Transport Accident Investigation Commission

Published reports

Ngā rīpoata kua whakaputaina

1 July 2024 to 30 June 2025

Our purpose
Tā tātou kaupapa

Ko te kaupapa a Te Kōmihana Tirotiro Aituā Waka, he whakatau me te āta tirotiro he aha te pūtake o ngā aituā waka me ngā hauata. Ā, me pēhea rā te karo i ērā, kia kore ai e tūpono anō ā muri ake.

The purpose of the Transport Accident Investigation Commission is to determine the circumstances and causes of accidents and incidents with a view to avoiding similar occurrences in the future.

About this report
Mō tēnei rīpoata

No repeat accidents – ever!

The principal purpose of the Transport Accident Investigation Commission is to determine the circumstances and causes of aviation, rail and maritime accidents and incidents with a view to avoiding similar occurrences in the future, rather than to ascribe blame to any person. TAIC launches an inquiry when it believes the reported circumstances of an accident or incident have – or are likely to have – significant implications for transport safety, or when the inquiry may allow the Commission to make findings or recommendations to improve transport safety.

This document contains the executive summaries and the recommendations from reports published for inquiries completed between 1 July 2024 and 30 June 2025.

In each case, refer to the final inquiry reports for a full analysis of the evidence.

Recommendations

The reports also contain recipients' responses to recommendations where they were received in time for publications. Each recommendation has an identifying number, which is given in square brackets after the text.

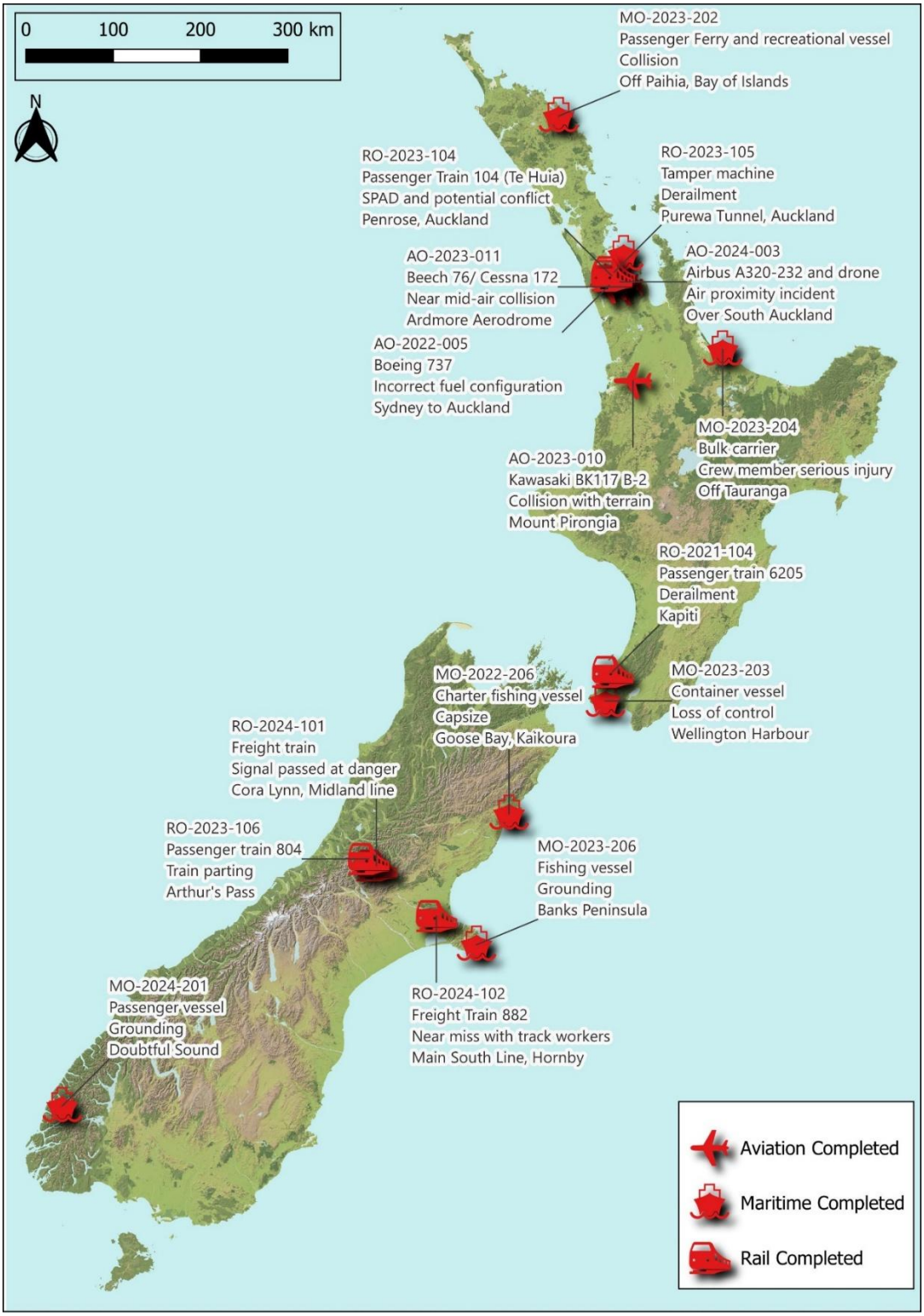
The Civil Aviation Authority, NZ Transport Agency Waka Kotahi, KiwiRail and Maritime NZ provide annual updates on the progress in implementing recommendations issued to them. The report can be found here on the Commission's website: Recommendations Reporting | TAIC.

Verbal probability expressions

For clarity, the Commission uses standardised terminology where possible. One example of this standardisation is the terminology used to describe the degree of probability (or likelihood) that an event happened, or a condition existed in support of a hypothesis. The Commission has adopted this terminology from the Intergovernmental Panel on Climate Change and Australian Transport Safety Bureau models. The Commission chose these models because of their simplicity, usability, and international use. The Commission considers these models reflect its functions. These functions include making findings and issuing recommendations based on a wide range of evidence, whether or not that evidence would be admissible in a court of law.

Term	Likelihood	Equivalent term
Virtually certain	> 99% probability of occurrence	Almost certain
Very likely	> 90% probability	Highly likely, very probable
Likely	> 66% probability	Probable
About as likely as not	33% to 66% probability	More or less likely
Unlikely	< 33% probability	Improbable
Very unlikely	< 10% probability	Highly unlikely
Exceptionally unlikely	< 1% probability	

Domestic inquiries completed 2024/25
Ngā pakirehua taiwhenua kua whakaotihia



Members of the Commission
Ngā mema o te Kōmihana

The members of the Commission on 30 June 2025 were:

David Clarke (Chief Commissioner): David brings over 20 years' experience in governance roles in the commercial, public and charitable sectors, including in Chair, finance and audit and risk roles. His 30 years of legal professional experience includes litigation, and corporate and commercial advice for private and listed company boards and public entities.

David was appointed to the Commission in December 2022 and appointed Chief Commissioner in October 2024. His term expires 30 November 2025.

Stephen Davies Howard (Deputy Chief Commissioner): Stephen Davies Howard is a Wellington-based company director. He flew fighter aircraft for the Royal Air Force and served in the Royal New Zealand Air Force as the Training Group Commander. He attained the rank of Group Captain in both services.

His strategic international experience includes being an accredited attaché to the British Embassy to the United States. He retains a commercial pilot licence and a commercially endorsed Ocean Yachtmaster's certificate.

Stephen was first appointed to the Commission in August 2015 and appointed Deputy Chief Commissioner in October 2018. His term expires on 30 June 2028.

Paula Rose QSO (Commissioner): Paula is a Canterbury-based director. Her career has seen her in roles which focus on reducing harm. She was formerly National Manager, Road Policing with NZ Police, and Deputy Chair of the Independent Taskforce on Workplace Health and Safety. Paula holds a number of governance roles including Deputy Chief Commissioner Te Kāhui Tātari Ture | Criminal Cases Review Commission and Authority Member, Electricity Authority. Previous roles include board positions on WorkSafe NZ, Social Workers Registration Board and the Broadcasting Standards Authority.

Paula is a Hato Hone St John volunteer and is currently a member of the Hato Hone St John Priory Board.

Paula was appointed to the Commission in May 2017. Her term expires on 30 June 2027.

Bernadette Roka Arapere (Commissioner): He uri tēnei o Ngāti Raukawa te au ki te Tonga, o Ngāti Tūwharetoa, o Ngāti Maniapoto hoki.

Bernadette is a barrister specialising in public and administrative law, civil litigation, and Māori legal issues. She is a Deputy Chair of the Teachers' Disciplinary Tribunal, a Trustee of Raukawa ki te Tonga Trust, and a member of the Legislation Design and Advisory Committee. She has previously held governance roles as a Trustee of the New Zealand Law Foundation and Co-Chair of Community Law Centres o Aotearoa Incorporated.

Prior to joining the independent bar, Bernadette was Crown Counsel at the Crown Law Office in Wellington and a Director of Wackrow Williams & Davies Ltd in Auckland.

Bernadette was appointed to the Commission in December 2022. Her term expires 30 November 2025.

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Summary

In a close proximity event, 'active listening' was a contributing factor – a safety issue previously identified in fatal mid-air collisions investigated by the Commission

Three of the 13 aviation inquiries active at some point in the 2024/25 year were close-proximity events. In one of these (AO-2023-011), we noted that since 2008, the Commission has investigated three fatal accidents involving mid-air collisions. All occurred over or near unattended aerodromes (that is, without air traffic controllers). At unattended aerodromes, the concept of 'see and avoid' is the final defence against mid-air collision. It is underpinned by pilots actively listening to all radio calls, processing the details of calls, and then using these to check their mental model of each aircraft's position in the approach sequence. In each of the three fatal mid-air collisions we investigated, lack of active listening was a contributing factor.

