COMMISSION OF INQUIRY INTO THE SINKING OF RABAUL QUEEN

The Honourable Peter O’Neill
Prime Minister of Papua New Guinea
Waigani

Dear Prime Minister

I have the honour of submitting the Report of the Commission of Inquiry into the sinking of Rabaul Queen under the Commissions of Inquiry Act (Chapter 31).

Respectfully

Judge Warwick Andrew C.B.E., C.R.H.
Commissioner

Dated: 28 June 2012
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EXECUTIVE SUMMARY

Rabaul Queen

*Rabaul Queen* was built as *Ieshima* at the Kawamoto Shipbuilding’s Higashino-cho shipyard in Japan and launched in December 1982. The ship was designed and equipped to operate in the smooth waters of the northern part of the Japanese Inland Sea. Passenger numbers depended on the length of voyage, and for voyages of less than 1.5 hours, 550 passengers and 14 crew were permitted to be carried.

Following its purchase by Rabaul Shipping Limited (Rabaul Shipping) late in 1998, *Rabaul Queen* was issued with Papua New Guinea survey certification on 5 March 1999, which stated that it could carry 295 passengers on its intended voyages.

The ship commenced passenger services in Papua New Guinea early in 1999, initially operating from Rabaul to Kavieng. After a couple of trips between these two ports, it entered service on the Rabaul, Kimbe, Lae scheduled passenger service. The ship had generally been on this service since that time.

*Rabaul Queen’s final voyage*

At about 1100 on 1 January 2012, passengers began to board *Rabaul Queen* for the overnight voyage from Kimbe to Lae. At the completion of boarding, the Master was allegedly informed that 360 passengers had boarded the ship. Also on board were 13 crew members, two canteen boys and the Master of *Solomon Queen* who was on leave and returning home.

At 1247, *Rabaul Queen* departed Kimbe for the 280 nautical mile overnight voyage to Lae. Conditions on board the ship were described by the passengers as ‘packed’ and ‘overloaded’. People were sitting shoulder to shoulder on the decks and they could not stretch out their legs. Passengers were also sitting on the stairs, both internal and external.

For the initial part of the voyage, the sea conditions were north-westerly winds of less than 10 knots and smooth seas. These conditions remained until about 1600, when the ship reached Cape Campbell on the eastern side of the Willaumez Peninsula and started to become influenced by the prevailing strong north-westerly winds and rough seas.

As the ship rounded Cape Hollmann at the top of Willaumez Peninsula, and began the voyage to Cape Gloucester (at the northern end of the Dampier Strait), it became more subjected to the north-westerly winds and sea conditions and its movement increased. Rain also started to fall. These weather and sea conditions did not change during this leg of the voyage. The constant pitching and rolling of the ship and the overcrowded conditions resulted in many people being sick.

Because it was raining at times, combined with the fact that spray from the sea was sometimes coming over the starboard side of the ship, some of the passengers who were standing on the starboard side of the Upper Deck and in the open part of the Promenade Deck began to get wet. These people then looked for some place dry to go and many moved over to the port side of the ship or inside the accommodation. This resulted in the inside areas becoming even more overcrowded.
This movement of passengers, combined with the wind exerting a force on the starboard side of the ship, resulted in the ship developing a port list (i.e. lean) during this leg of the voyage. While the list was probably no more than 5 degrees, the ship was rolling to port and returning to the upright but it had a tendency not to roll back over to starboard very far.

At about 0220 on 2 February, the ship reached Cape Gloucester and the Chief Mate altered course to make for the Nessup Channel, at the southern end of the Dampier Strait.

At about 0330, the Chief Mate called the Master to navigate the ship through the Siassi Islands and into the Vitiaz Strait. As the ship left the lee of Umboi Island, it again came under the influence of the prevailing north-westerly winds and sea, but by now the winds had increased to be between 20 to 30 knots and the seas to 3.0 m. The ship began to steer a little uneasily in the prevailing conditions, so the Master took it out of auto-pilot, put it into hand steering and took the helm. He steered a course of about 200° (True).

During the 35 nautical mile voyage across Vitiaz Strait, with the prevailing near gale force (see Appendix 3) conditions hitting the ship on its starboard quarter, the ship continued to roll and water continued to come onto the starboard side of the Upper Deck. The ship also maintained its list to port.

At about 0530, the Chief Mate left the bridge to go below to check on the passengers because he could hear some of the younger men shouting ‘one more, one more’ as the ship rode the waves. When the Chief Mate got to the Upper Deck, he asked the passengers to move back over to the starboard side of the ship so that the ship could be ‘balanced’. While several of the passengers moved back to starboard, the majority remained on the port side. Those that did move to the starboard side soon returned to the port side because the sea was still breaking over the starboard side of the ship. As a result, the ship maintained port list, exposing more of its starboard side to the prevailing weather and sea.

By this time, the day had started to dawn and it was about 0545 or a little later. The coastline could now be seen from the ship.

At about 0615, a large wave hit the ship on its starboard quarter. The stern was pushed to port and the ship heeled over heavily to port. This resulted in the ship coming beam onto the north-westerly seas (seas at right angles to the ship). On the bridge, the Master lost steerage of the ship and was not able to bring its head back around to port.

As the ship was slowly returning to the upright, a second wave hit the starboard side with sufficient force to again heel it over to port. However, because the ship had not returned to the upright, the heel angle was far greater than before and resulted in the ship’s port side becoming submerged. Water then began flooding into the accommodation.

The ship was heeled over to port for only a short period of time when a third wave hit the exposed hull and the ship capsized.

The capsize happened so quickly that the Master did not broadcast a mayday signal. He and the three other Rabaul Shipping employees found themselves in the wheelhouse as it filled up with water. Three of the four men were able to swim clear of the ship before it sank.
Meanwhile, most of the survivors were thrown into the water while the ship was in the process of rolling to port, or they escaped from the upturned ship before it sank.

*Rabaul Queen* remained in the capsized position for up to 10 minutes before it sank. As the ship sank, fuel and bilge oil from the engine room began to float on the surface of the sea. Not long after, the first of the ship’s 25-man liferafts surfaced. The liferafts inflated when they surfaced and they began to be blown down wind of the sinking position as a result of the still strong north-westerly winds. A few lifejackets and buoyant flotation devices also floated to the surface.

Some survivors managed to swim to liferafts and get on board while others had to be assisted on board. Some survivors also clung to the floating lifejackets or buoyant flotation devices for periods of time.

The first ship to rescue the survivors arrived at the sinking position at about 0940, just over 3 hours after *Rabaul Queen* sank. The ship, *MOL Summer*, was able to recover 116 passengers and its Master coordinated the other ships that arrived on scene to assist in the search and rescue operation. In all, the ships that took part in the search and rescue operation took on board 246 survivors.

**Number of people on board when the ship capsized**

*Rabaul Queen* was permitted by the National Maritime Safety Authority (NMSA) to carry a maximum of 310 persons including a maximum of 295 unberthed passengers. Rabaul Shipping’s Managing Director, Captain Peter Sharp, told the Commission that the ship often carried in excess of this permissible number and he had issued instructions to ticketing offices that up to 350 passengers could be carried on board the ship, because it was the sister ship of *Solomon Queen*, which was permitted by the NMSA to carry 350 passengers. The two ship’s were not ‘sister ships’ and there was no basis whatsoever to ever carry in excess of 295 passengers on board *Rabaul Queen*.

At the time of the sinking, the exact number of passengers on board the ship could not be determined. This was in no small part due to the fact that there was no manifest prepared by Rabaul Shipping. However, the Commission concludes that there were at least 365 and possibly as many as 384 ticketed passengers over the age of three on board *Rabaul Queen* at the time of the sinking.

The Commission further concludes that there were 16 crew members and about 11 infants under the age of three on board the ship at the time. Therefore, in total, there were at least 392 and possibly as many as 411 persons on board *Rabaul Queen* when the ship sank on the morning of 2 February 2012.

With respect to the search and rescue operations, the Commission concludes that 246 persons were rescued from the sea and the bodies of four (4) deceased persons were recovered. Therefore, the Commission has determined that at least 142 and possibly as many as 161 persons are considered to be missing and presumed dead as a result of the disaster.
Weather forecasts and conditions

The weather and sea condition forecasts issued by the Papua New Guinea National Weather Service (the Service) show that on 1 February 2012, the following gale wind warning was issued ‘northwest winds of 34/48 knots are expected to persist for the next 24 hours causing very rough and high seas’ for the waters of Finchaffen and the Vitiaz Strait.

During his evidence to the Commission, Captain Sharp presented an ‘in house’ document that he himself prepared on 31 January 2012 regarding the weather. This ‘weather report’, which was transmitted to his ships on 31 January 2012, forecast north-westerly winds of 15 – 20 knots between West New Britain and the Vitiaz Strait from 31 January 2012 to 2 February 2012. From Lae to the Vitiaz Strait, northwest winds of 20 – 30 knots were forecasted.

*Rabaul Queen’s* Master stated that he relied solely on the ‘weather report’ given to him by Captain Sharp and did not obtain weather forecasts from any other sources including the Service. It is important to note that the Master had ample opportunity to contact Coastal Radio on 31 January 2012 and 1 February 2012 and obtain independent weather and sea forecasts for the voyage but failed to do so.

The Master also stated that the weather conditions were winds greater than 20 knots from the northwest and seas of 1.5 m, on the ship’s starboard quarter, when *Rabaul Queen* capsized. This evidence was supported, in part, by the Chief Mate who stated that the winds were 20 to 25 knots at the time. However, the Chief Mate goes on to say that the winds were 20 knots and the seas were 2 to 3 m while the ship was entering Vitiaz Strait, but still in the shelter of Umboi Island. He also states that at 0530, strong winds and waves of 5 to 6 m were pounding on the starboard side of the ship.

In a statement of facts provided to the Commission by the Master of *Cap Scott*, the Master notes that his ship arrived on the scene of *Rabaul Queen’s* sinking at about 1140 on 2 February. He goes on to state that the weather conditions at that time were north-westerly, force 7 to 8 winds with gusts to force 9; sea state of 4 to 5 m.

The Operations Manager of RD Tuna Fishing gave evidence to the Commission that one of his ships, a 600 GT fishing ship operating in the Bismark Sea to the north of Kimbe, ceased fishing and took shelter behind Garove Island on 1 to 2 February 2012 due to strong winds.

According to *Cap Scott’s* Master, the weather conditions continued to deteriorate and, at 1520 on 2 February, he noted them as force 9, 5 to 6 m seas. At about 1600, the Master of *MOL Summer* reported to the Rescue Coordination Centre (RCC) in Australia that there were strong north-westerly winds in the area. On the afternoon of 3 February, the Master of *MSC Carole* reported to RCC Australia that the weather in the search area was north-westerly winds at 30 to 45 knots with seas of 3 to 4 m. The weather in the search area on 4 February was reported by the search and rescue assets as being north-westerly winds of up to 40 knots and seas of approximately 5 to 6 m.

These observations show that the weather and sea conditions in the area where *Rabaul Queen* sank were consistent with the forecasts and warnings issued by the Papua New Guinea National Weather Service on 1 February and the days following.
In the opinion of the Commission, at the time of *Rabaul Queen’s* capsize, the wind speed was in excess of 34 knots and the seas had become very rough with a probable wave height of about 4 m. However, these conditions were within the range that had been forecast by the Papua New Guinea National Weather Service.

**Stability**

The Commission engaged the services of Mr Rob Gehling of Rob Gehling and Associates Naval Architects to produce an expert Report and provide evidence to the Inquiry on matters relating to stability, load line, maritime safety and the cause of the disaster.

The Commission considered Mr Gehling’s evidence, and all of the other available evidence, and determined that although *Rabaul Queen’s* loading condition did not meet all of the specified stability criteria, a lack of reserves of stability was not the primary cause of the sudden and large angle of heeling resulting from the first wave that hit the ship at about 01615 on 2 February 2012.

However, the Commission is of the opinion that *Rabaul Queen* was unsafe for the voyage from Kimbe to Lae and accordingly should not have sailed from Kimbe because, among other things:

- the ship did not meet appropriate standards of weathertight integrity for operations in wind and sea conditions beyond force 6 (see Appendix 3);
- the ship was carrying passengers far in excess of the number permitted by its Survey Certificate and the number of passengers on the Promenade Deck exceeded the maximum specified in the ship’s Trim and Stability Book;
- no stability calculations were undertaken for the number and distribution of passengers on board for the voyage;
- a copy of the Trim and Stability Book was not provided on board the ship, nor was it based on lightship particulars that reflected modifications and other changes to the ship that had occurred since it was built in Japan in 1982, nor did it demonstrate how the ship could be safely loaded at its assigned minimum freeboard;
- Rabaul Shipping did not provide a conditions of assignment document relating to loadline, nor did the actions of the Master and crew indicate that Rabaul Shipping had provided instructions to them in relation to securing the ship’s weathertight integrity in heavy weather.

**The Capsize**

The Commission concludes that *Rabaul Queen* capsized after being ‘broached-to’ when it was hit by a large wave on its starboard quarter. This caused the ship’s bow to sheer to starboard, the ship to heel over to port by a large degree; and for the Master to lose steerage. Following the first wave, the ship began to right itself, but before it could, a second wave, this time beam onto the ship’s starboard side, caused the ship to again heel.

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1 The area of the ship between its stern and the middle of the right hand side.
over to port. This time, the ship heeled to an angle where the port deck and openings on the port side started to become submerged. The ship could no longer right itself and it started to take water into the accommodation. When a third wave hit the ship shortly afterwards, Rabaul Queen rolled over completely. The upturned ship remained afloat for about 10 minutes, before sinking bow first.

At the time of the capsize, the weather and sea conditions in the Vitiaz Strait were gale force, with north-westerly winds of in excess of 34 knots and seas of about 4 m. These conditions had been forecast by the Papua New Guinea National Weather Service and gale warnings for Vitiaz Strait had been issued several times on 1 February 2012.

However, the ship’s Master was not aware of the warnings and, despite the increase in wind speed and wave height when the ship entered Vitiaz Strait, maintained the ship’s course towards Lae. He did not, at any time, consider remaining in the relatively sheltered Dampier Strait region, between Umboi Island and West New Britain.

Neither the ship’s operator nor the Master was aware of the international guidance which clearly described the situation the ship had entered – high seas on its starboard quarter which could result in the ship ‘surf-riding and then broaching-to’. Consequently, the Master and crew of the ship were not aware that they were operating the ship in circumstances which exposed it to the risk of surf-riding and broaching-to.

Given the spectrum of wave heights corresponding to a particular sea state, the group of waves that capsized the ship do not appear to be rogue waves, as suggested by some witnesses and Rabaul Shipping’s Managing Director, but simply larger waves that were within the expected variation.

Simply put, the ship should not have been where it was in the conditions that were present on the morning of 2 February 2012.

An unseaworthy or unsafe ship

Neither the Papua New Guinea Merchant Shipping Act 1975 (the MS Act) nor the Merchant Shipping (Safety) Regulation 2006 (the Regulation) define seaworthiness. However, according to the Dictionary of Nautical Words and Terms\(^2\), seaworthiness is defined as:

‘In a limited sense, is a ship’s fitness to withstand the action of the sea, wind, and weather. In a broader, and legal, sense, it requires that a ship must be handled and navigated competently, fully manned, adequately stored, and in all respects fit to carry the cargo loaded.’

While the MS Act does not define seaworthy or unseaworthy, it does define an unsafe ship as ‘a ship that is deemed to be an unsafe ship under Section 94’ of the MS Act. Section 94 of the MS Act goes on to state:

’94. SHIPS DEEMED TO BE UNSAFE.

\(^2\) 4\(^{th}\) edition, revised by Captain A.G.W. Miller, Glasgow, 1994.
A ship shall be deemed to be unsafe where the Authority is of the opinion that, by reason of—

(a) the defective condition of the hull, machinery or equipment; or
(b) undermanning; or
(c) improper loading; or
(d) any other matter,

the ship is unfit to go to sea without danger to life having regard to the voyage which is proposed.’

*Rabaul Queen* had been issued with a Papua New Guinea Survey Certificate on 21 May 2008 and this certificate was valid until 23 March 2012. During the validity of the certificate, apart from the initial inspection of the ship for the issuance of the certificate, the ship had been inspected, and the certificate subsequently endorsed, on three other occasions: 27 August 2009, 30 June 2010 and 18 April 2011. This indicates that the ship was, in a limited sense, seaworthy.

However, when considering the operation of the ship and the broader meanings of ‘unseaworthiness’ and ‘unsafe ship’ the Commission considers that *Rabaul Queen* was both unseaworthy and unsafe; and, hence, should never have departed Kimbe because, among other things:

- the ship was not suitable to operate in force 7 or above weather conditions;
- the ship was not manned and operated by a competent and appropriately qualified crew;
- the ship was not maintained in accordance with a considered and recorded maintenance plan;
- the ship was routinely carrying more passengers than specified by its Survey Certificate;
- the crew did not carry out effective safety training drills;
- the crew was not provided with appropriate procedures and guidelines in the form of a safety management system;
- the passengers were not mustered and provided with information about the ship, its life saving equipment and emergency signals after departure;
- the ship did not carry lifejackets suitable for use by all of its passengers (i.e. children and infant lifejackets were not carried);
- Rабaul Shipping and the Master did not consider the most appropriate weather forecast information either before the ship sailed, or during the voyage;
- the Master did not make regular contact with Coastal Radio as required; and
- the Master did not check the ship’s stability before departing port.

**Captain Peter Sharp and his companies**

At the time of the sinking of *Rabaul Queen*, the owner of the ship was Hamamas Lines Limited and the operator was Rабaul Shipping Limited. Captain Sharp was the Managing Director and a shareholder in both companies.
On 2 February 2012, when *Rabaul Queen* sank, the fleet controlled by Captain Sharp (via his various companies) consisted of over 20 ships, although not all were operational or passenger ferries.

The evidence before the Commission shows that the shipping operation of Captain Sharp has been compromising the safety of crew and passengers for many years.

Captain Sharp demonstrated to the Commission that he had little or no respect for people, including those in authority. This gross disrespect was reflected in the appalling and inhumane conditions he was prepared to allow passengers on *Rabaul Queen* to travel and may explain, in part, why he was prepared to compromise the safety of passengers on board his ships. The safety of passengers was not of paramount concern to Captain Sharp. He made it clear in evidence that he put profit ahead of safety.

Captain Sharp wrote highly offensive, insulting, intimidating and provocative letters to the Regulator, the NMSA. He showed little or no respect for the organisation or maritime laws of Papua New Guinea.

Captain Sharp took the view that the cause of the disaster was an Act of God. However the Commission does not accept this to be the cause.

The ships maintained by Captain Sharp were generally poorly maintained. He said that the actual maintenance undertaken on ships was not written down and, contrary to the evidence of Captain Sharp, *Rabaul Queen* in recent years had not undertaken intense maintenance suggested by him. Having said that, *Rabaul Queen* was dry-docked in October 2011.

Captain Sharp demonstrated that he had little or no regard for the safety of passengers. One of his companies had owned a ship, *Kris*, which was a passenger ferry that sank in August 1993 resulting in the tragic death of five (5) people. Even though Captain Sharp was of the view that the ship was ‘obviously unsafe’ to operate and that he knew it was ‘totally wrong’ to have extra freeing ports placed on the ship, he nevertheless sailed the ship because it suited him.

Captain Sharp authorised *Rabaul Queen* and other ships operated by his companies to regularly carry in excess of the number of passengers prescribed on Survey Certificates. He also allowed *Rabaul Queen* to sail when the crew on board the ship did not meet the minimum safe manning requirements prescribed by the National Maritime Safety Authority in the Safe Manning Certificate. That is, with crew that were not qualified to sail the ship.

In addition, Captain Sharp knew that *Rabaul Queen* was unsafe to sail in conditions of force 8 or above. However, because he considered he knew better, he did not obtain weather forecasts from the Papua New Guinea National Weather Service or Coastal Radio. Rather, he produced his own in-house weather forecast from information which was not the most pertinent to the voyage in question.

Captain Sharp sought to justify the carrying of in excess of 350 passengers on *Rabaul Queen*, when it was only permitted to carry a maximum of 295 as prescribed by the Survey Certificate, on spurious and untenable grounds.
He demonstrated in his evidence that he was prepared to say anything, irrespective of the truth or the absurdity of the answers, to attempt to protect his interests. There can be no doubt that the arrogance of Captain Sharp, together with his flagrant disregard for the safety of his crew and passengers, as well as maritime safety laws of Papua New Guinea, resulted in *Rabaul Queen* sailing when it was unsafe to do so.

The evidence establishes that Captain Sharp:

- refused to allow NMSA officials or their relatives to travel on board his ships;
- was, via his companies, engaged in clear conflicts of interest;
- considered that he learnt from the tragedy that ‘people tell lies’;
- considered that the loss of lives on board *Rabaul Queen* was not ‘a large loss of life’;
- considered that the cause of the disaster was an Act of God;
- had no useful suggestion as to how to prevent the future occurrence of a similar disaster;
- had been allowed to operate with little or no effective competition in the passenger ferry sector for years, which he took advantage of to subject his passengers to gross overcrowding and unacceptably dangerous weather conditions on a regular basis;
- made deliberate misrepresentations to QBE Insurance and Pacific Assurance Group as to the number of passengers licensed to be carried many of his ships, including *Rabaul Queen*;
- poorly maintained his ships;
- allowed *Rabaul Queen* and other ships to travel in unsafe conditions on a regular basis;
- misrepresented to the Commission the number of passengers on board the ship when it sank; and
- had a long history of carrying excess passengers on ships in flagrant disregard of Survey Certificates issued by the National Maritime Safety Authority.

**National Maritime Safety Authority (NMSA)**

The Papua New Guinea National Maritime Safety Authority (NMSA) was established by the *National Maritime Safety Authority Act 2003* (the NMSA Act) and came into operation on 1 January 2006. At the time of the writing of this Report, the NMSA was under the Ministry of Transport and Works portfolio of the Papua New Guinea Government.

Prior to the establishment of the NMSA, its functions were carried out by the various transport ministry portfolios which existed after Papua New Guinea gained independence in 1975.

There are many instances that have come to light, during the course of the Commission hearings, which demonstrate a high level of incompetence and ineffectiveness of NMSA over many years. That is not to say that all members of the Board or staff, past or present, have lacked competency or effectiveness.
Some examples of the incompetence and ineffectiveness of NMSA relate specifically to *Rabaul Queen*, while others relate more generally to the maritime sector.

The Commission considers that if the NMSA had properly conducted its duties, it is possible that *Rabaul Queen* would not have sunk while carrying in excess of the number of passengers prescribed by the Survey Certificate and the tragedy would either have been averted or the number of deaths would have been reduced. That is an indication of what can happen when Government Authorities do not carry out their duties diligently.

The Commission, whilst critical of the NMSA, does not suggest that the Authority should be disbanded. The concept of an independent autonomous body funded as a not-for-profit organisation from a levy on all ships operating in Papua New Guinea is in line with best international practice for maritime administration. It is a fair way in which the cost of maritime safety is spread as a general taxation on all the users of maritime transport collected at the port of entry.

The Commission considers that NMSA has:

- failed to hold regular Board meetings demonstrating very poor corporate governance and a sense of disinterestedness;
- held Board meetings where there have been clear conflicts of interests, including those in relation to its former Chairman, Mr Hamish Sharp;
- failed to ensure that periodical inspections of ships, such as *Rabaul Queen*, are conducted within the time required by law resulting in ships being allowed to sail while ‘out of survey’;
- failed to ensure that ships, including *Rabaul Queen* are manned by crew that have the appropriate qualifications, as stipulated in the Safe Manning Certificates issued by NMSA itself;
- failed to carry out flag State inspections of ‘high risk’ ships such as *Rabaul Queen*, (i.e. random inspections of ships) with the regularity required to ensure the safety of passengers and crew travelling on such ships is not compromised;
- failed to engage a sufficient number of appropriately qualified staff such as surveyors/inspectors;
- failed to raise sufficient funds to properly and effectively operate; and
- allowed itself to be intimidated and bullied by Captain Sharp, with the result that it has not properly discharged its duties and functions, with the consequence that *Rabaul Queen* and other ships have sailed in Papua New Guinea when it was unsafe for them to do so.

**The law**

It is not for the Commission to ultimately determine, pursuant to Term of Reference 3, any criminal liability contributing to the disaster. That is a matter for the courts invested with criminal jurisdiction.

The Commission is, however, required to inquire into and report upon evidence leading to any criminal act contributing to the disaster. This requires a consideration of the
relevant criminal law. The facts in relation to this issue have been set out in detail in other parts of this Report.

Having said that, unless laws are enforced, for example, in relation to contravention of maritime safety legislation or which result in the loss of life by reason of gross negligence, laws will be likely to be ignored in the future. Appropriate law enforcement authorities need to look very carefully at the facts and circumstance relating to this tragedy.

The Commission has dealt with the law in relation to criminal acts that may be relevant on all of the evidence, including manslaughter by negligence.

Section 287 of the **Criminal Code** states:

1. It is the duty of every person who has in his charge or under his control anything whether living or inanimate and whether moving or stationary, of such a nature that in the absence of care or precaution in its use or management, the life, safety or health of any person may be endangered, to use reasonable care and take reasonable precaution to avoid that danger.

2. A person in whom a duty is imposed by subsection (1) shall be deemed to have caused any consequences that result to the life or health of any person by reason of any omission to perform that duty.’

In the case of the *State v. Vincent Waluka* unreported judgment of 30 September, 2011 (CR 109 of 1999) the State invoked Section 287 to have the accused indicted with one count of manslaughter arising from criminal negligence. That case is particularly apposite as the charge arose out of the alleged failure of the accused to take reasonable precautions as skipper of a dingly carrying building materials and people which capsized and sank in rough seas, resulting in the death of a passenger. The skipper was convicted.

In 2009, *Princess Ashika* sank in the waters of the Kingdom of Tonga with some 74 people losing their lives. The ship’s Master and the Managing Director of the operating shipping company were charged and convicted of manslaughter by negligence and sending a ship to sea that was unseaworthy.

These are recent precedents holding individuals accountable as the result of their acts or omissions associated with maritime disasters.

It is not necessary for the Commission to ultimately determine, pursuant to Term of Reference 4, any civil liability or responsibility for the disaster. It is only required to consider the evidence leading to any civil responsibility for the disaster. The courts, in the exercise of civil jurisdiction will ultimately determine civil liability if proceedings are commenced. However, given the terms of reference, it is appropriate for the Commission to consider briefly the law that may be relevant to the issue of possible civil responsibility for the disaster. The Commission has set out elsewhere the relevant evidence.

The Commission has set out the law in relation to breach of contract and negligence which pertains to the passengers on board *Rabaul Queen* in Chapter 11.

**Search and rescue**

The search and rescue operation for the survivors of the disaster was competently undertaken by the Maritime Rescue Coordination Centre in Port Moresby (MRCC POM).
and the Australian Maritime Safety Authority’s (AMSA) Rescue Coordination Centre in Canberra, Australia (RCC Australia).

*Rabaul Queen* sank at about 0615 on 2 February 2012. The ship’s 406 MHz Emergency Position Indicating Radio Beacon (EPIRB) was activated a short time after the ship sank. Its signal was picked up by orbiting satellites and, by 0706, the emergency distress satellite system had derived a position of the activated beacon and this was emailed by RCC Australia staff to MRCC POM’s senior search and rescue coordinator. At 0814, following a telephone call from the Managing Director of the ship’s owner, Hamamas Lines, RCC Australia issued a broadcast to shipping via satellite and high frequency radio, advising that the ship’s EPIRB had been activated.

By 0950, the first survivors had been located and by the early hours of 3 February, all 246 survivors had been transferred ashore in Lae for medical attention.

The search operations continued until 6 February. In total, 15 ships and 13 aircraft had taken part in the search and rescue operation. The aircraft included two of AMSA’s dedicated search and rescue aircraft, which were flown from Queensland to Lae, and two Royal Australian Air force aircraft, also purposely flown to Lae to take part in the operation.

Although MRCC POM retained overall coordination of the search, because the sinking took place within Papua New Guinea’s search and rescue region, its resources and asset tasking ability was severely limited. Without the assistance of RCC Australia in broadcasting messages to ships in the area of the sinking; identifying and tasking suitable aerial and surface search and rescue assets during the 4 days of extensive search and rescue operations, planning search areas based on drift modelling and assistance of RCC Australia personnel on the ground in Lae and Port Moresby, the search for, and rescue of, the 246 survivors of *Rabaul Queen* sinking would not have been possible and many more lives would have inevitably been lost.

**Reason why the loss of lives attained such magnitude**

Any accident involving a transport vehicle carrying a large number of people is likely to result in many fatalities. However, the Commission considers that the magnitude of the loss of life as a result of the capsize of *Rabaul Queen* attained the magnitude that it did because of a number of factors.

Firstly, the ship was significantly overcrowded and carrying far in excess of not only the maximum number of passengers permitted by the Survey Certificate, but also what could be safely carried on the overnight voyage from Kimbe.

Secondly, the design of the ship did not allow for easy escape of a large numbers of passengers in a short period of time, particularly from the ship’s Cabin Deck. As a result, many passengers were trapped inside the accommodation when the ship capsized.

Thirdly, the speed of the capsize was such that no warning was given to the passengers, many of whom weak from a long and tiring voyage, to don lifejackets or escape from the sinking ship.
Proposals to promote maritime safety in Papua New Guinea

1. The *Merchant Shipping Act 1975* and its subordinate regulations are deficient and are in need of radical amendment to ensure that they are consistent with, or exceed, the current international merchant shipping standards. There are many provisions which are unclear and ambiguous and the legislation should be amended in consultation with appropriate stakeholders.

2. The amendment to the *Merchant Shipping Act 1975* should include a new category for coastal passenger ships and that category should ensure that the best international standards for passenger ship design, safety, stability and safety management are contained within it.

3. The requirements for the carriage of liferafts on board ships should be amended with a view to increasing the total capacity to 125 per cent of the maximum number of persons carried on board a ship (so as to take account of, for example, liferafts not inflating, hydrostatic releases not operating and liferafts being trapped or damaged by the sinking ship).

4. The requirements for the carriage of lifejackets on board ships should be amended with a view to increasing the total capacity to 125 per cent of the maximum number of person carried on board a ship. A proportion of lifejackets should be required to be stowed in float free lockers on deck so that, if not accessed prior to a ship sinking, they will be available in the water for anyone who was unable to obtain a lifejacket before entering the water.

5. There should be a requirement for the carriage of lifejackets, on board all ships capable of carrying passengers, that are suitable for the use of all those who are on board the ship. This requirement should include the need to carry lifejackets suitable for use by children and infants.

6. There should be a requirement for the holders of all levels of Papua New Guinea maritime certificates of competency to revalidate their certificates at regular intervals.

7. There should be a requirement for all ships capable of carrying passengers to have their Emergency Position Indicating Radio Beacons (EPIRBs) fitted with Global Positioning System (GPS) capability.

8. The Government of Papua New Guinea needs to commission an independent and thorough review of NMSA. The review needs to consider the composition of the Board, the qualification of the Board members, the qualification and competency of senior officers of the organisation and also in terms of appropriate qualifications and competency of inspectors/surveyors.
9. The Government of Papua New Guinea needs to provide additional funds to NMSA to ensure its continuing development and so that the Authority has sufficient funding to meet the country’s domestic and international legal obligations with regard to enhancing maritime safety. The Commission considers that critical functions of NMSA, like search and rescue, could be largely funded by Government.

10. NMSA must ensure that it meets its statutory obligations under the *National Maritime Safety Authority Act 2003*, including carrying out its functions as required by Section 4, holding Board meetings as required by Section 12, preparing a Corporate Plan as required by Section 16 and furnishing a report to the Minister as required by Section 18.

11. NMSA must ensure that all Papua New Guinea registered ships have valid Survey and Safe Manning Certificates and are being operated in accordance with such certificates and the conditions specified therein.

12. NMSA must immediately carry out a thorough flag State inspection of all Papua New Guinea registered ships that are capable of carrying passengers.

13. NMSA must ensure that all ships registered in Papua New Guinea undergo a flag State inspection at intervals not exceeding 6 months.

14. NMSA must ensure that all records pertaining to ships and their survey are appropriately maintained, accessible to all surveyors/inspectors and properly reflect the ships under survey in Papua New Guinea.

15. NMSA must ensure that it employs a sufficient number of appropriately qualified and experienced surveyors/inspectors to meet all of its legislative responsibilities and functions.

16. NMSA must reassess the minimum manning requirements for ships that carry passengers with a view to ensuring that the Master and the ship’s officers have the requisite knowledge to comprehend and carry out their responsibilities.

17. NMSA must take immediate steps to revoke the appointment of Peter Robert Sharp as a recognised surveyor of ships under Section 57 of the *Merchant Shipping Act 1975*.

18. NMSA must stringently enforce all aspects of the *Merchant Shipping Act 1975* and its subordinate regulations. In particular, the requirements contained in Sections 141 and 143 of the *Merchant Shipping (Safety) Regulation 2006* that all ships carrying passengers conduct a safety demonstration for passengers when leaving port. This demonstration should be delivered in both English and Tok Pisin.
19. NMSA must take immediate steps to ensure that its website contains the most up to date information, including legislation and advice from the International Maritime Organization (IMO), and that it continues to do so.

20. The Government of Papua New Guinea should immediately allocate sufficient funds to the NMSA to enable the Maritime Rescue Coordination Centre in Port Moresby to be properly manned, equipped and resourced so that it can operate on a 24/7 basis. (This is important given the number of ships which transit the Papua New Guinea Search and Rescue Region each year and to whom the Government of Papua New Guinea have an international obligation to provide search and rescue services in the case of an emergency. It is also important because of the number of domestic ships operating in Papua New Guinea waters at any given time).

21. The Government of Papua New Guinea should invest in the necessary country wide communications infrastructure to ensure that the Maritime Rescue Coordination Centre and Coastal Radio have the ability to communicate with all ships operating within the Papua New Guinea search and rescue region on a 24/7 basis.

22. The Government of Papua New Guinea should undertake an assessment to determine whether the country is able to fulfil the international maritime search and rescue obligations, responsibilities and expectations that are associated with it having a dedicated maritime search and rescue region.

23. NMSA should ensure that its database of EPIRB (Emergency Position Indicating Radio Beacon) registrations is kept up to date and properly reflects the ship that specific beacons are carried on.

24. The National Weather Service should take steps to improve the reliability of its weather facsimile service. The Service should also ensure that appropriate and up to date weather information is available on a publicly accessible website and investigate the feasibility of the dissemination of weather information through social media like Facebook and Twitter.

25. The National Weather Service should consider providing warnings on its weather forecasts similar to those issued by the Australian Bureau of Meteorology that warn ‘Wind gusts can be 40 per cent stronger than the averages given here, and maximum waves may be up to twice the height.’
26. The Government of Papua New Guinea should provide funding and the necessary legislative amendments to provide a capacity to investigate maritime casualties in keeping with the International Maritime Organisation (IMO) casualty investigation code standards and practices as contained in IMO Resolution MSC.255(84). The Commission considers that this could be best achieved by expanding the current independent ‘no-blame’ safety investigation functions of the Papua New Guinea Accident Investigation Commission (AIC) to incorporate the maritime transport sector.

27. Captain Peter Sharp must take immediate action to ensure that his companies, and the ships they operate, comply with all of the requirements of the Merchant Shipping Act 1975 and its subordinate regulations.

28. The ‘within 60 minutes of dispatch’ requirement contained in Rescue Coordination Centre Australia’s procedure under its function as AUMCC, is not in keeping with best SAR practices and should be amended to read:

‘Whenever a resolved or encoded position 406 MHz beacon distress alert is sent to a MRCC, RCC or SPOC [SAR Point of Contact] in the AUMCC Service Area, RCC Australia, will as soon as possible after dispatch and in any event not more that 60 minutes after dispatch, confirm receipt of the alert by telephone and ascertain that they have coordination of the response. If the MRCC, RCC or SPOC requires further assistance, RCC Australia is to assist when it can.’ [Proposed amendments underlined by the Commission]

29. While the legislation does not currently require it, the Commission considers that every ship operator in Papua New Guinea should ensure that all of its ships capable of carrying passengers are fitted with Emergency Position Indicating Radio Beacon (EPIRB) which have Global Positioning System (GPS) capability.

30. While the legislation does not currently require it for all ships, the Commission considers that every ship operator in Papua New Guinea, particularly those operating ships capable of carrying passengers, should introduce and implement a safety management system for any ships operated by it, in line with the requirements of the International Safety Management (ISM) Code.

31. There needs to be proper and effective enforcement of the merchant shipping laws and these laws need to be respected and complied with by all shipowners and operators within the Papua New Guinea maritime industry. There has been a practice of ignoring the laws, including the Merchant Shipping Act 1975 and its subordinate regulations, which the Commission considers will only change if the law is taken seriously by shipping companies and rigorously enforced by the regulator and other relevant authorities.
32. Ship owners and operators in Papua New Guinea must ensure that they are familiar with the International Maritime Organization (IMO) document ‘Revised guidance to the Master for avoiding dangerous situations in adverse weather and sea condition’ (MSC.1/Circ.1228), and other relevant IMO advice, and develop simple instructions for the Masters of their ships to assist them in reducing risk.

33. Owners and operators of ships operating in Papua New Guinea should ensure that lifejacket storage is clearly signposted, in English and Tok Pisin, and strategically located to facilitate easy access by passengers. The location should be close to exits on the route to muster stations, but clear of doorways. A proportion of lifejackets should be stowed in float free lockers on deck so that, if not accessed prior to a ship sinking, they will be available in the water for anyone who was unable to obtain a lifejacket before entering the water.

34. All Masters and crews of passenger ships should wear a form of distinctive uniform to distinguish themselves from passengers. (Thus, should an emergency arise, passengers will know who to turn to for advice).
CHAPTER 1 - INTRODUCTION

At about 0615 on 2 February 2012, the Papua New Guinea registered passenger ferry *Rabaul Queen* capsized and sank in position 06° 30.1’ South 147° 56.1’ East, while on a voyage from Kimbe, West New Britain Province, to Lae, Morobe Province. This position was approximately 9 nautical miles northeast of the township of Finschhafen.

The owner of the ship, Hamamas Lines, and its Managing Director, Captain Peter Sharp maintained that there were 376 passengers and crew as well as infants under the age of three (3) on board when the ship left Kimbe on Wednesday 1 February 2012. However, this number was inaccurate, understating the number, for reasons which will be discussed in detail in this Report. The ship was operated by Rabaul Shipping whose Managing Director was also Captain Sharp.

Two hundred and forty six persons were rescued, four bodies were recovered from the sea (3 female and 1 child) and at least 142 persons remain unaccounted for and are presumed drowned. Chapter 6 of this Report looks in detail at the numbers of people on board the ship.

Because of the depth of water in which *Rabaul Queen* sank (between 1,300 m and 3,000 m), it was not possible to locate the wreck of the ship due to the deep sea location and extremely high recovery costs (*Exhibits 4 and 5*).

Pursuant to Section 165 and 166 of the Papua New Guinea *Merchant Shipping Act 1975*, Ch. 242, Part VI, a preliminary investigation was ordered by the National Maritime Safety Authority (NMSA) and conducted from Tuesday 7 February 2012 to Tuesday 14th February 2012.

The investigation team was headed by Captain Richard Teo, Principal of the Papua New Guinea Maritime College, Madang. The preliminary report, dated 15 February 2012, was tendered as part of Exhibit 54.

**The Commission of Inquiry**

On 10 February 2012, by virtue of the powers conferred by Section 2 of the *Commissions of Inquiry Act* (the COI Act) (Chapter 31) and other powers, the Prime Minister, the Honourable Peter O’Neill, ordered an inquiry into the sinking of *Rabaul Queen*.

Commissions of Inquiry are often established in circumstances where a major tragedy has occurred in Papua New Guinea. This is because Commissions of Inquiry usually have broad powers to investigate matters and report.

**Terms of Reference**

The matters to be inquired into and reported upon by the Commission pursuant to the terms of reference were:

1. The facts about the disaster which occurred at about 5 am on 2 February 2012 in relation to the capsizing and the sinking of *Rabaul Queen* nine (9) nautical miles off Finschhafen in the Morobe Province and the accompanying search, rescue and recovery of the disaster victims;

2. the cause of the disaster;
3. evidence leading to any criminal act contributing to the disaster;
4. evidence leading to any civil responsibility for the disaster;
5. the reason why the loss of lives attained such magnitude;
6. present proposals for any measure that would help to prevent the future occurrence of a similar disaster, or may assist in future search, rescue and recovery of disaster victims; and
7. make any further recommendation arising from the inquiry.

Commissioner and commission staff

Judge Warwick Andrew C.B.E., C.R.H. was appointed Commissioner

Pursuant to Section 15 of the Act, the Commission shall make a report of its proceedings and the results of its inquiry to the Prime Minister and shall record the reasons for its conclusions.

The Secretary to the Commission was Mr Mathew Yuangu.

Mr Manuel M. Varitimos and Mr Emmanuel Asigau were appointed as Counsel Assisting the Commission. Counsel Assisting have been instrumental in the assembly and presentation of evidence to assist the Commission so that it could properly inquire into and report upon the matters subject of the Terms of Reference. The efficient running of the Commission’s hearings, to a large part, was attributable to the hard work, diligence and commitment of Counsel Assisting.

The Commission wishes to acknowledge the invaluable and outstanding assistance it has received from the Australian Transport Safety Bureau (ATSB). Shortly after the accident, the Australian Government, through its Prime Minister, offered to provide any assistance to Papua New Guinea that it could give. Thereafter, the Papua New Guinea Government requested assistance in the gathering of evidence and the provision of technical assistance to the Inquiry. Within days, the ATSB established a technical investigation team and they conducted inquiries in Papua New Guinea, Japan and Australia.

Special thanks are due to Mr Stephen Curry and Captain Greg Chaffey, both Senior Transport Safety Investigators with the ATSB. These officers have worked tirelessly on behalf of the Commission of Inquiry and their professionalism and expertise have been invaluable. The Commission acknowledges their outstanding contribution.

Public hearings

On Wednesday 11 April 2012, a preliminary public hearing was held at Level 1, Muruk House, Waigani, National Capital District. Prior notice of the public hearing was provided by way of public notices in newspapers and on the radio. These public notices gave notice of the Terms of Reference, proposed hearing dates and locations and other relevant information.
Parties represented by Counsel

Section 8 of the Act relates to the appearance of Counsel before the Commission. It provides that:

‘8 Appearance of Counsel

Subject to Section 2(5), a person who satisfies the Commission that he has a bona fide interest in the subject matter of an Inquiry under this Act and any other person by leave of the Commission, may attend the Inquiry in person or may be represented by Counsel.’

