

Urgent Recommendation MO-2016-202: Cruise ship *Azamara Quest*,
contact with Wheki Rock, Tory Channel, 27 January 2016

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The Commission may make recommendations to improve transport safety. The cost of implementing any recommendation must always be balanced against its benefits. Such analysis is a matter for the regulator and the industry.

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Urgent Recommendation

Marine inquiry MO-2016-202
Cruise ship *Azamara Quest*, contact with Wheki Rock,
Tory Channel
27 January 2016

Transport Accident Investigation Commission

About the Transport Accident Investigation Commission

The Transport Accident Investigation Commission (Commission) is a standing commission of inquiry and an independent Crown entity responsible for inquiring into maritime, aviation and rail accidents and incidents for New Zealand, and co-ordinating and co-operating with other accident investigation organisations overseas. The principal purpose of its inquiries is to determine the circumstances and causes of occurrences with a view to avoiding similar occurrences in the future. Its purpose is not to ascribe blame to any person or agency or to pursue (or to assist an agency to pursue) criminal, civil or regulatory action against a person or agency. The Commission carries out its purpose by informing members of the transport sector and the public, both domestically and internationally, of the lessons that can be learnt from transport accidents and incidents.

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Important notes

Nature of this report

These urgent recommendations are an example of a preliminary report referred to in section 9 of the Transport Accident Investigation Commission Act 1990. This is not a draft report prepared for comment but a completed report that the Commission believes is necessary or appropriate in the interests of transport safety.

This preliminary report presents some facts and circumstances to give context to the urgent recommendation. The report contains no analysis or findings. Any extrapolation of the information given in this report would be speculation.

Final report may include different information

The Commission intends completing a final report on the accident after it completes its inquiry. That report will contain an analysis of the facts of the accident, findings and any further recommendations. The information contained in the Commission's final report may differ from the information contained in this preliminary report.

Citations and referencing

Information derived from interviews during the Commission's inquiry into the occurrence is not cited in this report. Documents that would normally be accessible to industry participants only and not discoverable under the Official Information Act 1980 have been referenced as footnotes only. Other documents referred to during the Commission's inquiry that are publicly available are cited.

Photographs, diagrams, pictures

Unless otherwise specified, photographs, diagrams and pictures included in this report are provided by, and owned by, the Commission.

Verbal probability expressions

The expressions listed in the following table are used in this report to describe the degree of probability (or likelihood) that an event happened or a condition existed in support of a hypothesis.

Terminology (Adopted from the Intergovernmental Panel on Climate Change)	Likelihood of the occurrence/outcome	Equivalent terms
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	



The Azamara Quest
(photo courtesy of www.cruisepassenger.com.au)

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Figure

Figure 1 Ship's position recorded from GPS data stored in the ship's voyage data recorder 1

Data summary

Vessel particulars

Name:	<i>Azamara Quest</i>
Type:	passenger ship
Limits:	unlimited
Classification:	Bureau Veritas
Length:	180.452 metres
Breadth:	28.3 metres
Draught:	5.8 metres
Gross tonnage:	30,277 gross registered tonnes
Built:	1999
Propulsion:	four Wartsila 12V32E diesel generators
Service speed:	18 knots
Owner/operator:	Azamara Quest Inc.
Port of registry:	Valletta
Minimum crew:	21

Date and time 27 January 2016, 0915

Location Tory Channel, eastern entrance

Persons on board

passengers:	652
crew:	394
other:	one (harbour pilot)

Injuries nil

Damage impact damage to bilge keel and propeller

1. Background information

- 1.1. At about 0845 on 27 January 2016, the 180-metre-long cruise ship *Azamara Quest* arrived off the eastern entrance of Tory Channel on the final leg of its maiden voyage to Picton Harbour. There were 652 passengers and 394 crew on board.
- 1.2. The port information guide describes Tory Channel as subject to “strong tidal currents” up to 7 knots, which can make navigation difficult. Pilotage was compulsory for vessels of 350 gross registered tonnes or more.
- 1.3. At about 0900 a Port Marlborough Marine Services pilot embarked about 3.5 nautical miles from the entrance to the channel. Once the pilot was on the bridge the master gave the pilot a standard briefing regarding the vessel’s characteristics and confirmed that the *Azamara Quest* had no deficiencies. The pilot and the master then discussed and agreed the passage plan, noting a strong flood tide.
- 1.4. At about 0912 conduct of the ship was handed over to the pilot.