The incident at Ardmore Aerodrome (AO-2023-011) was within metres of being an accident, and active listening was again identified as a contributing factor. The Commission did not make a recommendation because of the CAA's campaign 'Work together, stay apart', which seeks to educate pilots on the risks of flying at unattended aerodromes and on their mitigation.

We commented on the potential for drone incursions and close proximity events to increase and made a recommendation to the MoT and CAA

Another of the close-proximity events (AO-2024-003) involved a drone. We noted in our report that analysis of reported incidents of drone incursions into controlled airspace and close-proximity events show that both are continuing to increase and will almost certainly continue to do so unless prompt action is taken.

We recommended that the Ministry of Transport and the Civil Aviation Authority of New Zealand, in consultation with stakeholders, work to fully integrate drones into the aviation system and develop appropriate rules and standards, to reflect technology developments and relevant international best practices.

Incorrect fuel configuration on a Boeing 737 flying from Sydney to Auckland

AO-2022-005: Boeing 737-484SF ZK-TLL Incorrect fuel configuration, Sydney to Auckland, 7 June 2022

Published: 28 November 2024
Full report: *www.taic.org.nz/inquiry/ao-2022-005*

What happened

On 7 June 2022, Boeing 737 registration ZK-TLL, operated by Airwork Flight Operations Limited (the operator) as flight number AWK2, landed at Auckland Airport after a night flight from Sydney. It had been a dedicated freight flight with two crew on board. The Transport Accident Investigation Commission (Commission) found that the flight crew omitted to turn on the centre fuel pumps when preparing the aircraft for the flight.

After landing and while taxiing the plane to stand, the flight crew noticed that the centre fuel tank still had 4000 kilograms (kg) of fuel, but there was minimal fuel left in the two main tanks that were feeding the engines. They discovered that the centre fuel pumps had remained off for the entire flight when they should have been selected on during the engine start procedure in Sydney.

Why it happened

The Transport Accident Investigation Commission (Commission) found that the flight crew omitted to turn on the centre fuel pumps when preparing the aircraft for the flight.

The distractions of a last-minute change to the departure runway and an impending airport curfew **very likely** contributed to the omission.

The Commission found that the flight had departed Sydney with a flight plan that nominated alternate aerodromes that were not compliant with regulatory or company flight-planning requirements. The operator's operational staff had not provided weather updates and flight planning for the flight as prescribed in their manuals.

What we can learn

Pilots need to ensure that procedures and checklists involving critical aircraft systems are completed with rigour and be aware of potential distractions.

Operational staff need to follow the procedures detailed in their manuals to provide support to flight crew for extended-range flights.

Pilots should ensure that flight plans for their flights are compliant with operator and regulatory procedures for alternate aerodrome planning.

Who may benefit

Pilots, operators and operations staff will benefit from reading this report.

Recommendations

The Commission acknowledges the actions taken and the ongoing work by the regulator and the operator, and on this basis has not issued any further safety recommendations.

Crash of a rescue helicopter on Mount Pirongia

AO-2023-010: Kawasaki BK117 B-2, ZK-HHJ, Collision with terrain, Mount Pirongia, 19 September 2023

Published: 17 April 2024
Full report: *www.taic.org.nz/inquiry/ao-2023-010*

Figure 6 from the report: Accident scene

What happened

On 19 September 2023, an air ambulance helicopter was dispatched from Hamilton Airport to recover a trauma patient on Mount Pirongia.[1] On board the Kawasaki BK117 B-2 helicopter were a pilot, a crew member[2] and a paramedic.

While descending on the windward side of a ridge line to recover the patient by winch extraction, the helicopter rapidly and unexpectedly dropped in height. The helicopter impacted the terrain on a west-facing escarpment covered by dense native forest.

The helicopter was severely damaged. The pilot, crew member and paramedic escaped without injury.

Why it happened

It is **virtually certain** that the helicopter entered Vortex Ring State (VRS) while descending on the windward side of a ridge line to recover the patient. VRS is a hazardous aerodynamic phenomenon that a helicopter can encounter during the descent and landing phases of

[1] Mount Pirongia is located in the Waikato region of New Zealand's North Island.
[2] The crew member was a hoist (winch) operator.

flight and during manoeuvres at low forward speed. The onset of VRS can lead to a rapid loss of main rotor lift and then to a sudden increase in the helicopter's rate of descent.

The helicopter's trajectory, particularly its descent rate and forward speed, combined with its pitch attitude and the presence of orographic uplift[3] across the ridge, was conducive to the onset of VRS.

While on final approach, the pilot assumed that they could continue the approach to the winch site in level flight. During this critical phase of flight, the pilot's visual attention was primarily focused outside the cockpit on the patient's location. As a result of a reduced instrument scan, indications that the helicopter's forward speed and descent rate were conducive to VRS were not immediately recognised.

The helicopter's height above ground level (AGL) during the onset of VRS provided the pilot with insufficient time to perform an effective recovery.

During helicopter flight training, pilots receive generic tuition on VRS. The helicopter's Flight Manual did not contain the information necessary for the pilot to identify the flight conditions and parameters for the helicopter type that were conducive to VRS.

What we can learn

The omission of guidance by the helicopter manufacturer on the avoidance and recovery from VRS poses a significant risk to operators.

It is critical that helicopter pilots understand what VRS is and how they can avoid entering it.

Flying in mountainous terrain presents helicopter pilots with multiple challenges, including misinterpreting the air environment in which they are flying. Pilots need to use all available sources of information to ensure they are not subject to visual illusions that might lead them to misjudge their forward speed and rate of descent, particularly when operating close to the ground.

Standard operating procedures help ensure that an aircraft is operated and flown in as safe a manner as possible. Modifying these procedures can increase the risk of an adverse outcome.

Who may benefit

All helicopter pilots, operators, flight schools and manufacturers may benefit from the findings and recommendations in this report.

Recommendations

On 26 February 2025, the Commission recommended that Kawasaki Heavy Industries revise the Kawasaki BK117 B-2 Flight Manual to include specific data for Vortex Ring State to assist pilots in avoiding this phenomenon. [001/25]

- Kawasaki Heavy Industries accepted the recommendation.

On 26 February 2025, the Commission recommended to the Director of Civil Aviation at the Civil Aviation Authority of New Zealand that they promote, through the appropriate International Civil Aviation Organization (ICAO) forum, consideration for the requirement and implementation for Vortex Ring State alerting systems to be installed in new helicopters. [002/25]

- The CAA replied they had the recommendation under consideration.

[3] The process by which a mass of air is lifted by a geographical feature such as a line of hills or a mountain range.

On 26 February 2025, the Commission recommended that the Director of Civil Aviation at the Civil Aviation Authority of New Zealand use the lessons from this report to raise awareness for helicopter pilots of the risks associated with inadvertently entering flight conditions that are conducive to Vortex Ring State. (003/25)

- The CAA replied they had the recommendation under consideration.

On 26 February 2025, the Commission recommended to the Director of Civil Aviation at the Civil Aviation Authority of New Zealand that they promote, through the appropriate International Civil Aviation Organization (ICAO) forum, the need for additional information to be included in all rotorcraft flight manuals, to assist pilots in avoiding Vortex Ring State. (004/25)

- The CAA replied they had the recommendation under consideration.

Near mid-air collision at Ardmore aerodrome

AO-2023-011: ZK-JED BE76/ZK-WFS C172, Near mid-air collision, Ardmore, 3 October 2023

Published: 8 May 2025
Full report: *AO-2023-011 | TAIC*

What happened

On 3 October 2023 aircraft ZK-JED, a twin-engined Beech 76 Duchess, (the Beech) and ZK-WFS, a single-engined Cessna 172, (the Cessna), were flying at night at Ardmore Airport.

While on final approach to the runway, the Beech passed over the top of the Cessna. The pilot of the Cessna reported that the Beech passed above them "within 20 feet". The Cessna discontinued the approach and initiated a go-around. Both aircraft subsequently landed normally.

Why it happened

The pilot flying and the instructor on the Beech were unaware of their proximity to the Cessna in the circuit.

The external aircraft lighting on the Cessna met the regulatory requirements for night flying. However, the pilots of the Beech said they found it difficult to clearly identify the Cessna in the circuit.

The two aircraft flew different vertical profiles on final approach to land which increased the risk of one aircraft not seeing the other. Contributing to the different vertical profiles flown was that a local altitude restriction for Ardmore Airport was published in their operations manual and not in the Aeronautical Information Publication New Zealand (AIPNZ) available to all pilots.

There were potentially two opportunities for radio transmissions to have identified developing conflict between aircraft.

What we can learn

'See and avoid' is the primary method for ensuring aircraft separation at unattended aerodromes. It is underpinned by pilots actively listening to all radio calls, processing the details of calls, and then using these to check their mental model of each aircraft's position in the approach sequence. Pilots should request a repeat of any transmission that they cannot understand.

Conspicuity[4] of aircraft flying at night can be enhanced by modern lighting, such as light emitting diode (LED) lighting.

Aerodrome operators must ensure that all locally agreed procedures are published in the approved documentation accessible to all pilots.

[4] The quality of being noticeable or easy to see.

Who may benefit

Aerodrome operators, aircraft owners and all pilots may benefit from reading this report.

Recommendations

On 27 March 2025, the Commission recommended that the CAA issue guidance to promote suitable methods to increase conspicuity for aircraft flying at night. [037/25]

- The CAA replied they had accepted and implemented the recommendation.

On 27 March 2025, the Commission recommended that the CAA take steps to ensure that all procedures applied by local aerodrome operators are recorded in the AIPNZ. [038/25]

- The CAA replied they had accepted and implemented the recommendation.