On the 11 April 2012, at the preliminary hearing, submissions were heard as to whether leave should be granted for persons to be represented by Counsel at the Inquiry. The following were granted leave to be represented by Counsel.

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Lawyers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Captain Peter Sharp</td>
<td>Managing Director of Hamamas Lines &amp; Rabaul Shipping</td>
<td>Gadens Lawyers</td>
</tr>
<tr>
<td>Hamamas Lines Limited</td>
<td>Owner of Rabaul Queen</td>
<td>Gadens Lawyers</td>
</tr>
<tr>
<td>Rabaul Shipping</td>
<td>Operator of Rabaul Queen</td>
<td>Gadens Lawyers</td>
</tr>
<tr>
<td>Pacific Assurance Group Limited</td>
<td>Insurer of Rabaul Queen</td>
<td>Young &amp; Williams Lawyers</td>
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Commission website

Shortly before hearings commenced, the Commission established a website, the address of which is:

www.mvrabaulqueen.com

The website contains useful information such as the final report, contact details for the Commission, practice notes, public hearing details and the transcripts of the public hearings. The daily transcripts of the hearings conducted by the Commission were posted on the website generally by 11:00 pm on the day of the hearings. The website was widely accessed within Papua New Guinea and overseas which helped facilitate the openness of the public hearings.

Conduct of proceedings

Section 5 of the COI Act is titled ‘Rules of Procedure’ and provides that:

‘The Commission may make such rules, not inconsistent with the terms of the Instrument of its appointment, for the conduct of proceedings before it, for the times and places of its meetings and for adjournment, as it thinks proper.’

On the 29 March 2012, pursuant to Section 5 of the Act, the Commission issued Practice Note No. 1 (Appendix 1) which dealt with the conduct and management of the proceedings.
On Thursday the 12 April 2012, extensive public hearings commenced at Level 1, Muruk House, Waigani, National Capital District. Public hearings were held during April, May and June at the following centres.

<table>
<thead>
<tr>
<th>No.</th>
<th>Location</th>
<th>Hearing dates</th>
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<tbody>
<tr>
<td>1</td>
<td>Port Moresby</td>
<td>11, 12, and 13 April 2012</td>
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<td>2</td>
<td>Lae</td>
<td>17, 18, 19, 20 and 21 April 2012</td>
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<td>3</td>
<td>Kokopo</td>
<td>24, 25, 26, 27 and 28 April 2012</td>
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<td>4</td>
<td>Buka</td>
<td>1, 2 and 3 May 2012</td>
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<td>5</td>
<td>Kimbe</td>
<td>15, 16, 17 and 18 May 2012</td>
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<tr>
<td>6</td>
<td>Port Moresby</td>
<td>21, 22, 23, 24, 25, 29, 30 and 31 May 2012</td>
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<tr>
<td>7</td>
<td>Port Moresby</td>
<td>1, 5 and 6 June 2012</td>
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Notice was given of the hearing dates and locations, including to Gadens Lawyers and Young & Williams Lawyers, well in advance of the hearings commencing on 11 April 2012.

**Powers of the Commissioner**

Section 6(1) of the COI Act gives the Commissioner power to summon any person. The section is in the following terms:

‘6(1) A Commissioner may, by writing under his hand, summon any person to attend the Commission at a time and place named in the summons, and then and there to give evidence and to produce any books, documents, or writings in his custody or control which he is required by the summons to produce.’

Section 7 of the COI Act gives the Commissioner power to examine a witness on oath.

Section 9 of the COI Act creates an offence and prescribes the penalty for failing to attend or produce documents.

Section 10 of the COI Act creates an offence and prescribes the penalty for refusing to be sworn or to give evidence.

Section 10A of the COI Act creates an offence and prescribes the penalty for giving false evidence.

Section 11 of the COI Act creates an offence and prescribes the penalty for contempt of the Commission.

**Evidence before the Commission**

In accordance with the power given to the Commission pursuant to Section 6 of the COI Act, the Commissioner issued over 130 summons to witnesses to produce documents and be examined on oath or affirmation.

Counsel for Captain Sharp requested that certain witnesses be recalled. This request was accommodated by Counsel Assisting and the Commission. In some cases, Counsel requested that certain witnesses called produce additional documents. Again, Counsel Assisting ensured that these documents were produced, even if meant recalling the witnesses. It should also be noted that Counsel Assisting did not object to questions
asked of witnesses by Counsel for Captain Sharp. Furthermore, no application or request for the Commission to call any additional witnesses was made on behalf of Captain Sharp.

This Report has been prepared based on the evidence before the Commission as presented at the public hearings. That is, the oral evidence as recorded in the transcript and the evidence contained in the documents tendered as Exhibits before the Commission.

The names of the persons who have appeared in the public hearings are set out in the schedule below (in alphabetical order). For ease of reference, the schedule also lists the transcript page numbers at which the person gave evidence against the name of the witness.

Any person interested in the evidence that has been put before the Commission by the various witnesses is encouraged to read the transcript which is available at:

www.mvrabaulqueen.com/transcripts.asp

A copy of the entire transcript of the evidence before the Commission, consisting of over 3000 pages, is also contained in the Compact Disk (CD) that is attached at the back of the hard copy of this Report.

**Witness schedule**

<table>
<thead>
<tr>
<th>No.</th>
<th>Name and position</th>
<th>Pages</th>
<th>Day</th>
<th>Date</th>
</tr>
</thead>
</table>
| AFFLECK, PAUL  
(Chief Executive Officer, Pacific Assurance Group Limited) | 114 – 117  
291 – 298 | 2 | 12 April 2012  
13 April 2012 |
| AILA, SILAS  
(Second Mate, Rabaul Queen) | 1297 – 1315 | 11 | 26 April 2012 |
| AMEN, GRACE  
(Kimbe Branch Manager, Rabaul Shipping) | 1084 – 1138 | 10 | 25 April 2012 |
| APAITA, ROBERT  
(Survivor) | 2056 – 2075 | 18 | 16 May 2012 |
| AUGUST, DAVID  
(Police Officer, Morobe Disaster Centre Data Team Leader) | 798 – 819 | 7 | 20 April 2012 |
| AVERNELL, BRUCE ARTHUR  
(Operations Manager, QBE Insurance (PNG) Limited) | 271 – 284 | 3 | 13 April 2012 |
| BALOILOI, WESLEY EWEN  
(Kimbe Operations Supervisor, PNG Ports) | 2116 – 2129  
2204 – 2217  
2224 - 2232 | 19 | 17 May 2012  
18 May 2012  
18 May 2012 |
| BARITO, KAREN  
(Mother of passenger) | 1828 – 1831 | 16 | 3 May 2012 |
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<tr>
<td></td>
<td>BARUBIA, VINCENT</td>
<td>1261 – 1279</td>
<td>11</td>
<td>26 April 2012</td>
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<td></td>
<td>(Rabaul Branch Manager, Rabaul Shipping)</td>
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<td>BENNY, CHRISTINE</td>
<td>847 – 860</td>
<td>7</td>
<td>20 April 2012</td>
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<td>(Survivor)</td>
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<td>BUAGO, ALEXANDER</td>
<td>353 – 381</td>
<td>4</td>
<td>17 April 2012</td>
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<td>(Survivor)</td>
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<td>BURUA, JOHN</td>
<td>1530 – 1541</td>
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<td>(Survivor)</td>
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<td>BURUA, LALU</td>
<td>1541 – 1549</td>
<td>13</td>
<td>28 April 2012</td>
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<td>(Survivor)</td>
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<td>DALLY, CATHERINE</td>
<td>819 – 822</td>
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<td>(Senior Data Controller, Division of Policy Planning, Morobe Provincial Administration)</td>
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<td>DANIELS, PAUL</td>
<td>912 – 935</td>
<td>8</td>
<td>21 April 2012</td>
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<td>(Chaplain, Lutheran Shipping)</td>
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<td>DISIN, LAWRENCE</td>
<td>1807 – 1824</td>
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<td>3 May 2012</td>
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<td>ELIAKIM, SERAH</td>
<td>1139 – 1152</td>
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<td>25 April 2012</td>
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<td>(Rabaul Ticketing Clerk, Rabaul Shipping)</td>
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<td>EREMAS, SAMUEL</td>
<td>1197 – 1210</td>
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<td>25 April 2012</td>
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<td>(Seaman, Rabaul Queen)</td>
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<td>FAIPARIK, CLIFFORD</td>
<td>2289 – 2292</td>
<td>21</td>
<td>21 May 2012</td>
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<td>(Public relations Coordinator, Border Development Authority)</td>
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<td>GAMATO, PATILIAS</td>
<td>585 – 601</td>
<td>5</td>
<td>18 April 2012</td>
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<td></td>
<td>(Deputy Provincial Administrator, District Services for Morobe Province)</td>
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<td>GEHLING, ROBIN CHARLES</td>
<td>2608 – 2678</td>
<td>24</td>
<td>24 May 2012</td>
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<tr>
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<td>(Naval Architect, Rob Gehling and Associates)</td>
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Exhibits

There was extensive documentary material tendered before the Commission. The Exhibits tendered were over 400 in number, many containing voluminous material. A list of the Exhibits is attached as Appendix 2.

Counsel for Captain Sharp, during the course of the hearings, sought to tender various documents. Counsel Assisting did not object to the tender of any of these documents and they were accordingly all tendered and accepted into evidence.

Submissions

Advance notice was given to Counsel for Captain Sharp and Pacific Assurance Group that submissions would be made on 6 June 2012. Counsel for Pacific Assurance Group advised that they would not be making submissions.

Counsel Assisting, in submissions, were forthright in their assessment of the evidence, including as it related to Captain Sharp, Rabaul Shipping and the National Maritime Safety Authority (NMSA).

Counsel for Captain Sharp having been given the opportunity to make submissions on 6 June 2012 made oral submissions on that date, in part responding to submissions from Counsel Assisting. The Commission also granted Counsel for Captain Sharp a request to provide written submissions by 0900 Monday 11 June 2012. Written submissions were received on the morning of 12 June 2012. They have been considered for the purposes of this Report.

The Commission does not consider that any extension of time in which to provide its Report was required. The Commission has been able to properly inquire into, and report on, the terms of reference without any procedural unfairness.

Inadmissibility of evidence in judicial proceedings

Pursuant to the Section 13 of the Act a statement or disclosure made by a witness in answer to a question put to him by a Commission or by a Commissioner is not (except in proceedings for an offence against this Act) admissible in evidence against him in any civil or criminal proceedings.

Outline of the Report

The Report commences with an Executive Summary. The main body of the Report starts with an outline of the available facts applicable to Rabaul Queen and its final voyage from Kimbe, it then moves on to consider the evidence and provide a commentary of it.

It is not within the Terms of Reference to ultimately determine any civil liability or civil responsibility for the disaster. The courts, in the exercise of civil jurisdiction, would ultimately need to determine civil liability.

It is not for the Commission to ultimately determine, pursuant to the Terms of Reference, any criminal act contributing to the disaster. It is up to the appropriate authorities to determine if any charges are to be laid.
Having said that, it is appropriate for the Report to briefly consider the law that may be relevant to the issue of any criminal acts and civil responsibility because of Terms of Reference (3) and (4).
CHAPTER 2 – RABAUL QUEEN

The information contained in this chapter is apparent from the evidence put before the Commission of Inquiry. The evidence included documents relating to the ship’s original build; its operations in Japan; the purchasing and initial Papua New Guinea operations and crew details as provided by Captain Peter Sharp, Managing Director of Rabaul Shipping and Hamamas Lines.

Ieshima

In December 1982, the Japanese cargo-passenger ship *Ieshima*, shipyard number 101, which was later to become *Rabaul Queen*, was launched at Kawamoto Shipbuilding’s Higashino-cho shipyard. Owned and managed by Ieshima Kisen, Hyogo, Japan, it was designed for smooth water operations in the northern part of the Inland Sea. Its scheduled voyages were from less than 3 hours to less than 24 hours duration. The ship serviced Japanese ports until 1998, when it was put up for sale.

Figure 1: *Ieshima* publicity photo in Japan

As built, *Ieshima*’s principal details were:

<table>
<thead>
<tr>
<th>Ship use</th>
<th>Cargo-passenger ship</th>
<th>Port of registry</th>
<th>Ieshima-cho, Shikamagun, Hyogo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Official number</td>
<td>121187</td>
<td>Navigational area</td>
<td>Smooth water area</td>
</tr>
<tr>
<td>Gross tonnage</td>
<td>259</td>
<td>Length (overall)</td>
<td>47.34 m</td>
</tr>
<tr>
<td>Deadweight</td>
<td>81</td>
<td>Length (between perpendiculars)</td>
<td>42.7 m</td>
</tr>
<tr>
<td>Draught</td>
<td>2.18 m</td>
<td>Breadth (moulded)</td>
<td>8.2 m</td>
</tr>
<tr>
<td>Service speed</td>
<td>13 knots(^3)</td>
<td>Depth</td>
<td>3.19 m</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------</td>
<td>-------</td>
<td>--------</td>
</tr>
<tr>
<td><strong>Maximum number of people carried</strong></td>
<td>For voyages of less than 1.5 hours: 550 passengers and 14 crew</td>
<td>Total for voyages of less than 1.5 hours: 564 persons</td>
<td></td>
</tr>
</tbody>
</table>

**Rabaul Queen**

**Change of ownership**

Sometime in 1998, Rabaul Shipping, which is based in Rabaul, Papua New Guinea, sent a representative to Japan looking to purchase a suitable small passenger ferry to begin a passenger service from the island of New Britain (ports of Rabaul and Kimbe) to Lae in the Morobe Province.

The representative inspected *Ieshima* and recommended the ship to Captain Peter Sharp, Managing Director of Rabaul Shipping, as being suitable for the proposed service. Captain Sharp travelled to Shodoshima, the second largest island in the Japanese Inland Sea, towards the end of 1998 and inspected the ship and its plans while it was alongside a dockyard on the island. The ship was then dry docked and Captain Sharp carried out an underwater inspection. Following that, Captain Sharp was pleased that the ship was what he was looking for and *Ieshima* was purchased by Auspac Salvage Limited, a company of which Captain Peter Sharp was Director and major shareholder.

**Figure 2:** The newly named *Rabaul Queen* in a Shodoshima dry dock

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\(^3\) One knot, or one nautical mile per hour equals 1.852 kilometres per hour.
The ship was then dry docked prior to the ocean voyage to Papua New Guinea and renamed *Rabaul Queen*.

**Delivery of *Rabaul Queen* to Papua New Guinea**

About ten days after the final purchase of the ship, and the pre-voyage dry docking, *Rabaul Queen* departed Japan for Papua New Guinea.

Captain Sharp, the holder of a Master class 1 certificate of competency, was the Master and the Chief Mate for the voyage was Mr Anthony Tsiau. Mr Tsiau was the Master of the ship when it capsized in February 2012. A number of other Rabaul Shipping employees made up the remainder of the crew.

According to Captain Sharp, the voyage to Rabaul took about 12 to 13 days and went directly from Japan to Rabaul, passing the Pacific Ocean island of Guam.

During the first 5 days of the voyage, Captain Sharp described the weather and sea conditions as being rough. Captain Sharp put a mattress in the wheelhouse of the ship and slept there during that time. However, once the ship passed Guam, the weather and sea conditions abated and remained that way for the remainder of the voyage to Rabaul.

**Rabaul Queen in Papua New Guinea**

When *Rabaul Queen* arrived in Rabaul, it underwent a survey on 23 December 1998. The intent of this survey was to ensure that the ship was fitted out, and in a suitable condition, in accordance with the Papua New Guinea *Merchant Shipping Act 1975*. The ship was entered into the Registry of Ships held by the Department of Transport on 12 February 1999. The ship’s number was 812 with the owner being recorded as Auspac Salvage Ltd. The ship was then issued with a Papua New Guinea Survey Certificate (No. 4479) on 5 March 1999.

Initially, *Rabaul Queen* operated a passenger service from Rabaul, East New Britain Province, to Kavieng, New Ireland Province. After a couple of trips between these two ports, termed ‘shake down trips’ by Captain Sharp in his evidence to the Inquiry, *Rabaul Queen* entered service on the Rabaul – Kimbe (West New Britain Province) – Lae scheduled passenger service. The ship has been on this service since that time.

Occasionally during its time in Papua New Guinea, *Rabaul Queen* operated on the 180 nautical mile voyage between Rabaul and Buka (Autonomous Region of Bougainville). This was mainly during times of high passenger demand; the December/January/February period (including Christmas), and when another Rabaul Shipping operated passenger ship, *Solomon Queen* was not able to operate this service.

**Ship particulars**

*Rabaul Queen* was built in Japan as a smooth water, short voyage, passenger ferry for operations in the northern portion of the Japanese Inland Sea. Consequently, it was designed, built and equipped to the Japanese requirements covering ships operating in those conditions.
According to the ship’s General Arrangement (GA) plan (Exhibit 54), while engaged in voyages in the smooth waters of the Japanese Inland Sea, it could carry a maximum of 550 passengers.

The plans below are part of the GA plan of Rabaul Queen and have been amended to show the alterations mentioned below. They have been annotated to provide clarity.

**Figure 3:** View from starboard side *(Exhibit 158)*

**Figure 4:** Wheelhouse Deck plan *(Exhibit 159)*

**Figure 5:** Promenade Deck plan *(Exhibit 9)*

**Figure 6:** Upper Deck plan *(Exhibit 95)*
When the ship was introduced to the Papua New Guinea trade, its owners made several alterations to its cabin areas. These have been included in the description of the ship that follows.

The uppermost passenger deck, the Promenade Deck, was located above the Upper Deck, which in turn was located above the Cabin Deck. This latter deck was located below the waterline and did not have any windows. The uppermost deck, the Wheelhouse Deck, contained the navigational wheelhouse and a crew cabin area. The engine room was situated under the aft section of the Upper Deck, immediately behind the Cabin Deck passenger accommodation.

Immediately forward of the Cabin Deck were the bow thruster compartment and the forepeak tank. Aft of the engine room was the afterpeak tank and above this tank, on the Upper Deck level, was the steering gear room. Also on the Upper Deck level were two cargo spaces (one behind the toilets and one immediately forward of the passenger accommodation and under the ship’s forecastle). A fuel oil tank and two fresh water tanks were located beneath the Cabin Deck.

Access to the Wheelhouse Deck was via a ladder from the Promenade Deck. Located immediately behind the wheelhouse was a small deck officers and crew accommodation area. Behind this room was the area of the ship on which the liferaft cradles and liferafts were located. Buoyant floating platforms were also stowed inboard of the liferafts.

Access to the first class cabin area on the Promenade Deck was through two doors, one each on the port and starboard side. The first class cabin area contained aircraft type seats. A gate on each side of the first class accommodation area limited access to that part of the deck to first class passengers only. The open area at the aft end of the Promenade Deck contained four rows of bench seating on the centreline of the ship. A room immediately behind the first class cabin was allocated to mothers and small children. This room was accessed by a single door at its after end. At the after end of the Promenade Deck was a canteen. Two ladders, one on the port and one on the starboard side, led from the Promenade Deck down to the Upper Deck.
Access to the passenger accommodation on the Upper Deck was through a watertight door on each side of the ship. These doors opened into the passenger area and almost directly onto two staircases which led down into the Cabin Deck. There was no seating provided for passengers in the Upper Deck passenger accommodation area.

Immediately behind the passenger accommodation on the Upper Deck were cabins for the engineers and the motormen. These were accessed by a single door, located on the ship’s centreline.

Access to the Cabin Deck was via two internal stairways from the passenger cabin on the Upper Deck and from a forward set of stairs which led up to a door on the port side of the Upper Deck, immediately behind the cargo space. This staircase could also be accessed from the Upper Deck passenger accommodation. Like the Upper Deck, there were no seats for passengers on the Cabin Deck.

Immediately behind the passenger accommodation on the Upper Deck, were the men’s and women’s toilets. These were accessed through doors which led from the open deck. A short alleyway ran past the toilets and the starboard alleyway opened onto the cargo space behind the engine room casing. These alleyways had non-watertight doors fitted.

The engine room could be accessed through a non-watertight door on the starboard side, near the men’s toilets.

The after cargo space was located under a small crane and could hold an amount of cargo in the open. Mooring equipment was located on both the forecastle and poop decks.

**Watertight integrity of the accommodation on the Upper Deck**

When built, entry into the passenger accommodation on the Upper Deck was via two sliding doors on the port and starboard side, adjacent to the boarding gate in the bulwarks\(^4\). These doors were not watertight and could therefore admit water into the accommodation and, because there were no internal doors between the Upper Deck and the Cabin Deck, the stability of the ship could be reduced if water flowed into the two compartments in a particular situation. Before *Rabaul Queen* entered service in Papua New Guinea, Rabaul Shipping had these doors replaced by water tight doors, the sills of which were 600 mm above the deck.

According to the ship’s GA plan, there were watertight doors fitted on the men’s and women’s toilets; at the forward of the alleyway which ran from the after part of the ship past the engine room entry; and at the entries into the forecastle cargo space. However, there were no such doors on the entrance to the engineers’ accommodation or on the aft door on the alleyway which ran from the aft part of the ship past the engine room entry.

All the windows on the ship were of a sliding glass type, without any capability to be made watertight (i.e. there were no ‘deadlights’ fitted to them). Consequently, they did not have the capability of contributing to the watertight integrity of the accommodation on the Upper Deck.

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\(^4\) Plating around the outboard edge of an upper deck to protect this deck from entry of the sea.
Lifesaving appliances

Originally, when Rabaul Queen commenced operation in PNG, it was equipped with a liferaft capacity for 295 passengers. However, at the time of the ship’s capsize, it was equipped sixteen (16) 25-man liferafts. The liferafts were secured into their cradles on the wheelhouse deck by straps and hydrostatic releases. These hydrostatic releases are devices designed to cut through the securing line after a ship sinks to a depth of between 1.5 and 4.0 m. As the water pressure increases with depth, the pressure pushes down on a vertical spring within the unit. This spring releases a blade which cuts through the securing line.

The buoyancy of the now released liferaft will cause it to float from the cradle and, because the liferaft’s painter line is still tethered to the ship, the painter line pays out until it reaches its end; and then the pull of the painter inflates the liferaft. The increased buoyancy of the inflated liferaft causes a ‘weak link’ (usually a line of lesser diameter than the painter line) to part and the liferaft floats to the surface.

At the ship’s last survey, in October 2011, all the liferafts and hydrostatic releases were seen to be within their operating dates.

Stowed adjacent to the liferafts were 20 buoyant floatation devices (known by the crew as rigid liferafts) which had been on board the ship during its service in Japan. The design of these devices was such that people do not climb onto or into them, as they would do a liferaft, but they have hand-holds around the outside for people to hold onto while in the water. These floatation devices are designed to be used when the recovery of the people holding onto them is expected to occur soon after they enter the water, like in the busy waters of the Japanese Inland Sea.

There were 400 lifejackets on board the ship. These were located in lockers on the passenger decks and in the wheelhouse.

The crew on board Rabaul Queen for its final voyage

The following commentary is derived from the Rabaul Shipping crew training records (Exhibit 141) and the evidence provided by each of the surviving crew members to the Commission of Inquiry.

The Master, ANTHONY TSAIU, was born on 1 March 1958 and held a Papua New Guinea Master grade 4 certificate of competency (number N4-00020). He began his seagoing career in 1976 when he joined the Department of Transport (Marine Division), in Rabaul, as a trainee seaman and deck officer. Also in that year, he gained a Master grade 5 certificate of competency after completing a course at the Papua New Guinea Maritime College in Madang. In 1981 or 1982, he gained a Papua New Guinea Master grade 4 certificate of competency. From 1985 to 1990, he was employed as a Master by Coastal Shipping.

He joined Rabaul Shipping in 1991. Since then, he has worked on a number of Rabaul Shipping ships and first served on Rabaul Queen in 1998, when he joined it for the delivery voyage from Japan. Captain Tsiau maintained the 4 am to 8 am and 4 pm to 8 pm navigational watches on the bridge for the voyage from Kimbe to Lae and was on watch at the time the ship capsized.
The Chief Mate, **MICHAEL ZIRAU**, was born on 10 October 1965 and began his seagoing career in 1984 when he gained a coxswain grade 2 qualification from the Papua New Guinea Maritime College. Since gaining this qualification, he has worked for a number of shipping companies operating on the Papua New Guinea coast. These companies included Burns Philip (1982 – 1986), Rakaman Shipping (1987 – 1989), Coastal Shipping (1990 – 1993), Bismark Tug Services, South Coast Shipping, Nuigini Sea Products and Huris Transport. In September 2011, he joined Rabaul Shipping. At the time of the ship’s capsize, he held a Papua New Guinea coxswain class 2 qualification. He had served on board **Rabaul Queen** for about 3 weeks before the capsize. He maintained the midnight to 4 am and noon to 4 pm navigational watches on the bridge.

The Second Mate, **SAILAS AILA**, started his seagoing career in 2002. He has worked with Rabaul Shipping for 7 years and has been a Second Mate (a watchkeeping officer) for that time. At the time of the capsize, he held a coxswain grade 3 qualification and a certificate of training in survival and fire fighting which he obtained from the Papua New Guinea Maritime College. He has sailed on board **Rabaul Queen** for some 3 years before its sinking and maintained the 8 am to noon and 8 pm to midnight navigational watches on the bridge.

**Seaman, SOLOMOM KAIAN**, was born on 26 June 1987 and had worked for Rabaul Shipping for about 9 months before the capsize of **Rabaul Queen**. He had not worked on any other ship in the company in that time. Mr Kaian did not hold any NMSA issued certificates of competency but had received training in survival, fire fighting and safety conducted by the Malaguna Technical High School (Maltech) in Rabaul. He was on watch with the ship’s Master at the time of the capsize.

Seaman, **SAMUEL EREMAS**, had worked for Rabaul Shipping for about 5 months before the capsize of **Rabaul Queen**. He had not worked on any other ship in the company in that time. He had received general purpose hand training before he joined the ship but he did not have any certificates issued by the NMSA. He had been standing the midnight to 4 am watch with the Chief Mate.

Seaman, **JACK DUDE**, lost his life in the sinking.

Chief engineer, **ARUA BARU**, held an engineer class 3 certificate of competency. Mr Baru lost his life in the sinking.

Second Engineer, **DONALD KAIAN**, began his seagoing career in 2000 after completing an engineering course at the Papua New Guinea Maritime College. Since that time, he has worked as either a Second or Chief Engineer for several shipping companies on the Papua New Guinea coast including Latitude 8, Neptune Islands Shipping and Pacific Frontline Trading. He began working for Rabaul Shipping in 2004 and left the company in 2006, rejoining in 2009. He first served on **Rabaul Queen** in August 2011. At the time of the capsize, he held a Papua New Guinea engineer class 5 certificate of competency.

Motorman, **YONG YAI**, first went to sea in 1989 as a trainee engineer. He initially began working as a Motorman with Rabaul Shipping in 1993. In 1994; he attended the Papua New Guinea Maritime College to upgrade his qualifications. He returned to Rabaul Shipping and remained there until 1995 when he joined Coastal Shipping as a Second Engineer. After a period of time with Coastal Shipping and Islands Shipping, he returned
to Rabaul Shipping in 2002. At the time of the capsize, he held a Papua New Guinea engine room rating grade 1 certificate of competency which he obtained in 1994. He also held a certificate of training for survival and fire fighting. While on board the ship, he maintained the 8 am to 11 am and the 8 pm to 11 pm watch in the engine room.

Motorman, PAUL KANAWI, was born on 9 August 1986 and completed his initial general purpose rating training at the Papua New Guinea Maritime College in July 2011. He joined Rabaul Shipping as a Motorman on 5 September 2011. *Rabaul Queen* was his first ship with the company. While on board the ship, he maintained the 2 am to 6 am and the 2 pm to 6 pm watch in the engine room.

Motorman, ROBIN HAUS, born 23 December 1986, completed his initial seagoing general purpose rating training at the Papua New Guinea Maritime College in October 2011. He joined Rabaul Shipping as a Motorman on 6 December 2011. *Rabaul Queen* was his first ship with the company. While on board the ship, he maintained the 6 am to 10 am and 6 pm to 10 pm watch in the engine room.

Motorman, POMAT KAWATAN, lost his life in the sinking.

Cleaner, JOHN KEKO, had worked for Rabaul Shipping for about one year. This was the first time he had sailed on board *Rabaul Queen*. He had not undergone any training associated with crew members, including pre-sea, emergency or survival at sea training.

In addition to the above crew members, another Rabaul Shipping employee, Captain PAIS SALLE, born 1 August 1952, was on board the ship returning to his home for a period of leave. He was the holder of a Papua New Guinea Master class 4 certificate of competency (Number N4-00027) which was issued in January 1999. He had spent his seagoing career on the Papua New Guinea coast and had been the Master of a number of Rabaul Shipping ships, including the *Morobe Queen* and *Solomon Queen*, his most recent command. At the time of the sinking of *Rabaul Queen*, Captain Salle also held an intermediate fire fighting certificate and a proficiency in survival craft and rescue boat, other than fast rescue boat certificate, both of which were issued by the Papua New Guinea Maritime College in 2005. He lost his life in the sinking.

Two young men, ALEX MAIA and JOHN NAHA, relatives of the ship’s Master, operated the canteen on behalf of the Master. One of these young men, John Naha, lost his life in the sinking. Neither man had undergone any pre-sea or survival-at-sea training.

The competency and actions of the crew will be dealt with subsequently in this Report.
CHAPTER 3 – RABAUL QUEEN’S FINAL VOYAGE

At about 1500 on 30 January 2012, Rabaul Queen departed the wharf at Buka, Autonomous Region of Bougainville, for the 180 nautical mile overnight voyage to Rabaul, East New Britain Province (Figure 9).

Figure 9: Departing Buka on 30 January 2012 (Exhibit 218)

Sometime between 0600 and 0700 on 31 January, the ship arrived in Rabaul. Once secured to the wharf, all the passengers disembarked, including those who were not terminating their journey at Rabaul. This was in accordance with Rabaul Shipping’s policy. Those passengers intending to continue onto Kimbe or Lae were required to purchase another ticket for the next leg of the voyage. Tickets were purchased from the Rabaul Shipping office located at the terminal. Ticket sales were recorded in the ticket sales book and a passenger, after paying for the ticket, was given a ticket with a stub on it.

December to February is a peak period for people wanting to travel by sea between ports in Papua New Guinea. Consequently, there were a large number of people wanting to travel from Rabaul to Kimbe and Lae. According to some of the survivors, the terminal was full and it took a long time to buy a ticket.

Before passengers boarded Rabaul Queen, a number of demonstrations of how to put on and use a lifejacket were given by Rabaul Shipping staff, simultaneously, in the departure area of the terminal. The demonstrations lasted for less than 10 minutes and were not seen by all the passengers who would be boarding the ship that day. No microphones
were used and the Rabaul Shipping staff giving the demonstrations relied on their voices to get the instructions to the passengers.

During the morning, *Rabaul Queen* was moved to a refuelling berth where it took on board fuel oil for the voyage to Lae. At the completion of refuelling, the ship had about 20 tonnes of fuel on board.

Following the refuelling, *Rabaul Queen* was moved back to the passenger wharf in preparation for boarding its passengers. The ship’s fresh water tanks (the 20,000 litre after peak tank at its stern and the two tanks below the Cabin Deck (each 6,000 litres)) were also filled. The forepeak tank at the ship’s bow remained empty.

About 490 kg of cargo, mainly excess passenger baggage⁵ was loaded on the ship. Three partly filled 200 litre drums of oil were also stowed on the after deck and secured in place by the Chief Mate.

While alongside, the ship’s Master, Anthony Tsiau, visited the shipping office and while he was there, he was given a document by Rabaul Shipping’s Managing Director, Captain Peter Sharp. The document was titled ‘Weather 31st January 2012’ *(Exhibit 176)*. Captain Sharp had compiled the information on the document for use by the Masters of the ships in Rabaul Shipping’s fleet. The document indicated that during 31 January, 1 and 2 February, winds in the West New Britain/Vitiaz Strait and Lae region would be north-westerly up to 25 or 30 knots, with the highest speeds expected in the Vitiaz Strait/Lae region on the 31 January and 1 February.

Before boarding, the passengers were required to show their tickets to Rabaul Shipping ticketing staff as they entered the passenger lounge area. The staff collected the ticket stubs and counted the actual numbers of people who boarded. The passengers were also required to show their tickets to staff as they exited the departure lounge area and as they boarded the ship.

The Rabaul Shipping staff said, having totalled the number of passengers who boarded the ship, that they advised the Master that 365 ticketed passengers boarded the ship. This number did not include in excess of 10 infants less than 3 years of age, as these infants were not required to have a ticket. Of the ticketed passengers, 222 were travelling to Lae and 143 would be terminating their voyage in Kimbe. The Master said he signed the Rabaul Shipping ‘Voyage Instruction Report’, which listed the number of passengers on board the ship, and gave the report back to the Kimbe office staff.

By about 1815, the boarding of the passengers and their baggage was completed and *Rabaul Queen* left the berth for the 180 nautical mile overnight voyage to Kimbe. Passengers were distributed throughout the passenger accommodation of the ship, sitting on the decks or standing where they could. There were less than 20 people in the first class cabin and there were a number of empty seats in this area. However, elsewhere on board, conditions were described as being overcrowded with passengers.

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⁵ Passengers were permitted to carry two bags on board with them without charge. All other baggage had to be loaded on board and stowed in the cargo area on the poop deck.
not being able to move freely around the ship and having to excuse themselves as they stepped over other passengers if they needed to go to the toilet or to the canteen. Those passengers sitting on the decks were unable to stretch their legs out and were sitting almost shoulder to shoulder for the duration of the voyage. The conditions the passengers were expected to endure on the voyage were, in the opinion of the Commission, deplorable.

The weather for most of the passage to Kimbe was described as being rough and with rain at times. A large number of passengers were sick as a result of the motion of the ship.

At 0915 on Wednesday 1 February, Rabaul Queen arrived in Kimbe and, by 0930, it had berthed alongside the wharf. Once the ship was secured to the wharf and the Kimbe bound passengers had departed, the remaining passengers, who were bound for Lae, were asked to leave so that the ship’s accommodation could be cleaned. The passengers left the ship, but their baggage remained on board.

While alongside the wharf, the Kimbe bound cargo was discharged and cargo bound for Lae was loaded. At completion of loading, there was about 540 kg of cargo on board the ship, made up primarily of Buai and excess passenger baggage.

Fresh water was again taken to fill the aft peak tank and the port and starboard fresh water tanks. One of the fresh water tanks, the port one, overflowed onto the deck, indicating that it was full and then the hose was used to fill the starboard one. However, towards the end of the operation, the hose came out of the filling pipe and the Master, who was standing in the wheelhouse looking down, told the person filling the tank to stop as there was enough water on board.

At about 1100, the passengers began to board the ship for the overnight voyage to Lae. Before boarding the ship, passengers were again required to show their tickets to Rabaul Shipping staff on the wharf. Those who were boarding the ship for the first time had the stub removed from their ticket and those reboarding the ship had their ticket stamped.

The passengers from Rabaul were asked to board the ship ahead of those passengers joining in Kimbe. Many of the Rabaul passengers took the opportunity to go to the open Promenade Deck where there was some seating available and where it was open to the fresh air. The remainder went to where they had left their bags. Once the Rabaul passengers had boarded, the Kimbe passengers boarded and they found a place to sit or stand where they could. For this voyage, the first class cabin area was full.

Having totalled the number of passengers who boarded the ship, the Rabaul Shipping staff said they advised that the Master that 138 ticketed passengers boarded the ship in Kimbe, not including children less than 3 years of age. The staff did not count the number of Rabaul passengers that reboarded the ship, so the Master assumed that number remained unchanged. Also onboard were the crew of 13 (the Master, a chief and Second Mate, three seamen, a chief and Second Engineer, four motormen and a cleaner), 2 canteen boys (employed by the Master) and the Master of Solomon Queen who was returning home for leave. The Master said he signed the ‘Voyage Instruction Report’ and gave the report back to the Kimbe office staff.
Conditions on board *Rabaul Queen* were much the same as those when it departed Rabaul; the ship was very overcrowded. Some of the surviving passengers used the words ‘packed’ and ‘overloaded’. People were sitting shoulder to shoulder on the decks and they could not stretch out their legs. Passengers were also sitting on the stairs, both internal and external. Again, the conditions the passengers were expected to travel in on this ship, especially for a journey of this length, and in the prevailing and expected weather conditions, were deplorable. There were only a very few seats available for the passengers to sit on.

At 1247, *Rabaul Queen* departed the Kimbe passenger wharf for the 280 nautical mile overnight voyage to Lae (Figure 10). The ship’s departure draughts were, as usual, 1.2 m forward and 3.2 m aft.

**Figure 10:** Section of navigational chart AUS4622 showing the Kimbe to Lae voyage

The voyage would take the ship from Kimbe through Stettin Bay, north of the Willaumez Peninsula and Cape Hollmann, then towards the Dampier Strait, which runs between the islands of New Britain and Umboi. After transiting the Dampier Strait, *Rabaul Queen* would enter the Vitiaz Strait near Massmass Island, one of the Siassi Islands. It would follow a course of about 200° (T) and head for the stretch of water between Cape Cretin and Tami Islands, to the south-southeast of Finschhafen, before following the coast westward towards Lae. This was the usual route for the ship to follow and its Master and navigating officers were familiar with it.

No safety instruction on emergency signals or muster station locations was given by the crew. While many of the surviving members of the ship’s crew told the Commission that a demonstration of how to put on a lifejacket was given after the ship departed the berth in Kimbe, all the surviving passengers who gave evidence said that no demonstration was given either in Kimbe or after the ship departed the port.
Some passengers reported that the ship sailed with a list to port. However, not all witness confirmed this list at this early stage of the voyage and the Master attributed the small list on departure to the fact that the passengers were crowded onto the port side of the ship, waving good bye to family and friends.

For the initial part of the voyage, after the ship left Kimbe, the sea conditions were said to be not too bad, with north-westerly winds of less than 10 knots and smooth seas, according to the Master and Chief Mate, Michael Zirau. These conditions remained until the ship reached Cape Campbell on the eastern side of the Willaumez Peninsula. Not long before 1600, as the ship approached the cape, it started to leave the lee of the peninsula and became influenced by the prevailing strong north-westerly winds and rough seas. The Chief Mate, who was on watch at the time, estimated that the north-westerly wind speed increased to 20 knots and the seas up to 2.0 m. Consequently, the ship started to roll and pitch.

At 1600, when the Master took over the navigational watch from the Chief Mate, the ship was in auto-pilot mode (Figure 11).

Figure 11: Photograph taken from the starboard side of the Upper Deck. Note the shoreline in the background and waves (Photograph taken by Phillip Batari)

As the ship rounded Cape Hollmann at the top of Willaumez Peninsula, and began the voyage to Cape Gloucester (at the northern end of the Dampier Strait), it became more subjected to the north-westerly winds and sea conditions and its movement increased. Rain also started to fall. These weather and sea conditions did not change during this leg
of the voyage. The constant pitching and rolling and overcrowded conditions resulted in many people being sick.

At 2000, the Second Mate, Sailas Aila, took over the navigational watch from the Master. The weather conditions remained unchanged during the Second Mate’s watch and at midnight he handed over the navigational watch to the Chief Mate. The Second Mate then went to the crew accommodation immediately behind the wheelhouse.

Because it was raining at times, combined with the fact that spray from the sea was sometimes coming over the starboard side of the ship, some of the passengers who were standing on the starboard side of the Upper Deck and in the open part of the Promenade Deck began to get wet. These people then looked for some place dry to go and moved over to the port side of the ship or inside the accommodation. This resulted in the inside areas becoming even more overcrowded. Some others on the Promenade Deck moved from their exposed location to the relatively protected and dry area outside, and inside, the men’s’ toilets.

This movement of passengers, combined with the wind exerting a force on the starboard side, resulted in the ship developing a port list during this leg of the voyage. While the list was probably no more than 5 degrees, the ship was rolling to port and returning to the upright but it had a tendency not to roll back over to starboard very far.

At sometime during the night, the rain stopped but the wind and sea conditions remained.

At about 0220 on 2 February, the ship reached Cape Gloucester and the Chief Mate altered course to make for the Nessup Channel, at the southern end of the Dampier Strait. The Chief Mate testified that they ‘had good weather – the good seas – the ship steaming smoothly’ at 11 or 12 knots. This was despite the gale warning which had been issued on 1 February by the Papua New Guinea National Weather Service for West New Britain and Vitiaz Strait, the exact location where Rabaul Queen was operating on the morning of 2 February. The gale warning, issued at 5 pm on 1 February, stated that ‘northwest winds of 34/48 knots are expected to persist for the next 24 hours causing very rough and high seas’.

At about 0330, the Chief Mate called the Master to navigate the ship through the Siassi Islands and into the Vitiaz Strait. Shortly afterwards, Rabaul Queen passed Massmass Island (Figure 12). When the ship entered the open waters of the strait, and it left the lee of Umboi Island, it again came under the influence of the prevailing north-westerly winds and sea, but by now the winds had increased to be between 20 to 30 knots and the seas to 3.0 m.

Although it was now past 0400, the Chief Mate remained on the bridge with the Master. Also there were the duty Seaman, Solomon Kaian, the cleaner, John Keko, and the Master of Solomon Queen, Pais Salle. The ship was starting to steer a little uneasily in the prevailing conditions, so the Master took the ship out of auto-pilot, put it into hand steering and took the helm himself. He steered a course of about 200° (T).
During the 35 nautical mile voyage across Vitiaz Strait, with the prevailing near gale force conditions (see Appendix 3) hitting the ship on its starboard quarter⁶, the ship continued to roll and water continued to come onto the starboard side of the Upper Deck. The ship also maintained its list to port. The seas were seen to be breaking on the starboard side of the ship, with the after cross alleyway of the Upper Deck being awash with water. The water was coming onto the starboard deck, and then going out the freeing ports on the port side. The weather also caused the door on the ladies toilet to come off its hinges.

**Figure 12:** Section of navigational chart AUS386 showing the Dampier Strait leg of the voyage

At about 0530, the Chief Mate left the bridge to go below to check on the passengers because he could hear some of the younger men shouting ‘one more, one more’ as the ship rode the waves. This was repeated several times and he was wondering why this was being shouted.