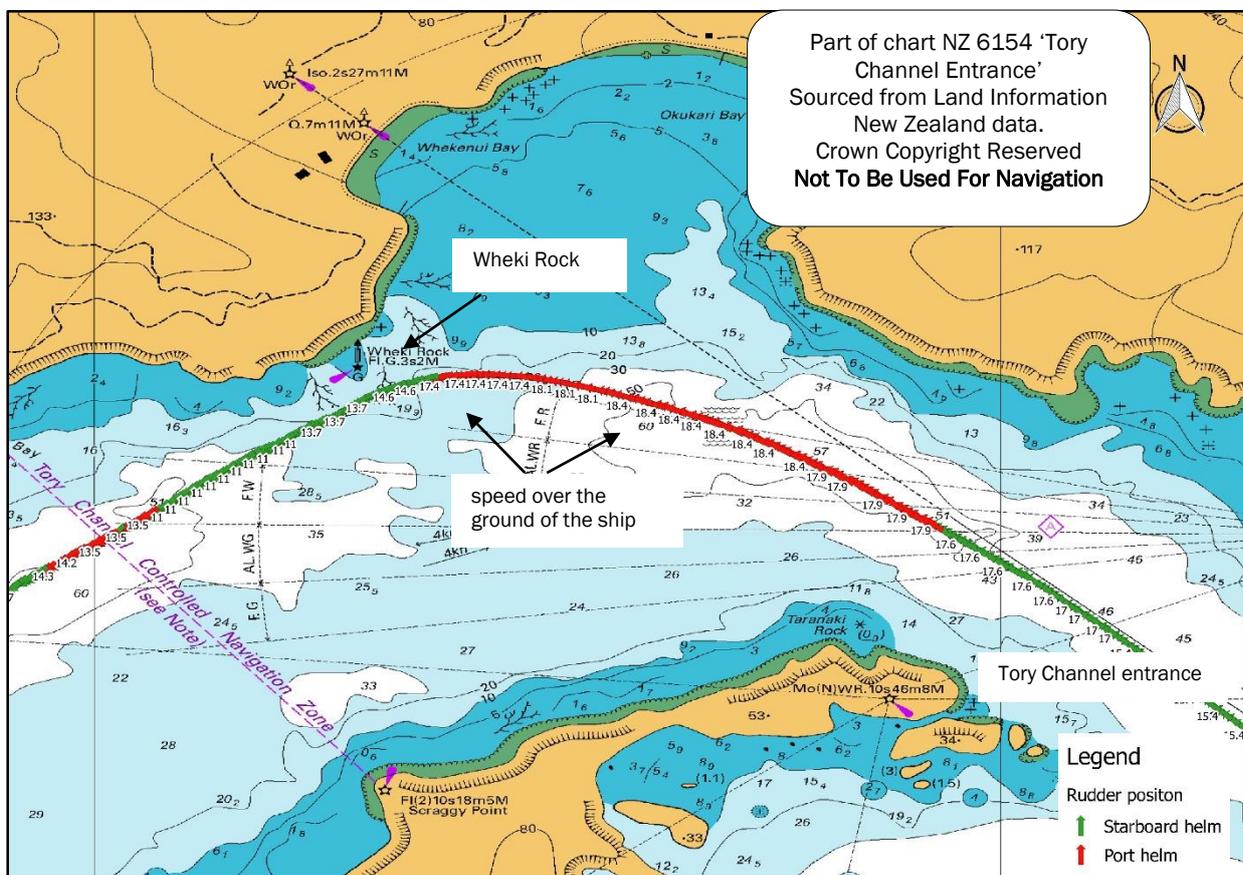


Figure 1
Ship's position recorded from GPS data stored in the ship's voyage data recorder

- 1.5. The ship was lined up with the leading navigation lights¹ and entered Tory Channel without incident. For reasons still under investigation, there was a delay in beginning the planned turn to port. As a result the ship's ground track² deviated to starboard of its planned track (the turn was much wider than planned).

¹ Two light beacons, one above and behind the other, that when in line indicate the ship is on the preferred track.

² The ship's track over the seabed as opposed to its track through the water.

- 1.6. The bridge team realised that the ship was going to come dangerously close to Wheki Rock on the starboard side of the channel (refer Figure 1) and corrective action was taken. However, the action was too late to prevent the ship's starboard quarter³ contacting Wheki Rock.
- 1.7. The ship was then steadied up on a safe track and continued on its passage to Picton without further incident. When the ship was berthed in Picton, divers conducted a survey and noted damage to the starboard bilge keel and propeller.