Veer off a runway of a Boeing 777 at Auckland International Airport

AO-2023-003: Runway excursion (veer-off), Boeing 777-319ER, ZK-OKN, Auckland International Airport, 27 January 2023

Published: 29 May 2025
Full report: AO-2023-003 | TAIC

What happened

On the evening of Friday 27 January 2023, Boeing 777-319ER ZK-OKN was returning to land at Auckland, having flown from Auckland to Melbourne earlier that day. As the aeroplane approached Auckland, heavy rain was encountered and the wind changed in direction and strength.

As the aeroplane neared the runway it began to drift right of the runway centreline. Soon after touchdown it veered off the runway onto a sealed shoulder. The aeroplane struck six runway edge lights before returning to the centre of the runway.

The aeroplane was taxied to the gate and passengers off loaded. An inspection of the aeroplane revealed that five of the six right landing-gear tyres were damaged and one of these had deflated. There was also damage to the right brake assembly and wiring harness. There were no injuries.

Why it happened

The Transport Accident Investigation Commission (the Commission) found that the heavy rain **likely** contributed to the decision to disengage the autopilot low in the approach. The timing of the autopilot disengagement combined with the technique used by the pilot flying, **very likely** resulted in there being insufficient time to correct the flightpath of the aeroplane before landing. The pilot flying was therefore unable to prevent the aeroplane drifting away from the centreline before landing and stop it veering off the runway after landing. The weather, while inclement, was above the minimum weather requirements throughout the approach and landing.

The Commission found it **exceptionally unlikely** that the heavy rain contaminated the runway to the extent that it caused the runway excursion.

While it was **exceptionally unlikely** that poor briefings contributed to the runway excursion, the Commission found that the approach and landing briefing did not meet the operator's guidelines. For example, the briefing did not make any reference to how the final approach and landing were to be conducted.

What we can learn

Operator and aircraft manuals and procedures are designed to help ensure an aircraft is flown as safely as possible in both normal and adverse circumstances. Knowledge and understanding of these documents, complemented by an appropriate recurrent training programme, helps mitigate the risk of an adverse outcome.

It is important that crews act in a cohesive manner and are as prepared as possible for any unforeseen eventualities. A good briefing, which is a core element of crew resource management, helps ensure a crew has a shared mental model, that critical factors are identified and any risks reduced to acceptable levels.

Who may benefit

All pilots and operators may benefit from the findings and lessons in this report.

Recommendations

Following the reporting of this occurrence the operator completed their own internal investigation. As a result, it has undertaken a range of actions to address the safety issue. Following the distribution of the draft report by the Commission, the operator has undertaken additional action regarding the safety issue and lesson.

The Commission notes the actions taken and has not issued any further safety recommendations.

Air proximity event between an Airbus 320 and a drone at Auckland International Airport

AO-2024-003: Airbus A320-232 and drone, air proximity incident 7 NM east of Auckland International Airport 2 April 2024

Published: 12 June 2025
Full report: AO-2024-003 | TAIC.

What happened

In the early evening of 2 April 2024, the crew of an Air New Zealand Airbus A320 reported seeing what they described as a drone while at 2000 feet on the final approach for runway 23L at Auckland.

As a result of the drone sighting, and for the safety of other aircraft, Air Traffic Control closed that portion of the Auckland airspace for 15 minutes, resulting in delays to other inbound aircraft.

Why it happened

The use of a drone in controlled airspace and at the altitude reported is contrary to Civil Aviation Rules and, as reflected in this and other reported incidents, such use poses a risk to aviation safety. There was no universal and reliable physical or electronic restriction to stop a drone flying in controlled airspace, so the system was reliant on drone operators knowing and following the rules.

However, some drone operators either do not know the rules, or are willing to disregard the rules because consequences for non-compliance seldom occur. In this incident, as in many other reported incidents involving drones, it was not possible to identify the drone or its user.

What we can learn

Until adequate controls are placed on the use of drones, other aircraft, including passenger-carrying aircraft, continue to be at risk of disruption and collision.

Information and other tools are available to assist operators to operate their drones safely and comply with the Civil Aviation Rules.

Who may benefit

Drone owners, operators and pilots, manned[5] aviation pilots, Air Traffic Controllers, aerodrome owners, operators and users, local councils, regulators and legislators may benefit from the findings and recommendations in this report.

[5] The terms 'manned' and 'unmanned' rather than the terms 'crewed' and 'uncrewed' have been used throughout this report to be consistent with the Civil Aviation Rules.

Recommendations

On 14 May 2025, the Commission recommended that the Ministry of Transport and the Civil Aviation Authority of New Zealand, in consultation with stakeholders, work to fully integrate drones into the aviation system and develop appropriate rules and standards, to reflect technology developments and relevant international best practices. [042/25]

- Both respondents replied they agreed with the recommendation but could not fully accept it.

Domestic aviation inquiries in progress on 30 June 2025

Inquiry	Description	Occurred
AO-2022-005	Boeing 737-484SF ZK-TLL, Incorrect fuel configuration Sydney to Auckland	8/06/2022
AO-2023-003	Runway excursion (veer-off), Boeing 777-319ER, ZK-OKN, Auckland International Airport	27/01/2023
AO-2023-007	Bombardier DHC-8, ZK-NEM, descended below minimum safe altitude, Timaru	13/06/2023
AO-2023-008	Close proximity incident involving Q300, ZK-NES and Beech 76 Duchess, ZK-JED, near Brynderwyn	28/08/2023
AO-2023-010	Kawasaki BK117 B-2, ZK-HHJ, Collision with terrain, Mount Pirongia	19/09/2023
AO-2023-011	ZK-JED Beech 76/ ZK-WFS Cessna, 172 Near mid-air collision, Ardmore Aerodrome	3/10/2023
AO-2024-001	Q300, ZK-NEF, rejected take-off at speed, Timaru	7/02/2024
AO-2024-003	Airbus A320-232, ZK-OXJ and drone, air proximity incident over South Auckland, 7 NM east of Auckland International Airport	2/04/2024
AO-2024-004	Airbus A320, VH-VFF, runway excursion, Christchurch Airport	31/05/2024
AO-2024-005	Airbus AS350BA, collision with terrain, Paringa River mouth	20/07/2024
AO-2024-006	ATR engine issue on approach to Wellington Airport	1/09/2024
AO-2024-007	Airbus 320, engine malfunction, enroute Wellington to Sydney	1/10/2024
AO-2025-001	AS350 helicopter, hard landing, Mount Madeline	12/01/2025

The rail year in review
Te arotake rerewhenua ā-tau

Summary

The safety of track workers continues to be an issue of concern for the Commission

In one of these inquiries, RO-2024-102, track workers were at risk of injury. In our report, we noted four previous occurrences where trains had passed into work areas, placing workers at risk. In four of the nine inquiries in progress at the end of June 2025, tracks had been injured, or were at risk of injury, and another two involve collisions between freight trains and hi-rail vehicles (used in track maintenance).

The Commission is especially concerned about the risks to people working in the rail corridor. It is one of the safety concerns highlighted in *Watchlist 2024*.

The resilience of infrastructure is also a safety issue previously raised by the Commission

One inquiry, involving damage to a rail bridge (RO-2024-103), relates to concerns previously raised about the resilience of infrastructure to severe weather; for example, in the report into the derailment of a freight train in January 2023, when material supporting the track was washed away.

Inquiries are continuing into this incident.

Derailment of a passenger train on the Kāpiti line

RO-2021-104: Passenger train 6205, derailment, Kāpiti, 17 August 2021

Published: 25 October 2024
Full report: www.taic.org.nz/inquiry/ro-2021-104

Figure 5 from the report: Derailed carriage and debris against and under carriage

What happened

On 17 August 2021 a Transdev Wellington-based passenger train was operating a scheduled service from Waikanae to Wellington on the North Island Main Trunk line[6] known as the Kāpiti line[7].

At about 0544 the passenger train departed Paekākāriki station in a southerly direction, conveying 82 passengers and three train crew under heavy rainfall conditions[8].

At about 0547 the passenger train, travelling at about 70 kilometres per hour, was rounding a right-hand curve next to the hillside when the train driver sighted a landslide[9] covering both main lines approximately 40 metres in front of the train. The train driver applied the emergency brake, but the train struck the debris from the landslide, derailing three of the four passenger cars before coming to a complete stop.

[6] The North Island Main Trunk line is the portion of the rail network between Auckland and Wellington.
[7] The Kāpiti line is located between the Waikanae and Wellington stations.
[8] The National Institute of Water and Atmospheric Research (NIWA) classification system, based on guidance from the World Meteorological Organization, classifies heavy rainfall as between 10 and 50 millimetres of rainfall within a one-hour period or rainfall greater than 100 millimetres in 24 hours.
[9] A landslide happens when a portion of earth moves down a hillside and causes debris to flow and build up.

No passengers or crew suffered any injuries, and all were evacuated safely to a nearby location.

Why it happened

Because of the curvature of the track and the speed of the train, there was only a short sighting distance to the landslide debris across the track. The train driver did not have enough distance or time to stop before reaching the landslide. When the train came across the debris, the debris disengaged the train's wheel-rail interface, derailing the train.

The Kāpiti area had experienced heavy rainfall in the hills adjacent to the rail corridor, which overwhelmed the waterways and drainage systems that would normally have moved water away. The meteorological information provided to KiwiRail predicted rainfall in most places in the North Island, with totals of 25 millimetres or more over a 24-hour period for western areas south of Hamilton and the Bay of Plenty.

What we can learn

As the frequency of severe weather events increases, risk assessments for transport infrastructure become vital to ensure hazards are identified and appropriate controls are applied.

Engineering systems and real-time monitoring can assist with providing those in the transport sector with accurate information from which to make timely and informed safety decisions.

Who may benefit

Rail personnel and passengers, transport operators, infrastructure designers and infrastructure maintainers may benefit from the findings in this report.

Recommendations

On 25 September 2024, the Commission recommended that KiwiRail review the trigger settings of its rainfall-monitoring equipment and weather risk matrix to ensure they can identify and respond to moderate or heavy rainfall that occurs within a short time period. [004/24]

- KiwiRail replied it had accepted and implemented the recommendation.