When the Chief Mate got to the Upper Deck, he asked the passengers to move back over to the starboard side of the ship so that the ship could be, as many of the passengers stated, ‘balanced’. The words many of the surviving passengers expressed to the Commission were ‘balance the ship, balance the ship’. While several of the passengers moved back to starboard, the majority remained on the port side. Those that did move to

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⁶ The area of the ship between its stern and the middle of the right hand side.
the starboard side soon returned to the port side because the sea was still breaking over
the starboard side of the ship. As a result, the ship maintained its port list, exposing more
of its starboard side to the prevailing weather and sea. The Chief Mate also asked the
young men to stop the shouting but they did not listen to him.

By this time, the day had started to dawn and it was about 0545 or a little later. The
coastline could now be seen from the ship.

At about 0600, the Second Mate woke up and shortly afterwards, he went outside onto
the Wheelhouse Deck to chew some betel nut. He was joined by the Second Engineer,
Donald Kaian. At about the same time, Robin Huas, one of the ship’s motormen, began
his watch in the engine room.

At about 0615, while the Chief Mate was securing the last of three drums of oil on the
poop deck, a large wave hit the ship on its starboard quarter. The stern was pushed to
port and the ship heeled over heavily to port. This resulted in the ship coming beam onto
the north-westerly seas. On the bridge, the Master lost steerage of the ship and was not
able to bring its head back around to port.

The Chief Mate and the drums were thrown onto the port hand rails. The surviving
passengers and crew on all the decks told the Commission that they and their baggage
were thrown or slid on the decks over to the port side of the ship. Many of the
passengers on the exposed decks (the Promenade Deck and port side of the Upper deck)
ended up in the water. The Second Mate was also thrown into the sea.

As the ship was slowly returning to the upright, a second wave hit the starboard side with
sufficient force to again heel it over to port. However, because the ship had not returned
to the upright, the heel angle was far greater than before and resulted in the ship’s port
side becoming submerged. Water then began flooding into the accommodation.

The ship was heeled over to port for only a short period of time when a third wave hit the
exposed hull and the ship capsized.

The Chief Mate and many passengers were thrown into the sea when the third wave hit
the ship. Inside the accommodation structure, some passengers were able to make their
way clear by swimming through open doors, windows or by breaking windows.

On the bridge, the capsize happened so quickly that the Master did not broadcast a
mayday signal on either very high frequency (VHF) or high frequency (HF) radio. He and
the three other Rabaul Shipping employees found themselves in the wheelhouse as it
filled up with water. Three of the four men were able to swim clear of the ship before it
sank.

While many witnesses were critical of the ship’s crew for not warning them about the
waves, there was little opportunity for the crew to make an announcement on the ship’s
public address system or to sound the emergency signal as the ship rolled over in a
matter of seconds, and without any notice. As a result, there was very little chance for
either the passengers or the crew to don lifejackets.

Less than 15 passengers and crew were able to get into a lifejacket after escaping the
capsized ship. Doors of the cupboards in which the lifejackets were stored were locked
and not easily accessible at any time during the voyage. The only spaces where lifejackets
were readily available were the mother’s and children’s room and the first class accommodation.

*Rabaul Queen* remained in the capsized position for up to 10 minutes before it sank. Evidence from survivors is that when they surfaced after escaping the ship, they could see the ship lying upturned in the water. The propeller was still slowly turning and the ship began to sink, bow first. One witness stated that he and another man stood on the upturned hull for a brief period of time and jumped off as it sank. It was also reported that some people were ‘sucked’ down with the ship as it sank but this could not be substantially confirmed.

Because of the time of day, many of the passengers were sleeping or exhausted from being sea sick during the night. Tragically, they were not able to get clear of the ship before it sank. Many of the passengers in the Cabin Deck space, which did not have any means of escape except through the internal staircases, were not able to swim clear of the ship.

While a number of the surviving passengers who appeared before the Commission of Inquiry were able to tell how they escaped the capsized ship, several were not able to clearly remember. This is understandable.

As the ship sank, fuel and bilge oil from the engine room began to float on the surface of the sea. Debris from the ship was also seen to float free as the ship went down. Not long after it sank, the first of the ship’s 25-man liferafts surfaced. The liferafts had been released when the hydrostatic releases cut the lines holding them to their cradles. The liferafts were inflated when they surfaced and they began to be blown down wind of the sinking position as a result of the still strong north-westerly winds. A few lifejackets and buoyant floatation devices, the latter of which had been stowed near the liferafts, also floated to the surface.

The witnesses said that when they themselves surfaced, they were covered in oil. Some managed to swim to liferafts and get on board while others had to be assisted on board. Some survivors also clung to the floating lifejackets for periods of time while others clung to or climbed on buoyant floating platforms that had floated off the ship.

During the initial period of time after the sinking, several of the liferafts were tied together while others remained separate. People on the liferafts continued to look for other survivors in the water and when they were sighted, the rafts were paddled towards those survivors and they were pulled on board or held close by.

Several of the liferafts did not surface in an upright condition and the survivors, not knowing how to right the raft, climbed on board and were sitting in the inverted life raft when they were rescued. Other rafts were upright and the survivors were afforded protection from the elements inside the raft and could access the provisions stowed in the rafts.

The first ship to rescue the survivors arrived at the sinking position at about 0940 that morning, just over 3 hours after *Rabaul Queen* sank. The ship, *MOL Summer*, was able to
recover 116 passengers and its Master coordinated the other ships that arrived on scene to assist in the search and rescue operation\textsuperscript{7}.

The ships carrying the survivors departed the area at about 1900 on 2 February bound for Lae. They arrived in Lae at about 0300 on 3 February and the survivors were taken ashore by the port’s tug, \textit{Victory}.

In all, the ships that took part in the search and rescue operation\textsuperscript{8} took on board 246 passengers and crew from \textit{Rabaul Queen}. All the survivors were recovered on 2 February (Figure 13) and no others were found during the search and rescue operation, which lasted until 5 February.

\textbf{Figure 13: Liferaft being pulled alongside the container ship \textit{Zhong He}}

The bodies of only four passengers were located in the water following the sinking of \textit{Rabaul Queen}. They were recovered from the sea on 4 February. It is highly probable that many of the bodies of the missing passengers and crew still remain trapped within \textit{Rabaul Queen}’s hull, at a depth of between 1300 and 3000 m.

\textsuperscript{7} The Search and Rescue operation is discussed in detail in chapter 16 of the report.

\textsuperscript{8} The names or designations of all assests that assisted in the search and rescue are listed in attachment 4.
CHAPTER 4 – NUMBER OF PEOPLE ON BOARD WHEN THE SHIP CAPSIZED

Introduction

Perhaps the most challenging task faced by the Commission was to definitively determine the actual number of people on board Rabaul Queen when it tragically sank on 2 February 2012. Regrettably, this was not possible notwithstanding considerable effort by the Commission. The challenge was seriously hindered given Rabaul Shipping failed to have a manifest prepared in relation to the voyage from Kimbe when Rabaul Queen sailed on 1 February 2012. Rabaul Shipping asserted that they had a manifest for the voyage. However, this is incorrect. Rabaul Shipping produced two handwritten lists which they represented were ‘passenger manifests’ but in reality they were incomplete and inaccurate ticket sales lists (Exhibits 137 & 168). They also produced what was represented as a ‘confirmed manifest’ (Exhibit 75). However, the so-called ‘confirmed manifest’ was only prepared by Rabaul Shipping about 2 weeks after Rabaul Queen sank and this typed document was deficient.

The Commission was assisted, to varying degrees, in determining the number of persons on board the ship from evidence given by witnesses called and examined during the Commission’s hearings; as well as, by reviewing a number of documents including:

- The typed ticket stub list (‘confirmed manifest’) produced by Rabaul Shipping (Exhibit 75).
- Survivors and Missing Persons Profiles produced by Morobe Provincial Disaster Centre (Exhibits 121 – 127).
- Survivors List prepared by Angau Memorial Hospital (Exhibit 129).
- Handwritten ticket sales lists produced by Rabaul Shipping (Exhibits 137 & 168).
- Crew list produced by Rabaul Shipping (Exhibit 140).
- Ticket Books produced by Rabaul Shipping (Exhibits 139, 178, 327 & 407).
- Voyage Instruction Report produced by Rabaul Shipping (Exhibit 369).

However, many of the above documents proved to be unreliable. For example, the handwritten ticket sales lists failed to record all tickets purchased for the voyage. For instance, the hand written ticket sales list for Rabaul did not record Roderick Voit as having purchased a ticket although he is listed on the typed ticket stub list (Exhibit 75) as being on board the ship when it sank. The handwritten ticket sales lists for Rabaul and Kokopo also failed to record when tickets were ‘topped up’ from student tickets to adult tickets. In regard to the handwritten ticket sale list for Kimbe, there were a total of 12 people, who had all purchased tickets from one ticket book, but were not recorded on the ticket sales list as ever having purchased a ticket.

The typed ticket stub list was also unreliable as it failed to properly record all the passengers who boarded the ship in Kimbe. Grace Amen, the Branch Manager for Rabaul Shipping in Kimbe, said in evidence that when she initially counted the ticket stubs, she arrived at a figure of 134. After the sinking of Rabaul Queen, she travelled to Rabaul with the ticket stubs from Kimbe and gave them to Captain Sharp. Captain Sharp then gave the ticket stubs to his in-house lawyer who counted them and came up with a figure of 138 (Transcript page 1091 – 1094).
The Commission’s task in determining numbers was made even more difficult by the fact that production of relevant documents by Rabaul Shipping and Captain Sharp was a very drawn out process. Not all information and documents were produced to the Commission prior to the hearings despite the Commission’s many requests, including Summons. For example, the Commission only became aware of the ticket books and the ‘Voyage Instruction Reports’ during the course of examination of the witnesses. The fact that these documents were not voluntarily made available to the Commission at the outset reflects poorly on Captain Sharp and Rabaul Shipping.

The reliability, or otherwise, of the documents prepared by the Morobe Disaster Centre and the Angau Memorial Hospital is discussed later in this chapter.

**Rabaul Shipping crew members and other on board workers**

According to the Rabaul Shipping crew list (*Exhibit 140*) there were 13 crew members on board *Rabaul Queen* when the ship departed Kimbe on 1 January 2012, as listed in the table below:

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master</td>
<td>Anthony Tsiau</td>
</tr>
<tr>
<td>Chief Officer</td>
<td>Michael Zirau</td>
</tr>
<tr>
<td>Second Officer</td>
<td>Silas Aila</td>
</tr>
<tr>
<td>Seaman</td>
<td>Solomon Kaian</td>
</tr>
<tr>
<td>Seaman</td>
<td>Jack Dude</td>
</tr>
<tr>
<td>Seaman</td>
<td>Samuel Eremas</td>
</tr>
<tr>
<td>Chief Engineer</td>
<td>Arua Baru</td>
</tr>
<tr>
<td>Second Engineer</td>
<td>Donald Kaian</td>
</tr>
<tr>
<td>Motorman</td>
<td>Paul Kanawi</td>
</tr>
<tr>
<td>Motorman</td>
<td>Pomat Kawatan</td>
</tr>
<tr>
<td>Motorman</td>
<td>Yong Yai</td>
</tr>
<tr>
<td>Motorman</td>
<td>Robin Haus</td>
</tr>
<tr>
<td>Cleaner</td>
<td>John Keko</td>
</tr>
</tbody>
</table>

The Master of *Solomon Queen*, Pais Salle, who was on leave and returning home, was also on board the ship at the time; as were two canteen boys, Alex Maia and John Naha, who were employed by the ship’s Master, Anthony Tsiau, to run his on board canteen business (*Exhibit 47*). The Commission does not accept that Pais Salle carried out the duties of Chief Mate as suggested by Captain Sharp. Such suggestion is not only contrary to the crew list provided by Captain Sharp, but also the evidence provided by the crew.

In total, there were 16 persons on board the ship when it departed Kimbe on 1 January 2012 that could broadly be considered to be shipboard workers or crew.
Ticketed passengers on departure

When *Rabaul Queen* departed Rabaul on 31 January 2012, the Master was not provided with a passenger manifest that noted the names and details of all passengers on board the ship. However, according to Captain Tsiau, he signed a ‘Voyage Instruction Report’ (*Exhibit 369*), which indicated that there were 222 ticketed passengers bound for Lae and 143 ticketed passengers bound for Kimbe, a total of 365 (*Transcript page 1370*). The Branch Manager for Rabaul Shipping in Rabaul, Vincent Barubia, confirmed in evidence that he prepared the ‘Voyage Instruction Report’ which was signed by the Captain noting 365 passengers on board the ship when it left Rabaul. Mr Barubia agreed that this number did not include infants under three (3) years of age and the crew (*Transcript page 1268 – 1272*).

Serah Eliakim and Elizabeth Tuna, the two ticketing officers for Rabaul Shipping in Rabaul, also stated in evidence that 365 passengers boarded ship in Rabaul bound for Kimbe (*Transcript page 1422 – 1475 and 1164 – 1168*).

On 1 February 2012, when the ship departed Kimbe, the Master was again not provided with a passenger manifest. However, Grace Amen, the Branch Manager for Rabaul Shipping in Kimbe said during examination that she had informed Captain Tsiau that there were 138 ticketed Kimbe passengers bound for Lae (*Transcript page 1119*). This gave the Master, according to her, a total number of ticketed passengers on board of 360 (222 boarded in Rabaul bound for Lae and 138 boarded in Kimbe bound for Lae). According to Captain Tsiau, he signed the ‘Voyage Instructions Report’ (*Transcript page 1372*). Despite numerous requests from the Commission, Rabaul Shipping and Captain Sharp failed to produce the ‘Voyage Instruction Report’ for the Kimbe to Lae leg of the voyage. This report, if properly prepared, would have recorded the total number of passengers, excluding infants under three (3) years of age, that were on the ship when it departed Kimbe.

Since infants under the age of 3 years travelled free of charge and without a ticket, they were not included in the number of ticketed passengers on board the ship. Rabaul Shipping did not provide any records to the Commission that indicate how many infants boarded the ship in either Rabaul or Kimbe.

Analysis of Rabaul Shipping passenger lists

When passengers purchased tickets at the Rabaul Shipping offices in either, Kokopo, Rabaul or Kimbe, their names and ticket numbers were supposed to be recorded on the handwritten tickets sales lists. According to these lists (*Exhibits 137 and 251*) 236 persons purchased tickets for the voyage from Rabaul to Lae and 146 persons bought tickets for the voyage from Kimbe to Lae. These handwritten ticket sales records indicate that a total of 382 tickets were sold for the voyage to Lae.

However, an analysis of the original ticket books produced to the Commission (*Exhibits 139, 178, 327 and 407*) carried out by the Commission, and confirmed by Rabaul Shipping’s in-house counsel (*Transcript page 3191 -3193*), showed that 235 persons purchased tickets for the voyage from Rabaul to Lae and 158 persons purchased tickets for the voyage from Kimbe to Lae. Therefore, according to the ticket books produced, a total of 393 tickets were actually sold for the voyage to Lae. This analysis has been
completed considering all of the available evidence. However, it is possible that not all the ticket sales books covering *Rabaul Queen*’s final voyage to Lae have been provided to the Commission.

While Captain Sharp gave evidence to the Commission (*Transcript page 2917 – 3072*) that it was the responsibility of the branch managers to limit the number of passengers on the ship to that prescribed by him, the evidence provided by *Rabaul Queen*’s sailings from Rabaul on 31 January 2012 (365 passengers on board according to Rabaul Shipping staff) and from Kimbe on 1 February 2012 (360 passengers according to Rabaul Shipping staff) demonstrates that this is not the case. The Commission, therefore, finds that Rabaul Shipping was prepared to allow all 393 ticketed passengers to travel on board the ship for the voyage to Lae. Captain Tsiau gave evidence of many instances when the ship has travelled with over 350, as did Grace Amen (*Transcript page 1131*). Grace Amen also gave evidence to the effect that on occasion, not only was *Rabaul Queen* carrying 360 passengers, but that Captain Sharp said it was ‘all right’ (*Transcript page 1132*).

The Commission was provided with evidence from Rabaul Shipping that nine (9) passengers who had tickets to travel from Rabaul to Lae on 31 January 2012 have since been provided with a refund because they did not travel on the ship (*Sanantha Robin, Desmond Robin, Zolanda Robin, Raenatha Robin, Anna Mosome, Jeremy Wafi, Mackey Wafi, Kahe Hasu and Gilbert Tauka*) (*Exhibit 410*). Since the Rabaul Shipping office in Kimbe has been closed since the loss of *Rabaul Queen*, there is no evidence of any persons who had tickets to travel on board the ship from Kimbe to Lae on 1 February 2012, did not board the ship, and have since sought a refund.

Rabaul Shipping typed ticket stub lists for these voyages (*Exhibit 138*) indicates that not all of those who bought tickets boarded the ship. These lists show that 222 ticketed passengers boarded the ship in Rabaul for the voyage to Lae and 138 ticketed passengers boarded in Kimbe for the voyage to Lae. Therefore, according to the typed ticket stub lists there were 360 ticketed passengers on board *Rabaul Queen* when the ship departed Kimbe on 1 January 2012. However, the evidence of Grace Amen indicated that she initially counted 134 stubs (*Transcript page 1091 – 1094*).

The Commission also carried out an analysis of ticket book records against the various Rabaul Shipping passenger records (handwritten sales lists and typed ticket stub list) (*Exhibits 408 and 420*) and Morobe Disaster Centre (MDC) records (*Exhibit 102*) of survivors and missing persons to verify the accuracy of the ticket stub records (i.e. the accuracy of the Rabaul Shipping records in relation to the number of persons who boarded the ship for the voyage to Lae).

This analysis showed that there were five (5) persons who purchased tickets for the voyage from Kimbe to Lae who were not recorded as boarding the ship. Each of these persons purchased a ticket in their names, as recorded in the ticket books (*Lizzy Kiriat, Roderick Kua, Rodney Mio, Clerance Kematacia and Alphonse Leato*), were confirmed as survivors following the disaster and were not recorded on either the handwritten ticket sales lists or the typed ticket stub lists. Therefore, not all of the ticket stubs collected for *Rabaul Queen*’s final voyage from Kimbe to Lae were provided to the Commission or used to compile the typed ticket stub lists.
This evidence suggests to the Commission that the Rabaul Shipping ticket stub records are not an accurate measure of the number of ticketed passengers that boarded *Rabaul Queen* for the voyage to Lae. While the Commission considers that it is unlikely that all of the persons who purchased tickets travelled on board the ship for the voyage to Lae, it is possible that more than the five (5) that have been identified by the Commission did.

Since infants under the age of 3 years travelled free of charge and without a ticket, they were not included in the number of ticketed passengers on board the ship.

In written submissions, Counsel for Captain Sharp contended in paragraph 39 that:

‘It is submitted that the time available to respond to the preparation by Counsel Assisting of Counsel’s calculation of numbers of persons to whom tickets have been sold, does not permit sufficient time or opportunity to resolve all the discrepancies and the inability to resolve all the discrepancies within the time available should not lead to an inference that the discrepancies could not be resolved in time.’

The Commission considers that Rabaul Shipping has had since 2 February 2012, the day *Rabaul Queen* sank, (over 18 weeks) to resolve any record keeping discrepancies and to provide the Commission and other interested Government bodies with an accurate account of the details of all of the people who boarded the ship before its departure from Kimbe on 1 January 2012. Clearly, the so called ‘manifests’ produced to the Commission have not been accurate and further time is not required to confirm this obvious fact.

**Non ticketed passengers**

On 24 March 2012, the Commission conducted a view of the Rabaul Shipping operations in Rabaul, during which time, the Commission was placed in a better position to assess and understand the processes of ticket purchase and passenger boarding. Captain Sharp also explained this process while giving evidence to the Commission *(Transcript page 944 - 1054)*.

When passengers arrived prior to the ship’s departure, they waited in the first section of a large hall. Then, before boarding, they were called to present their tickets. As they passed by two ticket sales staff and a turnstile, their ticket was checked and the stub removed. While one ticket sales staff member was checking the ticket and removing its stub, the second was keeping a tally of the number of stubs collected. The passengers then waited in the passenger lounge until boarding time.

When the ship was ready for boarding, the passengers were called. As they left the passenger lounge, their tickets were checked again. The tickets were then checked for a third time as the passengers boarded the ship.

The Commission was not afforded a view of the Rabaul Shipping operations in Kimbe. However, the description of those operations provided by the various surviving passengers and the PNG Ports Kimbe Supervisor *(Transcript page 2116 – 2129)* indicated that the passenger boarding process followed in Kimbe was as robust as that employed in Rabaul. That is, it would have been extremely difficult for passengers to board without a ticket.

While there has been much rumour and innuendo surrounding the possibility that a large number of un-ticketed passengers may have been on board *Rabaul Queen* when the ship
departed Kimbe on 1 February 2012, the Commission is of the opinion that it is highly unlikely that any un-ticketed passengers boarded the ship prior to its departure.

**Survivors rescued from the sea**

While 13 aircraft and 15 ships were tasked to assist with the search and rescue of survivors following the capsize and sinking on *Rabaul Queen* on 1 February 2012, only 5 ships recovered survivors (*Exhibit 183*). These survivors were all rescued from the sea on 2 February 2012. The numbers of passengers rescued by each of these ships is displayed in the following table.

<table>
<thead>
<tr>
<th>Ship</th>
<th>Passengers Rescued</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Cap Scott</em></td>
<td>9</td>
</tr>
<tr>
<td><em>MOL Summer</em></td>
<td>116</td>
</tr>
<tr>
<td><em>MSC Carole</em></td>
<td>53</td>
</tr>
<tr>
<td><em>Violet</em></td>
<td>39</td>
</tr>
<tr>
<td><em>Zhong He</em></td>
<td>29</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>246</strong></td>
</tr>
</tbody>
</table>

**Recovered bodies**

The Commission heard evidence from David August, an officer with the Morobe Disaster Centre that the bodies of three (3) adult women and one (1) child (four (4) in total) were recovered from the water as a result of the search and rescue operations (*Exhibit 121*). No reliable contrary evidence relating to recovered bodies was presented to the Commission.

**Landing of the survivors ashore**

On the morning of 3 February 2012, the rescued passengers were transferred from the ships that had rescued them to the Lae harbour tug *Victory*; and transported ashore. As the survivors were brought ashore, they were counted by the crew on board the tug. This count confirmed that 246 persons had been rescued (*Transcript page 822 – 830*).

**Survivors treated at the Angau Memorial General Hospital**

When the survivors were brought ashore in Lae, they received some basic triage treatment and categorised into three groups so that the more seriously injured were treated with priority when they reached the hospital. They were then transported to the hospital for treatment. When treated at the hospital, their personal details were recorded (*Transcript page 831 – 837*). These records (*Exhibit 129*) show that 247 persons were treated.

However, an analysis of these documents by the Commission found that a number of names on the various lists were in fact duplications. As a result, while these documents initially appear to support the evidence provided by the rescuing ships and the count of survivors as they came ashore in Lae, it cannot be considered as an accurate count of survivors.
Disaster Centre numbers

Following the sinking of Rabaul Queen on 1 February 2012, the Morobe Disaster Centre (MDC) coordinated the identification of survivors and missing persons. These tasks were carried out with assistance of staff from the Bougainville, East New Britain and West New Britain disaster centres.

According to the information provided by the MDC to the Commission (Exhibit 102), which was described as still being in draft form at the time, the MDC had identified 230 survivors, 4 deceased persons and 219 missing persons. While the number of missing persons was originally much higher, through a process of verification this number had been significantly reduced. However, the verification process was still ongoing at the time of the hearings.

When the Acting Director of the MDC provided evidence to the Commission (Transcript page 602 – 624), he explained that the number and detail of survivors on the MDC list (230) was not complete because the occupants of a small fifteen (15) seater bus that departed the wharf, en route to the hospital with survivors on board, had never been accounted for. As a result of this and other evidence, the Commission considers that the number of survivors listed on the MDC documents cannot be considered to be accurate.

When compiling the list of missing persons, the MDC asked people who believed that they had close relatives on board Rabaul Queen at the time of its sinking to register. A profile for each of the registered missing persons was created. This profile included personal details of the person considered to be missing and the person making the registration. However, evidence provided to the Commission (Exhibits 122, 124 and 126) shows that all aspects of these profile documents are not complete. Some do not contain the name or details of the individual who made the registration and; while some others contain these details, they have not been signed (Transcript page 798 – 819).

The MDC also took out large advertisements in the newspapers in an attempt to gather more information relating to possible missing persons. Its staff had also gone through a process of verifying the names on the missing person list. Through this verification process, it had been determined that there had been a number of dishonest claims made regarding the registration of missing persons. It is the Commission’s opinion that these dishonest claims were probably made in an attempt by unscrupulous individuals to gain a share of the funding that had been allocated by the Government to assist the survivors and the families of the missing persons or to receive other compensation. A number of senior officials from various disaster centres expressed this view in evidence. The initial grant offered by the MDC was K3000 per survivor/missing person.

Considering that the verification process is still ongoing and that it is possible that some dishonest claims have been made and not identified as such, the Commission considers that the number of missing person as provided by the MDC (219) cannot be considered to be accurate. The MDC accepted that this was so.

Infants

There is no record of how many infants were on board Rabaul Queen when the ship departed Kimbe on 1 February 2012. Therefore, the Commission has had to consider the
evidence provided by the various witnesses and that provided by the Provincial Disaster Committees when determining the number of infants on board the ship.

According to the various witnesses who have provided evidence to the Commission, there were, on the best assessment the Commission can make, about 10 to 12 infants on board *Rabaul Queen* when the ship departed Kimbe on 1 February 2012 (*Transcript page 754 and 1126*). These estimates are supported by the fact that, according to the MDC, no infants survived the sinking and 11 infants were registered as missing (*Exhibit 102*).

The registration of missing infants had been made by the parents of those infants, most of who were also on board the ship at the time of the sinking. Therefore, the Commission considers that the MDC record of missing infants is probably accurate.

**Conclusion**

Considering all the available evidence, the Commission concludes that there were at least 365\(^9\) and possibly as many as 384\(^10\) ticketed passengers over the age of three on board *Rabaul Queen* at the time of the sinking. This conclusion is based on, among other things, the evidence of survivors called before the Commission, the Commission’s analysis of ticket book records; the tally of boarded passenger ticket stubs; an analysis of the various records of survivors/missing persons; the robust nature of the Rabaul Shipping boarding practices; and the fact that no reliable contrary evidence has been provided to the Commission.

The Commission further concludes that there were 16 ‘crew members’; and about 11 infants under the age of three (3) on board the ship at the time. Therefore, in total, there were at least 392 or possibly as many as 411, persons on board *Rabaul Queen* when the ship sank on the morning of 2 February 2012.

With respect to the search and rescue operations, the Commission concludes that 246 persons were rescued from the sea and the bodies of four (4) deceased persons were recovered.

Therefore, the Commission has determined that there are at least 142, and possibly as many as 161 persons missing. Four (4) people tragically died and their bodies have been recovered. The remaining missing persons are presumed dead as a result of the disaster. The tables below express these findings in a tabulated form.

<table>
<thead>
<tr>
<th>Crew members</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ticketed passengers</td>
<td>at least 365 and possibly as many as 384</td>
</tr>
<tr>
<td>Infants</td>
<td>11</td>
</tr>
<tr>
<td>Total on board</td>
<td>at least 392 and possibly as many as 411</td>
</tr>
</tbody>
</table>

\(^9\) Ticket stub tally (360) + passengers with no ticket stub record but confirmed by the Commission as being on board (5)

\(^10\) Total number of tickets sold for the voyage (393) – passenger refunds (9)
The Commission had intended to identify all those people who travelled on board *Rabaul Queen* on its final voyage. However, the lack of any manifests, the quality of record keeping by both Rabaul Shipping and the various Disaster Centres, the propensity for Papua New Guinean’s to use more than one name and the fact that identification was not required at the time of booking or boarding (with many people in Papua New Guinea not carrying identification) made it a practical impossibility to complete this task accurately. Therefore, the Commission has chosen not to publish a list of names because it cannot guarantee that the list is complete and 100 per cent accurate.

<table>
<thead>
<tr>
<th>Total on board</th>
<th>at least 392 and possibly as many as 411</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survivors</td>
<td>246</td>
</tr>
<tr>
<td>Recovered bodies</td>
<td>4</td>
</tr>
<tr>
<td>Missing</td>
<td>at least 142 and possibly as many as 161</td>
</tr>
</tbody>
</table>
CHAPTER 5 – WEATHER FORECASTS AND CONDITIONS

The Papua New Guinea National Weather Service

The National Weather Service (the Service) is a division within the Papua New Guinea Department of Transport and operates from offices in Port Moresby. The Service is headed by Mr Sam Maiha, who has been its Acting Director since 2005.

The Service has 14 observation stations distributed throughout the country [including in Lae (Nadzab airport), Rabaul and Kimbe (Hoskins airport)], each manned by a trained meteorological observer. Each hour, the observers send weather observation data through to Port Moresby where it is used in association with the 3 hourly synoptic reports [received from the Australian Bureau of Meteorology (BoM)] to compile weather charts. Then, with the aid of the computer modelling, forecasts and wind warnings are derived and then issued.

The forecasting office is said to be a 24 hour operation, manned by a duty forecaster and at least two other people. However, evidence provided by the Assistant Director of the Service, (Transcript page 313), was that there have been occasions in the past where the personnel rostered to man the forecasting office have not turned up for work and therefore the office was not manned at all.

Coastal water forecasts

These forecasts are for coastal Papua New Guinea waters within 60 nautical miles (111 kilometres) from the coastline.

Coastal water forecasts are derived using the surface wind data collected at the observation stations. That data, combined with sea, swell and wave height data obtained from the Australian Bureau of Meteorology’s Darwin office, and the computer modelling, is used by the Service to produce the coastal water forecasts.

The coastal waters forecasts are issued by Port Moresby and are current for a 24 hour period from either 12 pm or 8 pm each day.

The Papua New Guinea coastal waters are divided into seven areas:

- Waters of Southern PNG/Indonesia border thru Daru, Kiwai Island to Yule Island.
- Waters of Yule Island to Hood Point to Suau Island.
- Waters of Suau [Samarai] Island to Cape Vogel to Finschhafen.
- Waters of Finschhafen/Vitiaz Strait thru Madang, Wewak to Vanimo and northern PNG/Indonesian border.
- Waters of Manus and New Britain.
- Waters of New Ireland and Bougainville.

If there are any wind warnings current (strong and/or gale) for the coastal waters, this is given at the top of the forecast. The warnings themselves are also issued on a separate notice.
Ocean forecasts

Ocean forecasts are derived by the Service using the computer modelling and data collecting deep water ocean buoys. These forecasts are not based on the observations used in the coastal waters forecasts.

Like the coastal waters forecasts, ocean forecasts are issued by the Service and are current for a 24 hour period from either 12 pm or 8 pm each day.

The ocean forecasts areas are for the:

- Coral Sea
- Solomon Sea
- Bismark Sea and
- Pacific Ocean

Any current wind warnings are given at the top of each forecast and immediately below that is a summary of the synoptic situation\(^{11}\) as it was at either 4 am (for the 12 pm forecast) or 10 am (for the 8 pm forecast). Again, any current wind warnings are issued on a separate notice.

Wind warnings

Wind warnings issued by the Service are the result of the forecasts above. Any warning is issued daily at 5 am, 11 am or 5 pm and then reviewed at 11 am, 5 pm or 5 am respectively.

These warnings take the form of either a strong wind warning or a gale wind warning. Strong wind warnings are issued when winds of between 25 and 33 knots\(^\text{12}\) are forecast, thereby causing rough seas. The Beaufort Scale\(^\text{13}\) (*Exhibit 186 and attached as Appendix 3*) indicates that winds of this speed can cause wave heights of 4.0 to 5.5 m. This would result in the sea ‘heaping up’, with some foam from breaking waves being blown into streaks along the wind direction. There would also be moderate amounts of airborne spray.

A gale wind warning is issued when winds of between 33 and 47 knots are forecast, thereby causing very rough and high seas. The Beaufort Scale indicates that winds of this speed can cause wave heights of 7.0 to 10.0 m. This would result in high waves, with crests that sometimes roll over. Dense foam would be blown along the wind direction and large amounts of airborne spray might begin to reduce visibility.

A note on both the strong and gale wind warnings is that all boats and small craft are asked/advised (depending on the warning) to take the necessary precautions whilst at sea.

\(^{11}\) The distribution of meteorological conditions over a wide area at a given time.

\(^{12}\) One knot, or one nautical mile per hour equals 1.852 kilometres per hour.

\(^{13}\) The Beaufort scale of wind force, developed in 1805 by Admiral Sir Francis Beaufort, enables sailors to estimate wind speeds through visual observations of sea states.
Under this note is a time that the warning will be reviewed.

Additional to strong and gale wind warnings, the Service can issue tropical cyclone warnings, advice and watches.

**Issuing forecasts and warnings**

The Service does not have a website which can be easily updated with the latest forecasts and warnings. Consequently, forecasts and warnings are sent by standard facsimile to a list of interested parties. These parties include the coastal radio station, shipping line offices and interested individuals. Copies are also sent to a number of FM radio stations and to EMTV (Media Niugini Limited), the national television service.

However, despite Rabaul Shipping’s head office in Rabaul being on the automated facsimile list, records from PNG Telikom show that no faxes were sent to Rabaul Shipping in late January/early February got through *(Transcript page 310 - 311)*. Furthermore, Captain Sharp stated that he had never received any faxes and had never requested any information from the Service.

If a shipping company is seeking a copy of the latest forecast or wind warning, they can contact the forecasting office at any time and a copy should be sent to them. However, if a member of the public wants a copy of the latest forecast or warning, they can only contact the forecasting office during office hours to request a copy.

Despite the availability of this service, Rabaul Shipping did not do this at any time, with Captain Sharp preferring to use the websites of non-Papua New Guinea weather forecasting services. However, the Star Ships (PNG) Limited office in Alotau appears to have received weather forecasts in January and February 2012 *(Exhibit 417)*. Captain Sharp said that he was not aware of this until after the ship sank. Clearly someone in authority considered, for good reason, that it was worthwhile to obtain forecasts and warnings from the Service, even if Captain Sharp did not hold this view.

**Forecast wind speeds and wave heights**

In Australia, the BoM forecasts ocean weather and sea conditions. They, like their Papua New Guinea counterparts, issue forecasts and wind warnings to ships operating in sea and coastal regions of Australia.

With regard to wind speed and direction, as contained in the BoM forecasts, the wind speed and direction are average (or mean) values over a 10 minute period at a height of 10 metres *(Exhibit 344)*. Wind speeds usually increase with height above the sea-surface. When there are expected variations along a coastal area a range may be given, for example 15 to 25 knots.

With regard to the BoM sea and swell forecasts, according to information on the website: forecasts of sea and swell in coastal waters forecasts are given in metres and describe the height, which is the average height of the highest one-third of the waves. So, what this means is, that some waves will be higher and some lower than the forecast (and observed) height.
The BoM includes the following words on each and every forecast and warning issued:

‘PLEASE BE AWARE

Wind gusts can be 40 percent stronger than the averages given here, and maximum waves may be up to twice the height.’

The Papua New Guinea Weather Service does not include this type of warning. Consequently, it is likely that many of those receiving the forecasts/warnings do not appreciate the fact that the figures quoted in the forecasts and warnings are not the maximum heights or speeds.

The following are a synopsis of the weather forecasts and warnings issued by the Papua New Guinea National Weather Service between 31 January and 2 February 2012.

**Coastal forecasts (Exhibits 17 and 20)**

**Waters of Samarai Island to Cape Vogel to Finschhafen –**

- 0615 hrs 31st – Seas 1.5 to 2.0 metres, Northwest winds 25/30 knots, rain and thunderstorms
- 1130 hrs 31st – Seas 1.5 to 2.0 metres, Northwest winds 25/30 knots, rain and thunderstorms
- 1900 hrs 31st – Seas 1.5 to 2.5 metres, Northwest winds 25/34 knots, scattered showers
- 0710 hrs 1st – Seas 2.0 to 3.0 metres, Northwest winds 20/34 knots, rain and thunderstorms
- 1135 hrs 1st – Seas 2.0 to 3.0 metres, Northwest winds 20/34 knots, scattered showers and thunderstorms
- 1000 hrs 2nd – Seas 2.5 to 3.5 metres, Northwest winds 33/47 knots, scattered showers and thunderstorms

**Waters of Finschhafen/Vitiaz Strait thru Madang, Wewak and Vanimo to northern PNG/Indonesian border –**

- 0615 hrs 31st – Seas 1.5 to 3.0 metres, Northwest winds 25/34 knots reaching gale force in Vitiaz, showers and thunderstorms
- 1130 hrs 31st – Seas 1.5 to 3.0 metres, Northwest winds 25/34 knots reaching gale force in Vitiaz, showers and thunderstorms
- 1900 hrs 31st – Seas 1.5 to 2.0 metres, Northwest winds 25/30 knots, scattered showers
- 0710 hrs 1st – Seas 2.0 to 3.5 metres, Northwest winds 20/34 knots reaching gale force in Vitiaz Strait, scattered showers and thunderstorms
- 1135 hrs 1st – Seas 2.0 to 3.5 metres, Northwest winds 20/34 knots reaching gale force in Vitiaz Strait, scattered showers and thunderstorms
- 1000 hrs 2nd – Seas 2.0 to 3.5 metres, Northwest winds 20/33 knots, increasing to 47 knots about Vitiaz Strait, scattered showers and thunderstorms

**Waters of Manus and New Britain –**

- 0615 hrs 31st – Seas 1.5 to 3.0 metres, Northwest winds 25/34 knots reaching gale force about West New Britain, scattered showers
• 1130 hrs 31\textsuperscript{st} – Seas 1.5 to 3.0 metres, Northwest winds 25/34 knots reaching gale force about West New Britain, scattered showers

• 1900 hrs 31\textsuperscript{st} – Seas 1.0 to 2.0 metres, Northwest winds 25/30 knots, scattered showers

• 0710 hrs 1\textsuperscript{st} – Seas 2.0 to 3.5 metres, Northwest winds 25/34 knots reaching gale force about West new Britain, scattered showers and thunderstorms

• 1135 hrs 1\textsuperscript{st} – Seas 2.0 to 3.5 metres, Northwest winds 25/34 knots reaching gale force about West new Britain, scattered showers and thunderstorms

• 1000 hrs 2\textsuperscript{nd} – Seas 2.0 to 3.3 metres, Northwest winds 25/33 knots, increasing to 47 knots about West new Britain, scattered showers

\textbf{Wind warnings (Exhibits 25 to 28)}

The following strong wind warnings were issued for all Papua New Guinea coastal waters:

- Strong wind warning issued by the Service at 5 am 31 January: Strong northwest winds of 25/30 knots are expected to persist for the next 24 hours causing rough seas.

- Strong wind warning issued by the Service at 5 am 1 February: Strong northwest winds of 25/34 knots are expected to continue for the next 24 hours causing rough seas.

- Strong wind warning issued by the Service at 11 am 1 February: Strong northwest winds of 25/34 knots are expected to continue for the next 24 hours causing rough seas.

- Strong wind warning issued by the Service at 5 pm 1 February: Strong northwest winds of 25/34 knots are expected to continue for the next 24 hours causing rough seas.

- Strong wind warning issued by the Service at 5 am 2 February: Strong northwest winds of 25/33 knots are expected to continue for the next 24 hours causing rough seas.

The following gale wind warnings were issued for all coastal areas southern Papua New Guinea/Indonesian border through (sic) Western Province to Gulf Province to Central Province and Milne Bay islands, including Finschhafen/Vitiaz Strait to West New Britain:

- Gale wind warning issued by the Service at 5 am 1 February: Northwest winds of 34/48 knots are expected to persist for the next 24 hours causing very rough and high seas.

- Gale wind warning issued by the Service at 11 am 1 February: Northwest winds of 34/48 knots are expected to persist for the next 24 hours causing very rough and high seas.

- Gale wind warning issued by the Service at 5 pm 1 February: Northwest winds of 34/48 knots are expected to persist for the next 24 hours causing very rough and high seas.

- Gale wind warning issued by the Service at 5 am 2 February: Northwest winds of 33/47 knots are expected to persist for the next 24 hours causing very rough and high seas.
Ocean forecasts (*Exhibits 31 and 32*)

**Solomon Sea** –
- 31st - Seas rather rough, Northwest winds 25/33 knots, rain and thunderstorms
- 31st - Seas rather rough, Northwest winds 25/33 knots, rain and thunderstorms
- 1st - Seas rough to high seas, Northwest winds 34/48 knots, scattered showers and thunderstorms
- 2nd - Seas rough to high seas, Northwest winds 33/47 knots, showers and thunderstorms
- 2nd - Seas rough to high seas, Northwest winds 33/47 knots, showers and thunderstorms

**Bismark Sea** –
- 31st - Seas moderate to rough, Northwest winds 20/30 knots, scattered showers
- 31st - Seas moderate to rough, Northwest winds 20/30 knots, scattered showers
- 1st - Seas moderate to rough, Northwest winds 20/34 knots, scattered showers
- 2nd - Seas rough, Northwest winds 25/47 knots, showers
- 2nd - Seas rough, Northwest winds 25/47 knots, showers

**Captain Sharp’s weather document**

During his evidence, Captain Sharp (*Transcript page 1221 - 1222*) presented an ‘in house’ document that he himself produced on 31 January 2012, regarding the weather, and distributed to the Rabaul Shipping offices by fax (*Exhibits 136 and 176*) for forwarding to the Master of any ship which might be in port at the time. Captain Sharp referred to this document as ‘a weather report’.

Earlier in the hearings, Captain Sharp (*Transcript page 944 - 1054*) told the Inquiry that he does not use any weather forecasts produced by the Papua New Guinea National Weather Service but rather uses information he obtains from websites of the American Joint Typhoon Warning Centre (JTWC) and the Australian Bureau of Meteorology (BoM). He obtained reports which cover the area of operation of his ships (Papua New Guinea coastal waters and the Bismark and Solomon Seas) and then he compiled his own ‘weather report’ document for distribution.

For the document covering 31 January (*Exhibit 176*), which was given to *Rabaul Queen’s* Master in Rabaul, Captain Sharp wrote:

‘Weather 31st January 2012
GEIVE A COPY TO ALL OUR SHIPS IN YOUR PORT
Send to POM, Alo Lae Mad Wew Buk
Queensland Bureau of Meteorology is predicting 3 more Cyclones between February and March.
The weather has become much worse over the last 24 hours with the formation of the cyclone near Vanuatu.
Wind on Papuan Coast is rising and also between Vitias and Goodenough.
Services in Milne Bay may shut down Tuesday and Wednesday
Services in Vanuatu are stopped’
According to information obtained from the JTWC website (Exhibit 343), the JTWC is a joint United States Navy/Air Force task force which is located in Pearl Harbor, Hawaii. The JTWC is responsible for the issuing of tropical cyclone warnings in the North West Pacific Ocean, South Pacific Ocean and Indian Ocean for United States Department of Defence interests, as well as U.S. and Micronesian civilian interests within the command’s area of responsibility. The information produced by the JTWC is intended for the protection of primarily military ships and aircraft, as well as military installations jointly operated with other countries around the world.

