



Pictured: two ATSB officials carry out an inspection aboard a vessel. Photo credit: Australian Transport Safety Bureau.



Pictured: Angus Mitchell, Chief Commissioner, Australian Transport Safety Bureau. Photo credit: Australian Transport Safety Bureau.

Australian Transport Safety Bureau 2023 half-way review

By ANGUS MITCHELL, Chief Commissioner, ATSB

At the halfway point of 2023 I'm pleased to be able to report on a highly productive and engaging six months for the ATSB in marine safety.

As of July 1, we have so far concluded three marine investigations in 2023, and have provided Interim updates for two ongoing investigations (the [grounding of Hagen Oldendorff](#) at Port Hedland, and the [propulsion failure of Portland Bay](#) off Port Kembla). We have also launched two new investigations so far this year, bringing our total number of active

marine investigations to nine, and we are on track to finalise six of these in the second half of this year.

This uptick in activity reflects the ATSB's more concentrated focus on marine investigations, facilitated by the establishment of a dedicated marine investigations team.

Previously, investigators with marine expertise were integrated into teams throughout the agency. While we maintain this multi-modal approach to

how we investigate transport safety matters, the dedication of a marine team, and similarly a rail team, will provide a clearer focus on these two sectors, ensuring we achieve the targeted balance of rigour and timeliness, providing the greatest public benefit.

A dedicated marine team also allows us to better maintain strong institutional knowledge, and stay abreast of the issues which most regularly emerge in marine occurrences, to ensure our staff are trained to identify and understand them.

To this end, I recently joined a number of our marine investigators in Brisbane on a Bridge Resource Management (BRM) course – a subject highly relevant to the investigation we finalised in March, concerning the collision involving Australian-flagged bulk carrier Goliath and two TasPorts tugs in Devonport, Tasmania, in January last year.

Among other findings, our final report into that investigation noted that neither the master nor the second mate had undertaken the required BRM training, and that BRM on-board was ineffective to the point of being contributory in the accident. Subsequently, the ship's operator arranged for all deck officers serving on board Goliath to attend BRM training ashore.

As we said in that report's safety messaging, the various concepts, techniques, and attitudes that together comprise BRM remain among the most effective measures available to identify and eliminate, or rectify, human error. Training in the various elements that comprise effective BRM provides a foundation upon which competency may be built through experience and practice. In addition, the design of physical bridge systems can also play a part in mitigating the risks of human error by incorporating intuitive and conspicuous indications of correct operation and conversely, of errors or incorrect settings.

As part of the Goliath investigation's release, the ATSB was able to demonstrate another of its new capabilities, through the production of an excellent animation to help explain the order of events, and some of the contributing factors in the accident. This was able to be produced thanks to the recent expansion of the communications and stakeholder engagement side of the ATSB. Videos and animations can not only provide a better understanding among those already engaged in our reports, but they can help bring more people into the safety conversation, with high engagement levels in social media in particular.

More recently, we released a final report into a complex investigation, concerning the grounding of the 81-metre general cargo ship Trinity Bay on Harrington Shoal in January 2021. At the time I was the General Manager of Maritime Safety Queensland (MSQ) and as such remember the incident well. While I

recused myself from the investigation process due to that association, I am now able to reflect on its findings, which – similar to the Goliath investigation – contain key safety messaging for multiple stakeholders.

The Trinity Bay investigation concluded that the use of a draft voyage planning tool, which included waypoint data errors, as well as an ongoing technical fault with the vessel monitoring and surveillance system for the Great Barrier Reef, contributed to the grounding, which fortunately resulted in no injuries or pollution, and only minor damage to the ship.

When Trinity Bay grounded on Harrington Shoal, a charted feature with a depth of 0.9 metres north-west of Harrington Reef, it was conducting its regular weekly passage from Thursday Island to Cairns. However, in an effort to address a deficiency identified during a recent internal audit, the ship's master had used a draft passage planning tool to develop a new route for the journey.

The planned routes from the planning tool were entered into the Trinity Bay's electronic chart system (ECS), a navigation information system which displayed the vessel's position and relevant nautical chart data. However, the ECS was not approved for use as the ship's primary means of navigation and did not possess automatic route safety checking functions.

Unfortunately, as our investigators found, there were errors in this planning tool, specifically in relation to the location of waypoints. This meant the new route took Trinity Bay dangerously close to the charted danger of Mid Rock, and then about an hour later directly over the charted danger of Harrington Shoal.

We found this new passage plan was not independently verified by another of the ship's deck watchkeeping officers, as required by the operator's procedures, and the planned routes were entered into the ECS instead of being annotated on the ship's paper charts.

In accordance with chart carriage regulations, these paper charts were the ship's primary means of navigation, and were marked with the ship's established, previously used routes. Consequently, the dangers on the newly planned route were not identified, and the monitoring of the ship's passage was ineffective in identifying these dangers.

In addition, our investigation also found that at the time of the grounding an ongoing technical fault in the REEFVTS (Great Barrier Reef and Torres Strait vessel traffic service) monitoring and surveillance system meant the duty operator at the VTS Centre in Townsville was being presented with an abnormally high number of erroneous alerts and alarms.

Alerts associated with Trinity Bay in the lead-up to the accident were acknowledged by the duty operator but not followed up, due to the operator experiencing a sustained period of elevated workload, combined with a high level of expectancy that the ship was not at risk, as it frequently transited the area.

I'm happy to report the ship's operator subsequently removed Trinity Bay's electronic chart system from service and advised the ATSB it was investigating the fitting of electronic chart display and information systems (ECDIS) on its ships.

Meanwhile MSQ, which operates REEFVTS, has since implemented a software update for the system, reducing the incidence of false alarms. Further, the reporting area covered by REEFVTS was split into two, a north and a south area operated respectively from Townsville and Gladstone, with a separate operator responsible for each area.

I would encourage all reading this to seek out these two investigations, and the many others on our website, to understand how the safety lessons might be relevant to their own operations. I would also encourage all readers to subscribe to our marine report releases, via the link on the home page of our website. ▲