On 25 September 2024, the Commission recommended that Transdev Wellington and Auckland One Rail take action to fit automatic alert systems to emergency brake activations on its passenger train services, to alert train control to an emergency at the earliest possibility. [005/24]

- Transdev Wellington replied it had the recommendation under consideration.
- Auckland One Rail replied it had accepted and implemented the recommendation.

On 25 September 2024, the Commission recommended that Transdev Wellington review and improve the training on the application of the in-cab emergency radio button simultaneously with an emergency brake application. [006/24]

- Transdev Wellington replied it had the recommendation under consideration.

On 25 September 2024, the Commission recommended that Transdev Wellington review the back-up portable radio system, particularly the equipment, coverage and signal strength along the network, to ensure it can transmit clear communication between train crews and train control. [007/24]

- Transdev Wellington replied it had the recommendation under consideration.

On 25 September 2024, the Commission recommended that Transdev Wellington and Auckland One Rail implement regular checks of the onboard radios (both in-cab main radios and in-cab back-up portable radios) in their passenger trains to ensure they can communicate with train control. [008/24]

- Transdev Wellington replied it had the recommendation under consideration.

Passenger train (Te Huia) passes a stop signal, potential conflict

RO-2023-104: Passenger train (Te Huia), signal passed at danger and potential conflict, 17 June 2023

Published: 14 November 2024
Full report: www.taic.org.nz/inquiry/ro-2023-104

What happened

On Saturday 17 June 2023, the Te Huia regional passenger train service named Te Huia was travelling from Hamilton to Auckland on a scheduled service.

At Penrose Station on the North Auckland line, the train passed a stop signal and entered the Onehunga branch line junction[10], damaging the junction points[11].

The track route and signals, which included the junction points, had been set for an Auckland One Rail commuter train (Service 6516) on the Onehunga branch line. That train was about to depart Penrose platform 3, which was located on the Onehunga branch line.

The signalling system detected that Te Huia had entered the junction, and the signals on the Onehunga branch line reverted to a stop sequence, alerting the commuter train driver that the route was occupied.

There were no injuries and there was no damage to the trains. However, Te Huia damaged the junction points, leading to a lengthy disruption to services.

Why it happened

The locomotive engineer on Te Huia incorrectly interpreted the signal for the Onehunga branch line (signal 312) as their own signal to proceed. The applicable signal (signal 308) for the line on which they were travelling was at stop but was not within their clear view.

There was no effective engineering control to prevent the signal being passed at stop or mitigate the consequences of the event, meaning Te Huia entered an area of potential conflict.

The locomotive engineer's absence from operating on the North Auckland line meant they were unfamiliar with the route and the signalling system approaching Penrose Station.

What we can learn

Complex systems[12] such as rail require robust engineering risk controls[13] to guard against the outcomes associated with human performance limitations. Administrative controls are vulnerable to human error and non-compliance. They should not be solely relied on to keep a system safe.

[10] A place at which two or more rail routes converge or diverge.
[11] A track component that provides a path for a wheel to transfer from one track to another.
[12] A complex system is one where multiple individual, but interrelated, components interact.
[13] Engineering risk controls work by isolating hazards, generally by way of the physical design of a system.

Compliance with the rail standards and the management of the risks on the railway network require monitoring to assure those using the system that the risks have been managed appropriately.

Who may benefit

Rail personnel, rail operators, rail access providers, transport planners and anyone involved in safety auditing and assessments may benefit from the findings in this report.

Recommendations

On 25 September 2024, the Commission recommended that NZ Transport Agency Waka Kotahi work with rail operators to assess the benefits of all rail operators on the Auckland rail network using a common engineering safety system to improve the safety of all users of that network. [017/24]

- NZ Transport Agency Waka Kotahi replied that KiwiRail is implementing the recommendation.

On 25 September 2024, the Commission recommended that KiwiRail review the route knowledge training for locomotive engineers to ensure infrequent driving of the route and prolonged absences are identified so that locomotive engineers have the route knowledge to travel safely. [018/24]

- KiwiRail accepted the recommendation.

On 25 September 2024, the Commission recommended that KiwiRail implement risk controls with respect to signal 308 to ensure that the hazards that have been identified are adequately mitigated. [019/24]

- KiwiRail accepted the recommendation.

Loaded coal train passes a stop signal on the Midland line

RO-2024-101: Loaded coal train 850, signal passed at danger, Cora Lynn, Midland line, 27 February 2024

Published: 30 January 2025
Full report: www.taic.org.nz/inquiry/ro-2024-101

What happened

At about 0800[14] on 27 February 2024 a loaded coal train (Train 850 with locomotive DXC5385, operated by KiwiRail) departed Arthur's Pass station and was travelling towards Lyttelton.

The locomotive engineer (LE) had taken over the train at Arthur's Pass station. Before departure, train control[15] had instructed the LE to cross[16] another train at Cora Lynn, approximately 15 kilometres (km) east of Arthur's Pass station.

A yellow intermediate signal[17] on the approach to Cora Lynn indicated that the arrival signal was at stop. However, the LE did not take the necessary steps to bring the train to a standstill before entering Cora Lynn. The train continued past the arrival signal at stop and entered the main line at 44 kilometres per hour (km/h).

On this occasion the route was set for the train to enter the main line, not the loop where an opposing train was located, and a collision was avoided.

Why it happened

While the LE could offer no explanation for not stopping at the arrival signal, they had very recently been unwell with COVID-19 while on annual leave. The LE stated that in hindsight they should not have returned to work while still suffering the after-effects of a COVID-19 infection.

What we can learn

Acute illnesses, such as COVID-19, may impair cognitive functions such as memory and concentration for a period following recovery from the illness. Safety-critical workers[18] should consider potential after-effects of an acute illness when self-assessing as being fit to return to work. Organisations employing safety-critical workers should also be aware that the

[14] Times used in this report are New Zealand Daylight Time (Universal Time Coordinated + 13 hours) and are expressed in 24-hour mode.

[15] KiwiRail's national train control centre in Wallaceville, Upper Hutt, which is responsible for track authorisations and the safe movement of rail traffic throughout New Zealand.

[16] On a single-line railway, trains travelling in opposite directions can pass each other at certain locations by one of the trains pulling into a sidetrack known as a crossing loop. This is known as either a 'cross' or 'meet' of trains.

[17] A signal within an automatic signalling area used to keep trains travelling in the same direction safely separated by indicating proceed if the section ahead is clear or indicating stop if the section is occupied. These signals divide the line between stations into shorter sections and control the entry of trains into such sections.

[18] Someone whose job involves activities that, if not performed correctly, could lead to serious harm or injury to themselves or others.

after-effects of an acute illness may reduce a worker's ability to reliably self-assess as being fit to return to work.

Who may benefit

Organisations involved in safety-critical work, all safety-critical workers and their managers may benefit from the findings in this report.

Recommendations

No new recommendations were issued.

Parting of the TranzAlpine train, Arthur's Pass

RO-2023-106 Passenger train 804, TranzAlpine, train parting, Arthur's Pass 17 December 2023

Published: 1 May 2025
Full report: RO-2023-106 | TAIC.

Figure 11 from the report: Parted gap between first and second carriages
(Credit: KiwiRail)

What happened

On 17 December 2023 at 1415[19], the TranzAlpine passenger train[20] departed Greymouth on its scheduled service back to Christchurch.

An earlier mechanical issue with one of the two locomotives resulted in two additional locomotives being attached at Otira Station for supplementary power to Arthur's Pass station.

At approximately 1630 as the train descended into Arthur's Pass station, the locomotive engineer completed several train brake applications. As the train came to a stop at the station's platform, the first two carriages[21] parted[22] by approximately one metre (m), activating the fail-safe braking system[23].

[19] Times are in New Zealand Standard Time (co-ordinated universal time + 13 hours) and expressed in 24-hour format
[20] The passenger train service between Christchurch and Greymouth operated by KiwiRail.
[21] A rail vehicle that conveys passengers.
[22] Loss of connection between two or more rail vehicles.
[23] The train's braking system that applies the brakes immediately when carriages or wagon's part and uncouples the train's brake pipes between the rail vehicles.

The train crew members were unaware of the parting until an onboard crew member went to walk between the two carriages. No passengers or crew were injured when the train parted.

Why it happened

A single component of the carriage-coupler[24] system broke, causing the two carriages to part.

The broken component had a pre-existing fracture that had not been identified in regular maintenance inspections by KiwiRail.

It is **virtually certain** that the train's configuration of four locomotives[25] operating in throttle position three while applying the train's brakes to their full capability caused the weakened coupler component to break.

What we can learn

Adequate inspection and maintenance plans for safety-critical components[26] are vital to ensure components remain in a condition fit for their intended purpose.

Preprepared and practised response plans[27] assist in an incident to ensure appropriate action can be undertaken safely.

Who may benefit

Rail operator personnel, transport designers and maintainers of safety-critical components may benefit from the findings in this report.

Any personnel involved in preparing or implementing response plans.

Recommendations

On 26 March 2025, the Commission recommended that KiwiRail review and improve the maintenance and inspection of safety-critical components of the carriage-coupler system to ensure they remain safe to operate. [034/25]

- KiwiRail accepted the recommendation.

On 26 March 2025, the Commission recommended that KiwiRail review and improve the automatic carriage alarm system (TMS) to ensure it alerts the crew to faults. [035/25]

- KiwiRail accepted the recommendation.

On 26 March 2025, the Commission recommended that KiwiRail include in its Operational Rules the processes and procedures to respond to a train parting because of a mechanical failure, to ensure the risk of injury to rail personnel and damage to rail vehicles is mitigated. [036/25]

- KiwiRail accepted the recommendation.

[24] The connection between two carriages or rail vehicles.

[25] The motive-power unit that provides tractive-effort force to pull or push rail vehicles along a rail track.