The JTWC is, as its name suggests, a typhoon/hurricane/cyclone warning centre and not a ‘usual’ weather forecasting centre. It does not have the observation stations for domestic weather observations/recording and does not have the modelling tools employed by national weather services to enable it to forecast coastal waters and near-ocean waters conditions, either current or expected. Nor does the JTWC distribute the type of forecasts and warnings which are useful to ships’ Masters in determining the weather for their upcoming voyage.

Indeed there is a warning notice on the JTWC website which states:

‘Products on this website are intended for use by U.S. government agencies. Please consult your national meteorological agency or the appropriate World Meteorological Organization Regional Specialized Meteorological Centre for tropical cyclone products pertinent to your country, region and/or local area.’

Australian Bureau of Meteorology (BoM)

Like the Papua New Guinea National Weather Service, the Australian BoM is a national weather agency and the BoM provides weather and forecasting information to users in the aviation, maritime and land domains. In the maritime domain, the BoM produces marine wind warnings, forecasts and weather observations through a website. However,
its main areas of interest are the sea areas surrounding the Australian continent and its offshore island territories, like Christmas Island and Lord Howe Island.

Moving further away from the Australian Content, the BoM does produce ‘High Seas Forecasts’ and these forecast areas do take in countries to Australia’s north, including Papua New Guinea (Figure 14). According to the BoM website (Exhibit 344):

‘High seas forecasts are issued twice daily by the Regional Forecasting Centres in Perth, Darwin, Brisbane and Melbourne for the areas beyond the coastal waters [areas within 60 nautical miles of the coast] surrounding Australia.’

These forecasts are for large ocean regions and provide large region information, not the area-specific data that the Papua New Guinea National Weather Service coastal waters and ocean waters forecasts provide. For example, the BoM high seas forecast for the north eastern depicted above covers the area from the Equator to 28° S and from 142° E to 170° E. This area includes the Papua New Guinea island of New Britain and the area of Rabaul Queen’s voyage to Lae. The only wind information contained in the forecast is general for that entire area.

**Deficiency in Captain Sharp relying on the JTWC and the Australian BoM**

Neither of these online services provide weather forecasting and warning advice to a sufficient level of detail to enable Captain Sharp and the Masters of his ships, who might happen to be in port when he distributes his ‘in house’ weather forecast, to make a properly informed decision about the type of weather and sea conditions they can expect of their voyage.

The Papua New Guinea National Weather Service forecasts and warnings do provide this level of detail. However, Captain Sharp chose not to make use of the service or to make the information available to Rabaul Shipping ships.

In the days leading up to 2 February 2012, there was a strong wind warning in place for all Papua New Guinea coastal waters. At 5 am on 1 February, the first gale wind warning was issued and this included the sea area encompassing the passage of Rabaul Queen.
Coastal waters forecasts for the waters of Finschhafen/Vitiaz Strait and West New Britain clearly show that the weather was deteriorating from the time the ship sailed from Rabaul and got worst on 1 February.

Ocean forecasts for the Solomon and Bismark Seas clearly showed that the weather was not abating but was in fact deteriorating.

In not making use of the Papua New Guinea National Weather Service coastal and ocean forecasts and strong and gale wind warnings, Captain Sharp did not properly understand the serious weather and sea conditions facing any ship that was proceeding through Vitiaz Strait on the days leading up to the expected passage of Rabaul Queen.

The Master of Rabaul Queen was happy to accept Captain Sharp’s forecast without question on 31 January and did not seek to obtain any other forecasts or warnings after the ship departed Rabaul. Because of the inadequacy of the information provided to him in Rabaul, he was not aware that there was a strong wind warning current on 31 January or that there was a gale wind warning in place for West New Britain and Vitiaz Strait, issued on 1 February.

Despite not using the best available resources to establish what the forecast local weather and sea conditions were (and which gave forecast conditions greater than those in Captain Sharp’s document), Captain Sharp’s weather document (Exhibit 176) for 31 January clearly showed that the winds in the Vitiaz Strait region were expected to increase (his data showed up to 30 knots) between 31 January and 2 February. However, Captain Sharp showed no concern about the conditions that Rabaul Queen might be subjected to after it departed either Rabaul or Kimbe.

His weather document of 1 February (Exhibit 136) showed that the winds in the Vitiaz Strait were not expected to abate during the ship’s transit of the strait and, given this information, he still permitted the ship to depart Kimbe with no additional instructions to its Master.

It is noteworthy that in the 31 January document, Captain Sharp states that services in Milne Bay may be shut down on Tuesday and Wednesday (based on the expected winds of up to 20 knots). However, he makes no comment about ships operating in the Lae/Vitiaz Strait region not putting to sea when he has stated that winds of up to 30 knots can be expected in that region.

Giving a wind speed alone, and the absence of strong wind and gale wind warnings and associated expected sea conditions (heights and use of the terms ‘rough or very rough and high seas’), might not register in the minds of Rabaul Shipping Masters just what the conditions at sea are. It is easier for someone to picture in their minds seas that are rough or very rough as opposed to 30 knots of wind blowing on the surface of the ocean.

**Weather observations**

Throughout the voyage from Kimbe, Rabaul Queen was subjected to strong north-westerly winds and seas. As the ship left the relatively sheltered waters of the Dampier Strait, between Umboi Island and West New Britain, and entered the Vitiaz Strait, the evidence of many surviving passengers and crew clearly show that the force of the winds and seas increased significantly. All of the passengers described the
uncomfortable movement of the ship, the large waves, strong winds and the fear they were experiencing at the time.

The Master stated that the weather conditions were winds greater than 20 knots from the northwest, on the ship’s starboard quarter, and seas of 1.5 m when *Rabaul Queen* capsized (*Exhibits 185 and 217*).

The Master’s statement is supported, in part, by the Chief Mate who stated that the winds were 20 to 25 knots at the time (*Transcript page 1326 - 1353*). However, the Chief Mate goes on to say that the winds were 20 knots and the seas were 2 to 3 m while the ship was entering Vitiaz Strait, but still in the shelter of Umboi Island. He also states that at 0530, strong winds and waves of 5 to 6 m were pounding on the starboard side of the ship (*Exhibit 217*).

The Operations Manager of RD Tuna Fishing, Mr Ronaldo Lamparero, gave evidence to the Commission (*Transcript page 433 - 450*) that one of his ships, a 600 GT fishing ship operating in the Bismark Sea to the north of Kimbe, ceased fishing and took shelter behind Garove Island on 1 to 2 February 2012 due to strong winds (*Exhibit 99*). Mr Lamparero stated that this ship was not reliant on the weather reports provided by Service because the ship was fitted with a sophisticated weather facsimile machine (*Transcript page 439*).

In a statement of facts provided to the Commission by the Master of *Cap Scott* (*Exhibit 326*), the Master notes that his ship arrived on the scene of *Rabaul Queen*’s sinking at about 1140 on 2 February. The Master goes on to state that the weather conditions at that time were north-westerly, force 7 to 8 winds with gusts to force 9; sea state of 4 to 5 m (recorded in the deck log book at noon as ‘sea scale 5’) (*Exhibit 326*).

When *Cap Scott* received the RCC Australia alert relating to *Rabaul Queen*, the ship was on a northerly heading and to the north of the Vitiaz Strait. The ship had passed through the Vitiaz Strait earlier that morning. At 0200, 0400 and again at 0600 the weather was recorded in the ship’s bridge log book as force 7 winds and sea state ‘scale 5’ (*Exhibit 326*).

According to *Cap Scott*’s Master, the weather conditions continued to deteriorate and, at 1520 on 2 February, they noted them as force 9, 5 to 6 m seas.

At about 1600, the Master of *MOL Summer* reported to the Rescue Coordination Centre (RCC) in Australia (responsible for coordinating the communications and aerial search assets, and determining the search areas) that there were strong north-westerly winds in the area (*Exhibit 183*).

On the afternoon of 3 February, the Master of *MSC Carole* reported to RCC Australia that the weather in the search area was north-westerly winds at 30 to 45 knots with seas of 3 to 4 m (*Exhibit 183*).

The weather in the search area on 4 February was reported by the search and rescue assets as being north-westerly winds of up to 40 knots and seas of approximately 5 to 6 m (*Exhibit 319*).
These observations show that the weather and sea conditions in the area where Rabaul Queen sank were consistent with the forecasts and warnings issued by the Papua New Guinea National Weather Service on 1 February and the days following.

**Conclusion**

In the opinion of the Commission, at the time of Rabaul Queen’s capsize, the wind speed was probably in excess of 34 knots and the seas had become very rough with a probable significant wave height of about 4 m\(^1\)

The weather that was experienced by Rabaul Queen on the morning of 2 February 2012, was in the range of that that had been forecast by the Papua New Guinea National Weather Service. Furthermore, these weather conditions should not have been unexpected, given the time of year, the presence of at least two cyclones in areas south of Papua New Guinea, and the warnings which had been issued in previous years for January and February (*Exhibit 366*).

\(^1\) The term ‘significant wave height’ is defined as the average of the highest one-third of waves, which when measured generally corresponds closely with a mean wave height determined by eye. However, the value of the significant wave height experienced by the ship needs only to be known approximately due to the statistical fact that the maximum height of individual waves in the range relating to a specific significant wave height can be double the significant wave height.
CHAPTER 6 – STABILITY

Initial stability calculations undertaken in 1999

Before *Rabaul Queen* entered service in Papua New Guinea, Rabaul Shipping (Captain Peter Sharp) had calculations carried out in order to establish its stability for the coastal trade it would be undertaking, so that it could be issued with a registration and survey certificate by the then Department of Transport. These calculations were completed by an Australian based naval architect company, G.A. Glanville & Company. The Trim and Stability Booklet (stability book) contained calculations that could also be used by Rabaul Shipping and its crews to determine the safe loading and operation of the ship once it was in service. As the evidence transpired, it became apparent that the crew, including the Master of the ship, had no proper understanding of stability. In fact, they had never seen the ship’s stability book, or any other stability book. Captain Sharp advised Mr. Glanville by letter dated 16 January 1999 that ‘I had never seen a master 4 who understands what is written in the (stability) booklet’ (Exhibit 165).

In the letter of engagement provided by Rabaul Shipping to G.A. Glanville, dated 16 January 1999 (Exhibit 286), Captain Sharp listed the modifications made to the ship which, in addition to the original Japanese documents provided, would assist with the calculation of the ship’s stability for its current configuration. These modifications included:

- The replacement of the sliding aluminium access doors on the port and starboard side of the Upper Deck, at Frame 42, with standard watertight doors, with sill heights of 600 mm. Because of their height above the main deck, the aluminium doors were a limiting factor of the ship’s down flooding\(^\text{15}\) scale.
- Two stainless steel doors on the Upper Deck, at Frame 60, were replaced with two mild steel watertight doors with a sill height of 450 mm. These two doors were located at the forward end of the Upper Deck and led into the forecastle cargo store.
- The sill height of the watertight door on the Upper Deck, at Frame 23, which led into the engine room, was raised to 600 mm.

However, there was no mention of the area at the aft end of the accommodation on the Upper Deck being converted into a number of cabins for the engineering crew; changes to the first class accommodation area on the Promenade Deck (to convert part of it to the mother’s and children’s room); or modification of the crew rest area on the Bridge Deck to an accommodation area. These modifications to the Upper Deck are shown below (Figure 15).

The stability calculations were based on the original Japanese inclining data and the original documentation was provided to Rabaul Shipping by the naval architects G.A.

\(^{15}\) The entrance of water into a hold or compartment as a result of accidental damage, or from water being shipped onto deck, e.g. flooding due to collision, fractured water pipe or from the ingress of water from heavy seas.
Glanville and Company. Resulting from the calculations was a stability book, dated 28 April 1999 (Exhibit 42), several copies of which were given to Rabaul Shipping.

**Figure 15: Modifications made to the ship’s Upper Deck**

Just how the trim and stability calculations were undertaken is given in Mr Geoffrey Glanville’s affidavit to the Commission (Exhibit 165). Of note is the following point made in the affidavit:

> ‘An additional assessment of the ship’s stability was provided using a Severe Wind and Rolling Criteria. This criteria is now commonly used internationally for application to ships in unrestricted operation but was not a mandated criteria at the time of the RABAUL QUEEN assessment. A reference calculation was included for completeness. It is noted that the Severe Wind and Rolling Criteria is normally applied for unrestricted operation with application of an assumed steady wind of 50 knots. We were advised by Captain Sharp that the ship would be engaged in coastal operations and would seek shelter in the case of bad weather. The Severe Wind and Rolling calculation presented in the stability book used a reduced assumed steady wind speed of 45 knots instead of the 50 knots applied to unrestricted operations.’
>
> [Commission emphasis underlined]

Having completed the stability calculations, the following conditions were listed on the General Information page of the stability book (page 2):

1) Maximum number of passengers on Promenade Deck shall not exceed 57 persons at any time.
2) Double bottom fresh water tanks (P & S) to be kept pressed full at all times.
3) Fresh water to be used from aft peak tank prior to drawing from other tanks.
4) Bathrooms on Upper Deck to be intact and watertight (Frames 17 to 25).

**Comment on the initial stability calculations**

In his evidence to the Commission, Mr Rob Gehling, naval architect, made comment on the initial stability calculations carried out in 1999:

> ‘The calculation of any trim and stability condition is, of necessity, based on the weight of the lightship, together with the positions its vertical and longitudinal centres of gravity (VCG and LCG respectively). While these ‘lightship particulars’ are measured by inclining experiment at the conclusion of the ship’s construction, they are subject to change during a ship’s life through accumulation of paint, corrosion, alterations and additions, accumulation of stores, replacement of equipment and so
on. In fact, the text of SOLAS\textsuperscript{16} regulation II-1/5.5 now in effect internationally (but not given effect by Papua New Guinea) requires checks on these lightship particulars to be made every 5 years and the ship re-inclined\textsuperscript{17} if significant variation is found. In the case of \textit{Rabaul Queen}, the lightship particulars determined at the inclining experiment conducted on the ship at completion in 1982 were used for the latest Trim and Stability Booklet prepared in 1999 by G A Glanville & Co for the ship’s service in Papua New Guinea (\textit{Exhibit 42}) and no evidence has been provided of these particulars having been questioned or checked. They have not been corrected, for example, for changes from arrangements shown on the Japanese general arrangement plan (\textit{Exhibit 54}), including:

- Addition of inflatable liferafts on the wheelhouse deck;
- fitting of crew accommodation on the wheelhouse deck in space previously allocated to crew rest room;
- addition of a bulkhead separating the mothers and children’s room from the first class passenger space on the promenade deck; and
- fitting of crew accommodation on upper deck (previously allocated as passenger space), including bulkhead separating this crew space from passenger space.’ (\textit{Exhibit 332 at paragraph 11})

It should be noted that SOLAS generally applies only to ships engaged on international voyages, but has separate application for each of its chapters and the Safety of Navigation chapter, in particular, applies to all ships on all voyages. The requirements of SOLAS and the other IMO safety and environmental conventions are generally highly prescriptive and not open to interpretation, so as to facilitate their uniform enforcement by different surveyors and different port States.

Mr Gehling concludes by stating that:

‘Accuracy of the outcomes of stability calculations of this [stability] report, which are based on the original Japanese lightship particulars, must therefore be questionable.’ (\textit{Exhibit 332 paragraph 11})

In addition, Mr Gehling points out an issue with the 1999 calculation of the down flooding angle of the ship. He states:

‘However, the sketch on page 49 of the Trim and Stability Booklet indicates that the Upper Deck passenger space up to the lower sill of the sliding side windows has been used for calculation of the KN\textsuperscript{18} values (page 50 of Exhibit 42). This gives a misleading indication of stability, as the righting lever (\(G_fZ\)) curve resulting from the use of these values is incorrect once water has over-topped this sill, resulting in water being trapped on the inside of the space and possibly flooding down into the

\textsuperscript{16} \textit{The International Convention on Safety of Life at Sea}, 1974 to which Papua New Guinea is a party (although not to the Protocols of 1978 and 1988 to this convention).

\textsuperscript{17} ‘Inclining’ or subjecting a ship to an inclining experiment is a procedure under which the lightship particulars are measured by measuring the drafts and heeling it using known weights transferred known distances, all conducted when the ship is as close as practicable to the lightship condition.

\textsuperscript{18} KN values are the horizontal distance between the ship’s centreline at baseline (K, keel at midships) and the line of action of the buoyant force (transverse centre of buoyancy) in still water for various assumed heel angles (\(\Theta\)). When combined with the effect of the height of the ship’s vertical centre of gravity (KGf), KN values provide righting lever values through the formula \(G_fZ = KN - KGf\sin\Theta\).
Cabin Deck space below. The problem is mitigated somewhat because the deckhouse side doors at frame 42, which should immerse before the sliding windows, were nominated as downflooding points at which the GZ curve should be terminated. G A Glanville & Co has confirmed to Counsel Assisting that the KN (stability) data has been calculated on the realistic assumption that the ship is free to trim as it heels and the downflooding curve (page 41 of Exhibit 42) has been calculated similarly.‘ (Exhibit 332 paragraph 22)

Given the evidence provided by Mr Gehling, the Commission is of the opinion that the intact stability calculations undertaken by G.A. Glanville in 1999 did not accurately reflect the condition of Rabaul Queen on 2 February 2012 or when it entered service in Papua New Guinea in 1999. The Commission considers that:

- *Rabaul Queen’s* lightship particulars should have been corrected for alterations and modifications made since it was inclined in Japan in 1982 and should not have been assumed to be unchanged over this lengthy period. In this regard, the ship should have been monitored for change of lightship particulars through regular checks.
- *Rabaul Queen’s* stability book should have been updated to take account of modifications and alterations, together with the resulting changes in lightship particulars over time.
- *Rabaul Queen’s* Master and crew should have been provided with an up-to-date copy of the stability book and the ship should have been operated in accordance with that book, including compliance at all times with the specified intact stability criteria.
- The KN data provided in the stability book should not have included the Upper Deck passenger space unless that area was made weathertight (within the meaning of the International Convention on Load Lines).
- In the absence of securing the ship’s weathertight integrity, as indicated in the preceding point, the ship should not have been operated or permitted to operate in open waters such as its route from Kimbe to Lae in conditions of wind and sea no greater than moderate (i.e. no more than 6 (see Appendix 3), which was consistent with the Survey Certificate issued 24 February 2003).

**Loadline assignment**

Closely connected with intact stability is the assignment of loadline, for which the main purposes are:

- Providing a reserve of buoyancy; and
- securing the reserve of buoyancy by providing a line of weathertight\(^\text{19}\) integrity above the buoyancy.

\(^{19}\) Weathertight means that in any sea conditions water will not penetrate into the ship.
Associated with both of these purposes is the need to ensure that water does not accumulate on deck and is drained so as to avoid reducing reserves of buoyancy and stability.

The well-known freeboard mark is assigned under the International Convention on Load Lines 1966 as a result of calculations that start with a tabular freeboard based on the ship’s length, corrected for depth, block coefficient, superstructures and sheer. Assignment is also conditional upon the ship’s structure being sufficiently strong for the ship to operate at the assigned freeboard and on provision of adequate stability data to enable the Master to be provided with ‘sufficient information in an approved form to give him guidance as to the stability of the ship under varying conditions of service’.

Associated with the freeboard assignment is the issue of details of ‘conditions of assignment’, which are the fittings such as hatches, coamings, weathertight doors, ventilators and any covers required to enable the line of weathertight integrity mentioned above to be secured in way of these fittings.

In 2004, G.A. Glanville & Company was again approached by Rabaul Shipping (Captain Sharp) with a request to make a loadline assignment calculation for the ship, in accordance with the International Convention on Load Lines 1996 for submission to the Department of Transport.

According to Mr Glanville’s affidavit to the Commission:

‘The calculation was to be based on existing drawings of the ship - the calculation did not include an inspection of the ship and the location of openings and dimensions were assumed to be in accordance with the referenced plans. A Conditions of Assignment Survey was not conducted.

A formal Loadline Calculation was submitted to Rabaul Shipping as Document No 1664/C02 dated 10 March 2004. An assigned loadline represents the maximum draft and thereby the maximum load that can be applied to a ship. The maximum draft is constrained by compliance with all of the following factors:

• Geometric loadline in accordance with the International Load Lines Convention;
• Maximum scantling (structural) draft;
• Maximum stability draft - compliance with stability criteria must be shown for the assigned loadline;
• Compliance with damaged stability requirements if applicable.

The loadline calculation prepared by our office stated as follows:

• Geometric loadline max draft = 2.81 metres
• Design draft = 2.25 metres
• Maximum stability draft = 2.25 metres
• Non-compliance with subdivision requirements (damaged stability) was noted.

From the loadline calculation it is clear that the maximum loadline applicable to the ship is a minimum freeboard of 953mm corresponding to the maximum design and stability draft of 2.25 metres. It is understood that the PNG Authority subsequently assigned a loadline of minimum 393mm freeboard corresponding to a draft of 2.81 metres.
Our company has not communicated directly with PNG authorities at any time in matters relating to RABAUL QUEEN. All communications in relation to RABAUL QUEEN have been directly with Captain Sharp.’ (Exhibit 165)

In 2004, the National Maritime Safety Authority (NMSA) issued Rabaul Queen with an International Loadline Certificate, 1966 (Exhibit 41), with validity through to 7 July 2007. However, the loadline corresponded to a draught of 2.81 m, with a resulting freeboard of only 393 mm, and not a loadline corresponding to a maximum stability draught of 2.25 m and a corresponding minimum freeboard of 953 mm (Figure 16) (Exhibit 164).

Figure 16: The ship’s two load lines

No evidence was provided to the Commission that might explain why this error was made when the ship’s loadline certificate was issued. As a result, the Commission asked Mr Gehling to look into the issuing of the loadline certificate as part of his review of stability issues. In his report to the Commission, Mr Gehling stated:

‘The action of issuing this certificate appears to have been erroneous as:

- The ship’s primary structural design drawing, the ‘midship section’ plan which is included in Exhibit 43, indicates that the ship was not designed for a midships draft any greater than 2.25 metres compared with the draft of about 2.8 metres corresponding to the assigned summer freeboard; the Commission has not seen any evidence to indicate that a structural assessment has been carried out for the assigned draft;
- There is no evidence of the existence or use of a conditions of assignment document;
- The ship’s stability book does not include a loading condition demonstrating how Rabaul Queen could be loaded to safely operate at the assigned freeboard; there was no copy of the Booklet provided on board in accordance with the requirements of both the ICLL and Section 7 of the USL Code.
- The construction of the passenger space on the Upper Deck was not weathertight, having sliding windows... and no means of preventing water entering that space from flooding down the stairways into the Cabin Deck space below.’ (Exhibit 165 Paragraph 27)

With regard to the loadline calculations undertaken in 2004, when questioned, Captain Sharp (Transcript page 1026), while remembering that he discussed a loadline assignment with Mr Glanville in 2004 (because the ship was going on a voyage to Palau), did not remember asking Mr Glanville to complete any loadline assignment calculations and said that no ‘conditions of assignment’ document for Rabaul Queen, or of any loadline survey including examination of the conditions of assignment, was completed. In addition,
Captain Sharp did not produce any instructions or procedures for closing and securing the relevant closing appliances to secure the ship’s weathertight integrity in heavy winds and seas such as were being experienced at the time of the capsize.

It is the opinion of the Commission that the International Loadline Certificate should not have been issued to *Rabaul Queen* in 2004 because there was a mistake in the allocation of freeboard. Additionally, the ship should not have been operated in open waters where the sea conditions were greater than moderate (i.e. up to and including Force 6), because heavier conditions can be expected to result in sea water on the Upper Deck, thereby increasing the safety importance of the inadequate weathertight protection of the Upper Deck passenger space and openings.

**Captain Sharp and the Master’s misunderstanding of the loadline assignment**

Both Captain Sharp (*Transcript page 243 – 247 and at page 1041*) and the Captain Tsiau (*Transcript page 1446*) stated that because the loadline was not submerged, *Rabaul Queen* could be assumed to have adequate stability without carrying out any stability calculations. This was a false assumption as no evidence has been brought before the Commission to indicate that any stability calculations have ever been carried out for operations at the assigned freeboard draft. In fact, the stability book (*Exhibit 42*) states on page 2 ‘maximum number of passengers on promenade deck shall not exceed 57 persons at any time’, with a similar statement also appearing on page 13.

It also shows that both men do not understand, or pretended not to understand, why a loadline is assigned to a ship and were attempting to use it as a poor excuse for justifying the carriage of more than the maximum permissible number of passengers. To use their reasoning, it would have been possible to carry even more passengers as long as the loadline was not submerged. This line of thought is clearly not borne out by the principles of loadline assignment or common sense.

Notwithstanding whether the loadline was immersed, *Rabaul Queen* should not have been loaded at any time with more than the number of passengers shown on its Survey Certificate (*Exhibit 39*) and distributed in accordance with any restrictions that might be imposed such as through the stability book. In this regard, it would have been appropriate to provide fixed seating for all passengers to ensure they were appropriately distributed, comfortable and that their movement was more restricted in terms of its possible adverse effect on the ship’s stability.

**Stability on departure from Kimbe 1 February 2012**

Based on evidence from the ship’s owner, Rabaul Shipping, and its Master, when departing Kimbe, *Rabaul Queen* had its midships fresh water tanks (port and starboard) filled permanently with fresh water, while the aft peak tank was topped-up with fresh water at Kimbe for use during the voyage to Lae. The ship’s midships fuel oil tank had been filled prior to departure on the previous leg from Rabaul to Kimbe, but was not topped-up at Kimbe and was consumed on the owner’s evidence at a rate of 250 litres per hour. The fore peak tank was kept permanently empty.

Much of the evidence given to the Commission by various witnesses related to the number of passengers on board on the final voyage from Kimbe. From this information,
the stability calculations undertaken by Mr Gehling in respect of Rabaul Queen’s final voyage were based on total passenger numbers of 360, 365, 380 and 400 adult passengers respectively, plus 16 crew. Evidence was given in relation to the numbers of passengers in the smaller spaces of first class passenger space (22 seated passengers with no passengers sitting on deck), mothers’ and children’s room (15 or more mothers and about 35 children) and those sheltering in the men’s toilet (10).

When calculating the departure stability, an average weight of 10 kg was used for infants under the age of three, who were not ticketed, while the remaining children (about 20) were assumed to average 20 kg. Evidence in relation to the leg from Rabaul to Kimbe, which was similarly loaded as the final leg to Lae, indicates that the Cabin Deck was less desirable for passengers than the higher two decks. Also, some passengers gave evidence that they had left their bags in the Cabin Deck but spent much of the voyage on higher decks.

It was assumed for the calculations of the stability that the passengers on the Cabin Deck had about 10 per cent more deck space than those travelling in the second class spaces on the higher decks. Further, to take account of the lack of protection from the elements in the second class passenger area on the Promenade Deck, the usable part of that area was taken to exclude the 900 mm along each side of the ship.

For the purpose of intact stability calculations undertaken by Mr Gehling, passengers were assumed to be distributed in the first class and mothers’/children’s spaces on the Promenade Deck and the men’s toilet space on the Upper Deck, all according to evidence given to the Commission by passengers, and evenly on a per square metre basis (using Exhibit 40) across the remaining second class passenger spaces excluding open decks.

Taking account of the information provided by Captain Sharp (Exhibit 165) that the average weight of Papua New Guineans carried on board the ship was significantly below 65 kg, an average of 75 kg was used with the assumption that it includes hand-baggage of at least 10 kg. To provide an indication of the sensitivity of outcomes to this assumption, a second set of stability calculations was undertaken assuming the average weight per passenger of 82.5 kg including hand luggage.

While Mr Gehling provided the Commission with calculations considering various passenger number configurations, average passenger weights and down flooding angles; the loading condition provided in the following tables (Figure 17) is considered by the Commission to be closest to that when Rabaul Queen capsized and sank on the morning of 2 February 2012 (Exhibit 399). The Commission had the benefit of observing many survivors and also asking them their weights. One survivor gave evidence of weighing over 100 kg. The Commission does not accept that an average fair weight for passengers including hand baggage, would be less than 75 kg. The average is likely to be at least 75 kg.

The calculations show that, at the time of the capsize, the ship did not meet two of the required intact stability criteria; maximum Gz and angle of passenger crowding. The Commission does not adopt the use of the word ‘fails’, but prefers to use the terminology ‘does not meet’. It is important to note that both IMO and the ship’s stability book (Exhibit 42) require all intact stability criteria to be met and that the ship should not have been allowed to depart from any port unless all conditions are met.
**Figure 17:** Loading condition and stability calculations at the time of *Rabaul Queen’s* capsize (365 passengers at 75 kg each including baggage, 16 crew and 12 infants)

<table>
<thead>
<tr>
<th>Item</th>
<th>Mass (t)</th>
<th>VCG (m.AB)</th>
<th>Vertical Moment (t.m)</th>
<th>LCG (m. fwd m.s)</th>
<th>Longit. Moment (t.m)</th>
<th>F.S.M. (t.m)</th>
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</thead>
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<tr>
<td>Promenade Deck 22 First Class Pax</td>
<td>1.65</td>
<td>6.65</td>
<td>10.97</td>
<td>11.20</td>
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<tr>
<td>Prom Deck 15 Mothers, 12 Infants=3yo</td>
<td>1.25</td>
<td>6.65</td>
<td>8.28</td>
<td>4.60</td>
<td>5.73</td>
<td></td>
</tr>
<tr>
<td>Prom Deck M-C Room 23 Children</td>
<td>0.46</td>
<td>6.65</td>
<td>3.06</td>
<td>4.60</td>
<td>2.12</td>
<td></td>
</tr>
<tr>
<td>Prom Deck 76 2nd Class Pax</td>
<td>5.70</td>
<td>6.65</td>
<td>37.91</td>
<td>-2.18</td>
<td>-12.43</td>
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</tr>
<tr>
<td>Upper Dk 80 2nd Class Pax</td>
<td>6.00</td>
<td>4.40</td>
<td>26.40</td>
<td>9.60</td>
<td>57.60</td>
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<tr>
<td>Mens Toilet 10 Pax</td>
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<td>3.30</td>
<td>-8.00</td>
<td>-6.00</td>
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</tr>
<tr>
<td>Cabin Deck 139 2nd Cl Pax</td>
<td>10.28</td>
<td>1.90</td>
<td>19.52</td>
<td>11.20</td>
<td>115.08</td>
<td></td>
</tr>
<tr>
<td>Crew &amp; Effects</td>
<td>1.36</td>
<td>4.10</td>
<td>5.58</td>
<td>2.33</td>
<td>3.17</td>
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<tr>
<td>Fresh Water Ballast (P+S)</td>
<td>13.92</td>
<td>0.54</td>
<td>7.52</td>
<td>6.47</td>
<td>90.06</td>
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</tr>
<tr>
<td>Misc FW 1</td>
<td>0.20</td>
<td>2.26</td>
<td>0.45</td>
<td>-4.50</td>
<td>-0.90</td>
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</tr>
<tr>
<td>Misc FW 2</td>
<td>0.23</td>
<td>4.10</td>
<td>0.94</td>
<td>-9.00</td>
<td>-2.07</td>
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</tr>
<tr>
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<td>5.98</td>
<td>2.09</td>
<td>-7.20</td>
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<td>Misc FW 4</td>
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<td>-4.46</td>
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<td>F.O.T</td>
<td>7.27</td>
<td>0.23</td>
<td>1.67</td>
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<tr>
<td>L.O. 1</td>
<td>1.38</td>
<td>1.79</td>
<td>2.47</td>
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</tr>
<tr>
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<td>0.52</td>
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<tr>
<td>Machinery Fluid Constants</td>
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<td>2.76</td>
<td>-5.19</td>
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<tr>
<td>Deck Cargo Aft</td>
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<td>5.20</td>
<td>2.81</td>
<td>-15.00</td>
<td>-8.10</td>
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<tr>
<td>3 half-empty oil drums stowed aft</td>
<td>0.32</td>
<td>5.20</td>
<td>1.64</td>
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<tr>
<td>Stores Fwd</td>
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<td>2.35</td>
<td>20.20</td>
<td>10.10</td>
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<tr>
<td>Stores Aft</td>
<td>0.30</td>
<td>3.60</td>
<td>1.08</td>
<td>-18.50</td>
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<td>FPT Fresh Water</td>
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<td>19.20</td>
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<tr>
<td>APT Fresh Water</td>
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<td>7.50</td>
<td>-19.26</td>
<td>-96.30</td>
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<td>Total Deadweight</td>
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<td>2.61</td>
<td>158.00</td>
<td>0.38</td>
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<td>Lightship</td>
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<td>1090.52</td>
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<td>1248.51</td>
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<td>FSC</td>
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<td>Draft (LCF)</td>
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<td>KGₙ</td>
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<td>LCB</td>
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<tr>
<td>GI/M</td>
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<td>MCT1Cm</td>
<td>6.300</td>
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<tr>
<td>Trim</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.270</td>
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</tr>
<tr>
<td>Draft at FP</td>
<td>1.420</td>
<td>Draft F B/L</td>
<td>1.970</td>
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<td></td>
</tr>
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<td>Draft A B/L</td>
<td>2.241</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Draft m/s</td>
<td></td>
<td></td>
<td>2.105</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Note: Mr Gehling was not able to truncate the righting lever (G\textsubscript{fZ}) curves at the downflooding angle (Θ\textsubscript{f}). This angle has been taken from page 41 of the Trim and Stability Booklet (*Exhibit 42*).

Further, the software used for the loading condition spreadsheets does not provide a G\textsubscript{fZ} curve of sufficient accuracy to interpolate the angle of maximum G\textsubscript{fZ}. The flag on whether the angle of maximum G\textsubscript{fZ} occurs at an angle of less than 25° has therefore been set by taking the slope of the G\textsubscript{fZ} curve to be the same as the straight line between the G\textsubscript{fZ} values at 20° and 30°.

**Figure 18:** Correction of G\textsubscript{fZ} curve for the effect of list
Captain Tsiau gave evidence (Transcript page 1408) that he did not calculate the ship’s stability prior to the ship departing Kimbe as he was of the understanding that satisfactory stability could be assumed as long as the loadline mark was not immersed. This assumption is not justified by any loading condition in the stability book. Indeed the book’s specified limitation of total passengers carried on the Promenade Deck to a maximum of 57 appears to be based on maintaining adequate intact stability to meet the stability criteria.

As a result of Captain Tsiau’s inaction, he was not aware that Rabaul Queen’s loading condition did not meet all of the required stability criteria and, hence, should not have departed Kimbe.

**Reported port list**

A number of witnesses stated that the ship had an initial list to port when it departed Kimbe and that this list was not rectified at any time during the voyage. While the existence of such a list was disputed by members of the crew, possibly being a reflection on their seamanship or that they were use to it, the fact that it was reported by a number of independent witnesses would seem to indicate that there was a list of sufficient size for it to be observed, for example a minimum of at least 2 degrees; some survivors indicated that may have been as large as 5 degrees. Pastor Daniels, who was the Master of Rabaul Queen at one time in 2011 and also a passenger on the ship that year, observed the ship listing at departure. He was told by the crew that the situation was like this all the time (Transcript page 915).

A number of passengers also gave evidence to the Inquiry that the ship’s list to port increased during the voyage, leading to the ship’s crew calling upon at least some passengers to move to starboard to ‘balance the ship’ sometime after 0500.

The cause of the increased list is not clear, but there may be a number of relatively small factors which cumulatively produced the increase. For example, the Chief Mate reported that three drums of oil carried on the poop deck had broken their lashings and he had to shift and secure them shortly before the ship capsized. A further example is that a number of passengers told the Commission that water from waves was flooding the deck of the female amenities on the port side during the morning hours, through to immediately before capsize (Transcript page 1679 – 1708).

The effect of such a list is that it lowers the $G_fZ$ curve until it intersects the horizontal axis at the angle of list, as shown below for a 2 degree list (Figure 18). This reduces the area under the $G_fZ$ curve and so further reduces the ship’s reserves of stability and its ability to recover when heeling forces are applied. Nonetheless the list is considered to be a contributory factor to, rather than a primary cause of, the capsize.

**Use of the port and starboard fresh water tanks**

There was a requirement in the 1999 trim and stability calculations undertaken by G.A. Glanville & Co for the two dedicated fresh water tanks under the Cabin Deck passenger accommodation to remain full at all times, and for fresh water only to be taken from the after peak tank. There were two reasons for this: to ensure that there was an amount of permanent weight down in the bottom of the ship because there were no ballast tanks to
provide this weight; and as fresh water is consumed from these tanks, they became subjected to the effect of free surface and this causes a loss of dynamic stability of the ship. This condition was given on page 2 of the stability book (Exhibit 42).

In regard to this condition, both Captain Sharp and Captain Tsiau gave evidence to the Commission that these fresh water tanks were not used at any time and therefore were always full.

In direct contradiction to this, a number of passengers told the Commission that after they had boarded the ship in Kimbe, they saw a fresh water hose running through the Upper Deck passenger accommodation to a pipe on the port side of the ship. They said that when that tank overflowed, the hose was put into the filling pipe of the tank on the other side of the ship. Before that tank overflowed, the hose came out of the pipe and the Master asked the man with the hose if the tank was full. He was told no, but the Master then said that there was enough water in the tank, and to remove the hose as the ship had to sail.

In addition, at least one witness standing outside the men’s toilet not long before the ship capsized said that he saw a crew member using a hose, connected to a tap on the starboard side of the Upper Deck (near the toilets), to fill the tank on the starboard side of the ship; he said the hose ran up to almost the front of the passenger accommodation, on the starboard side. It was this witness’s impression that the crew were filling this tank in an effort to ‘balance the ship’, which was heeling to port at the time. Not long after the tank overflowed, the Chief Mate (Transcript page 1342) began telling the passengers to ‘balance the ship’.

**Stability condition on the capsize**

Although *Rabaul Queen*’s loading condition did not meet all of the specified stability criteria, Mr Gehling’s calculations show that the ship had sufficient positive stability to indicate that lack of reserves of stability was not the primary cause of the sudden and large angle of heeling resulting from the first wave, as discussed earlier in this Report.

Given the information provided by Mr Gehling and summarised in the above tables, the Commission is of the opinion that the ship was unsafe for the voyage as it did not meet the required stability criteria and accordingly should not have sailed.

The lack of attention paid by the Master and crew to remove the reported list, and the substantial degradation on the ship’s reserves of intact stability by its presence shows a lack of understanding with regard to what the presence of the list meant and is evident of the low standards of seamanship. In fact, it is likely not to have been an isolated incident of concern (Transcript page 915).

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20 Free surface is the effect of a liquid being free to flow from one side of a tank or space to the other, thereby raising the effective vertical centre of gravity of that liquid. This raised centre of gravity is taken into account in the calculation of loading conditions by including ‘free surface moment (FSM)’ for all tanks that are not either pressed full or empty.
The evidence of the passengers with regard to the filling of the port and starboard fresh water tanks, indicates to the Commission that these fresh water tanks were not kept full at all times and that these ‘slack tanks’ had a detrimental contributing effect on the stability of the ship.

Intact and damage stability requirements under PNG legislation

Section 1 (Interpretation) of the Papua New Guinea Merchant Shipping Act 1975 (the MS Act) defines a passenger ship and states that it:

‘means a ship that is—
(a) engaged on an international voyage; and
(b) carrying more than 12 passengers;’

Given this definition, it is possible to conclude that Rabaul Queen was not a ‘passenger ship’ because it was not engaged on an international voyage. Although the term ‘cargo ship’ is not defined in the MS Act, it may be presumed that the ship was a ‘cargo ship’ if it was not a passenger ship because the SOLAS’74 Convention defines a ‘cargo ship’ as ‘any ship which is not a passenger ship’. Further, it could be interpreted that Rabaul Queen was not a ‘Safety Convention Ship’ as defined in section 1 of the MS Act because application of the SOLAS’74 Convention is confined to ships which are engaged on international voyages ‘unless expressly provided otherwise’.

The National Maritime Safety Authority (NMSA) took the view that there is no requirement in Papua New Guinea shipping legislation to require ships like Rabaul Queen to have damage stability capacity because they interpret the ship as being a cargo ship and not a passenger ship. Captain Sharp expressed this same view in his communications with the NMSA.

By way of comparison to international shipping, and domestic shipping in other countries, in addition to intact stability requirements, a damage stability capability is required by SOLAS. It is also general international practice with regard to non-SOLAS ships for ships carrying significant numbers of passengers.

The requirement to have a damage stability capacity is to provide added protection for passengers should the ship suffer damage to its watertight integrity through collision, grounding or internal flooding. However, if Rabaul Queen was not within the Act’s definition of a ‘passenger ship’, it was not subject to any damage stability requirements and most probably had no capability to withstand flooding of the Cabin Deck, in particular, without capsizing.

Application of damage stability requirements generally results in the ship having greater than minimum reserves of intact stability according to the criteria outlined in the preceding paragraph. Therefore, the absence of damage stability criteria for passenger ships such as Rabaul Queen when operating in Papua New Guinea means that passengers are afforded lower safety standards compared with other countries, not only with regard to survival if the ship’s integrity is damaged but also indirectly with regard to intact stability.

While G.A. Glanville & Company included damage stability calculations in the stability book, these calculations were based on the assumption that the Cabin Deck could be
segregated into two separate compartments by a watertight door. Since this was not the case, and the Cabin Deck was one open space (Exhibit 217), these calculations cannot be relied upon.

Although not required under the MS Act, Rabaul Queen’s lack of compliance with any damage stability or subdivision standard made it a ‘one-hit ship’, that is one that was likely to capsize and/or sink in the event of flooding due to hull damage or internal flooding, resulting in substantial risk to the safety of the ship, its passengers and crew.
CHAPTER 7 – THE CAPSIZE

The cause

Throughout the voyage from Kimbe, Rabaul Queen was subjected to strong north-westerly winds and seas. As the ship left the relatively sheltered waters of the Dampier Strait, between Umboi Island and West New Britain, and entered the Vitiaz Strait, the evidence of many surviving passengers and crew clearly show that the force of the winds and seas increased. This resulted in winds in excess of 30 knots, the seas becoming very rough with a probable significant wave height of 3 to 4 m.