³ The area around the stern on the starboard side.

2. Recommendations

2.1. General

- 2.1.1. The Transport Accident Investigation Commission (Commission) may issue, or give notice of, recommendations to any person or organisation that it considers the most appropriate to address the identified safety issues, depending on whether these safety issues are applicable to a single operator only or to the wider transport sector. In this case, recommendations have been issued to the Chief Executive of the Marlborough District Council and the Director of Maritime New Zealand, with notice of recommendation 1 to the Director of Maritime New Zealand and recommendation 2 to the Chief Executive of Port Marlborough New Zealand Limited for their information.
- 2.1.2. In the interests of transport safety, it is important that these recommendations are implemented without delay to help prevent similar accidents or incidents occurring in the future.

2.2. Recommendation one

Safety issue: The current harbour risk assessment for the safe navigation of ships through Tory Channel does not adequately consider the risks associated with international cruise ships transiting Tory Channel.

- 2.2.1. The Commission reviewed the Marlborough District Council's harbour risk assessment that forms part of the Harbour Safety Management System.
- 2.2.2. The current harbour risk assessment relies heavily on the standard operating procedures followed by the Cook Strait ferry operators as a means of mitigating the risk of collisions and groundings for passenger ferries. However, there are additional risks associated with cruise ships operating in pilotage waters that should be considered separately from ferry operations. For example, Cook Strait ferries transit Tory Channel daily, with pilot-exempt masters and crew who are very familiar with their ships and the local environment. However, masters and crew on cruise ships are less familiar with Tory Channel, and are required to integrate with harbour pilots who are less familiar with the navigation equipment and handling characteristics of the ships.
- 2.2.3. On 2 August 2016 the Commission **recommended** that before allowing cruise ships to use Tory Channel in future, the Chief Executive of the Marlborough District Council review its harbour risk assessment for the safe navigation of ships through Tory Channel, and in doing so consider the safe navigation of cruise ships through Tory Channel as a separate risk. The new risk assessment should consider, but not be limited to, the following factors:
 - the limited number of piloted ships using Tory Channel make it difficult for harbour pilots to maintain currency
 - cruise ship crews will not be familiar with Tory Channel
 - harbour pilots will not necessarily be familiar with the manoeuvring characteristics and the navigation equipment of ships they are piloting
 - there is only a short time available before transiting Tory Channel for a pilot and a ship's crew to form a cohesive bridge team
 - as well as the Tory Channel entrance itself, the remainder of Tory Channel is narrow, with significant Cook Strait passenger-ferry traffic. In order to help mitigate the risk of collisions between ships under pilotage and passenger ferries, pilots' passage plans would need to be aligned with those of the passenger ferries. (O16/16)

On 9 August 2016, Marlborough District Council replied:

The Council notes the content of the finalised recommendation but wishes to ensure that the terminology used is fully understood by all parties. In this context, the Council wishes to clarify its understanding of the difference between risk/hazard and control of these to ensure that the Commission has the same understanding.

It is the Council's belief that the risks/hazards associated with transits through Tory Channel Entrance as well as the passage through the Channel are already clearly identified and, although not ship specific, the outcome of the risk/hazard realisation will result in a range of consequences irrespective of the ship type. It is the level of the consequences that drive the associated risk control measures. The Council agrees that the generic controls already identified do not specifically address cruise ships transiting this area and that this is a shortcoming of the existing risk assessment that will be addressed but the risks/hazards are already documented.

The Commission will also be aware that a number of cruise ship specific draft control measures were identified immediately post the *Azamara Quest* incident and these were forwarded to the Commission's investigation team.

The Commission will have noted that each of these control measure has an associated implementation date and the Council wishes to be satisfied that these dates and control measures are realistic achievable and the costs not at a level that is disproportionate to anticipated traffic volumes. The key to resumption of any cruise ship transit through Tory Channel is the implementation of the identified control measures and until these are in place, transits are permitted through Harbour Master Direction.

On 18 August 2016, Marlborough District Council further replied:

Further to the Commission's recommendations, a number of control measures specific to cruise ships transiting Tory Channel have now finalised and a copy is attached for your information.

The Commission will note that each control measure has an associated implementation timeframe and unless these are achieved for the 'critical' and 'significant' controls, cruise ship transits of Tory Channel may not be able to resume.