[26] A component or system that must remain fit for purpose; otherwise it could pose a safety risk or a single point of failure

[27] A guided document outlining the process and established procedures for people to follow in situations such as incidents or accidents.

Near miss between freight train and track workers, Hornby

RO-2024-102 Freight train near miss with track workers, Hornby, 7 March 2024

Published: 22 May 2025
Full report: *RO-2024-102 | TAIC*

What happened

On 7 March 2024, Fulton Hogan Limited (Fulton Hogan) was undertaking construction work within the rail corridor[28] on the Main South Line, between the intersections of Halswell Junction Road and Parker Street at Hornby, Christchurch.

The protection arrangement for track workers[29] accessing the rail corridor was compulsory-stop protection[30] managed by Fulton Hogan's trainee Rail Protection Officer[31] (RPO) and a supervising RPO.

While working under the compulsory-stop protection, the trainee RPO authorised two trains to pass through the worksite[32] while track workers were clear of the track.

After the first train had cleared the worksite, the trainee RPO authorised the track workers to access the track to commence work before the second train had passed through the worksite.

At about 0900[33] the level-crossing protection alarms at Halswell Junction Road and Parker Street activated, with bells ringing. The track workers realised that a train was approaching the worksite and left the track for the safe place[34]. No one was injured.

Why it happened

The trainee RPO was carrying out tasks that required a high level of proficiency. They were unsupervised, had limited experience and became distracted. This led to an important step in the process of track protection being missed.

The supervising RPO was absent while the trainee RPO was performing the safety critical[35] tasks associated with track protection. The trainee RPO did not register that they had not followed the accepted practice of authorising track workers to enter the rail corridor only

[28] The land between the legal boundaries of railway land or land with.in 3 metres (m) of the centreline of any operational track where the land boundary is less than this distance
[29] Competent workers whose primary duties are associated with work on or around infrastructure in the rail corridor
[30] A sequence of boards used to protect rail personnel and rail vehicles from entering a planned Protected Work Area
[31] The person with overall responsibility for providing rail protection for the Protected Work Area
[32] An area with defined limits that is protected so that work can be undertaken
[33] Times in this report are in New Zealand Daylight Time (Universal Coordinated Time +13 hours) expressed in a 24-hour format.
[34] A place where people and equipment cannot be struck by passing rail traffic.
[35] Directly influencing safety (when applied to equipment or systems)

when the worksite was clear of rail traffic, and the supervising RPO was not available to provide the guidance necessary to rectify the situation.

The supervising RPO had not been provided with any additional training in coaching and mentoring personnel undertaking safety-critical roles, and the level of supervision required had not been clearly articulated or documented.

What we can learn

Providing adequate training for supervisors is necessary to ensure that there is a clear understanding of what adequate supervision means and its importance in maintaining safety, particularly where supervision relates to mentoring and coaching trainees conducting safety-critical tasks.

Who may benefit

The lessons from this incident will benefit all industries where the supervision of safety-critical tasks performed by inexperienced or unqualified staff is necessary to maintain safety.

Recommendations

On 30 April 2025, the Commission recommended that KiwiRail take all necessary steps to ensure that contractors operating under its rail licence carry out track work protection in accordance with KiwiRail's safety case and safety system, particularly with respect to:

a. supervision of trainee RPOs

b. training of supervising RPOs. [039/25]

- KiwiRail accepted the recommendation.

On 30 April 2025, the Commission recommended that Fulton Hogan:

a. review and improve the procedures and guidelines for the supervision of trainee RPOs

b. provides appropriate training to supervisor RPOs to enable them to perform this function effectively. [041/25]

- Fulton Hogan replied that the recommendation is under consideration.

On 30 April 2025, the Commission recommended that KiwiRail utilise engineering controls on track worksites to mitigate the risk of human error by track workers carrying out safety-critical tasks. [040/25]

- KiwiRail accepted the recommendation.

Derailment of a tamper vehicle in Purewa tunnel

RO-2023-105: Derailment of Tamper 703, Purewa Tunnel, Auckland, 9 October 2023

Published: 22 May 2025

Full report: *RO-2024-102 | TAIC*

Figure 1 from the report: Tamper 703 at site of derailment

What happened

Just after midnight on 9 October 2023, the operator[36] of a group of three track machines[37] obtained permission for the machines to depart Westfield rail depot in Otāhuhu, Auckland and enter an area of line that was closed to rail traffic as part of the Rail Network Rebuild project. The area was controlled by a Rail Protection Officer[38] (RPO).

The track machines were connected and running as a single unit, led by Tamper[39] 703. It was intended that the machines would travel through the project area into Auckland.

As the group made its way through the project area, further permission to pass signals at red (stop) was required from train control[40] in conjunction with the RPO.

Neither train control nor the RPO was aware that an area of track within the project area had been removed from within a tunnel along the route on which the tamper group was travelling.

[36] A person authorised to operate a mobile track-maintenance vehicle and who is in charge of the train or machine group.
[37] Specialised machines capable of travelling on a railway to conduct track maintenance.
[38] A qualified person with overall responsibility for protecting workers in a work area on the railway.
[39] A machine used to pack (tamp) the track ballast under railway tracks to make the tracks more level.
[40] At the time of the incident, the Auckland train control centre was located in KiwiRail's Westfield rail yard. Train control is responsible for track authorisations and the safe movement of rail traffic.

When the tamper group entered the tunnel, the operator on Tamper 703 noticed the missing track and applied emergency braking.

Tamper 703 was unable to stop before driving off the end of the track and into ballast, where it travelled for 16.4 metres before stopping. The rear two machines were able to stop and remain on the track.

None of the four crew was injured, but Tamper 703 was significantly damaged.

Why it happened

Safety-critical[41] information about the removal of the track within the project area was not provided to the track protection team because the key staff who were responsible were absent.

The track protection team did not have the resources to check all the track within the project area, and there was no requirement for track safety verification before rail traffic was authorised to move.

Key staff were unsupported while working in safety-critical roles and had very high work volumes.

What we can learn

Relying on administrative controls to prevent accidents and incidents may not be sufficient for safety-critical operations. Safety-critical systems requiring any human interactions should include protection and/or preventive engineering controls additional to those currently applied.

Who may benefit

Organisations and anyone responsible for managing or working within a safety critical environment may benefit from the findings and recommendations in this report.

Recommendations

On 28 May 2025, the Commission recommended that KiwiRail review and improve its process for authorising rail movements within worksites to ensure the safe movement of all rail traffic and personnel within protected work areas, including the verification of track integrity and the sharing of and access to safety-critical information. [031/25]

- KiwiRail accepted the recommendation.

On 28 May 2025, the Commission recommended that KiwiRail review and improve its rules and procedures relating to track maintenance work to require additional protection within worksites where the tracks have been made impassable. [032/25]

- KiwiRail replied the recommendation has been accepted and implemented.

On 28 May 2025, the Commission recommended that KiwiRail review its national project management structure to ensure there is sufficient oversight of and ongoing support for all project staff at all levels to maintain safe working conditions and manageable workloads. [033/25]

- KiwiRail accepted the recommendation.

[41] Activities that, if not performed correctly, could lead to serious harm or injury.

Rail inquiries in progress on 30 June 2025

Inquiry	Description	Occurred
RO-2021-104	Passenger train 6205, train derailment, Kāpiti	17/08/2021
RO-2023-104	Passenger Train 104 (Te Huia) SPAD and potential conflict, Penrose, Auckland	17/06/2023
RO-2023-105	Derailment of Tamper 703, Purewa Tunnel, Auckland	9/10/2023
RO-2023-106	Passenger train 804, TranzAlpine, train parting, Arthur's Pass	17/12/2023
RO-2024-101	Loaded coal train 850, signal passed at danger, Cora Lynn, Midland line	27/02/2024
RO-2024-102	Freight Train 882, near miss with track workers, Main South Line, Hornby 27 km	7/03/2024
RO-2024-103	Rail Bridge 57, damaged in flood waters, Rangitata River, near Ealing	12/04/2024
RO-2024-104	Freight train SPAD A1 and conflict with HRV, near Morrinsville	2/08/2024
RO-2024-105	Track workers, overhead line electrification incident	4/09/2024
RO-2025-101	Worksite incident, Main South Line, near Mataura	12/01/2025
RO-2025-102	Safe working incident, Port Chalmers marshalling yard	23/01/2025
RO-2025-103	Shunt train, SPAD, North Island Main Trunk, near Westfield, Auckland	1/02/2025
RO-2025-104	Signal outage, Wellington Station	27/03/2025
RO-2025-105	Collision, freight train and HRV, Kaimai Tunnel portal	6/04/2025
RO-2025-106	Passenger train near miss with track workers, Plimmerton	8/05/2025

The maritime year in review
Te arotake reremoana ā-tau

Summary

In October 2024, we published an interim factual report for an ongoing inquiry into the grounding of the *Aratere* in June 2024…

The Commission may issue an interim report if inquiries are complex and ongoing or where there is high public interest. In October 2024, we published such a report into the June 2024 grounding of the passenger and freight ferry *Aratere*,(MO-2024-204). The report contained the facts and circumstances established to date, drawing evidence from the ship's voyage data recorder, the steering control system, and interviews with crew. The Commission's inquiry is ongoing.

…which was one of five maritime inquiries that were groundings

Five of the 15 maritime inquiries active over the year related to groundings or strandings, including the grounding of the passenger ferry *Aratere*. There were no common causes for the two completed inquiries: one was related to watchkeeping standards (MO-2023-206) and the other fatigue (MO-2024-201).

A Cook Strait ferry was also involved in an incident involving loss of steering

Two inquiries in progress have involved loss of steering. One of these includes the loss of power of the passenger vessel the *Kaitaki* in Cook Strait in January 2023.

Events involving Cook Strait ferries are of high public interest, and we published interim factual reports for both the *Aratere* and *Kaitaki* incidents. We are continuing our inquiries, which are proving complex.