In his evidence, Captain Tsiau, who was the watchkeeping officer at the time, stated (Transcript page 1377) that he took the ship out of autopilot mode and commenced steering the ship by hand. This is what he usually did in these type of conditions as the autopilot had difficulty maintaining the ship’s heading. The course he steered was about 200° (T), which would take the ship across the Vitiaz Strait, towards Finschhafen.

On this course, the prevailing wind and waves encountered the ship on its starboard quarter; the area on its right hand side in the vicinity of the cargo stowage area.

The Commission engaged an independent expert, Mr. Rob Gehling of Rob Gehling & Associates Pty Ltd (Naval Architects and Marine Safety Consultants), as to the stability of the ship on departure Kimbe and as to the possible cause of the its capsize at 0615 on 2 February 2012.

In his evidence to the Commission (Exhibit 332 and 399), Mr Gehling’s concluded that while the ship’s loading condition on departure Kimbe did not meet all the specified stability criteria, it had sufficient positive stability to indicate that lack of reserves of stability was not the primary cause of the sudden and large angle of heel that resulted from the first wave hitting the ship.21

During his examination of the capsize, Mr Gehling discounted the possibility that the ship was ‘pooped’ by a large wave dumping on the ship’s poop deck, thus creating a large, although short lived, free surface.22 One of the reasons for discounting this cause is because in their evidence to the Commission, Chief Mate Michael Zirau and Motorman Paul Kanawi, who were both in the vicinity of the after deck at the time of the capsize, said that there was no significant loose water on the poop deck.

The more probable reason for the capsize, and supported by witness accounts of a large wave striking the ship’s starboard quarter and causing the ship to sheer around to starboard, with the Master loosing steerage control of the ship, is discussed by Mr Gehling.

21 Stability issues are dealt with in more detail in chapter 7 of this report.
22 Free surface is the effect of a liquid being free to flow from one side of a tank or space to the other, thereby raising the effective vertical centre of gravity of that liquid. This raised centre of gravity is taken into account in the calculation of loading conditions by including ‘free surface moment (FSM)’ for all tanks that are not either pressed full or empty.
The mode of the capsize of the ship as reported by the survivors is typical of ‘surf-riding’ and ‘broaching-to’ behaviour in stern quartering seas (Figure 19). This precisely reflects survivors’ accounts of the capsize.

Figure 19: Diagram depicting an example of surf-riding and broaching-to

A ship surf-riding and broaching-to is a phenomenon that is known in the international shipping industry and there is guidance material published by the International Maritime Organization (IMO) advising ship owners, operators and crew of what it is and how to manage the situation if a ship finds itself in a quartering sea with poor directional control.

This guidance document, (Exhibit 333) MSC.1/Circ.1228 (Revised guidance to the Master for avoiding dangerous situations in adverse weather and sea condition) contains the following description:

‘When a ship is situated on the steep forefront of a high wave in following or quartering sea conditions, the ship can be accelerated to ride on the wave. This is known as surf-riding. In this situation the so-called broaching-to phenomenon may occur, which endangers the ship to capsizing as a result of a sudden change of the ship’s heading and unexpected large heeling.’

According to Mr Gehling’s more technical evidence, broaching-to behaviour is a complex dynamic phenomenon resulting from the hydrodynamic forces acting on the hull of a ship while it is surf-riding. In that case, the ship’s position on the wave becomes directionally unstable in yaw and the ship experiences a violent uncontrollable turn despite the application of maximum steering effort. This violent and uncontrollable turn generates a centrifugal force on the ship’s centre of gravity that makes it heel away from the face of the wave (Figure 19).
It is likely that *Rabaul Queen* had been operating under similar quartering sea conditions for several hours since passing Massmass Island and this is why it had been steered manually through this period. The ship had shown some signs of course instability but this was not recognised by the Master and deck watchkeeping officers as a warning of more serious trouble.

**Methods of avoiding the situation**

Having found themselves in the situation of high stern quartering seas, the Master and crew of *Rabaul Queen* could have reduced the risk of the ship broaching-to. The IMO guidance contains the following diagram (Figure 20) to assist seafarers in the avoidance of surf-riding and broaching-to by avoiding the operation of their ships within the shaded area.

**Figure 20:** Diagram depicting an example of surf-riding and broaching-to

Mr Gehling discusses this issue in his evidence:

‘Given that the waterline length of *Rabaul Queen* was 44 metres, [the figure] shows that surf-riding was a risk at a speed of 11.94 knots if the seas were from directly astern or 16.9 knots for seas 45° off the stern. Since these speeds are absolute, and there is a transition area from about 80% of these speeds in which some surf-riding behaviour may occur, the ship’s speed in heavy stern or quartering seas would need to have been kept well below the appropriate value (e.g. about 9 knots for seas directly astern) to avoid reaching the threshold with assistance from the seas.’

What Mr Gehling is stating here, and the diagram is showing, is that if *Rabaul Queen*'s Master had reduced the speed of the ship, it was travelling at about 12 knots at the time.
leading up to the capsize, or altered its heading, the ship might have been able to reduce the risk of surf-riding and broaching-to.

However, given the size of the ship and the heights of the waves it was sailing in, any attempt by the Master to alter the ship’s heading might have exposed the ship to beam-on seas and the action of these seas may have resulted in the same outcome.

The best way for the ship to avoid the possibility of surf-riding and broaching-to was for it not to be put in that situation in the first place. The Master and operator of the ship should have relied on the official weather forecast available from the Papua New Guinea National Weather Service and delayed the ship’s departure from Kimbe, or taken shelter in the lee of Umboi Island (remaining in the Dampier Strait area) until the weather abated in the Vitiaz Strait.

However, the Commission is of the opinion that the Master never considered these options as he had never taken this type of action in the past and indeed, may have been concerned about the reaction of Rabaul Shipping’ Managing Director if he had delayed the ship’s arrival in Lae for any reason.

Conclusion

Given Mr Gehling’s evidence, and the witness reports of the behaviour of the ship when the first wave hit at about 0615, the Commission is of the opinion that *Rabaul Queen* was broached-to following being struck by a large wave on its starboard quarter, as a result of the ship being operated within the danger zone (as depicted in the IMO guidance diagram) and at an inappropriate speed in the prevailing circumstances and conditions. This caused the ship to sheer to starboard, the ship to heel over to port by a large degree, and for the Master to lose steerage.

Following the first large wave, the ship tried to right itself by rolling back to starboard, but before it could, a second large wave, this time beam onto the ship’s starboard side, caused the ship to again heel over to port. This time, the ship heeled to an angle where the port deck and openings on the port side started to become submerged and the ship could no longer right itself. The ship then started to take water into the accommodation. When the reported third wave hit the ship shortly afterwards, *Rabaul Queen* rolled over completely.

The Master and crew of the ship were not aware that they were operating the ship in circumstances which exposed it to the risk of surf-riding and broaching-to. While the Master could not, with his level of qualifications and training, be expected to have been aware of the physics of surf-riding and broaching-to, let alone the IMO circular relating to this issue, Rabaul Shipping’s Managing Director, as the operator of a number of passenger ships in areas where severe weather conditions are present, should have made himself aware of both the hazard and the IMO circular and then provided simple instructions to the Master on how to avoid this behaviour based on the guidance provided by the circular.
Given the spectrum of wave heights corresponding to the observed sea state (i.e. a significant wave height of about 4 m), it is not accepted that the group of waves that capsized the ship were rogue waves as suggested by Captain Sharp (Transcript page 3075 – 3183), but simply larger waves that were within the forecast variation\textsuperscript{23}.

\textsuperscript{23} As stated in Mr Rob Gehling’s report to the Commission (Exhibit 332), waves can be expected to be as high as twice the significant wave height.
CHAPTER 8 – AN UNSEAWORTHY OR UNSAFE SHIP

When seafarers consider the suitability of a ship to go to sea, they generally refer to it as being ‘seaworthy’ or ‘unseaworthy’.

Neither the Papua New Guinea Merchant Shipping Act 1975 (the MS Act) nor the Merchant Shipping (Safety) Regulation 2006 (the Regulation) define seaworthiness. However, according to the Dictionary of Nautical Words and Terms\(^{24}\), seaworthiness is defined as:

‘In a limited sense, is a ship’s fitness to withstand the action of the sea, wind, and weather. In a broader, and legal, sense, it requires that a ship must be handled and navigated competently, fully manned, adequately stored, and in all respects fit to carry the cargo loaded.’

While the MS Act does not define seaworthy or unseaworthy, it does define an unsafe ship as ‘a ship that is deemed to be an unsafe ship under Section 94’ of the MS Act. Section 94 of the MS Act goes on to state:

‘94. SHIPS DEEMED TO BE UNSAFE.

(1) A ship shall be deemed to be unsafe where the Authority is of the opinion that, by reason of—

(a) the defective condition of the hull, machinery or equipment; or

(b) undermanning; or

(c) improper loading; or

(d) any other matter,

The ship is unfit to go to sea without danger to life having regard to the voyage which is proposed.

The following pages cover the Commission’s consideration of the various issues that, when combined, amount to the conclusion that Rabaul Queen was an unseaworthy or unsafe ship.

Survey condition

*Rabaul Queen* had been subjected to NMSA inspection each year and had retained NMSA certification since May 2008. The ship had been issued with a Papua New Guinea Survey Certificate on 21 May 2008 and this certificate was valid until 23 March 2012. During the validity of the certificate, apart from the initial inspection of the ship for the issuance of the certificate, the ship had been inspected, and the certificate subsequently endorsed, on three other occasions: 27 August 2009, 30 June 2010 and 18 April 2011 (*Exhibit 54*).

The last full survey of the ship had been conducted by NMSA surveyor Joseph Kabiu in April 2011. The survey was comprehensive and Rabaul Shipping had applied for all items of equipment, hull, loadline, machinery and radio to be inspected during the survey. The surveyor duly inspected a number of items under these headings, including liferafts and

their hydrostatic releases, the number of lifejackets, the condition of the rescue boat, general alarms, the condition of the lifebuoys, deck logbook entries, distress flares smoke floats and distress rockets. He also conducted a watertight integrity test on watertight doors using a fire hose. While he found several deficiencies, these were rectified by Rabaul Shipping and the surveyor signed off on the report of survey on 18 April 2011.

In addition to the last annual survey in April 2011, Rabaul Queen had undergone a dry docking in Madang at the RD Fishing PNG Slipway in October 2011 (Exhibit 371). Some steel work was replaced on the hull and the ship repainted. On 19 October 2011, a NMSA surveyor had carried out a partial inspection of the ship. He examined its navigational, lifesaving and fire fighting equipment, and conducted a general inspection of its deck, deck equipment and structure. The surveyor found the ship complied with the requirements of the MS Act and that it was fit to comply on Papua New Guinea coastal voyages until its next annual survey and that it was fit to carry 295 persons (Exhibit 80). He signed off on the inspection report on 24 October.

Therefore, in the 12 months before its loss, Rabaul Queen had been deemed to be seaworthy for normal operations by NMSA surveyors. Since the ship has not been recovered, or sighted since the sinking, and there is no other contrary evidence, the Commission has no basis to conclude that the ship was in an unseaworthy condition with respect to its hull and equipment when it departed Kimbe on 1 February 2012.

**Crew competency and safe manning**

According to section 103 of the MS Act, a ship must carry such number and grades of qualified crewman as are prescribed. A ‘qualified crewman’ is defined as meaning a member of the crew of ship who holds a valid certificate of competency issued under section 104 of the MS Act.

Rabaul Shipping provided the Commission with the qualification and training records for the crew members who were on board Rabaul Queen when the ship capsized on 2 February 2012 (Exhibit 141). An analysis of those records against the Safe Manning Certificate issued by NMSA and dated 4 October 2008 (Exhibit 192) indicated that none of the ship’s navigational or engineering officers were ‘qualified crewman’. This assertion was also accepted by the ship’s Master, Anthony Tsiau, when he provided evidence to the Commission (Transcript pages 1435 – 1441).

Captain Sharp gave evidence to the effect that he was never given a copy of the Safe Manning Certificate (Transcript page 2816) and hence was unable to produce a copy to the Commission. The Commission rejects his evidence and finds that he did not produce the Safe Manning Certificate to the Commission, despite specific requests for him to do so, because he was aware that he had allowed the ship to operate without appropriately qualified crew for a long period of time. In any event, according to a document Captain Sharp prepared himself entitled ‘Instructions for Floating Staff’ (Exhibit 146), not all of the crew met the qualifications he himself prescribed. It is alarming that Captain Sharp allowed Rabaul Queen to sail without knowing the requisite competency of crew required by the Safe Manning Certificate.
The following table is a reproduction of *Rabaul Queen*’s Safe Manning Certificate and clearly shows the certificates of competency that the members of the crew, depending on the role they fulfilled on board, were to hold.

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</tr>
<tr>
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</tr>
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</table>

The following is an analysis of the certificates of competency held by the various deck and engineering officers on board the ship against the statutory requirements associated with the position they held on board the ship.

**The Master**

When *Rabaul Queen* capsized on 2 February 2012, the Master, Anthony Tsiau, held a master grade 4 certificate (*Exhibit 141*). While this certificate is of a similar standard to the master class 4 certificate that was required of a Master of *Rabaul Queen* (see above), it is not the same. A grade 4 certificate is endorsed to the requirements of the International Maritime Organization’s (IMO’s) Standards of Training Certification and Watchkeeping (STCW) 1978 while a class 4 certificate is endorsed to the upgraded requirements of STCW 1995. Therefore, the Master should have completed a bridging course and upgraded his certificate to gain a class 4 certificate. However, he had not and hence was not appropriately qualified to hold his position as Master on board *Rabaul Queen*.

Extraordinarily, Captain Sharp made no proper enquiries in relation to Anthony Tsiau prior to employing him. In fact, Captain Sharp accepted that he did not make any checks in relation to Anthony Tsiau and simply employed him on the basis of him showing ‘a valid certificate’.

If proper enquiries had been made (including with the Department of Transport), Captain Sharp would have ascertained that Anthony Tsiau was the Master of *Glomaris* which sank in 1990 and which resulted in the suspension of his certificate for 9 months.
Additionally, on 18 August 1993, Anthony Tsiau was the Master of Kris when it sank in waters off West New Britain. The ship was operated by a company controlled by Captain Sharp, Pacific New Guinea Line Pty Ltd at the time. Five (5) lives were lost as the result of the sinking, including that of an infant.

Captain H.F. Wales, the Principal Ship Surveyor employed at the Department of Transport prepared a preliminary investigation report dated 30 August 1993 (Exhibit 290). The report noted:

- Kris was a passenger ferry built in Japan in August 1972;
- the passenger ferry was operating in weather of gale proportion and large quantities of water was coming on board the ship; and
- the minimum manning scale of crew on board the ship were not being observed.

Given the record of Anthony Tsiau and his complete abrogation of responsibility relating to the sailing of Rabaul Queen on 2 February 2012 (discussed elsewhere in this Report), one questions how Captain Sharp could have employed him, let alone describe him as a ‘very very good seaman’ (Transcript page 2832).

The navigational watchkeepers

When asked to supply the Commission with a copy of Rabaul Queen’s crew list for the voyage from Kimbe to Lae on 1 February 2012, Captain Sharp on behalf of Rabaul Shipping supplied a list that noted Michael Zirau as Chief Mate and Silas Aila as Second Mate (Exhibit 47). The same list also noted that ‘Pias Sialle is a captain of Solomon Queen who was on holiday. We picked him up from Buka to Lae’. However, Captain Sharp stated during his evidence to the Commission that Pias Sialle was actually the Chief Mate on the ship at the time. Captain Sharp only gave this evidence during the course of examination by Counsel Assisting when it became evident that the Chief Mate, Michael Zirau, was not qualified to be the Chief Mate.

The Commission considered this evidence and that of Anthony Tsiau, Michael Zirau and Sailas Aila when deciding who were the watch keeping officers during the voyage. The Commission finds that Mr Zirau and Mr Aila, both holders of coxswain certificates, fulfilled the navigational watch keeping roles of Chief Mate and Second Mate respectively during the voyage. Neither Mr Zirau nor Mr Aila were appropriately qualified in accordance with the ship’s Safe Manning Certificate to hold their positions on board the ship.

According to the Merchant Shipping (STCW Convention) Regulations 2002, a coxswain qualification is only recognised on ships less than 15 m in length. So, in effect, these two watchkeeping officers were uncertified and unqualified when working on board Rabaul Queen.

While the formal training these men had received before gaining their qualification covered basic aspects of ship board operations, this was augmented over time as they gained more seagoing experience in shipboard operations. However, they had not had any navigation or stability training of the type they would have if they had held watchkeeping officer certificates of competency.
These two men should not have been employed by Rabaul Shipping to serve on the ship in the role of navigation watchkeeper.

The engineers

Schedule 3 of the *Merchant Shipping (STCW Convention) Regulations 2002* provides information on the qualifications and training of the engineers on board *Rabaul Queen*. For a ship with a power output less than 3,000 kW, the Chief Engineer needed a minimum of class 2 chief engineer certificate and the Second Engineer needed a minimum of class 2 second engineer certificate. Both of these requirements are reflected in the Safe Manning Certificate.

The Chief Engineer on board *Rabaul Queen* at the time of the ship’s loss, Arua Baru, held an engineer class 3 certificate (*Exhibit 195*) and the Second Engineer, Donald Kaian, held an engineer grade 5 certificate (*Exhibit 196*). Therefore, neither man was appropriately qualified in accordance with the Safe Manning Certificate to hold their position on board the ship.

Responsibilities of the owner/operator

Section 103 (Manning and certificates of competency) of the MS Act states:

‘103. GOING TO SEA UNDERMANNED.
(1) Subject to Subsection (3), a ship must carry such number and grades of qualified crewmen as are prescribed.
(2) An owner or Master of a ship that goes to sea without carrying the prescribed number of qualified crewmen is guilty of an offence.
Penalty: A fine not exceeding K8,000.00.
(3) Where a ship is at a port and does not have the prescribed number of crewmen of a particular grade, the Authority where it is satisfied that—
(a) a qualified crewman of the prescribed grade is not available for employment at the port; and
(b) it would be unreasonable to require the employer to obtain a qualified crewman of the prescribed grade from another port; and
(c) the safety of the ship would not be endangered,
may allow the ship, subject to such conditions (if any) as it thinks fit, to go to sea without carrying the prescribed number of qualified crewmen.’

In addition, Section 7 (Responsibility of owners) in Part III of the *Merchant Shipping (STCW Convention) Regulations 2002* states:

‘(1) The owner of a ship to which this Regulation applies shall employ seafarers for service on the ship in accordance with the Convention.
(2) The owner of a ship shall provide written instructions to the Master setting out the policies and procedures to be followed to ensure that all seafarers on board the ship are given a reasonable opportunity to become familiar with—
(a) the shipboard equipment and operating procedures; and
(b) any other arrangements needed for the proper performance of their duties before being assigned those duties.'
(3) The policies and procedures referred to in Subsection (2) shall include—
   (a) allocation of a reasonable period of time during which each seafarer
       will have an opportunity to become familiar with—
       (i) the specific equipment the seafarer will be operating; and
       (ii) ship-specific watchkeeping, safety, environmental
            protection and emergency procedures and arrangements
            the seafarer needs to know to perform the assigned duties
            properly; and...

The *Merchant Shipping (STCW Convention) Regulations 2002* applied to the ship’s owner, Hamamas Lines, its operator, Rabaul Shipping, and to the ships themselves.

While the correct number of crew members were on board, in accordance with the Safe Manning Certificate (issued under the auspices of the MS Act and the *Merchant Shipping (STCW Convention) Regulations 2002*), the qualifications most of those crew members held were not in accordance with the requirements of the Safe Manning Certificate. Neither Hamamas Lines nor Rabaul Shipping had received any dispensation from NMSA which permitted *Rabaul Queen* to proceed to sea without the correct certificates on board, in accordance with section 103(3) of the MS Act.

By not ensuring that the persons employed to serve on board *Rabaul Queen* had the appropriate certificates for the position they were employed to hold, Hamamas Lines and Rabaul Shipping contravened the manning requirements of the *Merchant Shipping Act 1975* and the *Merchant Shipping (STCW Convention) Regulations 2002*. Furthermore, by doing so, the companies had failed in their duty to operate the ship in a safe manner.

Captain Sharp was placing members of the crew into positions of authority which he well knew were beyond their level of competency. So much so that Captain Sharp accepted during his examination that if he had known about their certificate of competency, he would not have engaged them for such positions. By failing in his duty, by engaging under qualified crew, he compromised not only the safety of the passengers but also the crew themselves and the ship.

The Commission accepts the evidence of Anthony Tsiau to the effect that he spoke to Captain Sharp about crew on board the ship not being qualified and that Captain Sharp understood that they were not qualified (*Transcript page 1441 - 1442*). If Captain Sharp, as he suggested, had not seen a copy of the Safe Manning Certificate issued in 2008 until during the course of the Inquiry, one questions how Captain Sharp could have understood that the ship was not manned according to the Safe Manning Certificate.

Irrespective of the regulations, there were no sufficiently qualified navigating or engineering officers on board the ship and, as a result, the safety of the passengers, the crew and the ship were put at jeopardy every time the ship left the wharf.

**Responsibility of the regulator**

It is disturbing that, between 4 October 2008 and 2 February 2012, NMSA never took issue with the qualification of the crew on board *Rabaul Queen* during its periodical inspections. One would think that, considering the importance of the Safe Manning Certificate, NMSA would have ensured that *Rabaul Queen* was properly and competently manned in accordance with the Safe Manning Certificate. As such, NMSA is also at fault.
for failing to ensure that *Rabaul Queen* was, at all times, competently manned to guarantee the safety of the passengers.

**Revalidation of certificates of competency**

Under current legislation, there is no need for holders of Papua New Guinea non-SOLAS certificates of competency to revalidate their certificates. This means that someone like the Master of *Rabaul Queen* has not been required to update his knowledge since he gained his certificate some 30 years ago.

As a result, the holders of these certificates have been operating for many years on the Papua New Guinea coast using the knowledge that they gained at the time of their initial training. They have, of course, picked up additional knowledge and skills while serving on ships. However, they have never been required to attend training at a college where they can be taught, or made aware of, the changes/improvements in the maritime industry, and especially those associated with the safe operation of ships.

The Commission considers that this situation is untenable and that the holders of all Papua New Guinea issued certificates of competency should be required to routinely update their knowledge through a form of ongoing professional development and revalidation.

**Knowledge and understanding of stability**

On any ship, it is the Master who is ultimately responsible for the safety of the ship, its crew and passengers. Consequently, there is a minimum standard of training, seagoing experience and qualification that the person holding the position of Master must attain. That minimum level is prescribed in maritime legislation of the country licensing that person. In Papua New Guinea, that legislation is the *Merchant Shipping (STCW Convention) Regulations 2002*. Schedule 4 (i) of those regulations (Types of certificates and the pre-requisites for their issue) states what the requirements are for a person to have in order that they can be issued with a Master class 4 certificate (<500 GT near-coastal), the type of certificate Captain Tsiau should have held at the time of the loss of *Rabaul Queen*. Apart for the seagoing service requirement, the section has the following:

‘(ii) must have completed approved educational and training and meet the standard of competence specified in Section A-II/3 of the STCW Code for Masters on ships of less than 500 gross tonnage engaged on near-coastal voyages.’

One of the most important things regarding the safe operation of a ship that a ship’s Master, and any watchkeeping navigating officer, needs to understand is stability and the need to maintain an amount of intact stability buoyancy, thereby ensuring that the ship is able to safely undertake a voyage in weather and sea conditions up to the limit placed upon it by regulations or its loadline parameters.

With regard to stability knowledge, Section A-II/3 of the STCW Code, as referenced in the Papua New Guinea regulations above, states that any person in charge of a navigational watch, including the Master, needs to have a:

‘Working knowledge and application of stability, trim and stress tables, diagrams and stress-calculating equipment; an understanding of fundamental actions to be
taken in the event of partial loss of intact buoyancy; an understanding of the fundamentals of watertight integrity.’

As can be seen, these requirements do not go into the understanding and calculation of a ship’s stability in great detail. They are an ‘understanding’ and ‘working knowledge’ of certain aspects of a ship’s stability.

During the Commission hearings, Captain Tsiau *(Transcript page 1407 – 1412)* was questioned on his understanding of stability and his responsibility with regard to ensuring that the stability of *Rabaul Queen* was sufficient to ensure that the ship was safe to proceed to sea in the condition it was at Kimbe. During the questioning, Captain Tsiau agreed with Counsel Assisting that the stability of a ship is critical for the safety of the passengers and crew of that ship. He also agreed that he had never seen the ship’s Trim and Stability book and, consequently, had never carried out any stability calculations prior to departing any port since he had been the Master of the ship. When asked about getting a copy of the Trim and Stability book on board the ship, Captain Tsiau said that he had asked Captain Sharp several times for a copy of the book but one was never forthcoming.

During the questioning, Captain Tsiau showed that he had a very rudimentary understanding of ship stability (mentioning the terms GM, Centres of Gravity and Buoyancy). However, the Commission is of the opinion that he did not actually understand what he was quoting. For example, he said, correctly, that GM was the metacentric height but he then said that the GM was the Centre of Gravity. However, while the GM of a ship is associated with its Centre of Gravity, it is not the Centre of Gravity.

Captain Tsiau was of the belief that if a ship is not loaded to, or above, its loadline, it is stable. This too is incorrect. Again, this statement shows that Captain Tsiau’s understanding of stability is basic and not what it should be for a person in command of a passenger ship. While he agreed that putting too much cargo or too many passengers on board a ship might result in that ship being unsafe, the Commission finds that his thinking in this regard is to do with loading the ship beyond its loadline and not the implications that too many passengers might have on the ship’s stability and safety.

What is obvious from the Captain Tsiau’s evidence during the Commission hearings, and his actions in consistently not carrying out calculations to check the ship’s stability before departure, is that he did not have the required knowledge and understanding of stability to be in command of a ship carrying large numbers of passengers.

Captain Sharp said that ‘he had never yet seen a master 4 who understands what is written in a (stability) booklet’ *(Exhibit 165)*. Therefore, Rabaul Shipping should have been aware of Captain Tsiau’s lack of knowledge in this area and provided him with simplified stability data and guidance. This assistance would have assisted in ensuring he had an appreciation of the implications, with regard to stability, of allowing the ship to sail with more than the maximum permissible number of persons, and their luggage, on board.

**Safety Management Systems (SMS) for ships carrying passengers**

In 1993, the International Maritime Organization (IMO) adopted the International Management Code for the Safe Operation of Ships and for Pollution Prevention (the ISM
Commission of Inquiry into the sinking of Rabaul Queen

Since its inception, the ISM Code has established a global standard for the safe management and operation of ships. The ISM Code sets out mandatory rules for the organisation of a company’s management of ships in relation to safety and pollution prevention and, most importantly, for the implementation of SMSs.

The objectives of the ISM Code are to ensure safety at sea, prevention of human injury or loss of life, and avoidance of damage to the environment, in particular, to the marine environment, and to property.

The ISM Code states, at section 1.2.2, that the safety management objectives of a company should be:

- ‘The provision for safe practices in ship operation and safe working environment;
- establishment of safeguards against all identified risks; and
- continuously improve safety management skills of personnel ashore and on board ships, including preparing for emergencies related both to safety and environment protection.’

The ISM Code states that any SMS should ensure that there is compliance with mandatory rules and regulations, and that applicable codes, guidelines and standards recommended by the IMO, national maritime administrations, classification societies and maritime industry organisations are taken into account.

Section 1.4 of the ISM Code provides information for the functional requirements for a SMS, and states:

‘Every Company should develop, implement and maintain a Safety Management System (SMS) which included the following functional requirements:

1. a safety and environmental protection policy;
2. instructions and procedures to ensure safe operation of ships and protection of the environment in compliance with relevant international and flag State legislation;
3. defined levels of authority and lines of communication between, and amongst, shore and shipboard personnel;
4. procedures for reporting accidents and non-conformities with the provision of this Code;
5. procedures to prepare for and respond to emergency situations; and
6. procedures for internal audits and management review.’

While the requirements of the ISM Code have been mandated for SOLAS Convention ships worldwide, domestically, many countries have mandated the implementation of an ISM Code type SMS for ships which carry passengers, to help the operators and crews of those ships to better manage the safe operation of ships and for pollution prevention. These SMSs either follow the requirements of the ISM Code or are based on the requirements of the ISM Code.

For example, in New Zealand, Section 2 of Part 21 (Safe Ship Management Systems) (Exhibit 347) of the National Maritime Rules requires that ships of less than 45 m in
length which proceed beyond restricted limits must be maintained and operated in compliance with the New Zealand Safe Ship Management Code. This code is the same as the ISM Code.

In Australia, the National Standard for Commercial Vessels (NSCV) covers the regulation of non-SOLAS Convention ships operating in the Australian states (including the domestic operation of passenger ships). Australian state maritime administrations mandate the contents of the NSCV through their respective legislation. Part E (Operational Practices) of the NSCV is applicable to the operation of all ships and draws heavily on the lead of the international shipping community and the ISM Code; and requires the provision of an SMS.

There is no requirement for the implementation of an SMS covering the operations of a ship like Rabaul Queen in Papua New Guinea maritime legislation and when providing evidence to the Commission, Captain Sharp stated that Rabaul Shipping had not implemented a SMS covering its operations and that the company had not developed any emergency response plans. When asked why this was so, Captain Sharp answered (Transcript page 181):

‘MR SHARP: Safe management system comes - comes under a thing called , safety of life at sea. SOLAS supplies the vessels of over 500 gross tonnes. Our vessels are all under 500 gross tonnes.’

However, Captain Sharp told the Commission that his ships did have on board a document called ‘Instructions to Floating Staff’ which provided a set of basic operating instructions to the crew of its ships. This document was produced to the Commission, entitled ‘Floating Staff Handbook’ (Exhibit 146). It covered the requirement to conduct monthly musters, fire emergency and life jacket drills. It also covered the maintenance of a ship’s emergency equipment, engine room fires, port leave, uniforms, communications after an accident, the maintenance of wires and ‘the requirement to carry a second engineer and for the chief engineer (particularly the Sri Lankan ones) to stop firing them after their placement’.

The document also had sections directed towards the Master and watchkeeping officers, which dealt with navigational charts, the over reliance on GPS units in position fixing, collision avoidance and groundings, departure/arrival checklists and checklists (both deck and engine room) for tasks which had to be done daily, weekly, monthly, 3 monthly and annually.

The ‘Floating Staff Handbook’ was a 36 page document, including the title and contents pages. Of those pages, only five were directly related to the carriage of passengers on Rabaul Shipping ships plus one that dealt with persons falling overboard. The pages that dealt with passengers are associated with:

25 Inshore and enclosed areas.

• Pregnant women passengers (¼ of a page).
• A release and indemnity form to be signed by a woman who is in the stages of advanced pregnancy wanting to travel on a Rabaul shipping ship (1 page).
• Announcements to be made for transit passengers (¼ of a page).
• A memo to all Managers, Captains and Chief Officers concerning the numbers of passengers each ship can carry (in which it states that both Rabaul Queen and Solomon Queen can carry 350 passengers) (total of 1 ¼ pages).

This handbook contains only two directions that deal with passenger safety [musters and lifejackets in the Safety Drills (or BOT Sports) section] and nothing that provides guidance to the crews of Rabaul Shipping ships in relation to passenger welfare on board the ships.

The muster paragraph can be read as needing only to be carried out once a month (along with the other drills) and does not mention the legal requirement for a muster to be held after the departure from each port (discussed later in this Chapter). However, the lifejacket section does state that a demonstration of the use of the lifejackets is to be undertaken each time a ship leaves port.

The existence of the ‘Floating Staff Handbook’ was not well known to crew members and Rabaul Shipping staff. Additionally, many of the instructions provided in the document were ignored and nothing was done by Rabaul Shipping to ensure compliance with the limited directions the document did provide.

When compared to the guidance material which is required to be provided to the crews of passenger ships operating domestically in other countries, as highlighted previously for New Zealand and Australia, the ‘Floating Staff Handbook’ was deficient in almost every aspect regarding guidance to crew on the day-to-day operation of the ship.

The Commission finds that, as a handbook which is supposed to provide guidance to crew on the safe operation of a ship, the ‘Floating Staff Handbook’ is manifestly inadequate.

Regardless of whether there was a statutory requirement for Rabaul Shipping to implement a SMS covering its operations, the company had a duty of care and contractual obligation to the passengers carried on its ships. Accordingly, Rabaul Shipping should have had appropriate policies and procedures in place covering the safe operation of its ships, including Rabaul Queen, to ensure that the safety of the ships, their crews and the passengers carried on board was protected. Furthermore, the company should have developed and implemented a suite of emergency response plans and developed a reporting and audit regime to ensure that safe operations were always followed on board its ships.

**Passenger musters**

Section 141(2) (Musters) of the Regulation states:

‘(2) When a ship leaves a port carrying passengers, the master of the ship must cause each passenger—

(a) to be mustered; and

(b) to be informed of the—

(i) emergency signal referred to in Section 144; and
(ii) method of use of lifejackets; and
(iii) positions for embarkation into lifeboats and liferafts; and

(c) to be made aware of the instruction cards referred to in Section 143.‘

Section 142 of the Regulation also requires boat drills and fire drills to be carried out on the ship concurrently with the muster under section 141. Furthermore, according to Section 143 of the Regulation, where a ship carries an inflatable liferaft, there must be an instruction card displayed in a prominent position on the ship giving clear and simple directions for launching the liferaft.

The Commission heard evidence that the Rabaul Shipping staff demonstrated the use of lifejackets in the departure terminal in Rabaul. However, according to evidence given by passengers who boarded the ship in Rabaul, the demonstration only lasted for about 5 to 10 minutes and was done whilst other passengers were still entering the departure lounge. Hence, not all passengers witnessed the demonstrations. Grace Amen, the Rabaul Shipping Branch Manager in Kimbe told the Commission that no safety demonstrations were ever conducted on the wharf in Kimbe (Transcript page 1138).

Samuel Eremas (Seaman) gave evidence to the Commission that a safety demonstration on the use of lifejackets was conducted by himself, John Keko (Cleaner) and Soloman Kaian (Seaman) shortly after the ship left Kimbe (Transcript pages 1205 – 1206). The Second Mate, Silas Aila, also said in evidence that a demonstration was conducted by four (4) members of the crew after the ship left port in Kimbe (Transcript page 1311). However, none of the passengers who provided evidence to the Commission witnessed the crew providing a lifejacket demonstration after the ship departed the port.

While this evidence is contradictory, the Commission can only conclude that either no lifejacket demonstration was performed by the crew, or that an ineffective demonstration was performed. Regardless, a demonstration on the use of a lifejacket does not meet the Regulations requirements in relation to ‘musters’. The passengers were not mustered, they were not made aware of the ship’s emergency signal and they were not shown the liferaft embarkation areas.

As a result, the Commission was not surprised when it heard evidence that the survivors did not know how to use the liferafts properly. For instance, many passengers climbed onto the top of upturned liferafts, because they did not know how to right them, and many did not know that there was water, food and first aid material on board the liferafts.

The Commission considers that Rabaul Shipping and the crew of Rabaul Queen failed to properly perform their duties in a satisfactory and acceptable manner, in accordance with the Regulation, by ensuring that the passengers were appropriately provided with information regarding the ship’s emergency and lifesaving equipment. Furthermore, their actions clearly demonstrate a flagrant disregard by Captain Sharp, Rabaul Shipping and crew of Rabaul Queen toward the safety of the ship’s passengers.
Fire fighting and lifesaving drills

Section 142 of the Regulation states that:

‘...

(3) The master of a ship must cause a fire drill under Subsection (1) to be so held that at least once in every period of four months and each item of fire fighting equipment is examined or tested as specified by the Authority.

(4) A drill under this section must be—

(a) so arranged that the crew fully understand and are practiced in the duties they have to perform in the event of an emergency; and

(b) carried out in the manner required by the Authority.

(5) The master of a ship must cause all drills carried out under this section to be entered in the Deck Log Book of the ship.’

*Rabaul Queen*’s crew gave varying accounts in relation to the conduct of fire fighting and lifesaving drills. For instance, Captain Tsiau, Silas Aila (Second Mate), Donald Kaian (Second Engineer), Yong Yai (Motorman) and Solomon Kaian (Seaman) gave sworn evidence that fire fighting and lifesaving drills were carried out by all crew members once a month under the supervision of the Master (*Transcript page 1430 - 1431, 1286 – 1287, 1295 – 1296, 1311 – 1312 and 1323*). However, Michael Zirau (Chief Mate), who had been working for Rabaul Shipping for 7 months but had only worked on board *Rabaul Queen* for 3 weeks prior to its sinking gave evidence that during his time on board the ship, said no fire fighting or safety drills were conducted (*Transcript page 1347 – 1348*).

Furthermore, Samuel Eremas (Seaman) told the Commission that, in the 5 months he had been working on board *Rabaul Queen*, there had been no fire fighting or life saving drills carried out by the crew (*Transcript page 1207*).

On 8 April 2011, Mr Joseph Kabiu, NMSA inspector in Rabaul, conducted a survey inspection of *Rabaul Queen* (*Transcript page 1504 – 1505*). Following the inspection, Mr Kabiu noted a list of defects that included ‘no records of drills sighted on board’ (*Exhibits 179 and 206*). This could mean that no drills were ever conducted prior to 8 April 2011 or if they were conducted, they were not recorded. In both cases, the Commission considers this to be grossly unsatisfactory considering that the ship was regularly carrying large numbers of passengers. There should be no doubt that the ship’s owner/operator and Master were responsible for ensuring that any and all drills conducted by the crew were properly carried out and recorded in compliance with the Regulation.

In relation to the ‘abandon ship’ or ‘emergency signal’, Captain Tsiau said in evidence that the ship’s abandon ship signal was ‘six short blasts and a long blast’ of the ship’s whistle (*Transcript page 1425*). This, however, contradicts what is suggested in the ‘*Floating Staff Handbook*’, which states that the signal should be ‘7 short blasts and followed by one long blast’ (*Exhibit 146*).

Alarmingly, not only was Captain Tsiau confused about the ‘abandon ship’ signal, he also failed to demonstrate the signal and inform the passengers what it meant when the ship left both Rabaul and Kimbe on its final voyages (*Transcript page 1425*). Also disconcerting, is the fact that the other crew members could not properly explain to the
Commission what the signal was. Some accepted that it was similar to a fire alarm in a building and others including Samuel Eremas (Seaman) and John Keko (Cleaner) admitted that they did not know what the abandon ship signal was.

This evidence indicates to the Commission that it is unlikely that Rabaul Queen’s Master and crew were routinely carrying out effective fire fighting and life saving drills in accordance with the Regulation. As a result, it is likely that they were not appropriately equipped to deal with the events as they unfolded when Rabaul Queen capsized and sank on 2 February 2012.

The Commission considers that even if Captain Tsiau were to have set off the ‘abandon ship’ signal prior to the sinking, the passengers, and many crew, would not have understood what the signal meant. Again this demonstrates the level of incompetence of the Master and crew of Rabaul Queen in ensuring the safety and welfare of the passengers.

Lifejackets

With reference to lifejackets the Regulation states:

‘82. LIFEJACKETS.
(1) A ship shall carry at least one lifejacket for every person carried on board the ship.
(2) Each lifejacket required to be carried on a ship shall be of a type suitable for the voyage in which the ship is, or is about to be, engaged.’

According to the evidence provided to the Commission by Captain Sharp and the ship’s Master, Anthony Tsiau, there were 400 adult lifejackets carried on board Rabaul Queen. The lifejackets were located on the Promenade Deck (in the first class area and the mothers and children’s room), the Upper Deck and the Cabin Deck.

Captain Sharp claimed, during examination, that there were also lifejackets for infants in the mothers and children’s room (Transcript page 2854). However, when the ship’s Master, Anthony Tsiau, was asked if there were any lifejackets for children on board the ship, he said ‘No’ (Transcript page 1423). Michael Zirau, the ship’s Chief Mate, stated that he didn’t know if there were any lifejackets for children on board the ship (Transcript page 1346).

The Regulation did not require the carriage of lifejackets suitable for use by children or infants. However, Rabaul Shipping had a duty of care to its passengers to provide them with safe passage on the ship. Therefore, it was fair to expect that the ship should have carried lifejackets suitable for all of its passengers, including infants and children, particularly since Rabaul Queen was regularly carrying considerable numbers of infants and children.

Furthermore, one of the ships owned by a company controlled by Captain Sharp, Kris, whose Master at the time was Anthony Tsiau, sank in 1993 with the loss of life of one child. One would have thought that, based on the fact that an infant had died when Kris sank, Captain Sharp and Anthony Tsiau would have ensured that there were lifejackets for infants and children on board Rabaul Queen.
During evidence, all of the passengers told the Commission that at no time during the voyage from Kimbe to Lae did the crew members distribute any life jackets to the passengers despite the weather and sea conditions. There was no emergency alarm and no warning from the crew that the ship was in peril. As a result, none of the passengers were wearing lifejackets when the ship capsized and sank. However, some passengers did manage to grasp hold of one when a small number of lifejackets floated free from the ship.

The passengers also stated that the cabinets holding the lifejackets were locked. While Captain Sharp and the ship’s crew disputed this fact, the simple belief by the passengers that the cabinets were locked may have been enough to prevent them from accessing the lifejackets themselves.

**Permitted number of passengers**

On 24 February 2003, the Department of Transport issued a Survey Certificate for *Rabaul Queen*, valid until 24 March 2007 *(Exhibit 174)*. The Survey Certificate certified that the ship was fit to carry 310 persons, including 295 unberthed passengers and also contained that the ship operate in conditions below force 7 winds (see Appendix 3). That is, winds of no more than 33 knots *(Exhibit 186)*.

Upon expiry of that Survey Certificate, the NMSA issued a subsequent Survey Certificate on 21 May 2008, which was valid until 23 March 2012. It certified, like the earlier certificate, that the ship was fit to carry 310 persons, including 295 unberthed passengers. However, it did not contain the condition regarding the ship operating in conditions below force 7.

As discussed in detail in Chapter 9 of this Report, Captain Sharp should have been acutely aware that *Rabaul Queen*’s Survey Certificate stipulated that it could carry a maximum of 310 persons including a maximum of 295 passengers. However, he circulated a memorandum to his staff instructing them to allow the ship to carry 350 passengers *(Exhibit 191)*.

Furthermore, the ship’s Master, Anthony Tsiau, was aware of the Survey Certificate stipulation that the ship could only carry 295 passengers, but he accepted Captain Sharp’s direction without query and routinely sailed the ship with more passengers than the Survey Certificate allowed *(Transcript page 1397)*.