I trust that these measures adequately address the Commission's safety recommendations.

2.3. Notice given to Director of Maritime New Zealand

2.3.1. On 2 August 2016 the Commission gave notice to the Director of Maritime New Zealand that:

The Commission has **recommended** that before allowing cruise ships to use Tory Channel in future, the Chief Executive of the Marlborough District Council review its harbour risk assessment for the safe navigation of ships through Tory Channel, and in doing so consider the safe navigation of cruise ships through Tory Channel as a separate risk. The new risk assessment should consider, but not be limited to, the following:

- the limited number of piloted ships using Tory Channel make it difficult for harbour pilots to maintain currency
- cruise ship crews will not be familiar with Tory Channel
- harbour pilots will not necessarily be familiar with the manoeuvring characteristics and the navigation equipment of ships they are piloting
- there is only a short time available before transiting Tory Channel for a pilot and a ship's crew to form a cohesive bridge team
- as well as the Tory Channel entrance itself, the remainder of Tory Channel is narrow, with significant Cook Strait passenger-ferry traffic. In order to help mitigate the risk of collisions between ships under pilotage and passenger ferries, pilots' passage plans would need to be aligned with those of the passenger ferries. (016/16)

2.4. Recommendation two

Safety issue: In the Commission's view Port Marlborough's⁴ Pilot Training and Proficiency Plan did not meet the intent of Maritime Rules Part 90: Pilotage.

- 2.4.1. Maritime Rules Part 90: Pilotage required the *Azamara Quest* to carry a licensed Grade A (unrestricted) pilot to transit Tory Channel.
- 2.4.2. The Director of Maritime New Zealand specifies the minimum number of transits a pilot must make within a defined period of time in order to remain current for a pilotage area. For Port Marlborough this was deemed to be 10 transits (five inwards and five outwards) of Tory Channel in any 12-month period in order to remain current. At least two inward and two outward of those transits were required to be made during the hours of darkness. These requirements were reflected in the Pilot Training and Proficiency Plan and approved by Maritime New Zealand.
- 2.4.3. For the purpose of maintaining pilot currency under the Pilot Training and Proficiency Plan, Port Marlborough considered inward and outward transits of Tory Channel made in pilot boats⁵ as qualifying transits. These transits were made by pilots on the way to and from ships that they had piloted or were about to pilot. The plan also allowed two transits undertaken in a ship simulator to count towards currency.
- 2.4.4. In the previous 12 months the pilot had conducted two inward transits and one outward transit piloting commercial ships. He had conducted four transits in a ship simulator, of which only two could be counted for the purpose of maintaining currency. This meant that he was relying on five transits in the pilot vessel to maintain the required currency according to the Pilot Training and Proficiency Plan.
- 2.4.5. The Pilot Training and Proficiency Plan is ambiguous in its wording on whether transits made on a pilot boat can be counted as inward or outward pilotage. Notwithstanding any ambiguity, the Commission is questioning the appropriateness, for the purpose of maintaining Grade A pilot currency, of likening a pilot being driven out to a ship in a small pilot launch with the difficulty and responsibility involved in piloting a large cruise ship through Tory Channel.
- 2.4.6. On 2 August 2016 the Commission **recommended** that the Director of Maritime New Zealand review Port Marlborough New Zealand Limited's Port Safety Management System and ensure that it has appropriate procedures in place to meet the requirements of its Pilot Training and Proficiency Plan and that the plan meets the intent of Maritime Rules Part 90: Pilotage. (O17/16)
- 2.4.7. On 18 August 2016, Maritime New Zealand replied:

The Director of Maritime NZ accepts the recommendation. Maritime NZ is working with Marlborough District Council to ensure clarity in relation to pilot currency. Maritime NZ does not believe that situations of this type currently exist in other pilotage areas around New Zealand but it will ensure that the TAIC recommendations are circulated to other regional councils.

2.5. Notice given to Chief Executive of Port Marlborough New Zealand

- 2.5.1. On 2 August 2016 the Commission **recommended** that the Director of Maritime New Zealand review Port Marlborough New Zealand's Port Safety Management Plan and ensure that it has appropriate procedures in place to meet the requirements of its Pilot Training and Proficiency Plan and that the plan meets the intent of Maritime Rules Part 90: Pilotage. (O17/16)

⁴ Port Marlborough New Zealand Limited.

⁵ The pilot boat was a small launch 14.6 metres in length.



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