Commission staff assisted the NZDF's Court of Inquiry onto the sinking of HMNZS *Manawanui*

TAIC staff assisted the NZDF's Court of Inquiry into the sinking HMNZS *Manawanui* on 6 October 2024. The Senior Data Recovery Specialist, in collaboration with the UK's Marine Accident Investigation Branch (MAIB), extracted data from the vessel's voyage data recorders; and, along with other senior staff, presented the vessel's track and speed, and meteorological data to the Court.

Serious injury on a bulk carrier, off Tauranga

MO-2023-204: Bulk carrier Poavosa Brave, serious injury, off Tauranga, 23 June 2023

Published: 3 October 2024
Full report: www.taic.org.nz/inquiry/mo-2023-204

What happened

On 23 June 2023 a crew member was seriously injured on board the bulk carrier *Poavosa Brave*.

The vessel was at anchor outside Tauranga Harbour and the crew was preparing the cargo securing gear for a full cargo consignment of logs. They were using one of the on board cranes to erect a set of the collapsible stanchions[42] on the main deck.

As the deck crew completed this task, an able-bodied seafarer was struck by the crane block[43] and suffered very serious injuries.

Why it happened

The weather and sea conditions were not suitable for using the crane to hoist up the stanchions. The master ordered that the crane was not to be used and assigned the crew alternative work for the day.

The wind and sea conditions eased during the morning. The bosun[44] decided to hoist a set of stanchions as a training exercise for the crew. The bosun did not inform the master or the chief officer[45] that the crew was going to do this job.

When the chief officer heard the crane operating, they went out on deck to tell the crew to stop the work. Upon arriving at the work area, the chief officer did not communicate with the bosun and gave the crew an order that conflicted with the crew's work plan.

Subsequently, the chief officer ordered the crew to approach the crane block when it was not stable or safe to approach.

What we can learn

Safety is compromised when lines of authority and responsibility are not followed. The benefits of risk assessment and job safety analysis are lost when unplanned or unauthorised work is undertaken.

When stopping work that is perceived to be unsafe, people should take a moment to determine how the work can be stopped safely, without introducing new hazards.

[42] A vertical support structure used to secure cargo, such as logs, on the upper deck of a vessel.
[43] A component of the crane system on a vessel – containing the crane hook, swivel, bearing, sheaves, pins and frame – that is suspended by a crane's hoisting wire or load chains.
[44] Abbreviated version of boatswain: foreman or supervisor of the deck crew.
[45] Deck officer next in rank below master, head of the deck department; also known as the first officer.

Who may benefit

Maritime operators, seafarers, regulators and training institutions may all benefit from the findings in this report.

Recommendations

The Commission issued no new recommendations.

Collision between a passenger ferry and a recreational vessel in Paihia

MO-2023-202 Collision, passenger ferry Waitere and recreational vessel Onepoto, Paihia, Bay of Islands, 13 April 2023

Published: 10 October 2024
Full report: www.taic.org.nz/inquiry/mo-2023-202

Figure 6 from the report: The damaged *Waitere* showing the destroyed wheelhouse
(Credit: Bay of Islands Coastguard)

What happened

At about 1147 on 13 April 2023, the recreational vessel *Onepoto* and the passenger ferry *Waitere* collided in the Bay of Islands, New Zealand. The *Onepoto* was on passage from Opua to Onepoto Bay. The *Waitere* was on a scheduled trip from Russell to Paihia.

The master of the *Waitere* suffered serious injuries and was airlifted to hospital.

The *Waitere* suffered catastrophic damage and eventually sank. The *Onepoto* also sustained some damage but was able to proceed under its own power to a repair berth.

Why it happened

Watchkeeping standards on both vessels did not provide safe navigation and it is **virtually certain** that they contributed to the accident.

The skipper of the *Onepoto* was distracted by a non-critical engine alarm. As a result, they did not keep a proper lookout and did not see the *Waitere* crossing in front of them. Once the skipper of the *Onepoto* noticed the *Waitere*, they were too close to take action to avoid the collision.

The skipper of the *Onepoto* was navigating the vessel at 20.5 knots (kt). Had it been travelling at a safer speed for the conditions, it is **very likely** that either the collision would have been avoided or the consequences of the collision would have been reduced.

The master of the *Waitere* did not see the *Onepoto* until it was about five metres (m) away, and they did not have enough time to take action to avoid the collision.

What we can learn

Collisions at sea can be avoided by implementing watchkeeping standards and adhering to the collision prevention rules.

Every vessel must maintain a proper lookout by sight and hearing and use all means available to determine whether a risk of collision exists. In a crossing situation, regardless of which vessel is the designated give-way vessel, both vessels must be vigilant and monitor the effectiveness of any avoidance action taken, such as a change of course and/or a change of speed, until the other vessel has passed and is clear.

All vessels must proceed at a speed that allows time to determine whether a risk of collision exists and enables the vessel to stop in a safe distance if required.

Who may benefit

All seafarers, vessel owners, vessel operators, boat insurers, boat clubs, local councils and harbourmasters may benefit from the findings of this inquiry.

Recommendations

The Commission issued no new recommendations.

Stranding of a fishing vessel in Banks Peninsula

MO-2023-206: Fishing vessel Austro Carina stranding, Banks Peninsula 24 September 2023

Published: 27 March 2025
Full report: www.taic.org.nz/inquiry/mo-2023-206

Figure 5 from the report: The stranded Austro Carina
(Credit: Mr G Finlayson)

What happened

On 24 September 2023, at about 2137, the *Austro Carina* stranded[46] while fishing at Red Bay, Banks Peninsula. The vessel suffered extensive damage and was unsalvageable. It was subsequently declared a constructive total loss[47] by the insurer.

The four crew members abandoned the vessel and were rescued by helicopter and returned to Christchurch.

Why it happened

Watchkeeping standards and practices on the *Austro Carina* did not ensure safe navigation while the crew were fishing. The master left the wheelhouse for periods of 5–10 minutes to help the crew with fishing activities. The master believed this to be permitted under the standing orders, and it was apparently normal practice. The master did not activate any of the navigation aids. Had the wheelhouse[48] been continuously manned it is **virtually certain**

[46] When a ship or a boat is aground and cannot be refloated without assistance.
[47] The damage to the vessel is extensive and the cost of salvage and repairs would exceed the insured value.
[48] Part of a ship or boat from which a person steers the ship or boat.

that the vessel's course and speed would have been monitored, and adjustments made to avoid the stranding.

What we can learn

Strandings can be avoided by implementing good watchkeeping standards, including adhering to the basic principle of keeping a navigational watch on board fishing vessels.

Effective communication and crew resource management, where all team members are alert to what is happening and are prepared to speak up, are essential for operating fishing vessels safely.

Who may benefit

All seafarers, fishing vessel owners and operators, fishing vessel insurers and maritime training schools may benefit from the findings of this inquiry.

Recommendations

On 13 March 2025, the Commission recommended that the Director of Maritime New Zealand review their competency frameworks for STCW-F-aligned certificates, to ensure they include the basic principles to be observed in keeping a navigational watch as set out in Chapter IV of the Annex to STCW-F. [029/25]

- Maritime NZ rejected the recommendation.

On 13 March 2025, the Commission recommended that Pegasus Fishing Limited review their safety management system and take steps to ensure safe navigational watchkeeping principles are observed during all phases of the fishing operation. [030/25]

- Pegasus Fishing Limited replied it had accepted and implemented the recommendation.

Capsize of the *i-Catcher* in Goose Bay

MO-2022-206: Charter fishing vessel i-Catcher *capsize, Goose Bay, New Zealand, 10 September 2022*

Published: 3 April 2025
Full report: www.taic.org.nz/inquiry/mo-2022-206

What happened

The *i-Catcher* was an 8-metre (m) aluminium pontoon boat[49] operated by Fish Kaikoura 2011 Limited (Fish Kaikoura) out of South Bay in Kaikōura, New Zealand. The vessel was primarily engaged for charter fishing, with occasional sightseeing tours around the coastal waters of Kaikōura.

At approximately 0800 on Saturday 10 September 2022, the *i-Catcher* departed South Bay, Kaikōura with 11 people onboard, comprising 10 passengers and the skipper.

The passengers were members of the Nature Photography Society of New Zealand and had chartered the vessel for a three-hour passage to photograph pelagic[50] birds.

At approximately 1005, the *i-Catcher* was off the coast of Goose Bay heading towards Rileys Lookout on its return to South Bay, when the vessel's occupants felt a sudden impact from underneath the hull and the *i-Catcher* rapidly capsized to starboard.

Five passengers and the skipper managed to climb on top of the upturned hull, while the other five passengers remained in an air pocket underneath the vessel.

The skipper placed an emergency 111 call using a passenger's mobile device, alerting New Zealand Police (Police) to the accident, and initiating a search and rescue operation.

Six of the eleven people survived the accident. The survivors were retrieved from on top of the upturned hull by responding vessels. The Police National Dive Squad later recovered the bodies of the remaining five passengers from underneath the upturned hull.

The deceased were found wearing inflated lifejackets within an air pocket that was heavily contaminated with petrol.

Why it happened

It is **virtually certain** the *i-Catcher* struck a whale that had surfaced underneath the hull, causing the rapid capsize to starboard.

All five deceased passengers were found within the air pocket under the upturned hull wearing inflated lifejackets, hindering their ability to escape. Four of the lifejackets were manually activated, while one was automatically activated.

It is **virtually certain** that defects in the vessel's fuel system allowed fuel to leak into the air pocket of the upturned vessel reducing the survivability of the accident.

[49] A rigid-hulled collared vessel that has alloy buoyancy chambers around the periphery of the hull.
[50] Of, relating to, or living or occurring in the open sea.