This evidence shows that there was a clear intent on the part of Rabaul Shipping, and in particular Captain Sharp and Anthony Tsiau, to ignore the conditions outlined on *Rabaul Queen*’s Survey Certificate by routinely sailing the ship with many more passengers than the ship was legally allowed to carry.

There can be no sensible dispute that at the time that *Rabaul Queen* sank, it was carrying in excess of 360 passengers, breaching the maximum numbers prescribed by the Survey Certificate. This unmistakably demonstrates that Captain Sharp was more concerned with profit than the safety of life and abiding by the rules prescribed by law.
Contact with Coastal Radio

Section 124 of the Regulation stipulates that a ship at sea is required to report its position, speed and destination to Coastal Radio at least twice within 24 hours after leaving port and before arriving at the next port. If the ship encounters any serious danger to navigation on or near its course, the Master is obligated to report such an encounter to any ships in the vicinity and Coastal Radio.

According to Section 79 of the Merchant Shipping Act 1975, the Master of a ship is required to report by radio any serious danger to navigation that comes to his notice while the ship is at sea.

When Captain Tsiu was asked if he had contacted Coastal Radio during the voyage from Rabaul to Kimbe and from Kimbe to Lae between 31 January 2012 and 2 February 2012, Captain Tsiu said ‘No’ (Transcript page 1383). This was confirmed by Coastal Radio’s Daily Logs which contain records of each time a ship radioed in and advised of its position (Exhibits 356 and 357).

The Daily Logs indicate that Rabaul Queen’s Master never, at any time during its voyages in January and February 2012, made any radio communications with Coastal Radio. The only record of communication between Rabaul Queen and Coastal Radio brought to the attention of the Commission, from 1 December 2011 to 2 February 2012, was on 14 December 2011 (Transcript page 2732).

Rabaul Queen was operating throughout this period of time and the ship’s Master chose to ignore the reporting of his ship’s position, speed and destination as required by the Regulation. Once again, this demonstrates a complete lack of concern for the safe operation of the ship and the safety of its passengers and crew.

Maintenance of the ship

Rabaul Shipping produced documents showing that Rabaul Queen was dry-docked in October 2011 and that work was carried out on the ship by RD Fishing (PNG) Limited at that time (Exhibit 142 and 143).

Captain Sharp also said in evidence that he had a maintenance plan for Rabaul Queen but ‘it’s not recorded’. He also said that the actual maintenance undertaken is not written down (Transcript page 973).

When Counsel Assisting asked Captain Sharp to explain how he undertook maintenance and repairs without a written maintenance record or plan, he said:

‘MR SHARP: Right, it’s very simple. We have what we call the major ships, of which Rabaul Queen was one, and for about eight months of the year between April and October we concentrate on maintaining those major ships so that they are ready to provide an uninterrupted service between the end of October through to the end of February. Now, it’s important to us that those ships do not stop in that four months’ period and we go through an intense period of maintenance on those major ships to make sure that they are in prime condition to tackle that period of time. The smaller vessels, which are not required during that prime time, are then maintained during that prime time. And if you take a trip to our dockyard, it will...’
become more apparent to you what we do on the maintenance which we can explain to you at the dockyard in more detail, then you can actually see what we are doing. So the big ships have about eight months of intense maintenance so that they are ready for uninterrupted service for four months and the smaller vessels are maintained throughout the year as required.’

The Commission, however, obtained documents from PNG Ports Corporation Limited in Kimbe which indicated that *Rabaul Queen* was entering and leaving the Port in Kimbe in 2010, 2011 and 2012 with such regularity that it was clearly incorrect to suggest in those years that the ship was undergoing months of intense maintenance as claimed by Captain Sharp (*Exhibit 375 and transcript pages 260-262*).

When Captain Sharp was shown these documents during examination, he accepted that *Rabaul Queen* could not have undertaken the intense maintenance he suggested (*Transcript page 2870*). It is clear to the Commission that Rabaul Shipping did not have a considered plan for the ongoing maintenance of *Rabaul Queen*.

**Design suitability for Papua New Guinea operations**

*Rabaul Queen* was built in Japan for use in the Inland Sea of Japan. Its original General Arrangement (GA) plan stated that the ship’s navigation area was ‘smooth waters’ (*Exhibit 54*). When *Rabaul Queen* was purchased, Captain Sharp was provided a document from his broker, Cosmo Marine Trade Co Ltd, which also made reference to ‘smooth water’ (*Exhibit 190*).

In addition, the ship was designed for predominately short voyages in sheltered waters of the Inland Sea of Japan. The coastal trade in Papua New Guinea was very different to the Japanese trade and the ship would be subjected to differing weather conditions during the overnight voyages of up to 20 hours in a tropical region.

However, Captain Sharp stated in evidence that he doubted that *Rabaul Queen* was built for ‘smooth waters’. He also acknowledged that the ship was not operating in smooth waters in Papua New Guinea (*Transcript page 2763*).

It is also noteworthy that when the ship was brought into PNG, Captain Wales, the principal ship’s surveyor from the Department of Transport in Papua New Guinea, queried the suitability of the ship to trade in Papua New Guinea (*Exhibit 54*). As a result of the concerns raised by Captain Wales and the Department of Transport about the suitability of the ship for PNG operations, Captain Sharp requested Mr Glanville, a Naval Architect from Cairns, Australia to prepare a Trim & Stability Book.

There is a considerable body of reliable evidence to the effect that the ship should never have sailed in conditions of force 7 or above, including that from the Naval Architect Mr Gehling (*Exhibit 332 and transcript page 2678*), Captain Teo (*Transcript page 2280*), Captain Hossain (*Transcript page 2474 – 2475*) and Mr Mudalige (*Transcript page 2417 – 2418*). This evidence is consistent with the survey certificate that was issued in respect of the ship on 24 February 2003 (*Exhibit 174*) that stipulated that the ship was to operate in conditions below force 7.

The fact that *Rabaul Queen* was built to operate in smooth waters does not necessarily mean that it was unsafe to operate in Papua New Guinea. However, the Commission
considers that it was unsafe for the ship to operate the ship in force 7 and above conditions.

**Weather and sea conditions**

The weather and sea conditions for the voyage on 1 February 2012 are discussed in detail in a Chapter 5 in this Report. However, the Commission wishes to briefly discuss the weather and sea conditions in relation to the safe operation of the ship.

The Commission was provided with weather and sea forecasts records by the Papua New Guinea National Weather Service (the Service) in relation to the weather and sea condition from December 2011 to February 2012.

These records indicate that on 1 February 2012, a gale wind warning was issued by the Service forecasting ‘northwest winds of 34/48 knots are expected to persist for the next 24 hours causing very rough and high seas’. This forecast covered the waters of Finchaffen and the Vitiaz Strait.

On 2 February 2012, the Service forecasted that ‘northwest winds of 33/47 knots are expected to persist for the next 24 hours causing very rough and high seas’. As a result the Service issued a gale wind warning that again covered the waters of Finchaffen and the Vitiaz Strait.

During his evidence, Captain Sharp (Transcript pages 1221 - 1222) presented an ‘in house’ document that he himself prepared on 31 January 2012 regarding the weather, and distributed to the Rabaul Shipping offices by fax for forwarding to the Master of any ship which might be in port at the time. Captain Sharp refers to this document as ‘a weather report’ (Exhibits 136 and 176).

Earlier in the hearings, Captain Sharp (Transcript pages 944 - 1054) told the Commission that he does not use any weather forecasts produced by the Service but rather uses information he obtains from websites of the American Joint Typhoon Warning Centre (JTWC) and the Australian Bureau of Meteorology (BoM). He obtains reports which cover the area of operation of his ships (Papua New Guinea coastal waters and the Bismark and Solomon Seas) and then he compiles his own ‘weather report’ for distribution.

The ‘weather report’ (Exhibit 176) prepared by Captain Sharp and transmitted to his ships on 31 January 2012 forecast north-westerly winds of 15 – 20 knots between West New Britain and the Vitiaz Strait 31 January 2012 to 2 February 2012. From Lae to the Vitiaz Strait, northwest winds of 20 – 30 knots were forecasted.

Captain Sharp’s ‘weather report’ of 1 February 2012 (Exhibit 136) showed that the winds in the Vitiaz Strait were not expected to abate during Rabaul Queen’s transit of the strait and, given this information, he still permitted the ship to depart Kimbe with no additional instructions to its Master.

Captain Tsiau said during his evidence that he relied solely on the ‘weather reports’ given to him by Captain Sharp and did not obtain weather forecasts from any other sources including the Service (Transcript page 1385). It is important to note that Captain Tsiau had ample opportunity to contact Coastal Radio on 31 January 2012 and 1 February 2012 and obtain independent weather and sea forecasts for the voyage but failed to do so.
Captain Tsiau gave evidence that he had sailed *Rabaul Queen* in conditions of force 7 or above winds on numerous occasions between February 2003 and March 2007 despite the Survey Certificate at the time specifically prohibiting it (*Transcript 1389*). Captain Tsiau also stated that he would have sought shelter if he knew of the gale wind warnings (*Transcript page 1391*).

In that regard, it is worth mentioning that Rolando Lamparero, the operations head of RD Fishing, gave evidence that several of RD Fishing’s ships (*Dolores 839* and *Dolores 849*), which are both considerably bigger than *Rabaul Queen* sought shelter from the conditions on 1 February 2012 (*Transcript pages 435 – 437 and Exhibit 99*). These ships were sheltering near Cape Hollman, which is at the tip of the Willaumez Peninsula to the west of Kimbe. *Rabaul Queen* was operating in this same area on 1 February 2012. However, contrary to what the Captain Tsiau told the Commission, he did not seek shelter despite the weather and sea conditions. This, again, demonstrates Captain Tsiau blatant disregard for the safety of the ship, its crew and more importantly, its passengers.

**Conclusion**

*Rabaul Queen* had been issued with a Papua New Guinea Survey Certificate on 21 May 2008 and this certificate was valid until 23 March 2012. During the validity of the certificate, apart from the initial inspection of the ship for the issuance of the certificate, the ship had been inspected, and the certificate subsequently endorsed, on three other occasions: 27 August 2009, 30 June 2010 and 18 April 2011. This indicates that the ship was, in a limited sense, seaworthy.

However, when considering the operation of the ship and the broader meanings of ‘unseaworthiness’ and ‘unsafe ship’ the Commission considers that *Rabaul Queen* was both unseaworthy and unsafe; and, hence, should never have departed Kimbe because:

- the ship was not suitable to operate in force 7 or above weather conditions;
- the ship was not manned and operated by a competent and appropriately qualified crew;
- the ship was not maintained in accordance with a considered and recorded maintenance plan;
- the ship was routinely carrying more passengers than specified by its Survey Certificate;
- the crew did not carry out effective safety training drills;
- the crew was not provided with appropriate procedures and guidelines in the form of a safety management system;
- the passengers were not mustered and provided with information about the ship, its life saving equipment and emergency signals after departure;
- the ship did not carry lifejackets suitable for use by all of its passengers (i.e. children and infant lifejackets were not carried);
- Rabaul Shipping and the Master did not consider the most appropriate weather forecast information either before the ship sailed, or during the voyage;
- the Master did not make regular contact with Coastal Radio as required; and
- The Master did not check the ship’s stability before departing port.
CHAPTER 9 – CAPTAIN PETER SHARP AND ‘HIS’ COMPANIES

The man and his companies

Captain Peter Robert Sharp was born on 10 May 1944. At the time of the sinking of Rabaul Queen the owner of the ship was Hamamas Lines Ltd and the operator was Rabaul Shipping Ltd. Captain Sharp was the managing director and a shareholder in both companies. There were many other companies at the time of the sinking of the ship of which Captain Sharp was a director and shareholder. He said that different companies related to particular parts of his business, for example, he said his passenger ship business was associated with Hamamas Lines, Rabaul Shipping and Star Ships (PNG) Limited.

Auspac

Auspac Limited (formerly Auspac Salvage Limited) (Company No 1-14704) was incorporated on 21 July 1989. Peter Robert Sharp became a director on 19 October 1989 and a shareholder on 30 June 1990. He has remained a director and shareholder since those dates. His wife, Mrs Leah Sharp (born 14 September 1951) and his son, Mr Alexander Cameron Sharp (born 21 August 1982) became shareholders on 8 November 1998 and 19 October 1989 respectively (Exhibit 57 and 350).

The company records obtained from the Registrar of Companies shows the registration of a fixed and floating charge by way of a ship’s mortgage. The property affected by the charge is recorded as ‘Motor Ship Ieshima’ (which was the former name of Rabaul Queen) (Exhibit 57). The records also revealed that there was the creation of a fixed charge on 23 March 2007 registered on 25 May 2007.

The property affected by the charge is noted as ‘Rabaul Queen’ and ‘Solomon Queen’. The principal activity of the business is recorded as ‘coastal shipping’. Captain Sharp gave evidence to the effect that he thought the charge had been paid out (Transcript page 131).

The official Registry of Ships (Exhibit 298) recorded Auspac Salvage Limited as the registered owner of Rabaul Queen (as at 12 February 1999), as did the original documents relating to the purchase of the ship from Japan in 1998 (Exhibit 190).

The Survey Certificates issued for Rabaul Queen dated 24 February 2003 (Exhibit 174) and 21 May 2008 (Exhibit 175) recorded the owner of Rabaul Queen as Auspac Salvage Limited. The Certificate dated 21 May 2008 was valid until 23 March 2012.

An apparent inconsistency in the proper identification of the ship’s owner is the fact that, in a one page Application for Survey submitted to the NMSA and dated 18 October 2011, Auspac (Salvage) Limited is given as the ship’s owner or agent. By that date, Hamamas Lines Limited was registered as the owner of the ship. While Captain Sharp’s signature appears at the bottom of the Application, he stated in evidence that someone else filled out the Application and he merely signed it (apparently without checking the details of the Application). The evidence that Captain Sharp gave that he did not read what he signed is rejected.
Hamamas Lines

Hamamas Lines Limited (Company No 1-58813) was incorporated on 13 February 2007 in Papua New Guinea. Peter Robert Sharp and Alexander Cameron Sharp are recorded as the only shareholders and directors from that date. The records obtained from the Registrar of Companies shows that a Charge was registered on 14 September 2009 and the properties affected by the Charge were ‘Rabaul Queen’ and ‘Solomon Queen’. Captain Sharp confirmed that at the time of the sinking this Charge remained unpaid (Transcript page 134 and exhibits 60 and 351).

According to the official Registry Book, NMSA recorded a change of ownership to Hamamas Lines Limited of Rabaul Queen on 23 June 2009. This is generally consistent with the evidence of Captain Sharp to the effect that there was a change of ownership. At the time of the sinking of the ship, Hamamas Lines Limited was still the owner of the ship (Exhibit 3). The Certificate of Registry issued by National Maritime Safety Authority (NMSA) dated 22 January 2009 records Hamamas Lines Limited as the registered owner of Rabaul Queen, some 5 months before the recorded change on the official Registry Book held by NMSA. The change of owner should have been, but was not, recorded on the Survey Certificate for the ship.

Rabaul Shipping

Rabaul Shipping Limited (formerly Rabaul Shipping Pty Ltd) (Company No 1-1275) was incorporated on 7 January 1965. Captain Sharp and his wife, Mrs Leah Sharp have been shareholders for many years, prior to the commencement of the operation of Rabaul Queen in Papua New Guinea in 1999 (Exhibit 59).

Captain Sharp became a director of Rabaul Shipping on 3 August 1987 and has held such position to this day. Rabaul Shipping was the operator of Rabaul Queen and the employer of the crew on board the ship when it sank on 2 February 2012 (Exhibit 2). According to Captain Sharp, the company has been the operator of the ship from the time it was purchased until it sank. The General Category Licence to engage in the coasting trade is dated 10 February 2010 and was issued by the Department of Transport (Exhibit 65). It was current at the date of sinking and was granted to Rabaul Shipping.

Star Ships (PNG)

Star Ships (PNG) Limited (Company No 1-50175) was incorporated on 18 November 2003. Captain Sharp, his wife Mrs Leah Sharp, and his son Mr Alexander Cameron Sharp have all been shareholders since 18 November 2003. The Registrar of Company documents reveal a number of charges in respect of various ships such as Kimbe Queen, Kavieng Queen, Buka Queen, Kokopo Queen, Solomon Queen, Pomio Queen and Rabaul Queen (Exhibit 58).

Interoceanic Ships and Kumul Line

Golden Kumul Line Limited (Company No 1-14598) and Interoceanic Ships Limited (Company No 1-14593) are two companies which were incorporated in 1989 by Captain Sharp. The principal activities are recorded as Coastal Shipping (Exhibit 61 and 62).
However the companies appear not to have operated for some years (Transcript page 138).

**Captain Sharp’s fleet on 2 February 2012**

At the time of *Rabaul Queen* sinking, the fleet controlled by Captain Sharp (via his various companies) consisted of over 20 ships, although not all were operational and not all were passenger ferries. Some of the ships operated outside Papua New Guinea. Various ships controlled by Captain Sharp via his companies at the time of sinking, with the year of build when available, were (in alphabetical order):

<table>
<thead>
<tr>
<th>Name of Ship</th>
<th>Type of Ship</th>
<th>Year of Build</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 <em>Alotau Queen</em></td>
<td>Passenger Ferry</td>
<td>1979</td>
</tr>
<tr>
<td>2 <em>Atolls Queen</em></td>
<td>Passenger Ferry</td>
<td>1988</td>
</tr>
<tr>
<td>3 <em>Calvados Queen</em></td>
<td>Passenger Ferry</td>
<td>1984</td>
</tr>
<tr>
<td>4 <em>Kavieng Queen</em></td>
<td>Passenger Ferry</td>
<td>1979</td>
</tr>
<tr>
<td>5 <em>Kimbe Queen</em></td>
<td>Passenger Ferry</td>
<td>1989</td>
</tr>
<tr>
<td>6 <em>Kokopo Queen</em></td>
<td>Passenger Ferry</td>
<td>1985</td>
</tr>
<tr>
<td>7 <em>Kondor</em></td>
<td>Cargo Ship</td>
<td>1974</td>
</tr>
<tr>
<td>8 <em>Kopra 1</em></td>
<td>Cargo Ship</td>
<td>1984</td>
</tr>
<tr>
<td>9 <em>Kopra 2</em></td>
<td>Cargo Ship</td>
<td>1985</td>
</tr>
<tr>
<td>10 <em>Kopra 3</em></td>
<td>Cargo Ship</td>
<td>1983</td>
</tr>
<tr>
<td>11 <em>Kopra 4</em></td>
<td>Cargo Ship</td>
<td>1989</td>
</tr>
<tr>
<td>12 <em>Kula Queen</em></td>
<td>Passenger Ferry</td>
<td>1990</td>
</tr>
<tr>
<td>13 <em>Madang Queen</em></td>
<td>Passenger Ferry</td>
<td>1980</td>
</tr>
<tr>
<td>14 <em>Mary Janine</em></td>
<td>Cargo Ship</td>
<td>1977</td>
</tr>
<tr>
<td>15 <em>Mary Mall</em></td>
<td>Cargo Boat</td>
<td>-</td>
</tr>
<tr>
<td>16 <em>Morobe Queen</em></td>
<td>Passenger Ferry</td>
<td>1972</td>
</tr>
<tr>
<td>17 <em>Pomio Queen</em></td>
<td>Passenger Ferry</td>
<td>1987</td>
</tr>
<tr>
<td>18 <em>Rabaul Queen</em></td>
<td>Passenger Ferry</td>
<td>1982</td>
</tr>
<tr>
<td>19 <em>Samarai Queen</em></td>
<td>Passenger Ferry</td>
<td>1984</td>
</tr>
</tbody>
</table>
Other ships owned by overseas companies controlled by Captain Sharp which operated outside Papua New Guinea were *Morima Queen* (Vanuatu) and *Temotu* (Solomon Islands) (*Transcript page 146 – 147*).

These ships varied in size and passenger-carrying capacity, with *Rabaul Queen* and *Solomon Queen* being the largest. They all operated passenger or cargo services around the Papua New Guinea coast, apart from *Morima Queen* and *Temotu*.

**Qualifications and experience of Captain Sharp**

Captain Sharp came from a long history of seafarers. His great grandfather, grandfather and father were all captains. Captain Sharp holds an Australian Master Class 1 Certificate of Competency issued by the Australian Maritime Safety Authority.

Captain Sharp first went to sea at the age of 16 on board tankers operated by Ampol. During the six years spent on board these tankers, Captain Sharp obtained his Second Mate and Chief Mate Certificates of Competency. When he left Ampol, Captain Sharp was employed by Karlander New Guinea Line and served on ships which operated between Australia and various Pacific Ocean islands, including Papua New Guinea. During that time, he obtained his Master Class 1 Certificate of Competency, known then as a Foreign Going Master’s Certificate.

In 1971, because of this experience in the waters of Papua New Guinea, Captain Sharp took up the position of operations manager with the newly formed New Guinea Express Lines. In about 1973, he joined a small company called Sea Freight, a company jointly owned by the Anglican Church and the then Stannard Shipping (Stannard Tugs & Adelaide Steamships Company, Australia). This company operated about 12 small coastal ships in Papua New Guinea Coastal Waters. Following a disagreement between the Church and the Australian Shipping Companies, Sea Freight was sold to Bishop Shipping Services and Captain Sharp began a ship operating company with his brother Mr Hamish Sharp.

Captain Sharp and his brother, Mr Hamish Sharp, ceased their business relationship many years ago and both to this day operate different companies. Mr Hamish Sharp, who was born on 15 September 1953, is a shareholder of Bismark Maritime Limited and a former controversial member and Chairman of the NMSA.

By the time *Rabaul Queen* sank, Captain Sharp had considerable experience, over many years, operating passenger ferries in Papua New Guinea.

Captain Sharp also had a long history of purchasing ships, including passenger ferries in Japan.

Unfortunately, Captain Sharp did nothing effective, such as attending regular courses, to keep up with developments in the maritime industry, including in relation to the safe operation of ships. In the last five years, Captain Sharp only attended a short course for one to two weeks about 4 ½ years ago to keep his Master 1 Certificate current.
When Captain Sharp sought to lobby to become a member of the Board of NMSA he said in a letter dated 11 February 2007 to the Chairman of the PNG Chamber of Commerce, the following:

‘I therefore ask you to withdraw your nomination and to reconsider nominating me because there is no one else in Papua New Guinea with the length and depth of knowledge of the shipping industry within Papua New Guinea that I have. This is a fact which is irrefutable and it concerns me that the Chamber’s nominees have always been transient contract persons with no real affinity to the country or the industry.

I appreciate that I cannot force myself onto the Chamber of Commerce but it is necessary that you are put on notice that I make myself available for this nomination.’

Captain Sharp was never nominated or appointed to the Board of NMSA, unlike his brother Mr Hamish Sharp who became the Chairman.

Given the background of Captain Sharp, it is not surprising that he appreciated and understood that:

- It is the duty of an operator, owner and Master of a ship to ensure as a paramount matter the safety of passengers;
- the operator, owner and Master of a ship should not do anything to compromise the safety of the crew or passengers on board a ship; and
- an approach should be taken by the operator, owner and Master of a ship which is conservative in the interests of safety of the crew and its passengers (Transcript page 144 and 254).

For reasons discussed elsewhere, what is alarming is that Captain Sharp was of the opinion that during the entire time his companies had been operating and owning ships in Papua New Guinea, there was not one instance where he formed the opinion that the safety of the crew or passengers had been compromised (Transcript page 145). The evidence shows that the shipping operation of Captain Sharp had been compromising the safety of crew and passengers for years and allowed to go, in many material respects, unabated by the NMSA. If one does not recognise a problem, as was the case with Captain Sharp, it cannot be appropriately addressed.

**Captain Peter Sharp: overwhelming and a law unto himself**

Captain Sharp demonstrated to the Commission that he has little or no respect for people, including those in authority. This gross disrespect was reflected in the appalling and inhumane conditions he was prepared to allow passengers on *Rabaul Queen* to travel and may explain, in part, why he was prepared to compromise the safety of passengers on board his ships. The safety of passengers was not of paramount concern to Captain Sharp. He made it clear in evidence that he was in business to make a profit. Of course, there is nothing wrong with this, provided one does not compromise the safety of passengers for the sake of profit.
Advertisement for Positions with Rabaul Shipping

On 28 January 2008, Captain Sharp personally prepared and placed an advertisement in The National newspaper advertising an immediate vacancy for certain positions based in Rabaul but moving around Papua New Guinea as required. The advertisement was a prominent advertisement in the newspaper and provided in paragraph 3 as follows:

‘The candidate will demonstrate that unlike 99% of all Papuan New Guineans he has the capacity to control not only other Papuan New Guineans but foreign nationals without fear or favour. The successful candidate will have to be able to advise Government officials they are wrong when they are wrong and to stand up to oppressive and stupid intimidation and come out on top.’ (Exhibit 389)

The advertisement went on to state that:

‘The successful candidate will be mentored and monitored by Captain Peter Sharp until the Ship’s Supervisor gets into his stride.’ (Exhibit 389)

Captain Sharp in examination by Counsel Assisting indicated in relation to the advertisement to the effect that (Transcript page 3016 – 3012):

- He had no regrets at all about the advertisement;
- he still held the opinions expressed in the advertisement;
- expatriates can basically get away with anything they want to tell Papuan New Guineans; and
- it was not, in his opinion, offensive.

The Commission finds that the advertisement was highly offensive and the failure of Captain Sharp to recognise this is a reflection on his character demonstrating, together with other evidence, that he considers he can largely say and do what he wishes.

Communications with NMSA

Captain Sharp wrote highly offensive, insulting, intimidating and provocative letters to the Regulator, the NMSA. There is a long history of such communications from Captain Sharp. Many of these letters were copied to others in authority such as the Ombudsman Commission. They were calculated to bully the NMSA into doing what Captain Sharp wanted and are likely, in the opinion of the Commission, to be in part an explanation as to why NMSA and officials did not inspect ships operated by Captain Sharp as regularly or with the attention to detail expected.

By letter dated 20 November 2010, Captain Sharp wrote to the Executive Manager – Maritime Operations of NMSA Captain Nurur Rahman, who was not a Papua New Guinean. The letter stated:

‘You refer me to the Merchant Shipping Act 1975 (without amendments apparently). Perhaps I have been missing something because we have been talking in English, my mother tongue, but I thought that that was what was behind my argument all along plus precedent or in other words history…

‘Our western and PNG law is based on procedures from the past. It is called precedent. I thought Bangladesh and Australia followed the same Westminster
system? Curious I must be mistaken in which case I am very sorry that you are in an alien system conducted in a foreign language...

‘It is not something to be ashamed of if you are ignorant of some things. The crime is when you are a Government Senior Official and you deliberately, because of ignorance or malice or both or more, try to impose your own ideas which are not or may not be in line with the law of the country you are in. That has happened all too often in Papua New Guinea in the nearly 50 years I have been here. My experience has been limited mainly to liars and deceivers within the Department of Transport and now the NMSA. Again you cannot deny history because a large number of the people now working for the NMSA were the same liars and idiots that were in the DoT. So whilst you may be a separate entity legally, to all intents and purposes it is the same lunatics who have taken over the asylum. Instead of cream rising to the top in the case of the NMSA, it is my belief that it is the sewer scum that has bubbled to the top like a cesspool.’ (Exhibit 296)

Ironically, the evidence demonstrates that over many years it has been Captain Sharp who has sought to impose his ideas on others inconsistent with the laws of Papua New Guinea. For example, authorising, over many years, underqualified crew to sail ships knowingly carrying more passengers than authorised by the survey certificates.

On 15 March 2011, Captain Sharp wrote a further letter to the Executive Manager – Maritime Operations NMSA stating in paragraph 2:

‘Do you suffer from schizophrenia or other psychosis or do you have a history of mental illness in your family?’

The letter was copied to the Ombudsman Commission, an independent surveyor, the Secretary of the Department of Transport and others. (Exhibit 337)

On 21 May 2010, Captain Sharp wrote to Mr Cyril Mudalige, Surveyor, NMSA. Captain Sharp had had numerous disputes with Mr Cyril Mudalige from the time that Mr Mudalige worked in the Department of Transport in the 1990’s. At one time Captain Sharp took steps to have Mr Mudalige charged with contempt resulting from his refusal to survey and issue a Certificate of Survey relating to one of his ships.

The letter of 21 May 2010 was entitled ‘Refusal to Issue Safety Certificate MV Kula Queen’. The letter indicated that his lawyers had been instructed to commence Court proceedings against Mr Mudalige if he did not provide a new full term Safety Certificate before the close of business that day. The letter was again copied to the Ombudsman Commission and the Secretary of the Department of Transport, as well as his in-house lawyers. (Exhibit 337)

On 26 May 2010 Captain Sharp sent an email to Mr Cyril Mudalige. The subject was ‘Positions Vacant’. The email simply said:

‘Cyril

I see that the position of Government Engineer & Ship Surveyor is vacant in Colombo.

p sharp.’ (Exhibit 296)

Initially Captain Sharp said in evidence that he could not remember sending any demeaning or insulting letters to NMSA (Transcript page 3021). Ultimately Captain Sharp
accepted that the letters were offensive but said that was the intent. He said he did not have the slightest regrets about sending the offensive letters to the Regulator (Transcript page 3023-3024). The Commission does not accept the evidence of Captain Sharp that it is ‘totally incorrect’ that history indicates that he has sought to be abusive over a number of years or used bullying tactics to get his way from the Regulator (Transcript page 3027).

Captain Sharp was of the view that the Department of Transport and NMSA were incompetent (Transcript page 3035); said he does not have a lot of respect for them (Transcript page 3069) and does not see ‘eye to eye’ with them on a number of issues (Transcript page 3026).

Captain Sharp accepted that he treated with disdain and distrust members of NMSA when he considers ‘it’s appropriate’ (Transcript page 3070).

Counsel Assisting suggested to Captain Sharp that he belittles them (NMSA members) by reference to sending copies of letters to the Ombudsman Commission and other officials. As to this, Captain Sharp said:

‘If I think it’s warranted. What – I believe that I have a right to do it, don’t I.’ (Transcript page 3070)

Refusal to carry expatriates on board ships

When Captain Sharp was asked by Counsel Assisting if it was correct that he refused to carry expatriates on his ships, he said:

‘That’s partly true but no completely true. We prohibit the travel of expatriates on our ships during the busy period, which is November through to February.’ (Transcript page 3019)

When it was correctly pointed out in examination that he would not know, in some cases, whether tickets were being purchased on behalf of expatriates or not he suggested that his staff would because:

‘Not many black people have got white relatives.’ (Transcript page 3020)

After it was suggested that a driver may purchase a ticket for an expatriate, he suggested that the sales office would ask who they were buying a ticket for.

When it was highlighted to Captain Sharp, who is married to a Papua New Guinean, that a Papua New Guinean may purchase a ticket for an expatriate husband, Captain Sharp changed his mind. He said:

‘We allow nuns, priests and people like you’re talking about to travel on this ship if it’s necessary.’ (Transcript page 3021)

Refusal to allow NMSA officials or their relatives to travel

Captain Sharp, despite his initial denials, had refused to allow NMSA officials or members of their families to travel on his ships. This is a demonstration of his vindictiveness (Transcript page 3061-3062).

In an affidavit sworn by Captain Sharp (Exhibit 330), as recently as 2 November 2010 in National Court proceedings, Captain Sharp deposed in paragraphs 11 and 12:
11. It was quite a shock to me to learn that without the courtesy of advising me Mathesion had left us and joined the NMSA.

12. Sometime later Mathesion’s wife wanted a trip to take her to the Island in Milne Bay on one of our ships. In retaliation to Mathesion’s sudden and very rude departure we declined to carry Mrs Mathesion advising her she could travel on the other boats from her Island. Mr Mathesion said he would get even with the company.’

The admitted retaliatory conduct by Captain Sharp again reflects very poorly on his character, demonstrates the measures he is prepared to take if he does not get his way and how he is prepared to treat people.

Mr Carl Kamang was an officer at NMSA in 2009 and at the time of the Commission hearings. Mr Kamang was in fact an officer on board Kris when it sank, which was operated by a company controlled by Captain Sharp and was thus well known to Captain Sharp.

On 13 January 2009, Mr Kamang’s family travelled on board Rabaul Queen from Kimbe to Rabaul transiting to Buka on 14 January 2009. The family was informed that Captain Sharp was looking for them and he did not want to see them board the ship to Buka (Exhibit 330). Other arrangements were made by the family to travel from Rabaul to Buka.

Conflicts of interest

The Department of Transport and NMSA has allowed Captain Sharp and his companies to engage in clear conflicts of interest over many years not only without challenge, but by condoning such conduct by, for example, issuing survey certificates and endorsing such certificates on numerous occasions.

Captain Sharp is, and was, a director and shareholder of a company named Rabaul Slipways Pty Ltd. This company had been conducting fire equipment tests for years issuing fire equipment certificates and CO2 weight tests relating to ships operated by Rabaul Shipping.

In fact, on 14 February 2011, Rabaul Slipways Pty Ltd issued a Fire Equipment Certificate certifying that the company had examined and tested the fire extinguishers for Rabaul Queen and ‘they were in good working order’. (Exhibit 171)

On 4 April 2011, Rabaul Slipways Pty Ltd issued a certificate in relation to the testing of Rabaul Queen’s CO2 weights. (Exhibit 172). Captain Sharp could not accept that there was any conflict of interest, or even a perceived conflict, in issuing such certificate in circumstances where there was a clear conflict (Transcript pages 2876 and 2878). He did not see a conflict:

‘Because we’ve done it for a long, long period of time. We’ve done it not only for Rabaul Queen but all the other ships that had CO2 and nobody has brought to our attention that they believe we have a conflict, and we’ve continued to do that, and on the basis of that we continue to get our surveys done. So if anybody had a conflict – if anybody thought there was a perceived conflict I would have thought they’d come and have a talk to us.’ (Transcript page 2878)
Rabaul Slipway should not have conducted the testing. NMSA should also not have allowed this conflict and the fact that it was allowed to continue for years reflects poorly on the Department of Transport and the NMSA.

Another demonstration of what could amount to a clear and serious conflict of interest is a suggestion by Captain Sharp that he would and could survey his own company’s ships. By National Gazette published 18 October 2007 Mr Chris Rupen, General Manager of NMSA, signed an instrument appointing ‘Rabaul Shipping, Peter Sharp’ to be surveyors of ships less than Convention Size (Exhibit 377). On 1 May 2012, Captain Sharp wrote to Captain Hassain, Manager, Survey & Inspection NMSA. The letter listed five ships owned by companies controlled by Captain Sharp. It indicated, in effect, that he was an approved surveyor and he required the forms from NMSA so he could survey the ships (Exhibit 376).

Captain Sharp accepted that he could see a conflict in surveying his own ships but did not see a conflict of interest when he wrote the letter because he was attempting to ‘prompt a reply’ (Transcript page 2891).

Captain Sharp said that if he was forced to, he would survey his own ships. That is, if NMSA did not send a surveyor (Transcript page 2893). NMSA appear not to have sent a reply to Captain Sharp in respect of his letter, but should have, drawing his attention to a clear conflict and advising him he was not entitled to survey his own ships. In fact, having regard to the unsafe operations conducted by Captain Sharp over many years and his character, Captain Sharp should not be allowed to survey any ships. If the authority given to him to survey ships has not been revoked, it should be done immediately.

**What did Captain Sharp learn from the tragedy?**

One would expect that as the person behind the companies that owned and operated *Rabaul Queen*, the sinking of which resulted in the death of so many people, that Captain Sharp would have reflected seriously on the tragedy. This should have been even more so given the establishment of the Commission of Inquiry and the terms of reference.

The following exchange at transcript page 2762 between Counsel Assisting and Captain Sharp on 29 May 2012 is instructive:

‘MR VARITIMOS:  Now, Captain, have you learnt anything from this disaster?
MR SHARP:  Yes, I have.
MR VARITIMOS:  And what have you learnt?
MR SHARP:  People tell lies.
MR VARITIMOS:  People tell lies.
MR SHARP:  They do.
MR VARITIMOS:  That’s what you learnt. And have you told any lies to the Commission?
MR SHARP:  I have not.’

On 31 May 2012, the following is noteworthy (Transcript page 3113-3114)
‘MR VARITIMOS: ...Captain Sharp, I should just give you this opportunity. I asked you, I think it was yesterday or the day before, what have you learnt out of the Inquiry. Remember that?

MR SHARP: Yes.

MR VARITIMOS: Is your answer still the same?

MR SHARP: And what was that answer?

MR VARITIMOS: The answer was, ‘People lie.’

MR SHARP: That’s right.

MR VARITIMOS: Is that still your answer?

MR SHARP: Some people lie.

MR VARITIMOS: Yes. Is that still your answer?

MR SHARP: That’s right.

MR VARITIMOS: Is that all you’ve learnt from the Inquiry?

MR SHARP: No.

MR VARITIMOS: What else have you learnt?

MR SHARP: I haven’t formulated it yet.’

The answers by Captain Sharp to what he has learnt from the disaster is a very poor reflection on Captain Sharp and demonstrates his unfitness to continue to be a director of a company which is engaged in owning and operating ships carrying large numbers of passengers.

Why did Captain Sharp consider the loss of lives attained such magnitude?

The Commission of Inquiry, by term of reference 5, is to inquire and report into the reason why the loss of lives attained such magnitude. Captain Sharp was aware of this since February 2012. Irrespective of this term, Captain Sharp should have had this question firmly in his mind after the disaster and considered the answer.

The transcript, on this issue, records ([Transcript pages 3099 – 3110]) as follows:

‘MR VARITIMOS: Why do you say the loss of lives attained such magnitude in this case?

MR SHARP: Whilst there is a large number of people lost, compared to other disasters I don’t think there was a large loss of life. When you look at the Airlines PNG crash, all 44 passengers died. If you take a figure of 360 for Rabaul Queen, approximately 120 died. So it’s a comparison and whilst there were too many people lost, there were a lot of people saved.

MR VARITIMOS: If the ship did not - was not as crowded as it was, do you accept that less lives would have been lost?

MR SHARP: Perhaps, but I’m not going to say positively.

MR VARITIMOS: But there is a likelihood that that would have been the case?"
MR SHARP:  It may have.

The answer by Captain Sharp demonstrates total disrespect for those who lost their lives as a result of the Rabaul Queen tragedy and their families. How Captain Sharp could suggest that the loss of over 140 lives is not ‘a large loss of life’, compared to other another disaster when 44 people died, is incredible. Both were regrettable tragedies.

Captain Sharp’s view on the cause of the disaster

Captain Sharp maintained that the cause of the disaster was an Act of God (Transcript page 3070-2071 and Exhibit 231) and that three large waves rose up and sank the ship. Captain Sharp said, ‘It was one of those things that happen in nature and the ship was in a spot where it was overwhelmed by three large waves.’ (Transcript page 3099)

Captain Sharp accepted the definition of an Act of God put to him by Counsel Assisting as:

‘Casualty due to extraordinary natural causes and circumstances, to which there was no human contribution and which could have been foreseen or averted by the exercise of any amount of reasonable intelligence or endeavour.’ (Transcript page 2760)

For reasons set out elsewhere in this Report, the Commission has no hesitation in finding that the cause of the disaster was not an ‘Act of God’. There were human contributions that lead to the disaster and it should have been foreseen and averted by the exercise of reasonable intelligence or endeavour by Captain Sharp and the Master of the ship.

Captain Sharp unequivocally rejected the suggestion that the ship was overwhelmed by the weather conditions (Transcript at page 3099). Having said that, he acknowledged that the ship should never have sailed in force 8 or 9 conditions, as it would be unsafe to do so. (Transcript page 2777 – 2778 and page 2781 – 2782) (see Appendix 3)

The weather forecast issued at 5am on 1 February 2012, before the ship sailed on its final voyage from Kimbe, forecast force 8 and 9 conditions. Rabaul Queen should never have sailed from Kimbe on 1 February 2012 as the weather conditions were unsafe for the ship to sail. The credible evidence, as discussed in Chapter 5 of this Report relating to weather, confirms that the ship was likely to have been in force 8 or 9 conditions when it sank.

Measures to prevent the future occurrence of a similar disaster

The Commission is required, by term of reference 6, to inquire into and report on proposals that would help prevent the future occurrence of a similar disaster. Captain Sharp was aware of this from February 2012 and had ample opportunity to reflect on the term and any answer. Counsel Assisting gave Captain Sharp an opportunity to express his opinion on the above term. On 31 May 2012 at page 3100, the transcript is informative:

MR VARITIMOS:  What measures or proposals do you consider should be put in place to prevent the future occurrence of a similar disaster?

MR SHARP:  A little bit more understanding of the nature of the water in which, not only did Rabaul Queen perish, but in 1991 a Lutheran Shipping ship, called the Simbang, also perished with approximately 100 lives or more. And seven weeks after Rabaul Queen accident, a container ship called the
Morobe Coast nearly perished after it got hit in the same area by three large waves.

‘MR VARITIMOS: That’s a dangerous area, is it?

MR SHARP: Well, it appears to be.

MR VARITIMOS: You have known about these other events previously, have you?

MR SHARP: I knew about the Simbang but the Morobe Coast didn’t occur until seven weeks after Rabaul Queen.

MR VARITIMOS: Well, when you say more understanding of the nature of the water

MR SHARP: Yes.

MR VARITIMOS: - - - you mean better understanding of the nature of the sea conditions in the area?

MR SHARP: That’s correct.

MR VARITIMOS: That is, the ocean conditions, the wind conditions, is that right?

MR SHARP: That’s correct.

MR VARITIMOS: And who should have a better understanding? Well, when you say more understanding, I assume you mean better understanding?

MR SHARP: A better understanding because Papua New Guinea is not terribly well frequented. But that particular area where the ship sank there is the legend of a thing called the Bobongara. Now, usually when you have legends, there is some basis of the legend, like in Norway you have the Kraken which rises up and sinks ships, and in other parts of the world you have these things. And it appears that this phenomenon known as the Bobongara is known to the village people near Bobongara and they claim that it’s claimed many ships in the past in that particular area and there are warning signs predicting when a Bobongara is going to appear. Now, we have learned all this subsequent to the accident.’

