regular public transport operations.
CITS	Victorian Office of Chief Investigators.
Collective	The collective pitch control, or collective lever, in a helicopter changes the pitch angle of all the main rotor blades at the same time, independent of their position. Therefore, if a collective input is made, all the blades change equally. The result is that the helicopter increases or decreases its total lift derived from the rotor.
Commercial air transport	High-capacity regular public transport (RPT) flights, low-capacity RPT flights, charter flights and medical transport.
Complex investigations	Investigations rated at level 1, level 2 or level 3 in accordance with the ATSB's rating system.

Contributing safety factor	A safety factor that, if it had not occurred or existed at the relevant time, then: <ul style="list-style-type: none"> ➤ 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.
CPRs	Commonwealth Procurement Rules.
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.
CVR (black box)	Cockpit voice recorder.
DCV	Domestic Commercial Vessel as defined by the <i>Marine Safety (Domestic Commercial Vessel) National Law Act 2012</i> .
DFSB	Defence Flight Safety Bureau
DRWA	Drivers Working and Rostering Arrangements.
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. This also includes those whose reputations are likely to be affected following the release of the investigation report.
EEGO	Energy Efficiency in Government Operations.
EL	Executive Level.
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 which results in death within 30 days of the accident.
Flight data recorder (FDR) (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, or check and training operations conducted by RPT operators.
FMCS	Fatigue Management Control System.
FOI Act	<i>Freedom of Information Act 1982</i> .
FRMIP	Fatigue Risk Management Improvement Program.
FRMS	Fatigue Risk Management System.
FRNSW	Fire and Rescue New South Wales.
General aviation (GA)	General aviation covers: <ul style="list-style-type: none"> ➤ aerial work operations (including aerial agriculture, aerial mustering, search and rescue, and aerial survey) ➤ flying training ➤ private aviation ➤ business and sports (including gliding) aviation—VH, or foreign-registered.
GovCMS	Content management system platform.
GPS	Global Positioning System.
GRWA	Guards Rostering and Working Arrangements.
Hours flown	Calculated from the time the wheels start, with the intention of flight, to the time the wheels stop after completion of the flight.
Human factors	Human factors is the multidisciplinary science that applies knowledge about the capabilities and limitations of human performance to all aspects of the design operation and maintenance of products and systems. It considers the effect of physical, psychological and environmental factors on human performance in different task environments—including the role of human operators in complex systems.
IACS	International Association of Classification Societies.
IALA	International Association of Marine Aids to Navigation and Lighthouse Authorities
IAS	Integrated automation system.
ICARAS	International Convention of Aviation Regulation and Safety.
ICAO	International Civil Aviation Organization.
Immediately reportable matter	A serious transport safety matter that covers occurrences such as: <ul style="list-style-type: none"> ➤ accidents involving death ➤ serious injury ➤ destruction or serious damage of vehicles or property ➤ when an accident nearly occurs.