What we can learn

Because of the suddenness of the capsize, the vessel occupants were unable to retrieve the Emergency Position Indicating Radio Beacon (EPIRB) to alert authorities to their emergency. The EPIRB remained secured in its bracket underneath the upturned hull. There is a significant safety benefit for vessels equipped with EPIRBs that are manually released and activated to carry a reliable secondary form of communication suitable for the location and conditions such as a Personal Locator Beacon. This practice greatly improves the likelihood of alerting authorities to an emergency should a sudden event occur.

It is important for vessel owners and operators to be familiar with the state of fuel systems onboard their vessels through regular inspections for deficiencies, ensuring the safety of the vessel and its occupants.

Lifejackets are a critical lifesaving appliance. On the day of the accident, the vessel occupants were well equipped, wearing inflatable lifejackets suitable for the vessel's operation. The circumstances of this accident highlight the importance for people to understand how to safely deflate and remove an inflatable lifejacket while in the water should they need to do so in an emergency.

Pre-departure safety briefings should include doffing[51] procedures as part of lifejacket operational instruction so that vessel occupants are well informed should a sudden emergency occur.

Inflatable lifejackets rely on the successful operation of an inflation mechanism to make them buoyant. It is important that inflatable lifejackets are regularly inspected and maintained to ensure they work as designed when needed.

There were challenges in coordinating the search and rescue operation resulting in delays and elevating risk to those responding. The Commission considers it **unlikely** that the delays contributed to the overall outcome of this accident, given the toxic environment within the air pocket of the upturned hull. Nevertheless, valuable lessons can be learned from this response to better prepare for a search and rescue response for similar accidents in the future.

Who may benefit

All mariners, maritime regulatory agencies, industry stakeholders, recreational boaters, lifejacket manufacturers and their consumers, and agencies and operators involved in search and rescue operations.

Recommendations

On 26 February 2025, the Commission recommended that the director of Maritime New Zealand:

- Adjust the level of oversight and monitoring of the survey system to ensure it is sufficient to give MNZ confidence that the system is fit for purpose, providing for the safety of the vessel and its occupants. [005/25]
    - Maritime NZ replied it had accepted and is implementing the recommendation.

[51] Removing from the body.

- Work with lifejacket industry stakeholders and commercial operators to identify and implement effective safety measures that mitigate the risks associated with incorrectly re-arming and re-packing inflatable life jackets. [006/25]
  - Maritime NZ replied it had the recommendation under consideration.
- Implement a requirement for Recognised Surveyors to record in their survey report the servicing and expiry details for life-saving appliances onboard the vessel, to reduce the risk of appliances that are not fit for purpose remaining in service. [007/25]
  - Maritime NZ partially accepted the recommendation.
- Work with lifejacket industry stakeholders to educate and raise awareness with users of inflatable lifejackets of the:
    - doffing and deflation procedures
    - potential hazard of inflating when obstructed overhead. [008/25]
  - Maritime NZ replied it had the recommendation under consideration.
- Work with lifejacket industry stakeholders and commercial operators to identify and implement appropriate safety measures that mitigate the potential risks associated with:
    - inflating a lifejacket while obstructed overhead or in a confined space, limiting a wearer's ability to escape to a safer area
    - the lack of guidance and procedures relating to the doffing and deflation of inflatable lifejackets, to increase a wearer's ability to remove an inflated lifejacket if needed. [009/25]
  - Maritime NZ replied it had the recommendation under consideration.
- Work with lifejacket industry stakeholders to develop guidelines on the information that should be covered in safety briefings on lifejacket use, including doffing, deflation and hazards. [010/25]
  - Maritime NZ replied it had the recommendation under consideration.
- Support the submission of papers to the IMO through an appropriate IMO forum for their consideration to raise awareness about the importance of:
    - doffing and deflation procedures
    - the potential hazard of inflating when obstructed overhead. [011/25]
  - Maritime NZ replied it had accepted and is implementing the recommendation.
- Introduce a requirement for crew of passenger vessels equipped with Category II EPIRB's to also carry a personal location beacon or similar device capable of transmitting a distress message, to increase the timeliness of notification of an emergency. [012/25]
  - Maritime NZ partially accepted the recommendation.

On 26 February 2025, the Commission recommended that the Chief Executive of the Ministry of Business, Innovation and Employment and Next Generation Critical Communications collaboratively conduct a review of the emergency 111 system with sector stakeholders, to

remove unnecessary delays and improve New Zealand's emergency response efficiency. [013/25]

- The Ministry of Business, Innovation and Employment and Next Generation Critical Communications replied they had the recommendation under consideration.

On 26 February 2025, the Commission recommended that Next Generation Critical Communications lead the establishment of a common communication platform for emergency services, to support the sharing of inter-agency communications to remove delays and improve the flow of information during an emergency response. [014/25]

- Next Generation Critical Communications replied it had the recommendation under consideration.

On 26 February 2025, the Commission recommended that the Chief Executive of Standards New Zealand submit papers to the ISO to amend standard ISO 12402 so that it requires manufacturers to attach the following information on lifejackets:

  - doffing procedures
  - deflation procedures for inflatable lifejackets
  - the potential hazard of inflating a lifejacket when obstructed overhead. [015/25]

- Standards New Zealand accepted the recommendation.

On 26 February 2025, the Commission recommended that the Commissioner of New Zealand Police:

- Amend Police Standard Operating Procedures to include early engagement of the Police dive squad in maritime responses, when appropriate, to take advantage of their expertise and knowledge in water rescue. [016/25]
  - The New Zealand Police replied it had accepted and is implementing the recommendation.
- Direct the Tasman District Police to work with RCCNZ, other emergency response agencies and local authorities to develop a maritime rescue plan that includes the Kaikōura region. [017/25]
  - The New Zealand Police replied it had accepted and is implementing the recommendation.
- Conduct a review, in consultation with RCCNZ, to ensure that maritime rescue plans are in place and put into practice where appropriate, for areas of increased water-based activity nationwide. [018/25]
  - The New Zealand Police replied it had accepted and is implementing the recommendation in conjunction with RCCNZ.

On 26 February 2025, the Commission recommended that the New Zealand Search and Rescue Council:

- Direct the Rescue Coordination Centre and New Zealand Police to work together to ensure that effective processes are in place that allow the Rescue Coordination Centre to coordinate maritime and/or aviation assets on behalf of Police when requested or deemed beneficial, fully utilising the strengths of both SAR coordinating authorities for efficient and well-coordinated search and rescue operations. [019/25]
  - The NZSAR Council replied it had accepted and is implementing the recommendation in conjunction with the NZ Police.

- Further explore whether Rescue Coordination Centre should be responsible for tasking and coordinating all SAR aviation assets, as is done overseas. [020/25]
    - The NZSAR Council accepted the recommendation.

Grounding of a passenger vessel in Doubtful Sound

MO-2024-201 Passenger vessel Fiordland Navigator*, grounding in Doubtful Sound 24 January 2024*

Published: 10 April 2025
Full report: www.taic.org.nz/inquiry/mo-2024-201

What happened

The *Fiordland Navigator* was a passenger vessel that operated from Deep Cove in Doubtful Sound, New Zealand. It offered an overnight tourism voyage in Doubtful Sound, with the route depending on the conditions at the time. On 24 January 2024, as the vessel was being turned to exit an arm of Doubtful Sound (Crooked Arm), it is **virtually certain** that the master fell asleep and the vessel ran aground.

There were nine crew and 57 passengers on board. The grounding resulted in a number of minor injuries to the crew and passengers and moderate damage to the vessel. The emergency response was effective, with the passengers evacuated to Deep Cove then on to Te Anau that evening. The vessel returned to Deep Cove that night.

Why it happened

The master was **very likely** subject to fatigue impairment due to inadequate rest periods. The Operator's Fatigue Management Guidelines did not assure adequate rest periods for the crew, and those rest periods were not implemented effectively. The master was also taking medication that had the potential effects of drowsiness. While it may have contributed to the master's impairment, the Transport Accident Investigation Commission was unable to determine if it had.

The master held a current Maritime New Zealand Certificate of Medical Fitness that should have identified the risks of medication side effects, but the master had begun taking the medication after the certificate was issued. There were no prompts or requirements for Certificate of Medical Fitness holders to ensure they met the prescribed medical standards throughout the two-year validity of the certificate.

The *Fiordland Navigator* was operated by a sole-charge master. However, the hazards presented by a sole-charge master, such as incapacitation, had not been explicitly identified or mitigated in the vessel's risk register. As a result, there was inadequate mitigation in place when the master became incapacitated.

The implementation of elements of the vessel's safety management system was ineffective because the manager responsible was burdened with a workload significantly beyond that which one person could have reasonably handled. This hindered the fatigue management of the masters and crew and diminished the likelihood of effective risk identification and mitigation-control implementation.

What we can learn

A person's medical fitness for duty should be considered an ongoing state rather than a state judged through a one-time certificate for approval.

When a person is operating in a safety-critical role, any new medications they take should be considered for potential performance-impairing effects.

Master incapacitation is a significant risk on sole-charge vessels.

Adequate resources are necessary to ensure the effective implementation of safety management systems.

Who may benefit

The people and entities that may benefit from the findings and recommendations in this report include: people with safety-critical roles who could be affected by fatigue or medication; sole-charge operators; those associated with Certificates of Medical Fitness; those who operate safety management systems; auditors and regulators; maritime schools; and maritime industry bodies.

Recommendations

On 27 February 2025, the Commission recommended that Maritime New Zealand implement measures to raise awareness of the standards for the Certificate of Medical Fitness for seafarers and ensure that certificate holders understand their responsibilities to maintain certificate validity and report any impacting changes. [028/25]

- Maritime NZ replied it had the recommendation under consideration.