The Commission considers that the disaster was not the result of any so called ‘Bobongara’ and that the weather conditions were such that it was unsafe for the ship to depart Kimbe on 1 February 2012. The official forecast issued by the Papua New Guinea National Weather Service (the Service) had predicted force 8 and 9 conditions hours prior to the departure of the ship from Kimbe. Captain Sharp had never availed himself of the opportunity to obtain these weather forecasts as he considered that he knew better than the Service. Although he did not receive the reports, it is likely that they were received by his office in Alotau. The Alotau office of Star Ships (PNG) Ltd certainly received some weather reports in late January and early February 2012 (Exhibit 417). Captain Sharp said that he did not become aware that the Alotau office was receiving weather reports until
after *Rabaul Queen* sank. Obviously someone had the common sense at his Alotau office to seek official weather reports from the Service.

When Captain Sharp gave evidence on the 31 May 2012, he said that his wife told him ‘Ring up Alotau. They might have a weather report’ (*Transcript page 3163*) Captain Sharp ascertained after checking, that the Alotau office had obtained weather forecasts and asked the office to send them to him. He said this was done and ‘I think it was the forecast on 1st and the 3rd.’ When asked by the Counsel Assisting whether they covered the period 1 February from the Service he replied ‘I believe – I believe they did’ (*Transcript page 3164*). However, although Captain Sharp said he would produce copies, the only copies produced were those supplied by his Alotau office by facsimile to Captain Sharp on 31 May 2012, not copies of the actual facsimile transmissions received by him shortly after the ship sank. The facsimile transmission to Captain Sharp from Joshua of the Alotau office said that ‘I can only find weather reports for 25/01/2012, 27/01/2012, 03/02/2012 and 05/02/2012.’ (*Exhibit 417*). The weather reports included a coastal waters forecast for 25 January 2012, coastal waters forecast for 27 January 2012 and two gale wind warnings for 3 February and 5 February 2012. Both gale wind warnings recorded:

‘VERY STRONG NORTHWEST WINDS OF 34/48 KNOTS ARE EXPECTED TO CONTINUE FOR NEXT 24 HOURS CAUSING VERY ROUGH AND HIGH SEAS.’

It is likely that the Alotau office received the weather forecasts and warnings for 1 February 2012, but they were not produced to the Commission. In any event, Captain Sharp gave evidence to the effect that he knew better than the Service.

**Lack of competition**

Captain Sharp had little or no effective competition in the passenger ferry sector for years. On 30 May 2012 he maintained, ‘We do actually have a lot of competition from small boats’, however these banana boats, as he acknowledged, only carry about 10 people (*Transcript page 3030*). The voyages that *Rabaul Queen* was travelling were usually at least 15 hours duration. The voyage from Kimbe to Lae was anticipated to take about 20 hours. It can hardly be said that the banana boats are effective competition to large passenger ferries in these circumstances.

When Captain Sharp gave evidence on 12 April 2012, he said his competition was from Lutheran Shipping, but they only send a ship according to his evidence on the run that *Rabaul Queen* sailed approximately once a month. On 30 May 2012, Captain Sharp said ‘We have competition, it’s called Lutheran Shipping’. He also said that he did not know whether this was effective competition and that ‘they sail quite often’. He maintained, ‘We have plenty of competition from the airlines’ (*Transcript page 151*).

The lack of any competition, or at least any effective competition, has enabled Captain Sharp to offer substandard service for years and at the same time charge high fares. The suggestion by Captain Sharp that K350 was not a lot of money for a Papuan New Guinean to pay for a ticket from Rabaul to Lae cannot be accepted. Captain Sharp indicated that he paid his driver, for example, K3 an hour. That puts the fare charged in context.

The passengers who wish to travel from places *Rabaul Queen* travelled to, had little choice but to accept the appalling conditions offered by the ships operated by Captain
Sharp. Captain Sharp took advantage of this to subject his passengers to gross overcrowding and unacceptably dangerous weather conditions on a regular basis.

**Misrepresentations by Captain Sharp to QBE Insurance & Pacific Assurance Group**

A demonstration of the dishonesty of Captain Sharp was reflected in his dealings with the former insurer of *Rabaul Queen*, QBE Insurance PNG Limited and the insurers at the time of the sinking, Pacific Assurance Group Limited. This was compounded by his responses to questions put to him by Counsel Assisting regarding his dealings with the insurance companies.

QBE Insurance first insured ships owned by companies controlled by Captain Sharp when the company acquired the insurance business of Zurich Pacific Insurance around 2001. The business was transacted by Aon Risk Services (PNG) Limited.

There were various losses and claims that came to the attention of QBE. These losses and claims included:

<table>
<thead>
<tr>
<th>Date</th>
<th>Ship Name</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 October 2002</td>
<td><em>Kimbe Queen</em></td>
<td>Grounded at Kimbe</td>
</tr>
<tr>
<td>5 March 2004</td>
<td><em>Solomon Queen</em></td>
<td>Propeller damage</td>
</tr>
<tr>
<td>13 July 2004</td>
<td><em>Atolls Queen</em></td>
<td>Grounded</td>
</tr>
<tr>
<td>25 June 2005</td>
<td><em>Kimbe Queen</em></td>
<td>Grounded</td>
</tr>
<tr>
<td>26 August 2005</td>
<td><em>Rabaul Queen</em></td>
<td>Grounded</td>
</tr>
<tr>
<td>29 October 2005</td>
<td><em>Buka Queen</em></td>
<td>Ran aground at Amio</td>
</tr>
<tr>
<td>18 May 2006</td>
<td><em>Kokopo Queen</em></td>
<td>Ran aground Kavieng</td>
</tr>
<tr>
<td>27 August 2006</td>
<td><em>Kokopo Queen</em></td>
<td>Engine seizure</td>
</tr>
<tr>
<td>17 February 2009</td>
<td><em>Kuanua</em></td>
<td>Ran aground on a reef</td>
</tr>
<tr>
<td>11 May 2009</td>
<td><em>Kuanua</em></td>
<td>Grounded near old Lae airport</td>
</tr>
</tbody>
</table>

(Exhibit 84)

In December 2009, a decision was made to offer insurance renewal terms for only eight ships, but not 13 other ships as they were deemed by QBE Marine Underwriting staff to fail the standard underwriting criteria in relation to ship risks *(Exhibit 84)*.

Of importance, QBE made an offer to renew insurance for *Rabaul Queen* on the basis of a declared passenger number of 350, but refused to renew insurance to *Solomon Queen* which was built in 1975.

The Survey Certificates relating to *Rabaul Queen*, applicable since 24 February 2003 to the date of sinking prescribed, that the maximum number of passengers the ship was allowed to carry as 295 unberthed passengers *(Exhibits 174 and 175)*.

Notwithstanding the maximum number of passengers prescribed by the Survey Certificates, Captain Sharp continuously insured *Rabaul Queen* for 350 passengers, both with QBE and subsequently Pacific Assurance Group. *(Exhibits 393 and 394)*. He obtained yearly quotation slips indicating that the ship was insured for 350.
Captain Sharp deliberately misled the insurers, QBE and subsequently Pacific Assurance Group as to the number of passengers Rabaul Queen was licensed to carry. In fact, Captain Sharp signed at least one false declaration in this regard.

The Commission has no hesitation in concluding that over a number of years Captain Sharp knowingly insured various ships, including Rabaul Queen, to carry many more passengers than the ships were licensed to carry (Exhibits 50, 51, 84 and 183 and transcript page 3086 – 3098).

At one time, Captain Sharp accepted that in an Application for Insurance signed by him on 6 November 2006, he wrote that the number of passengers Rabaul Queen was licensed to carry was 350 (Exhibit 110 and transcript page 2970). He accepted that he had misled the insurance company but said it was not intentional (Transcript page 2971).

The suggestion by Captain Sharp to the effect that the disclosure or representation over many years to the insurers was some form of oversight or mistake or that he did not read documents (Transcript page 3095), such as insurance proposal forms signed by him, is not accepted. The Commission finds he deliberately and intentionally misled insurers over many years.

**Poorly maintained ships**

The fleet of ships owned and operated by Captain Sharp’s companies were poorly maintained and of considerable age (Exhibit 93). In a letter to NMSA dated 15 March 2012, Captain Sharp said that ‘the cost of a new ferry is probably 10 or more times more expensive than a good second hand ship. Every ship owner wants to build a new ship to his/her design but the most important factor is cost.’ (Part of Exhibit 54)

Captain Sharp said that he had planned maintenance for Rabaul Queen but ‘it’s not recorded’. He also said that the actual maintenance undertaken is not written down (Transcript page 973).

When Counsel Assisting asked Captain Sharp to explain how he undertook maintenance and repairs without a written maintenance record or plan, he said:

> **‘MR VARITIMOS:** Well, you explain to me then how you undertake maintenance and repairs without a written maintenance record or plan.

> **MR SHARP:** Right, it’s very simple. We have what we call the major ships, of which Rabaul Queen was one, and for about eight months of the year between April and October we concentrate on maintaining those major ships so that they are ready to provide an uninterrupted service between the end of October through to the end of February. Now, it’s important to us that those ships do not stop in that four months’ period and we go through an intense period of maintenance on those major ships to make sure that they are in prime condition to tackle that period of time. The smaller ships, which are not required during that prime time, are then maintained during that prime time. And if you take a trip to our dockyard, it will become more apparent to you what we do on the maintenance which we can explain to
you at the dockyard in more detail, then you can actually see what we are doing. So the big ships have about eight months of intense maintenance so that they are ready for uninterrupted service for four months and the smaller ships are maintained throughout the year as required.’

The Commission obtained documents from the PNG Ports Corporation in Kimbe which demonstrated Rabaul Queen was entering and leaving the Port in Kimbe in 2010, 2011 and 2012 with such regularity that it was clearly incorrect to suggest in those years that the ship was undergoing months of intense maintenance (Exhibit 375 and transcript pages 260-262).

These documents were put to Captain Sharp who had no alternative but to accept that Rabaul Queen could not have undertaken the intense maintenance he suggested (Transcript page 2870). Having said that, Rabaul Queen was dry-docked in October 2011 and work on the ship was carried out by RD Fishing (PNG) Limited.

Allowing Kris to sail when Captain Sharp knew it was unsafe.

Kris was a passenger ferry (built in Japan in 1972) that sank on 19 August 1993. The ship’s last departure port before sinking was Buki. Some five persons were confirmed as missing after the ship sank (and presumed dead) (Exhibit 290).

The ship was owned by Pacific New Guinea Line Pty Ltd, a company controlled by Captain Peter Sharp. The Master at the time of the capsize was Anthony Tsiau who was also the Master of Rabaul Queen when it sank (Exhibit 290).

Just like when Rabaul Queen sank, the minimum manning scale was not observed when Kris sank. That is, there were not sufficiently qualified crew to man the ship.

Notwithstanding the capsize and death of passengers on board Kris, Captain Sharp expressed the view that ‘Kris was very, very successful’ (Transcript page 3164). Captain Sharp considered that the ship was ‘very, very successful’ by explaining that this was a reference to financial reasons.

Captain Sharp maintained that ‘Kris sank because of a gross mistake by the Department of Transport and that caused Kris to sink’ (Transcript page 2809). He said that the Master was not at fault.

Captain Sharp said that the Department of Transport required Kris to be fitted with increased freeing port area which allowed water to come onto the ship causing it to sink. Captain Sharp said that in his opinion it was ‘obviously unsafe’ to operate the ship and he knew it was ‘totally wrong’ to have the extra freeing ports. He said that although ‘I knew it was wrong, but if we wanted to operate that ship we had to put in the freeing port area’ (Transcript page 2837 and pages 2844-2846). When asked by Counsel Assisting if it was to his benefit to sail the ship he said, ‘that’s what you’re in business for.’ (Transcript page 2847).

Having indicated that he knew that the ship was obviously unsafe to operate, Captain Sharp tried to suggest that he ‘suspected’ it was unsafe but when it sank ‘he knew it’ (Transcript page 2846).
Captain Sharp was clearly prepared to operate 
Kris for financial gain, even though it was obvious in his opinion that he would be compromising the safety of the crew, passengers and the ship. This is what he again did in allowing 
Rabaul Queen to sail in February 2012 from Kimbe.

The questions and response from Counsel Assisting, at page 2846 of the transcript, are instructive. The transcript records:

‘MR VARITIMOS: And you knew that it effectively was totally wrong, I suggest, for the ship Kris to sail in that condition?

MR SHARP: That's right.

MR VARITIMOS: And one of your companies was the owner or operator of the ship?

MR SHARP: That's right.

MR VARITIMOS: But you, nevertheless, allowed the ship to continue to operate?

MR SHARP: It continued to operate because the Department of Transport told me that it was safe to operate.

MR VARITIMOS: But you knew that it was unsafe.

MR SHARP: Well, I didn't know, I suspected.

MR VARITIMOS: Well, you said in evidence before lunch that it was obviously unsafe.

MR SHARP: It was obviously unsafe to me.

MR VARITIMOS: So I suggest you more than suspected it; you knew it.

MR SHARP: Well, I suspected it and when it happened then I knew that I had been correct.

MR VARITIMOS: And that lives were lost as a result.

MR SHARP: That's right.

MR VARITIMOS: Including at least one infant or child?

MR SHARP: That's right.

MR VARITIMOS: You have responsibility, as the operator of the ship, not to operate unsafe ships, is that right?

MR SHARP: Well, if I am told that I am - I have to do these things to operate the ship, you do these things and that's what the flag state tells you to do and you do it.’

Notwithstanding that the Survey Certificate for 
Rabaul Queen required the ship to operate with a maximum number of passengers of 295, Captain Sharp chose to ignore the Survey Certificate because it suited him. However, in circumstances where he obtained a Survey Certificate in relation to 
Kris he elected to rely on his Survey Certificate to operate what he considered was an unsafe ship. This is a demonstration in hypocrisy.
Captain Sharp said he had not seen the report of the Preliminary Investigation prepared by Captain Wales dated 30 August 1993 relating to the sinking of Kris (Exhibit 290). The report raised serious concerns warranting further investigation into the:

- Age of the ship;
- possible overloading of the ship; and
- minimum manning scale not being observed.

The unsafe nature of Rabaul Queen for Papua New Guinea conditions

Rabaul Queen was built in Japan for use in the Inland Sea of Japan. The original General Arrangement (GA) plan prepared for the ship provided that the navigational area for Rabaul Queen was ‘smooth water’ (Part of Exhibit 54). Captain Sharp had seen and obtained the GA plan but indicated to the Commission that he was unable to find a copy despite it being a very important plan and the fact that he could produce the other plans relating to the ship. The only plan he was not able to produce relating to the ship was the GA plan (Transcript page 2765).

The Commission finds that Captain Sharp deliberately failed to produce the GA plan, as he did with other important documents, because it did not suit his interests.

When Captain Sharp purchased the ship he was provided a document from his broker Cosmo Marine Trade Co Ltd which also made reference to ‘smooth water’ (Exhibit 190). Although expressing the view that he ‘doubted’ that Rabaul Queen was built for smooth water (Transcript pages 162 – 168), Captain Sharp well knew that it was built for operation in smooth waters from both the GA plan and the information he obtained from the brokers, Cosmo Marine Trade Co Ltd. The fact that it was built to operate in smooth waters does not necessarily mean it was unsafe to operate in Papua New Guinea. However, the Commission finds, which was accepted by numerous witnesses, that it was unsafe to operate the ship in force 7 and above conditions.

There is a considerable body of reliable evidence to the effect that the ship should never have sailed in conditions of force 7 or above, including that from the Naval Architect, Mr Gehling, (Exhibit 332 and transcript page 2678), Captain Teo (Transcript page 2280), Captain Hossain (Transcript page 2474 – 2475) and Mr Mudalige (Transcript page 2417 – 2418). This is consistent with the survey certificate issued in respect of the ship on 24 February 2003 (Exhibit 174) that stipulated that the ship was to operate in conditions below force 7 (i.e. below 28 knots). The Commission has no hesitation in concluding that the ship, when it sank, was operating in conditions of at least force 8.

Captain Sharp correctly accepted that Rabaul Queen was not operating in smooth waters in Papua New Guinea (Transcript page 2764). He also stated that going to sea was ‘dangerous’ and that it would be unsafe to operate Rabaul Queen in force 8 conditions (Transcript page 162).

Therefore, Captain Sharp should have had at least some concern about the safe operation of Rabaul Queen in Papua New Guinea, particularly in rough conditions, when he purchased it.

It is not surprising given the design and his operation of the ship that Captain Sharp heard shortly after the purchase of the ship that Captain Wales, principal ship’s surveyor from...
the Department of Transport in Papua New Guinea queried the suitability of the ship to trade in Papua New Guinea. *(Part of Exhibit 54)*.

The original Survey Certificate for the ship, which should have been issued in early 1999, could not be produced by either Captain Sharp or NMSA. However, the Survey Certificate issued on 24 February 2003 (valid until 24 March 2007) certified that the ship could only carry 295 passengers and the ship was to operate in conditions below force 7 seas *(Exhibit 174)*. That is, below 28 knots.

It is likely that the ship was only permitted to carry 295 passengers from the time it commenced operation in Papua New Guinea and Captain Sharp accepted this in evidence. That is, the ship was never permitted to ever carry greater than 295 passengers in Papua New Guinea, although this condition was ignored by Captain Sharp. Captain Sharp indicated that the ship would not be profitable if it only carried 295 passengers. Whether this is true or not, Captain Sharp would obviously be in a much better financial position carrying, as the ship regularly did during peak season, 350 or more passengers. Captain Sharp was prepared to place financial gain ahead of the safety of his passengers and crew.

Having heard about concerns raised by the Department of Transport about the suitability of the ship for PNG operations, Captain Sharp engaged Mr Glanville, a Naval Architect from Cairns to prepare a Trim & Stability Book. He advised him to prepare calculations based on a maximum number of passengers of 295.

Accordingly, having been engaged in January 1999, Mr Glanville prepared a Trim & Stability Book in April 1999 relating to the stability of *Rabaul Queen*. Significantly it was based not only on a maximum number of passengers of 295, but also a maximum of 57 passengers on the Promenade Deck at any one time *(Exhibit 42)*. Basically, the more passengers higher up the ship, for example the promenade deck, the less stable the ship becomes.

The evidence is clear that the crew and operator of the ship had no policy in place to restrict the number of passengers to 57 on the Promenade Deck. There were probably over 100 passengers on the Promenade Deck when the ship sank. There were certainly many more than the maximum allowable 57. They were in the first class area, mothers and children’s room and the open deck area. This was dangerous, and unsafe, particularly given the conditions on the voyage.

The number of passengers on the Promenade Deck thus well exceeded the basis upon which the stability calculations had been prepared in 1999.

Some of *Rabaul Queen*’s crew informed Captain Sharp sometime prior to 3:45pm on 14 February 2012 (some two weeks after the sinking) that there were about 80 people on the Promenade Deck. This was communicated in an email to Mr Glanville by Captain Sharp on that date *(Exhibit 286)*. However, Captain Sharp told Mr Glanville that ‘it was wet and blowing about 25 knots and I doubt it’ *(Exhibit 286)*. He instructed Mr Glanville to accordingly calculate the ship’s stability at the time of sinking on the basis of 55 on the Promenade Deck. This was a number under the maximum figure Mr Glanville had determined for the purposes of his stability calculations in 1999 and should have been the maximum number of passengers ever allowed on the promenade at any one time for
safety reasons. There was no justifiable basis for Captain Sharp to reduce the number to 55 as an accurate number of passengers on the Promenade Deck at the time of sinking. When asked on 30 May 2012 by Counsel Assisting how many did he say were on the Promenade Deck, he said, ‘I estimate, from what the crew have told me, round about 40, 50 people.’ (Transcript page 3045). This is contrary to the figure of 80 the crew told him by 8 February 2012.

It was clearly dangerous and unsafe to have over 100 passengers on the Promenade Deck. The persons on board the ship, especially the passengers in the deck passengers’ area, were getting wet during the voyage. Captain Sharp said, they would ‘get spray coming over the top’ and eventually would cover the whole deck; the whole deck would get slippery and dangerous (Transcript page 3179). This is consistent with the evidence given by numerous passengers who were on the Promenade Deck. Even if the ship sailed, given the unsafe conditions caused by the wet and slippery surface of the deck, no passengers should have been permitted on the deck. However, given the overcrowding of the ship and that well in excess of the maximum number of passengers were allowed on board the ship, they had no choice but to subject themselves to the dangerous and unsafe conditions.

When asked about the promenade deck being wet the following exchange at transcript page 3177 should be noted:

‘MR SHARP: It would have been wet.

MR VARITMOS: And you said they probably would be sliding all over the place.

MR SHARP: Well, the ship would have been rolling. It was on a beam sea. As we found out from that ship, the Cap Scott, the sea was a metre and a half to two and a half metres, which is consistent with what the crew have said all along, despite what the passengers have said. The crew indicated that the ship was rolling, which is the natural state for a ship in the beam sea. Seas were hitting the side of the ship. Those unruly students down below were egging it on, saying ‘One more, one more’, which meant that the waves were hitting the side of the ship. The spray would have been blown up. You’ve got a 20 knot wind that would have carried it all over the deck. So the deck would have been wet. You’ve got an act – you’ve got an area there which had fairly violent motion. So it would be probably the last place on the ship you’d want to be.’

Captain Sharp’s expressed views on passenger numbers after the ship sank

Captain Sharp issued his memorandum dated 22 September 2004 to ‘All Managers, All Captains and All Chief Officers’ that Rabaul Queen could carry 350 passengers (Exhibit 191). In evidence, he accepted that all references on passenger numbers made by him did not include any infants under 3 years as they were not issued tickets.

The number of passengers the ship was insured to carry, on the basis of information provided by Captain Sharp and the number of passengers he declared it was licensed to
carry, was 350. This is notwithstanding that the Survey Certificates issued in respect of the ship only authorised a maximum of 295 passengers to be carried.

On 2 February 2012, Captain Sharp issued a typed Press Statement headed ‘PNG FERRY DISASTER STATEMENT FROM OWNER OF RABAUL QUEEN’ (Exhibit 74). The press statement was circulated widely by Captain Sharp, including under cover of letter dated 3 February 2012 to the Prime Minister (Exhibit 56). The statement represented:

‘The Company confirmed that 350 passengers and 12 crew were on board the ship’.

On 8 February 2012, Captain Sharp sent an email to Mr Glanville, Naval Architect. He wanted Mr Glanville to do calculations as ‘a defence for excess passengers is that the ship was not over her (load line) mark’. He gave the figure of 367 passengers and 14 crew, not 350 passengers and 12 crew as referred to in the press statement of 2 February 2012. (Exhibit 286)

On 16 February 2012, the in-house lawyer for Rabaul Shipping sent a letter to the Chairman of the East New Britain Disaster Committee attaching a typed list described as the ‘legitimate and official manifest for the Rabaul Queen’. It represented that there were 222 passengers that boarded the ship from Rabaul to Lae and 138 passengers that boarded the ship from Kimbe to Lae (Exhibit 75).

For reasons explained elsewhere, the Commission finds this typed ‘official manifest’, which was prepared well after the ship sank, understated the number of passengers on board the ship when it capsized.

The ticket sales books ultimately obtained from Rabaul Shipping by the Commission indicated that there were at least 235 passengers who purchased tickets for the Rabaul to Lae leg of the voyage and 158 for the Kimbe to Lae leg of the voyage. That is, a total of 393 passengers.

The handwritten ‘manifests’ provided by Rabaul Shipping which were said to be in reality ticket sales lists were unreliable and inaccurate. This is discussed in more detail elsewhere in this Report. Captain Sharp accepted that these handwritten ticket sales lists were not truly manifests and were not totally accurate.

On 15 March 2012, Captain Sharp wrote a letter to the NMSA which was copied to the Prime Minister, Insurance Broker for the ship and others. The letter advised, ‘Under Japanese measurements the number of passengers allowed for a voyage under 24 hours is 358 adults (Exhibit 405). The number of adults on board were 350. There is absolutely no PROOF that there were any more adult people than this’. There is also another document form Japan that records the number of passengers allowed on board the ship for a voyage of less than 24 hours as 314 (Exhibit 390).

The letter of 15 March 2012, also made reference to 350 passengers being on board. This was the number Captain Sharp had falsely disclosed to his insurers as the licensed number of persons the ship could carry and what was contained in its memorandum of September 2004 to his staff authorising the number of passengers that could be carried.
Captain Sharp: *Rabaul Queen* was unsafe to travel in conditions above force 7

There were official gale wind warnings issued by the Papua New Guinea National Weather Service at 5 am and again at 11 am on 1 February 2012. These gale wind warnings had also been sent to coastal radio by facsimile. *Rabaul Queen* departed Kimbe at about 12.45 pm on 1 February 2012.

The gale wind warnings included the Finschaffen/Vitiaz Strait to West New Britain area. The warnings provided:

‘NORTH WEST WINDS OF 34/48 KNOTS ARE EXPECTED TO PERSIST FOR NEXT 24 HOURS CAUSING VERY ROUGH AND HIGH SEAS.’ (Exhibit 26)

According to the Beaufort Wind Force Scale, wind speeds of 34-40 knots represent force 8 and wind speeds of 41-47 knots represent force 9 (severe gale conditions).

The questions and answers at transcript pages 2778 and 2779 are noteworthy. The transcript records:

‘MR VARITIMOS: If you knew that the ship, Rabaul Queen, was going to face gale or severe gale conditions would you have allowed the ship to sail?

MR SHARP: No. We would have stopped the ship.

MR VARITIMOS: And you would have stopped the ship because it would have been unsafe to sail.

MR SHARP: In gale or gale force winds, yes.

MR VARITIMOS: And you would not have allowed the captain to sail Rabaul Queen in gale or severe gale force conditions, is that right?

MR SHARP: That’s correct.

MR VARITIMOS: And you would have expected any competent, responsible Master of a ship - Master of Rabaul Queen - not to have sailed Rabaul Queen in gale or severe gale conditions, is that right?

MR SHARP: That’s correct.

MR VARITIMOS: And that’s because they would have been compromising the safety of the passengers, the crew and the ship.

MR SHARP: That's correct.

MR VARITIMOS: And you have no hesitation in coming to the conclusion as a Master mariner of considerable experience, I suggest, that under no circumstances should this ship have sailed if the conditions were gale or severe gale, is that right?

MR SHARP: That's correct.’

At page 2781 of the transcript, Captain Sharp confirmed his earlier evidence. The transcript records:

‘MR VARITIMOS: Now I just wish to clarify what your position is, Captain Sharp. You accepted, as I understand it, that you
would never have allowed Rabaul Queen to sail if you knew the conditions were gale, severe gale, is that right?

MR SHARP: That's correct.

MR VARITIMOS: That is, 34 knots or above.

MR SHARP: That's correct.

MR VARITIMOS: And that's because you'd be compromising the safety of the passengers, the crew and the ship, is that right?

MR SHARP: That's right.

MR VARITIMOS: And can you say that in terms of the Beaufort wind scale 7, which represents 28 to 33 knots, whether you would have allowed the ship to sail in those conditions?

MR SHARP: I probably would have allowed it to sail.

MR VARITIMOS: In 7.

MR SHARP: That's right.

MR VARITIMOS: You have some doubt, do you?

MR SHARP: Not really.’

Captain Sharp acknowledged that in gale force conditions, the sea would be rough (Transcript page 2782), although he would not concede that they were likely to be very rough. The transcript page 2782 records:

‘MR VARITIMOS: But certainly in terms of gale, severe gale conditions you wouldn’t allow the ship to sail, you’ve said that.

MR SHARP: No. That’s right.

MR VARITIMOS: To be able to make an informed decision on whether the ship should sail, I suggest you need accurate and reliable weather forecasts, is that right?

MR SHARP: That’s correct.

MR VARITIMOS: And in your case you prepared your own weather forecasts.

MR SHARP: That’s correct.’

Captain Sharp confirmed again that he would not have allowed the ship to sail in gale force conditions (Transcript pages 2792-2793). Captain Sharp not only failed to contact the Papua New Guinea National Weather Service but also Coastal Radio who had relevant information about the gale force wind warnings. This is because he thought he knew better than Coastal Radio (Transcript page 2794). He also considered he knew better than the Papua New Guinea National Weather Service (Transcript page 2797). This is another demonstration of the arrogance of Captain Sharp.

Captain Sharp well knew that it would be unsafe to sail the ship in conditions of 34-48 knots. He was asked about the fact that in the claim form he signed and submitted to the insurance company after Rabaul Queen sank, he declared in response to the question, ‘Who was to blame’, the word ‘Sea’. (Exhibit 373). (The claim form also stated the weather conditions were ‘moderate’, which was not the case).
At transcript page 2799, the following is noteworthy:

‘MR VARITIMOS: But of course, I suggest to you that if you had known that the weather conditions were predicted at 34 to 48 knots you wouldn’t have allowed the ship to sail?

MR SHARP: That’s correct.

MR VARITIMOS: And you also know that to sail the ship in conditions of 34 to 48 knots was unsafe?

MR SHARP: That’s correct.’

On 30 May 2012, Captain Sharp said that if the weather conditions were 8 or 9, ‘perhaps the ship should not have sailed’. (Transcript page 3071)

The Commission has addressed the weather conditions in detail in a separate chapter of this Report.

**History of Captain Sharp’s ships carrying excess passengers**

On 24 February 2003, the Maritime Transport Division of the Department of Transport issued a Survey Certificate for *Rabaul Queen*. It was valid until 24 March 2007 (Exhibit 174).

The Survey Certificate contained two very important conditions for present purposes. Firstly, it certified that the ship was fit to carry 310 persons, including 295 unberthed passengers and crew. Secondly, it certified that the ship shall be operated in conditions below force 7 winds. That is, winds of no more than 33 knots (Exhibit 186).

A Survey Certificate was subsequently issued on 21 May 2008 (Exhibit 175). It was valid until 21 May 2012. It certified, like the earlier certificate, that the ship was fit to carry 310 persons, including 295 unberthed passengers. It did not contain the condition about the ship operating in conditions below force 7. However, the certificate prescribed that it was valid until 23 March 2012 subject to the following conditions:

a) Vessel to maintain safety standards as per the *Merchant Shipping Act* 1975 and the NMSA requirements;

b) periodic Surveys and Inspections must be carried out and recorded in accordance with the requirements of the *Merchant Shipping Act* 1975; and

c) endorsement must be made by the Safety Officer in respect to the Annual Periodic Surveys.

Section 94 of the *Merchant Shipping Act* has provided at all relevant times:

‘A ship shall be deemed to be unsafe where the Authority is of the opinion that, by reason of -

(a) the defective condition of the hull, machinery or equipment; or

(b) undermanning; or

(c) improper loading; or

(d) any other matter,'
the ship is unfit to go to sea without danger to life having regard to the voyage which is proposed.’

By facsimile dated 15 February 1999, Captain Sharp advised Mr Glanville, Naval Architect, that for the purposes of stability calculations being done by him:

‘We have reduced the total number of passengers from 550 to 295 and this should also reflect in your calculations.’ (Exhibit 165)

A Survey Master Sheet (Exhibit 76) records that on 5 March 1999 there was a grant of a PNG Survey Certificate. The number of passengers recorded on the Survey Master Sheet is ‘berthed 295’. Captain Sharp gave evidence that he ascertained shortly after purchasing the ship that Rabaul Queen was only permitted to carry 295. Another copy of the Survey Master Sheet records on page 4, lifeboat/liferaft capacity of 295 (Exhibit 381).

The Commission sought to establish how the maximum number of 295 was determined for the purpose of the survey certificates including by reference to the Merchant Shipping (Safety) Regulation 1975 and 2006 (Exhibits 391 and 392). The relevant regulation has a formula that provides guidance on how to calculate the maximum number of unberthed passengers that can be carried on board a ship. However, the regulation provides that:

‘Where, in the opinion of the Authority, any person carried on board a ship would because of—

(a) the construction of the ship; or
(b) the trade in which the ship is, or is intended to be, engaged; or
(c) any other reason,

be endangered, it may require that a lesser number of unberthed passengers be carried on the ship than would otherwise have been permitted…’

The Commission finds that it would have been inappropriate for the Authority to have permitted in excess of 295 passengers for operation in Papua New Guinea. This is particularly so given that the ship was proposed to operate outside smooth waters; the lack of seating capacity; the duration of voyages and the fact that the voyages were generally overnight. The ship was severely overcrowded carrying, as it regularly did during peak periods, 350 or more passengers and their belongings on overnight voyages.

In any case, Captain Sharp, Rabaul Shipping and the Master were obliged to comply with the survey certificate imposing a restriction of 295 passengers and under no circumstances were they entitled to ignore it.

The Survey Certificate issued 24 February 2003 provided that the ‘periodical Inspection date’ for Rabaul Queen were to be 24 March 2004, 24 March 2005 and 24 March 2006.

However, the certificates produced to the Commission revealed that there were inspections in July 2004, 1 April 2005 and 1 April 2006. These dates are endorsed on the Survey Certificate.

It is disconcerting that there was no Survey Certificate issued for Rabaul Queen after the certificate of 24 February 2003, which expired on 24 March 2007, until the certificate issued 21 May 2008 (Exhibit 175). That is, Rabaul Queen was allowed to operate for a long period of time without a Survey Certificate. This should not have occurred. Both Captain Sharp and NMSA should accept responsibility for the ship operating without a
Survey Certificate. A letter dated 21 May 2012 from the lawyers for Captain Sharp, in response to a request to produce a Survey Certificate for the period after 24 March 2007, was met by the reply that ‘In June 2007, Hanua Kora of NMSA authorised the ship to sail by telephone’ (Exhibit 382).

In an earlier letter, dated 15 May 2012, the lawyers for Captain Sharp advised:

‘that NMSA did not issue our client a Survey Certificate for Rabaul Queen for the period from 25 March 2007 to 20 May 2008. The ship did go for survey in Port Moresby in June 2007 and was cleared by the Surveyor Hanua Kora from NMSA. The ship was allowed to sail out of Port Moresby and continued to operate without any objections until the Survey Certificate was issued on 21 May 2008.’

It appears that Solomon Queen also sailed for a long period of time without a current Survey Certificate. A Survey Certificate was issued in respect of the ship on 1 September 2003 which was valid until 1 September 2007 (Exhibit 382). Another Survey Certificate was issued on 25 November 2010 valid until 21 November 2014. There were numerous requests for Captain Sharp, including requests to his lawyers in writing, to produce a Survey Certificate for Solomon Queen covering the period immediately after 1 September 2007 (Exhibit 382). The lawyers for Captain Sharp advised by letter dated 21 May 2012 that, ‘There is no Survey Certificate for the period after 2007 on the file’ (Exhibit 382). The NMSA was also unable to produce a copy of any Survey Certificate for Solomon Queen to cover the period immediately after 1 September 2007 (Exhibit 271). Surveyors at NMSA gave evidence to the effect that ships had, and do, sail without current Survey Certificates in Papua New Guinea. This is most disconcerting.

The documentary evidence suggests that a survey of Rabaul Queen was undertaken on 18 and 19 July 2007 by Mr Kora and Mr Kamang. The survey found a long list of defects, including in relation to safety matters (Exhibit 339) that required rectification before the ship could sail. Some of these defects were recorded as ‘vessel now deemed UNSEAWORTHY’. By facsimile dated 23 August 2007, Mr Matheson on behalf of Rabaul Shipping sent a facsimile transmission to NMSA suggesting that many of the defects had been attended to and others would be attended to that had not yet been rectified.

The Survey Certificate issued 21 May 2008 records the periodical inspection dates were 24 March 2009, 24 March 2010 and 24 March 2011. The copy of the Survey Certificate produced to the Commission records an endorsement on the certificate for the periodical inspection dates as 27 August 2009, 30 June 2010 and 18 April 2011. The evidence from NMSA Officials was to the effect that unless the owner or operator made an application, no periodical inspections would be done. Importantly, Captain Sharp made all the applications himself and was well aware that survey certificates only permitted a maximum of 295 passengers.

In August 2004, Captain Sharp made a written application to increase passenger loading of Rabaul Queen. By letter dated 11 August 2011 Captain Sharp was advised by the Acting First Secretary of the Maritime Transport Division of the Department of Transport that ‘this Administration will not allow Rabaul Queen to carry more than 310 passengers at any one time.’ (Exhibit 77). Captain Sharp said he never received such letter. Even if this was so, given the importance of the application, one would have had expected Captain Sharp to contact the Department of Transport to find out the result of his application. In
any event, unless there had been an increase authorised to be carried on the ship, Captain Sharp had no authority to ignore the survey certificate and the ship should never had carried more passengers than prescribed on the survey certificates.

The transcript, at pages 2846 – 2847, should be noted against Captain Sharp’s evidence that he was surprised to learn after the ship sank that he was only entitled to carry 295 passengers. The evidence reads:

‘MR VARITIMOS: The survey certificate in this case of Rabaul Queen said the ship should only operate with 295 passengers maximum, is that right?
MR SHARP: That’s right.
MR VARITIMOS: Did you listen to that? Did you respond to that survey certificate?
MR SHARP: I did and I told them that it was wrong.
MR VARITIMOS: Did you comply with that survey certificate?
MR SHARP: No, I didn’t.’

Transcript page 2198 is also helpful to shed light on Captain Sharp’s evidence of his ‘surprise’ to learn after the ship sank that it was only authorised to carry 295 passengers. The following is noteworthy:

‘MR VARITIMOS: So you take the view that you as the operator of the ship can ignore the maximum number of passengers prescribed by a survey certificate?
MR SHARP: In the case where the ship is not overloaded, yes. Also, if you go back, there is another document which increased the number to 310.’

Captain Sharp made a deliberate decision, fully aware of the restriction of 295 passengers permitted to be carried on Rabaul Queen, to carry well in excess of this figure because of his suggestion that the ship was not overloaded.

The suggestion by Captain Sharp in evidence that he was surprised to learn after the ship sank that it was only entitled to carry 295 passengers is nothing short of absurd and deliberately dishonest (Transcript pages 3151 and 3176). He was well aware from his regular dealings with the Department of Transport and NMSA, including applications for inspection of the ship and subsequent endorsements on the survey certificates, that the maximum number of passengers permitted was 295. On 4 April 2011, Captain Sharp signed a letter to the National Maritime Survey Section enclosing an application signed, again by him, for survey or inspection for Rabaul Queen. The number of passengers recorded in writing on the application was 295 passengers (Exhibit 79 and transcript pages 229 – 231).

As recently as 18 October 2011, less than four months before the sinking of Rabaul Queen, Captain Sharp signed a letter to the NMSA together with a signed application for survey or inspection of Rabaul Queen. The number of passengers recorded on the application was 310 and the number of crew recorded was 10. Captain Sharp was asked
some questions about the application dated 18 October 2011. The following at transcript page 235 is informative. The transcript records:

‘MR VARITIMOS: And is that your writing on the actual application form?
MR SHARP: No.
MR VARITIMOS: None of that is except your signature and the date, is that right?
MR SHARP: Except my signature and the date.
MR VARITIMOS: But you checked it before you signed it.
MR SHARP: I’d have to say yes but I’m not sure.
MR VARITIMOS: Well, it’s a fairly straightforward form.
MR SHARP: It’s a – yes.
MR VARITIMOS: It would take you about three seconds to actually have a look at it.
MR SHARP: Yes’

Captain Sharp justified the number of 350 passengers permitted by him to be carried on board Rabaul Queen by stating that he was ‘operating Rabaul Queen safely according to the draft marks and the loadline’ and ‘that the ship was not overloaded’ because the loadline was not submerged. This in itself is, at best, a misunderstanding of the relationship between passenger numbers and the assignment of loadlines to ships. Because a ship is not sailing with its loadline submerged, and therefore not ‘overloaded’ in the loadline sense, it does not mean that as many people can be ‘crammed onboard’ as can physically fit on the ship. So, clearly there is a difference in a ship being overloaded and being overcrowded.

Captain Sharp further justified carrying 350 passengers on the basis that it was the number that Solomon Queen was permitted to carry pursuant to its Survey Certificates. He said that because they were sister ships, both were entitled to carry 350 passengers.

Rabaul Queen and Solomon Queen were not sister ships. Captain Sharp well knew this. A sister ship is a ship of the same class as, or of virtually identical design to another ship and that such ships share a near-identical hull and superstructure layout, similar displacement and roughly comparable features and equipment as Captain Sharp accepted in evidence (Transcript page 1227).

The following table lists the relevant ‘parameters’ of each ship (Exhibit 342):

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Rabaul Queen</th>
<th>Solomon Queen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of build</td>
<td>1982</td>
<td>1975</td>
</tr>
<tr>
<td>Length overall</td>
<td>47.34 m</td>
<td>47.25 m</td>
</tr>
<tr>
<td>Length between perpendiculars</td>
<td>42.7 m</td>
<td>42.1 m</td>
</tr>
<tr>
<td>Moulded breath</td>
<td>8.2 m</td>
<td>7.8 m</td>
</tr>
<tr>
<td>Depth</td>
<td>3.2 m</td>
<td>3.4 m</td>
</tr>
<tr>
<td>Draught</td>
<td>2.18 m</td>
<td>2.89 m</td>
</tr>
</tbody>
</table>
Looking at the above table, it can be clearly seen that these two ships are not identical or virtually identical. While they might be of similar physical size and hull shape, they are not ‘exactly the same ship’ (Captain Sharp’s words). Even without knowing the above particulars of each ship, one can tell that the ships are not identical or virtually identical by just looking at them (Figures 20 and 21).

**Figure 20: Photograph of Solomon Queen**

The two biggest visual differences are the accommodation arrangement and that *Solomon Queen* has a cargo hold (and cargo crane) located forward of the accommodation and thus its ability to carry cargo is greater than *Rabaul Queen*.

The Master of *Rabaul Queen*, Anthony Tsiau acknowledged that they were not sister ships. However, Captain Sharp suggested that in effect he is more qualified than the Master to determine what a sister ship was.
In any event, when *Rabaul Queen* sank, *Solomon Queen* was only permitted to carry 331 passengers in accordance with the Survey Certificate issued 25 November 2010, which was well less than the number carried on *Rabaul Queen* when it sank.

The Commission finds it alarming that, given Captain Sharp’s experience as a professional mariner and operator of ships for many years, he chooses this comparison of the two ships to base his determination about passenger numbers on *Rabaul Queen*, without any additional stability calculations being undertaken. In addition, he was prepared to completely disregard the maximum passenger requirement of the NMSA by making the decision to carry well in excess of the 295 passengers.

Given the statements made to the Commission by all the survivors, *Rabaul Queen* was, without a doubt, overcrowded when it departed for the overnight voyage from Kimbe on 1 February 2012. While this overcrowding did not necessarily overload the ship, there were other detrimental ramifications associated with the number of passengers on board. This included passenger comfort, hygiene, being able to access areas of the ship without stepping on other passengers, remaining in areas where they should, in the numbers that they should. Also having fewer people on board means that they are able to escape the accommodation much easier in the case of an emergency, such as fire or capsize.