ICT	Information and Communications Technology.
IMO	International Maritime Organization.
Incident	An occurrence, other than an accident, associated with the operation of transport vehicle that affects, or could affect, the safety of the operation
ITSAP	The Australian Government's Indonesia Transport Safety Assistance Package
KPI	Key Performance Indicator.
Less complex investigations	Those rated at level 4 or level 5 under the ATSB's rating scheme.
Minor injury	An injury sustained by a person, in an accident, that was not fatal or serious and does not require hospitalisation.
MIPP	Major Investigation Preparedness Plan.
MOC	Maintenance of competency.
MOU	Memorandum of Understanding.
Multi-modal	Across the three modes of transport covered by the ATSB: aviation, marine and rail.
National Transportation Safety Committee (NTSC)	An Indonesian Government institution responsible for the investigation of safety deficiencies in aviation, maritime and land transport.
NM	Nautical miles.
OAIC	Office of the Australian Information Commissioner.
Occurrences accidents and incidents	Occurrences are reportable matters - either an immediately reportable matter (IRM) or a routine reportable matter (RRM). They comprise accidents, serious incidents and incidents.
ONRSR	Office of the National Rail Safety Regulator.
Other aerial work	Other aerial work includes: <ul style="list-style-type: none"> ➤ operations conducted for the purposes of serial work other than 'flying training' and 'agricultural operations' ➤ operations classified as other aerial work—including aerial surveying an photography, spotting, aerial stock mustering, search and rescue, ambulance, towing (including glider, target and banner towing), advertising, cloud seeding, firefighting, parachute dropping and coastal surveillance.
Other safety issue	Associated with a risk level regarded as unacceptable unless it is kept as low as reasonably practicable. Where there is a reasonable expectation that safety action could be taken in response to reduce risk, the ATSB will issue a safety recommendation to the appropriate agency when proactive safety action is not forthcoming.
OTSI	New South Wales Office of Transport Safety Investigations.
PGPA Act	<i>Public Governance, Performance and Accountability Act 2013.</i>
Pilotage	Use of licensed coastal pilots to guide ships through designated areas.
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 without revenue. Business flying refers to the use of aircraft as a means of transport to support a business or profession.
QR	Queensland Rail.
RAAF	Royal Australian Air Force.
RAAus	Recreational Aviation Australia.
Recreational aviation	Aircraft being used for recreational flying that are registered by a recreational aviation administration organisation.
Regular public transport (RPT)	Refers to aircraft that transport passengers and/or cargo according to fixed schedules and fixed departure/arrival points, in exchange for monetary reward. These services can be further divided into low- and high-capacity aircraft: <ul style="list-style-type: none"> ➤ low-capacity RPT—an RPT aircraft that provides a maximum of 38 passenger seats, or a maximum payload no greater than 4,200 kilograms ➤ high-capacity RPT—an RPT aircraft that provides more than 38 passenger seats, or a maximum payload greater than 4,200 kilograms.
ReOC	A remotely piloted aircraft operator's certificate.
REPCON	The aviation confidential reporting scheme.
Reportable safety concern	Any matter that endangers or could endanger a transport vehicle.

RMC	Rail Management Centre.
RPAS	Remotely piloted aircraft systems.
RTCD	Risk triggered commentary driving.
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: <ul style="list-style-type: none"> ➤ ATSB safety action ➤ non-ATSB safety action.
Safety advisory notice (SAN)	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 than a safety recommendation and is 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—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 which can reasonably be regarded as having the potential to adversely affect the safety of future operations and: <ul style="list-style-type: none"> ➤ is a characteristic of an organisation or a system, rather than a characteristic of a specific individual, or ➤ is characteristic of an operational environment at a specific point in time.
Safety recommendation	ATSB safety recommendations are formal recommendations from 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.
Serious incident	An incident involving circumstances indicating an accident nearly occurred.
Serious injury	An injury which is sustained by a person in an accident and involves one or more of the following: <ul style="list-style-type: none"> ➤ requires hospitalisation for more than 48 hours, commencing within seven days from the date the injury was received ➤ results in a fracture of any bone (except simple fractures of fingers, toes or nose) ➤ involves lacerations which cause severe haemorrhage, nerve, muscle or tendon damage ➤ involves injury to any internal organ ➤ involves second or third degree burns, or any burns affecting more than five per cent of the body surface ➤ involves verified exposure to infectious substances or injurious radiation.
SES	Senior Executive Service.
SFAIRP	So far as is reasonably practicable.
Short investigation	Short, factual, office-based investigations of less complex safety occurrences rated at level 5 under the ATSB's rating scheme.
SLT	Senior Leadership Team.
SMS	Safety Management System.
SOLAS	Safety of life at sea.
SPAD	Signal passed at danger.
SPID	Strategy, Portfolio and Investment Directorate.
Sports aviation	Aircraft excluded from the RPT, GA or military aircraft categories—including ultralights, gliders, hang gliders, rotorcraft and balloon aviation. Most, if not all sport aviation craft are registered with various sporting bodies rather than with the CASA, although exceptions to this rule occur. Sports aviation also includes parachute operations and acrobatics. Sports aviation in this report does not include Australian nonVH registered aircraft.
Statutory agency	A body or group of persons declared by an Act to be a statutory agency for the purposes of the <i>Public Service Act 1999</i> .
Systemic failure	A breakdown in the system as a whole.
Transport safety matter	As defined by the <i>Transport Safety Investigation Act 2003</i> , these matters consist of occurrences in which: <ul style="list-style-type: none"> ➤ 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 occurred that affected, is affecting, or might affect transport safety.
TSI Act	<i>Transport Safety Investigation Act 2003.</i>
VEMD	Vehicle engine multifunction display.

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