Loss of control of a container vessel in Wellington harbour

MO-2023-203: Container vessel Shiling, loss of control, Wellington harbour, 15 April 2023

Published: 6 June 2025
Full report: www.taic.org.nz/inquiry/mo-2023-203

What happened

On 15 April 2023, the container ship *Shiling* was under pilotage[52] outbound from the port of Wellington and had just initiated a turn into the Wellington Harbour entrance channel when it suffered a blackout[53] that caused the main engine to stop. The momentum of the turn carried the ship into the shallow waters of Falcon Shoal, where the bridge team succeeded in using both the ship's anchors to stop the ship from grounding. The ship was subsequently towed dead-ship[54] by harbour tugs back to its berth to be repaired.

On 10 May 2023, the repairs having been made, the *Shiling* departed Wellington bound for Singapore. Because of forecast inclement weather for the Tasman Sea, the master decided to take shelter near the New Zealand coast and wait for about 36 hours for the weather to abate.

Because of the length of time spent at Wellington, the bilge[55] water holding tanks and the engine-room bilges were full, and water had begun to accumulate on the engine room tank-top[56]. When the *Shiling* entered the Tasman Sea, it began to roll, and the free water on the tank-top entered the void under the main engine sump[57], where three rubber diaphragms were located.

The diaphragms linked the main engine sump to the main-engine lubricating oil tank (lube-oil tank) beneath. Their purpose was twofold: to compensate for the relative movement between the main engine and the solid structure of the tank; and to prevent water entering the lube-oil tank. However, all three rubber diaphragms were in a deteriorated state and allowed the bilge water to enter the lube-oil tank, causing the lube-oil pumps to lose pressure and the main engine to stop.

Without the main engine operating, the *Shiling* was unable to manoeuvre. The ship settled with its beam to the swell and began to roll heavily. With no option for recovering the main engine, the master made a Mayday call[58]. A tow-capable vessel located in the nearby port of

[52] The activity carried out by a pilot assisting the master of a ship in navigation while entering or leaving a port.
[53] A sudden total loss of electrical power on the ship.
[54] Without the use of the ship's propulsion systems.
[55] 4The compartment at the bottom of the hull of a ship where water collects so that it may be pumped out of the ship at a later time.
[56] The floor of the engine room, under which various tanks and voids are located.
[57] The internal space at the bottom of an engine where lubricating oil either accumulates, or (as in this case) drains into the lube-oil tank beneath.
[58] An international standard distress signal given through radiotelephony message that a vessel is in grave and imminent danger and requires immediate assistance.

New Plymouth responded, initially taking the *Shiling* in tow to the sheltered waters of Golden Bay and eventually back to Wellington for further repairs.

Why it happened

The ship's blackout in Wellington Harbour was caused by exhaust gases from a cracked cylinder liner in one of the generators entering the centralised cooling-water system that supplied cooling water to all generators and the main engine. The running generators tripped out because of high cooling-water temperature and caused the blackout, which subsequently caused the main engine to stop.

Although the ship held valid statutory and classification society certificates, the generators and several other safety-critical systems were found to be in a deteriorated condition.

It is **very likely** that the rubber diaphragms had not been inspected for many years, despite the issuing of several bulletins by insurance clubs and engine manufacturers warning of the critical importance of maintaining the diaphragms in good condition.

The Transport Accident Investigation Commission (the Commission) has identified several safety issues relating to the international and domestic systems for regulating international ships and the ability of ship owners to devolve their responsibilities for the safe operation of their ships to third parties without regulatory consequences.

The Commission has made recommendations to Maritime New Zealand to address these matters through the International Maritime Organization (IMO).

What we can learn

Deferred ship maintenance, especially of critical equipment and systems, will significantly increase the risk of accidents and incidents.

Failures involving critical equipment and systems must be fully investigated for their causes and resolved before the equipment or systems are placed back in service.

The creators of risks are best placed to manage them (Committee on Safety and Health at Work, 1972). A ship owner who offers a ship for service must remain responsible for its safe operation, regardless of any other entities involved in operating, inspecting and auditing the ship and its systems.

Who may benefit

All ship owners and operators (including ship managers), port state[59], and flag state[60] regulators, classification societies, insurance providers and deck and engineering officers may benefit from the findings of this inquiry.

Recommendations

On 15 May 2025, the Commission recommended that the owner of the *Shiling* review the performance of ship management companies engaged to operate its ships against international and domestic requirements, to enable it to be satisfied that the ships are seaworthy for every voyage. [021/25]

- Shimin Holding Pte Ltd replied that it had accepted and implemented the recommendation.

[59] The country that is responsible for carrying out port state control, being the inspection of foreign ships in national ports to verify the condition of the ship and its equipment.

[60] The country where the ship was registered.

On 15 May 2025, the Commission recommended that Maritime New Zealand work with the Ministry of Transport to continue to develop and then implement a more comprehensive maritime incident response strategy that includes a risk assessment to identify areas most susceptible to very serious marine casualties, particularly mass fatality events, and strengthen the long-term salvage and rescue capability in those areas. [022/25]

- Maritime NZ partially accepted the recommendation.

On 15 May 2025, the Commission recommended that Maritime New Zealand collaborate with other states to submit joint papers to the IMO (through the appropriate sub-committee) recommending the IMO:

a. introduce a more meaningful definition of critical equipment and systems [023/25]

   - Maritime NZ rejected the recommendation.

b. amend the ISM Code (or through another mechanism) to ensure ship owners remain accountable for the safe operation of their ships, notwithstanding the use of ship management companies to operate their fleets. [024/25]

   - Maritime NZ replied it had the recommendation under consideration.

c. introduce the requirement for a continuous synopsis record for the repair and maintenance of ships' critical equipment and systems remain on board throughout a vessel's life. [025/25]

   - Maritime NZ partially accepted the recommendation.

On 15 May 2025, the Commission recommended that the Secretary for Transport take steps to introduce a legislative change that would give the Director of Maritime New Zealand powers to ban substandard ships from New Zealand under appropriate criteria. [026/25]

- The Ministry of Transport replied it had the recommendation under consideration.

Grounding of a fishing vessel in the Hauraki Gulf

MO-2024-203: FV Chokyu Maru No.68*, grounding, The Noises, Hauraki Gulf, 16 April 2024*

Published: 19 June 2025
Full report: www.taic.org.nz/inquiry/mo-2024-203

Figure 1 from the report: Fishing *Chokyu Maru No.68* after grounding
(Credit: Auckland harbourmaster)

What happened

On 16 May 2024 the Japanese fishing vessel *Chokyu Maru No.68* was inbound to the Auckland pilot boarding area when it grounded on rocks near The Noises[61] island group.

There were 27 crew on board; nobody was injured and there was no pollution as a consequence of the grounding.

The vessel sustained a small hole at the bow, heavy scraping of the hull paint and minor damage to the propeller. It was refloated later the same day and towed to an Auckland port facility.

Why it happened

The vessel's route from Yaizu, Japan to Auckland, New Zealand was not appraised, planned, documented or resourced before departure as required by industry rules and guidelines and standard seafaring practice.

[61] The Noises is a group of islands, rock stacks and reefs within the inner Hauraki Gulf Marine Park/Tīkapa Moana. The largest islands are Ōtata Island and Motuhoropapa Island.

The crew responsible for navigation did not use all available means to determine the vessel's position in relation to navigable and unnavigable waters.

The vessel was not carrying the appropriate nautical publications and large-scale charts that identified local navigational hazards such as The Noises and its outlying rocks.

The master was not aware of rocks and islands between the vessel and the pilot boarding area and set a straight-line course that encountered these navigational hazards.

What we can learn

A well-researched and documented voyage plan is of fundamental importance to the safety of navigation.

Who may benefit

Maritime operators, managers, regulators and training facilities may all benefit from the findings in this report.

Recommendations

On 30 April 2025, the Commission recommended that Yugen Kaisha Chokyu take steps to ensure the effectiveness of its safety management practices with respect to voyage planning and navigation, and take steps to ensure the safe navigation of vessels in its fleet. [027/25]

- Yugen Kaisha Chokyu did not respond to the recommendation in time for publication of the report.

Domestic maritime inquiries in progress on 30 June 2025

Inquiry	Description	Occurred
MO-2022-206	Charter fishing vessel *i-Catcher*, Capsize, Goose Bay, Kaikōura	10/09/2022
MO-2023-201	Passenger ferry *Kaitaki*, loss of power, Cook Strait	28/01/2023
MO-2023-202	Collision between Passenger Ferry, *Waitere* and recreational vessel, *Onepoto*, off Paihia, Bay of Islands	13/04/2023
MO-2023-203	Container vessel, *Shiling*, Loss of control Wellington harbour	15/04/2023
MO-2023-204	Bulk carrier *Poavosa Brave*, Serious injury, Off Tauranga	23/06/2023
MO-2023-205	Bulk Carrier *Achilles Bulker*, loss of rudder, near Tauranga Port	24/07/2023
MO-2023-206	Fishing vessel, *Austro Carina*, Stranding at Red Bay, Banks Peninsula	24/09/2023
MO-2024-201	Passenger vessel, *Fiordland Navigator*, Grounding, Doubtful Sound	24/01/2024
MO-2024-203	*Chokyo Maru* No.68, grounding, Hauraki Gulf	16/04/2024
MO-2024-204	Passenger and freight Ferry, *Aratere*, Grounding, Titoki Bay, Picton	21/06/2024
MO-2024-205	*Manahau*, grounding, Westport	31/08/2024
MO-2024-207	Pilot vessel *Takitimu II*, grounding, near Bluff, Southland	26/12/2024
MO-2025-201	Gas poisoning, *Antarctic Discovery*, Port of Lyttelton	21/02/2025
MO-2025-202	Jet boat *Discovery*, Skippers Canyon, Queenstown	25/02/2025
MO-2025-203	Crew injury on bulk carrier, MV *Thor Nitnirund*, Cook Strait	20/03/2025
MO-2025-204	Crew injury on bulk carrier, MV *Olivia*, South Port, Bluff	24/05/2025

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