The way the passengers were crammed into the ship could be compared with the transportation of cattle in that there were very few seats available for passengers, resulting that they had to sit on the hard, steel decks and that they did not have the room to be able to stretch their legs or even lie down on the overnight voyages from Buka, Rabaul or Kimbe. With the interior accommodation full, passengers had to sit for the entire voyages on the exposed Promenade Deck space and stand on the port and starboard walkways on the Upper Deck. All this, in atrocious sea conditions which resulted in many of the passengers becoming sick and vomiting. This left them weak, tired and unable to sleep.

Captain Sharp gave evidence to the effect that the decks were not ‘steel’ as they had been covered with a troweled on compound at the time of the ship’s construction in 1982 ([Transcript page 3079](#)). However, the Commission is of the opinion that such a compound did not provide sufficient insulation from the steel deck to make sitting directly on the decks any more comfortable for the passengers.

In loading the ship so that it was overcrowded, there was a total failing in Rabaul Shipping’s duty of care towards its passengers and shows the degree of contempt Captain Sharp had towards the people he was supposed to be providing a service to. Furthermore, despite the loss of at least 142 people, there was a total lack of remorse shown by Captain Sharp during his appearances before the Commission, which compounds the evident contempt that he has for the people who travel as passengers on his ships.

Captain Sharp issued a memorandum dated 22 September 2004 to All Managers, All Captains and All Chief Officers (*Exhibit 191*).
The memorandum provided:

‘Unfortunately we are becoming slack again and we need to take much more care of what we are doing with the rush period coming up.

Passengers are our business. We are the largest carriers of passengers in the country and we must be the best.

The Captains, Chief Officers and the Managers in all ports must know at all times how many passengers are on each ship.

Whilst we take every care to make sure numbers on each ship are not over the Maximum number of passengers allowable there will be times when we are over. However this must not be allowed if possible. The ships have about a 50% safety factor over the numbers below but we are concerned with comfort as well as safety.

The way to stop loading too many passengers is for everyone to know how many passengers are on the ship at all times and it starts with the Managers ashore.

When you are loading the ships you must be aware of the loading capacity of the ships.

RABAUL QUEEN and SOLOMON QUEEN can take 350 passengers
MADANG QUEEN and MOROBE QUEEN can take 300 passengers
KIMBE QUEEN takes 250 passengers
BUKA QUEEN, KAVIENG QUEEN, KOKOPO QUEEN and POMIO QUEEN take 90 passengers.
ATOLLS QUEEN takes 80 passengers.

Under separate cover you have been advised how many First Class passengers there are on each ship. Remember this and do not oversell the First Class.’

The existence of such memorandum came to the attention of the Commission during the course of examination of certain employees for Rabaul Shipping by Counsel Assisting. Captain Sharp had not disclosed the existence of such memorandum and suggested that he had forgotten about it. The memorandum was displayed in a prominent position at offices of Rabaul Shipping, including in ticket sales offices. It had never been revoked and was effective, as far as staff of Rabaul Shipping were concerned, at the time of the sinking of the ship. The Commission does not accept Captain Sharp’s evidence to the effect that he forgot about the memorandum.

It is accepted that at the date of the memorandum in 2004, some of the figures provided stated the correct number of passengers the ships were entitled to carry pursuant to the Survey Certificates. However these figures were, in a number of cases, reduced by the time of the sailing of Rabaul Queen. This is not unusual where ships become older. Critically, the Survey Certificates relevant to Rabaul Queen never permitted greater than 295 passengers on board the ship.

The evidence of a former employee and manager of Rabaul Shipping, Louisa Wesley, indicates that Captain Sharp’s ships had been carrying excess passengers even as far back as 2006 and 2007 (Exhibits 361, 362 and 363). That of course does not mean that they were always carrying excess passengers. However, they should never have done so. Grace Amen an employee and branch manager at the Kimbe office of Rabaul Shipping
gave evidence to the effect that *Rabaul Queen* had carried 360 passengers on earlier voyages and that Captain Sharp said that it was ‘all right’. *(Transcript pages 1132 – 1133)*

The evidence of Captain Tsiau is to the effect that in his long experience with working for Rabaul Shipping, passengers who had tickets were never prevented from boarding and sailing on *Rabaul Queen* unless, for example, they were drunk or misbehaving themselves. *(Transcript page 1406)*. Captain Tsiau also gave sworn evidence that *Rabaul Queen* had carried more than 375 passengers on previous voyages *(Transcript page 1372 – 1374)*. Rabaul Shipping maintained that on the leg of the voyage from Rabaul to Kimbe, arriving at Kimbe on 1 February 2012, there were 365 passengers.

Captain Sharp took the view, when he gave evidence on 30 May 2012, that if a person had the right category of ticket he was obliged to allow them to travel. That is, he accepted that even if 413 people had tickets to travel on *Rabaul Queen* on 1 February 2012 from Kimbe he would have allowed them to travel *(Transcript pages 3007 and 3008)*. At another time during his evidence he suggested passengers would be turned away if the numbers exceeded 350. However, this is not what happened on 1 February 2012 or on many other occasions *(Transcript pages 1405 – 1406)*. There is no credible evidence to support this. The evidence suggests the contrary.

At one time Captain Sharp suggested in evidence that *Rabaul Queen* was the only ship he had ever authorised to carry more than the maximum number of passengers permitted by the Survey Certificates issued. However, the Commission finds that this is incorrect and that at least five other ships were authorised by him and did carry unauthorised numbers of passengers. Captain Sharp well knew his statement to this effect was incorrect. Captain Sharp also gave evidence to the effect that by the time the ship sank 360 passengers was the most that the ship had ever carried. However, this was clearly incorrect as confirmed by Captain Tsiau and Grace Amen when giving their evidence.

Set out below is a table setting out passenger numbers authorised to be carried by Survey Certificates against the number of passengers which Captain Sharp authorised to be carried in his memorandum issued to All Managers, All Captains and All Chief Officers dated 22 September 2004. It shows that for a number of years Captain Sharp authorising more than the number of passengers permitted by the Survey Certificate. In some cases it was 20% more.

<table>
<thead>
<tr>
<th>Name of Ship</th>
<th>Survey Certificate maximum passengers</th>
<th>Period of Certificate</th>
<th>Captain Sharp’s Memo (Ex. 191)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 <em>Rabaul Queen</em></td>
<td>295</td>
<td>21/05/2008 – 23/03/2012</td>
<td>350</td>
</tr>
<tr>
<td>2 Solomon Queen</td>
<td>331</td>
<td>25/11/2010 – 21/11/2012</td>
<td>350</td>
</tr>
<tr>
<td>3 Madang Queen</td>
<td>250</td>
<td>19/10/2009 – 19/08/2013</td>
<td>300</td>
</tr>
<tr>
<td>4 Morobe Queen</td>
<td>250</td>
<td>19/10/2009 – 19/08/2013</td>
<td>300</td>
</tr>
<tr>
<td>5 Kimbe Queen</td>
<td>232</td>
<td>23/03/2009 – 23/03/2013</td>
<td>250</td>
</tr>
<tr>
<td>6 Buka Queen</td>
<td></td>
<td></td>
<td>90</td>
</tr>
<tr>
<td>Name of Ship</td>
<td>Survey Certificate maximum passengers</td>
<td>Period of Certificate</td>
<td>Captain Sharp’s Memo (Ex. 191)</td>
</tr>
<tr>
<td>------------------</td>
<td>----------------------------------------</td>
<td>------------------------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>7 Kavieng Queen</td>
<td>90</td>
<td></td>
<td>90</td>
</tr>
<tr>
<td>8 Kokopo Queen</td>
<td>100</td>
<td></td>
<td>90</td>
</tr>
<tr>
<td>9 Pomio Queen</td>
<td>92</td>
<td></td>
<td>90</td>
</tr>
<tr>
<td>10 Atolls Queen</td>
<td>72</td>
<td>14/07/2009 – 3/07/2013</td>
<td>80</td>
</tr>
<tr>
<td>11 Alotau Queen</td>
<td>150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Calvodos Queen</td>
<td>112</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 Kula Queen</td>
<td>117</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 Samarai Queen</td>
<td>90</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Captain Sharp permitted Rabaul Queen to sail with unqualified crew**

Captain Sharp permitted *Rabaul Queen* to knowingly sail at the time of the sinking, and for long periods of time before this, with a number of crew that failed to meet the competency required by the NMSA. While this is set out in more detail in Chapter 8 of this Report, it also point to his preparedness to, yet again, compromise the safety of the ship, its crew and passengers.
CHAPTER 10 – THE NATIONAL MARITIME SAFETY AUTHORITY (NMSA)

Background

The Papua New Guinea National Maritime Safety Authority (NMSA) was established by the National Maritime Safety Authority Act 2003 (the NMSA Act) and came into operation on 1 January 2006. At the time of the writing of this Report, the NMSA was under the Ministry of Transport and Works portfolio of the Papua New Guinea Government.

Prior to the establishment of the NMSA, its functions were carried out by the various transport ministry portfolios which existed after Papua New Guinea gained independence in 1975.

Overview

There are many instances that have come to light, during the course of the Commission hearings, which demonstrate a high level of incompetence and ineffectiveness of NMSA over many years. That is not to say that all members of the Board or staff, past or present, have lacked competency or effectiveness.

Some examples of the incompetence and ineffectiveness of NMSA relate specifically to Rabaul Queen, while others relate more generally to the maritime sector. A number of these are dealt with in this Chapter.

The Commission considers that if the NMSA had properly conducted its duties, it is possible that Rabaul Queen would not have sunk while carrying in excess of the number of passengers prescribed by the Survey Certificate and the tragedy would either have been averted or the number of deaths would have been reduced. That is an indication of what can happen when Government Authorities do not carry out their duties diligently.

The importance of water transport for Papua New Guinea

The importance of water transport for Papua New Guinea highlights why it is essential to have a properly functioning and effective National Maritime Safety Authority.

The Papua New Guinea Development Strategic Plan 2010-2030 was compiled by the Department of National Planning and Monitoring (Exhibit 274). According to the Plan, there are fourteen Maritime Provinces in Papua New Guinea. The size of the population in these Provinces is an indication that at least 59 per cent of the country’s population depends on water transportation. Many of the communities in these Provinces do not have ready access to road or air. These communities therefore rely on water transportation, including for the delivery of goods and services.

The Plan goes on to note that for the purposes of passenger and local freight transport in Maritime Provinces, drive-on passenger ships will be central for interconnection as these enable the roads and water transport networks to operate smoothly with one another. New transport routes will therefore need to be opened up and more frequent services provided on existing routes. Partnership with the private sector, according to the Plan, will be crucial in raising the capacity of shipping services as the private sector will be relied upon for much of the investment.
The Plan suggests that there may be a case for introducing Government funded shipping services to facilitate the flow of people and cargo, particularly in remote regions of the fourteen Maritime Provinces and Islands of Papua New Guinea. It goes on to state that to minimise the impact on the budget, the Government will pursue a public/private partnership arrangement and that it is expected that between 15 and 20 ships will be required over the next 20 years to serve the coastal regions.

Functions of NMSA

Section 4 of the NMSA Act provides the functions of the NMSA. They are:

(a) to perform the functions and exercise the powers as are conferred upon it by this Act or under any other law; and
(b) to co-ordinate search and rescue operations for vessels in distress or lost at sea pursuant to the terms and conditions of a search and rescue plan prepared by the Minister, from time to time, and approved by the Authority; and
(c) to co-ordinate with other agencies and persons, including regional and international organizations and consultants, whether local or foreign, on matters concerning maritime safety, marine pollution prevention or search and rescue operations at sea; and
(d) to collect data relevant to maritime safety, marine pollution prevention and search and rescue operations at sea; and
(e) to act on behalf of the State in relation to any domestic or international agreement relating to maritime safety, marine pollution prevention or search and rescue operations at sea to which the State is or may become a party; and
(f) to make recommendations on policy to the Minister regarding maritime safety, marine pollution prevention and search and rescue operations at sea; and
(g) to provide consulting services, training and management services relating to any of its functions whether in Papua New Guinea or overseas; and
(h) where appropriate to consult with –
   (i) other agencies of the National Government; or
   (ii) Provincial Governments; or
   (iii) Local Governments; or
   (iv) commercial, industrial and other relevant bodies and organizations,
   In relation to matters affecting them in the performance of its functions; and
   (i) generally to do such supplementary, incidental or consequential acts and things as are necessary or convenient for carrying out its functions.‘

NMSA administers the Merchant Shipping Act 1975 (the MS Act) (including a number of subordinate regulations) and a number of regulations associated with the prevention of maritime pollution from ships.

Dr Thomas Webster, the Chairman of NMSA, expressed the view that NMSA has still to find its feet in terms of its roles and functions after moving over from the Transport Department. He refers to the parochial nature of the Board members where there were
self-serving interests on the Board who did not give the management and the technical people the direction and support that was needed.

This is no doubt referring in part to Mr Hamish Sharp (brother of Captain Sharp) who was a former Chairman of NMSA and director. An Ombudsman Report details the political interference involved in his appointment. He was subsequently removed following his actions in insisting that he vote on issues for which he had a clear conflict of interest, including the sinking of his own ships.

**Powers of NMSA**

Pursuant to Section 6 of the NMSA Act there is established a Board of the Authority. The Board shall, in accordance with Section 6 (2) of the NMSA Act, carry out the functions, exercise the powers, and manage and direct the affairs of the Authority. The Board reports to the Minister of the Transport portfolio. The Board may delegate, by written instrument, pursuant to Section 15 of the NMSA Act, any of its functions and powers other than those expressly stipulated therein.

According to section 7 (1) of the NMSA Act, the Board shall consist of:

- (a) the Departmental Head of the Department responsible for transport matters, ex officio, or his nominee; and
- (b) the Departmental Head of the Department responsible for finance matters, ex officio, or his nominee; and
- (c) the General Manager, ex officio, as a non-voting member; and
- (d) one person nominated by the Minister to represent the Momase region\(^{27}\), the New Guinea Islands region and the Southern region of the country;
- (e) one person nominated by the National Research Institute; and
- (f) one person nominated by the Papua New Guinea Shipowners Association; and
- (g) one person nominated by the Papua New Guinea Chamber of Commerce and Industry; and
- (h) one person nominated by the Papua New Guinea Harbours Ltd.’

The Minister\(^{28}\) is responsible for appointing a Chairman and Deputy Chairman of the Board from within the Board members. Those two members remain in those positions until they are replaced by the Minister or until the expiry of the period of their respective appointment or until they cease to be a member of the Board.

**Funding**

The NMSA is a not-for-profit public body. Its funding is provided for by way of levies placed on ships using the country’s ports. Additional funding for maritime related projects is provided by the Government. But there is evidence that it is probably

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\(^{27}\) Maritime Provinces of Morobe, Madang, East Sepik and West Sepik.

\(^{28}\) That Minister responsible for the Transport portfolio.
unrealistic to expect that NMSA can operate purely on a self-sustainable financial basis *(Transcript page 2542)*. Section 3 (4) of the NMSA Act provides:

‘The Authority shall operate-

(a) as a not-for-profit public body; and,

(b) on a self-sustaining financial basis through the various fees and levies provided under this Act or any other law, with a view furthermore that the revenue to accrue to the Authority from such fees and levies does not exceed for any prolonged period of the costs and expenses incurred by the Authority in the performance of its functions.’

**Corporate Plan**

The Corporate Plan of the NMSA 2010-2014 *(Exhibit 272)* specifies the functions of the Authority to include:

- Registration of ships
- Registration of seafarers
- Quality control of seafarers qualifications
- Establishing and refurbishing navigational aids
- Monitoring navigational aids through maintenance programmes
- Ensuring search and rescue operations are investigated whenever required
- Monitoring safety of ships through Flag State control and Port State control inspections
- Maintaining, updating and supplying the PNG chart portfolio and nautical publications
- Continuously reviewing maritime safety policies and relevant legislation
- Ensuring environmental marine pollution response whenever needed
- Investigating all maritime incidents, accidents and casualties
- Prosecuting infringements of PNG Laws
- Enforcing wreck removal

The Board is required, pursuant to Section 16 of the NMSA Act, to prepare a Corporate Plan at least once a year and submit the plan to the Minister.

**Business Plan 2012**

According to the Business Plan 2012, NMSA was expressed to continue to operate under the structure of two divisions in Maritime Operations and Corporate Services, with both divisional managers reporting to the CEO. The plan stated that NMSA would continue with consolidation of what has been achieved in the past 5 years, evaluating the progress and addressing issues identified and may require assistance from external parties, consultants and donor agencies.

To keep focus on the corporate statements, the plan provided that in the next 5 years, and under the revised structure, NMSA would commit additional resources to the revised structure, by recruiting key managerial positions, and continually to do so over the next 2 years. NMSA would, according to the plan, continue and progress eight (8) fundamental objectives in 2012:
1. Develop appropriate Maritime Safety Legislation, Regulations and Policies and keeping them updated as relevant to PNG.

2. Continue to monitor and implement maritime safety legislation, regulations and policies, including IMO and international developments, through consultation with the stakeholders by setting up Maritime Standards Department and Maritime Safety Committee (MSC).

3. Develop capacity and systems to support NMSA operations, including adoption and implementation of a revised Pricing Policy, recruitment of key positions, engagement of consultants where need are identified, and proactive training and development programs across key technical fields and support services.

4. Pursue implementation of rehabilitation of phase one of small navaids network project in the first half of 2012 to be followed by phase two of the same project in the second half of the year.

5. Implement setting up of Global Maritime Disaster and Safety Services (GMDSS) to keep in communication with the ships, especially when in distress.

6. Develop mutually beneficial relationships with state agencies and other organizations in the implementation of the mandate.

7. Assist maritime provincial in promotion and implementation of the Small Craft Safety Act.

8. Enactment of 5 MARPOL Bills and begin the implementation of the NATPLAN and continue with risk assessment activities in selected sites.

It is one thing to have Business and Corporate Plans, but is another thing to properly and effectively implement them. Regrettably, the evidence reveals that NMSA has largely failed when it comes to implementation of these plans.

Conduct of NMSA

Lack of Board meetings

The Commission considers it alarming that there has been no Board meeting conducted since July 2011. There was some suggestion that a Board meeting may have been conducted in October 2011, although this is not consistent with the minutes produced by NMSA (Exhibit 274). In any event, there is no dispute that no Board meeting was convened following the sinking of Rabaul Queen. Surely this event should have provoked a Board meeting.

Section 12 of the NMSA Act provides:

12. Meetings of the Board –

(1) Board shall meet as often as the business of the Authority requires and at such times and places as the Board determines, or as the Chairman directs, but in any event shall meet not less frequently than once in every three months.

(2) At a meeting of the Board –

(a) four members, excluding the General Manager, constitute a quorum; and
(b) the Chairperson shall preside, and if he is absent, the members present shall appoint, from amongst their member, a Chairperson for that meeting; and

(c) matters arising shall be decided by a majority of the votes of the members present (excluding the General Manager); and

(d) the person presiding has a deliberative, and in the event of an equality of votes, on any matter, also a casting vote. [Emphasis added by the Commission]

The general excuse for not holding such Board meetings, at least once every 3 months, is the lack of a quorum and the lack of political will to fill vacant board positions. That is not considered to be an appropriate excuse and the Authority is exposing itself to justifiable claims that it is dysfunctional.

The malaise involved in not having Board meetings may in part relate to Board members having other interests and responsibilities outside of the shipping industry, as well as to the lack of political will to fill vacant Board positions. However, if Board members are not prepared to properly discharge their duties and responsibilities, they should not be on the Board. The failure to hold regular meetings, including any meetings after Rabaul Queen sank, reflects very poorly on the Board and the lack of governance associated with NMSA. The General Manager is, in accordance with Section 21 of the NMSA Act, to manage the Authority in keeping with the policies and directions of the Board. There cannot be effective policies and directions determined by the Board if it does not regularly meet.

Management and organisation

Under Section 21 of the NMSA Act, the General Manager of the NMSA shall:

‘a) manage the Authority in accordance with the policies and directions of the Board; and

(b) be responsible, subject to this Act, for directing other staff of the Authority including the authority to hire and fire such staff as are not appointed directly by the Board; and

(c) advise the Board on any matter concerning the Authority referred to him by the Board; and

(d) report quarterly to the Board on the financial performance of the Authority against the approved annual budget; and

(e) carry out and perform the duties required of him under this Act and under his contract of employment.’

Since its creation, there has been one General Manager/Chief Executive Officer of the NMSA, Mr Chris Rupen.

In order to carry out the day-to-day management of the functions of the NMSA, the General Manager has two executive managers reporting to him: Executive Manager Maritime Operations and the Executive Manager Corporate Services.

As the name suggests, Maritime Operations is the operations division of the NMSA. The section is divided into six areas: Survey and Inspection; Navigation Safety (including
search and rescue); Environment Protection; Maritime Standards; Maritime Qualifications and Ship Registration.

The surveys and Inspection Department performs a crucial safety regulatory function considered to be the main focus of NMSA.

The Corporate Services division is divided into four areas: Corporate Strategy and Quality Assurance; Finance and Administration; Information Technology and Human Resources.

As at the time this Report was published, the NMSA had about 60 employees. These employees are based in Port Moresby and five field offices located in Kokopo, Lae, Madang, Alotau and Kimbe. The field office functions sit under the Survey and Inspection area and each field office has an ‘Officer-in-Charge’.

**Survey staff and experience**

The NMSA employs ten (10) marine surveyors/inspectors (including managers who do not carry out surveys and inspections) and these are based in Port Moresby and the field offices. These staff members have come to the NMSA with a range of experience in the maritime industry, both on the Papua New Guinea coast and internationally. They conduct inspections and statutory surveys of Papua New Guinea registered ships and visiting foreign ships. As stated previously, there are field offices in Lae, Rabaul, Kimbe, Alotau and Madang, mostly staffed by one person.

At this time, the inspectors have the following certificates of competency: two (2) master class 1; three (3) master class 2; one (1) mate class 1; one (1) engineer class 1; two (2) engineer class 2; and one (1) shipwright surveyor *(Exhibit 338)*.

The surveyors/inspectors also conduct oral examinations of local candidates sitting certificate of competency examinations. Generally, oral examinations above master class 3 and engineer watch keeper are conducted by the surveyors/inspectors who hold the class 1 certificates.

When new surveyors/inspectors join the NMSA, they undergo a period of assessor training which enables them to conduct oral examinations, beginning at the lesser certificate level and working their way up until they are able to conduct oral examinations at the level below the certificate of competency they themselves hold.

There is said to be about 700 ships on the Registry of ships in Papua New Guinea *(Transcript page 2476)*. That is an indication of the size of the Maritime Industry and a reflection of the importance of the Industry to Papua New Guinea.

In this climate, NMSA is clearly understaffed and no more so than in the Maritime Operations Division that has responsibility for:

- Ship survey and inspection
- Navigation Safety (including Search and Rescue)
- Environment Protection
- Maritime Qualifications and Ship Registration

There is evidence that NMSA needs from 17 to 20 surveyors/inspectors to operate effectively *(Transcript page 2471)* and with at least two (2) in each field office. It is
acknowledged that there is a great shortage of properly qualified surveyors/inspectors in Papua New Guinea.

During the Commission hearings, it was commonly acknowledged that NMSA is understaffed (Transcript page 1481, 1498, 1517, 1524, 2391, 2396, 2403 and 2534). The current staff level, as stated previously, is about 60 persons and there is said to be approval for about 125 (Transcript page 2534). Moreover, it is admitted that NMSA cannot cope with only 60 staff members and that the Authority cannot properly carry out its functions (Transcript page 2391 and 2396).

There is evidence that a system has developed, in this climate, where NMSA relies on the owner/operator of a ship to advise of its annual due date for survey. There is also evidence that NMSA ‘tries to advise companies but they never come back to us and we don’t carry out the periodical inspection’ (Transcript page 1497) and ‘if the owner does not submit an application NMSA would not conduct an inspection’ (Transcript page 1982).

It would be hard to imagine a less proactive system than this. Further, there is in evidence that NMSA does not have a system in place to record when periodic inspections of ships are done (Transcript page 1983).

The resident survey/inspector in Kimbe gave evidence that there were no documents on file to indicate the maximum number of passengers allowed to travel on board Rabaul Queen (Transcript page 1988). However, he only had to walk down to the port and board the ship to inspect its Survey Certificate, which contained this important information.

There is also evidence that many ships are out of survey (Transcript page 1497). Due to the undermanning of NMSA it lacks the capacity to enforce the appropriate rules and regulations (Transcript page 1498).

Litigation against NMSA by Rabaul Shipping

A disruptive and detrimental influence upon NMSA surveyors/inspectors is Captain Sharp’s litigious behaviour. There is the ever present threat of legal action should Captain Sharp not get his own way.

Some cases are as follows:

- **O.S. No: 753 Rabaul Shipping Limited v Michael James Pidi, Chris Rupen, Carl Kamang, E. Panees**

  Rabaul Shipping Limited applied to NMSA for the survey of the Alotau Queen but NMSA refused to survey the ship saying it should be surveyed by a non exclusive surveyor. Captain Sharp issued proceedings. Subsequently the ship was surveyed and an application to dismiss was filed.

- **OS NO: 320 of 2008 – Application by Rabaul Shipping Limited for an order under Order 3 of the National Court Rules.**

  This was an application for a court order to have Mr Chris Rupen, General Manager of NMSA, answer as to who formed a quorum for the Board to meet and appoint Mr Brian White and associates, a consultant and advisor in relation to the Marine Pollution Bills.
• **W.S. 20 of 2005 – Rabaul Shipping Limited and Peter Sharp v Cyril Mudalige and the State.**

Rabaul Shipping purchased *Morobe Queen* from Japan. Upon hearing of the purchase Cyril Mudalige then with the Department of Transport advised Japanese authorities by letter that the owner had ‘a very bad record in maintaining ships’ and the ship should be surveyed by class surveyors before it could be operated in Papua New Guinea. Captain Sharp sued for defamation. At trial the letter was found to be defamatory. Mr Mudalige’s letter was found to be actuated by malice. The State was found liable. NMSA found the outcome detrimental to surveyors’ functions and appealed the decision to the Supreme Court.

There are numerous other examples of Captain Sharp threatening to issue proceedings against NMSA staff if they did not do as he wanted. There is an infamous case where an NMSA officer spent a short time in custody. He refused to issue a survey certificate to one of Captain Sharp’s ships and he was later convicted of contempt of court when a court order was not complied with. The NMSA officer seemed to have been left without legal representation and in the hands of the National Court, when he was simply carrying out his duties. Captain Sharp has since used this conviction in other matters threatening and intimidating the officer that he will raise the conviction in other proceedings if the officer does not do as he wishes.

Another matter was where an officer was sued for ordering that inflammable material be removed from a passenger ship before it sailed.

**Communications by Captain Sharp with NMSA**

Captain Sharp wrote highly offensive, insulting, intimidating and provocative letters to NMSA over many years. Many of these letters were copied to others in authority such as the Ombudsman Commission. They were calculated to bully NMSA into doing what Captain Sharp wanted and are likely, in the opinion of the Commission, to be part of the explanation as to why NMSA officers did not inspect ships operated by Captain Sharp as regularly or with the attention to detail as expected. A number of these letters are set out in more detail in Chapter 9 dealing with Captain Sharp and his companies under the heading ‘Communications with NMSA’.

By way of indication of the caustic nature of the letters, in one letter to the Executive Manager – Maritime Operations of NMSA dated 20 November 2010, Captain Sharp wrote:-

‘My experience has been limited mainly to liars and deceivers within the Department of Transport and now NMSA. Again you cannot deny history because a large number of the people now working for NMSA were the same liars and idiots that were in the DoT. So whilst you may be a separate entity legally, to all intents and purposes it is the same lunatics who have taken over the asylum. Instead of cream rising to the top in the case of NMSA, it is my belief that it is the sewer scum that has bubbled to the top like a cesspool.’

Captain Sharp acknowledged that he treated NMSA with disdain and distrust when he considers ‘it’s appropriate’ and belittles them (*Transcript page 3070*).
The result of this intimidation has been, as stated by Mr Mudalige, an NMSA officer, (Transcript page 2410) as follows:

‘Mr Varitimos: And so did you ascertain that officers of NMSA, to some extent thought it was better not to have an argument with Captain Sharp?

Mr Mudalige: It becomes automatic, for example, now any human being would not like to go to court very frequently and our inspectors, they are very dutiful, they carry out - perform their work and if they are being threatened with court actions they will not feel very good. In fact, they get panicky. And when those things are sent to us we also stop our work and attend to that, on what its all about and discuss with lawyers and all that. We cannot afford to do that because we are short-staffed and we have too much work, so these things - it becomes automatic, it becomes - its only human nature, yes.

Mr Varitimos: So basically his letters of intimidation worked.

Mr Mudalige: Somewhat, yes, it works – sometimes.’

While Captain Sharp has surrounded himself with lawyers, including in-house counsel, and is ready to issue proceedings as part of a ploy to intimidate, the NMSA must act without fear or favour and the intimidation by Captain Sharp cannot be an excuse for failing to properly regulate the operations of Rabaul Queen and other ships.

**Rabaul Queen and NMSA**

**Lack of proper record keeping**

NMSA did not have a flag State inspection computer based information system in place when Rabaul Queen sank on 2 February 2012. Therefore, basic information in relation to the ship and its survey history was not readily available to NMSA surveyors/inspectors, especially those in regional offices. This had particularly serious consequences for Rabaul Queen.

Recently, a database has been established by NMSA and, on 22 May 2012, information was entered in relation to surveys of Rabaul Queen and Solomon Queen (Transcript page 2432 – 2433). However, there is no information in the database in relation to Rabaul Queen and Solomon Queen that was entered before 22 May 2012. This information was probably only recorded on 22 May 2012 as a result of Counsel Assisting asking for its production. At this point in time, the database is fairly ineffective (Transcript page 2431).

Consequently, some field officers cannot access inspections/survey records or certificate details in the database to determine whether an inspection has been carried out or is due (Transcript page 1984 – 1988).

Even in the main NMSA office in Port Moresby, important documents such as Survey Certificates and other records pertaining to Rabaul Queen were not available. This may well be by reason of the very poor transition from the Department of Transport to NMSA; poor record keeping by the Department of Transport; poor record keeping of NMSA or a combination of any or all of these. It is imperative that NMSA have proper records in relation to ships registered in Papua New Guinea and that such records are safely secured and easily accessible by relevant staff, including surveyors/inspectors.
Ascertaining the correct history of a ship is very important. In relation to Rabaul Queen, for example, the Survey Certificate issued in 2003 provided a condition that the ship was to operate in conditions below force 7 seas (i.e. below 33 knots). However, the Survey Certificate issued in 2008 did not contain this condition.

The Commission has found that the ship should never have sailed from Kimbe on 1 February 2012, because the weather forecast issued by PNG Weather Service forecast force 8 and 9 conditions and it was unsafe to sail. It was accepted by officers of NMSA that the condition imposed on the Survey Certificate issued in 2003 prohibiting Rabaul Queen from operating in conditions of force 7 or above should have also been included in the Survey Certificate issued in 2008. There was no explanation available as to why this condition was removed. If proper record had been kept, this may have been apparent. Additionally, if proper records had been retained, the condition may well not have been removed when the subsequent Survey Certificate was issued for Rabaul Queen.

NMSA condoning conflicts of interest

The Department of Transport and NMSA have allowed Captain Sharp and his companies to engage in clear conflicts of interest, over many years, not only without challenge, but by condoning such conduct.

Captain Sharp is, and was, a Director and shareholder of a company named Rabaul Slipways Pty Ltd. This company had been conducting fire equipment tests for years, issuing fire equipment certificates and CO₂ weight tests for ships operated by Rabaul Shipping.

On 4 April 2011 Captain Sharp submitted an Application for Survey or Inspection for Rabaul Queen. (Exhibit 205). On the same day Rabaul Slipways issued a Certificate in relation to the testing of Rabaul Queen’s CO₂ weights (Exhibit 172). Earlier, on 14 February 2011, Rabaul Slipways issued a Fire Equipment Certificate certifying that the company had examined and tested the fire extinguishers for Rabaul Queen and that ‘they were in good working order.’ (Exhibit 171).

The Certificate was signed by ‘C Sharp’, the daughter of Captain Sharp who, in his words is ‘the most highly qualified marine engineer, female, in the world’ (Transcript page 2874). While Ms Sharp may well be extremely well qualified, Rabaul Shipways should not have been issuing certificates in relation to Rabaul Queen because of the obvious conflict of interest.

On 18 April 2011, Mr Joseph Kabi, an NMSA surveyor/inspector, endorsed Rabaul Queen’s Survey Certificate. On that date, Mr Kabi also endorsed a Report by Surveyor on completion of survey or inspection. The Report notes ‘serviced all Portable fire extinguishers with service certificates in place.’ In other words, he was relying on and approving the certificates provided by Rabaul Slipways notwithstanding the clear conflict.

NMSA should not have allowed the clear conflict of interest to arise where a company controlled by Captain Sharp was certifying important documents pertaining to Rabaul Queen, a ship owned by another company controlled by Captain Sharp. However, Captain Sharp indicated to the effect that these tests had been conducted for years and that the Department of Transport and NMSA had never raised a concern about any perceived conflict (Transcript page 2878).
History of Captain Sharp’s ships carrying excess passengers

There is a long history of Captain Sharp carrying more passengers on his ships than permitted by Survey Certificates issued by the Department of Transport and more recently the NMSA. This is discussed in more detail in Chapter 9 under the heading ‘Survey Certificates for Rabaul Queen and History of Captain Sharp’s ships carrying excess passengers’.

In relation to Rabaul Queen it is clear, on the evidence, that Rabaul Queen regularly sailed during peak periods with in excess of the 295 unberthed passengers which was the prescribed maximum number of passengers permitted pursuant to the Survey Certificates issued.

Section 94 of the MS Act has provided, at all relevant times, that a ship shall be deemed to be unsafe where the Authority is of the opinion that, by reason of the defective condition of the hull, machinery or equipment; or undermanning; or improper loading; or any other matter the ship is unfit to go to sea without danger to life having regard to the voyage which is proposed.

Rabaul Queen was engaged in overnight voyages which made it unsafe to carry the 350 or more passengers that it regularly carried. It is an indictment on NMSA that this was allowed to continue. NMSA officials should have detected the non-compliance with the Survey Certificate, at least during some of the voyages. Captain Sharp was allowed to continue to flagrantly ignore the Survey Certificates because of the ineffectiveness and incompetence of NMSA.

No NMSA officer admitted to the Commission that they ever checked the passenger numbers on board Rabaul Queen. It seems that this had never been a priority and the practice was that it was not done. There had been a practice that the PNG Ports Corporation would check numbers of passengers as they were supposed to receive a payment from the shipping company for each passenger that boarded. This policy was challenged in court by Captain Sharp and the Ports Corporation ceased counting numbers of passengers. In any event, the Ports Corporation were in the habit of just accepting what numbers the owner/operator said and in effect there was no accurate counting of passengers. Unsurprisingly, the numbers supplied by Rabaul Shipping were minimal and far less than the numbers of passengers that actually boarded.

The NMSA surveyor/inspector in Kimbe said that he had intended to board the ship and had checked with the Ports Corporation as to when it was berthing. He said that the Ports Corporation officer did not get back to him with the arrival time and he did not worry about chasing him up. As a result, he never went to inspect the ship (Transcript page 1990 – 1992). This was rejected by the Ports Corporation officer who said that he was never contacted by the surveyor (Transcript page 2126). The fact was that Rabaul Queen had been regularly sailing in and out of Kimbe for 12 years and it would have been a simple thing to ascertain the ships arrival time by simply looking to see if the ship was in port. The officers of NMSA were not properly carrying out its duties and again compromising the safety of those on board the ship.
Ensuring that *Rabaul Queen* did not sail ‘out of survey’

The Commission considers that it is fair to expect that all PNG registered ship’s are inspected by NMSA at least once every 6 months. Furthermore, a ship such as *Rabaul Queen*, which was a major carrier of passengers, should have been identified as a ‘high risk’ ship and, hence, inspected even more regularly.

However, the evidence before the Commission suggests that a lot of ships are not checked to see whether they have valid survey certificates (*Transcript page 2309*). Therefore, the mandatory functions of NMSA are not being properly performed and the Authority has not been proactive in assessing the ship inspection regime.

NMSA has a responsibility to ensure that ships that are out of survey do not operate (*Transcript page 2309*).

For example, NMSA was unable to produce a Survey Certificate for *Rabaul Queen* issued prior to 24 February 2003, although the ship commenced operations in 1999. The Survey Certificate issued 24 February 2003 was valid until 24 March 2007. It provided that the ‘periodical inspection date’ for *Rabaul Queen* would be 24 March 2004, 24 March 2005 and 24 March 2006.

However, the periodic surveys were carried out and the Certificate was endorsed on July 2004, 1 April 2005 and 1 April 2006. Even allowing for the 3 month grace period after the due date for the periodical inspection, as provided for by Section 8 of the *Merchant Shipping (Safety) Regulation 2006*, the inspection carried out in July 2004 was overdue. Hence, the ship was out of survey at the time of the inspection conducted in July 2004 and should not have been operating.

What is of even greater concern is that there was no Survey Certificate issued for *Rabaul Queen* after this certificate expired on 24 March 2007 until 21 May 2008 (*Exhibit 175*). In other words, *Rabaul Queen* was allowed to operate for over a year without a Survey Certificate. The fact that this occurred, and was allowed to continue for so long, is scandalous.

The Survey Certificate issued for *Rabaul Queen* on 21 May 2008 was valid until 23 March 2012. The dates for the periodic surveys, according to the Survey Certificate, were recorded to be 24 March 2009, 24 March 2010 and 24 March 2011. However, the periodical inspection endorsements recorded on the Survey Certificate were dated 27 August 2009, 30 June 2010 and 18 April 2011. Therefore, yet again, even allowing for the 3 month grace period, two of the periodic surveys were carried out late and, as a result, *Rabaul Queen* was sailing even though it was ‘out of survey’ (*Transcript page 1979 – 1982*).

*Solomon Queen*, operated by Rabaul Shipping, also sailed for a long period of time without a current Survey Certificate after 1 September 2007. It was accepted by officers of NMSA at the Commission hearings that ships are currently operating in Papua New Guinea without current Survey Certificates. This is totally unacceptable and needs to be immediately rectified.
Allowing *Rabaul Queen* to sail with under-qualified crew

Pursuant to section 103 of the MS Act, a ship must carry such number and grades of qualified crewman as are prescribed. A ‘qualified crewman’ is defined as meaning a member of the crew of the ship who holds a valid certificate of competence issued under section 104.

The evidence before the Commission establishes that a Safe Manning Certificate dated 4 October 2008 was issued by NMSA (*Exhibit 192*). When one compares the qualifications and training records for the crew members on board *Rabaul Queen* when it sank (*Exhibit 141*) none of the officers were ‘qualified crewman’.

It is most disconcerting that between 4 October 2008 and 2 February 2012, when the ship sank, NMSA never raised any concerns about the qualifications of the crew of *Rabaul Queen* during its periodical inspections or at any other time. NMSA must accept responsibility for failing to ensure that *Rabaul Queen* was at all times appropriately manned.

The Commission finds it an appalling excuse proffered by officers of NMSA, including inspectors, that when they inspected *Rabaul Queen* the crew were never on board and that this was the reason for them not checking whether the crew were properly qualified. This is a demonstration, at best, of incompetence and laziness on the part of officers of NMSA, resulting in the failure to discharge their duties professionally.

Officers of NMSA should have been on alert to ensure that ships operated by Captain Sharp’s companies were properly manned because he operated a fleet of ‘high risk’ passenger carrying ships. Furthermore, they should have been aware of previous incidents involving ships operated by his companies. For example, *Kris* sank resulting in the death of five people. An investigation conducted in relation to this sinking concluded that the minimum safe manning scale was not observed on board the ship.

There is no point in NMSA issuing Safe Manning Certificates if the Authority is going to allow ships to sail in contravention of such certificates.

*Rabaul Queen* sailed without contacting coastal radio

*Rabaul Queen* and other ships operated by Captain Sharp’s companies, when sailing, should have regularly contacted Coastal Radio. This is not only a requirement under section 124 of the *Merchant Shipping (Safety) Regulation 2006*, but important for safety reasons.

The records provided to the Commission demonstrate that over a period of 2 months leading up to the sinking of *Rabaul Queen* Coastal Radio was only contacted once by the ship’s crew. The evidence to the Commission is to the effect that many ships in Papua New Guinea do not keep in contact with Coastal Radio.

NMSA should be taking steps to ensure that ships report regularly with Coastal Radio. The failure of ships to keep in communication with Coastal Radio, which is allowed to continue due to the neglect of NMSA, is compromising the safety of those on board the ships.
Process Audit Report into the sinking of **Sealark** and **San Pedro** and the near capsize of **Lihir Express**

NMSA’s execution of the regulatory functions was revealed in a Process Audit Report; that being, ‘Process Audit into the sinking of **Sealark** and **San Pedro** and in the near capsize of **Lihir Express**’. The Report was prepared by Captain Christopher Filor (Exhibit 340).

The detail of these incidents were: on 7 April 2006, **Sealark** caught fire alongside the port of Lae and it later sank after being moved off the wharf; on 19 August 2008, **San Pedro** capsized and sank while on passage from Lae to Port Moresby; and on 3 October 2009, **Lihir Express** nearly capsized, lost containers overboard and ten of the fifteen crew were thrown into the sea.

The causes of these incident were identified as:

- **Sealark** - Loss by fire
- **San Pedro** - Overloading and degrading stability as the proximate cause of the capsize
- **Lihir Express** - Loading without regard to final stability resulting in the ship sailing with a neutral or negative GM

**Sealark** and **Lihir Express** were owned and managed by Bismark Maritime Limited and **San Pedro** was owned and operated by Magellan Shipping. The principal shareholder and Managing Director of the two companies was appointed Chairman of the NMSA in November 2006. That is, Mr Hamish Sharp who was the Chairman when these three reports were submitted to the Authority. The Process Audit Report was completed in December 2010.

The reports recommendation in relation to **Lihir Express** was that the NMSA should consider ways of ensuring that stevedores and shore management are in a position to accurately calculate the ships stability before the ship sails and provide the Master with an accurate distribution of weights in terms of vertical, longitudinal and athwartships centres of gravity.

It would appear that little or no weight has been given to this recommendation.

There was a recommendation that NMSA should re-asses the maximum manning of passenger ships to ensure that there are sufficiently trained crew to simultaneously contain an emergency and muster and help passengers.

The Process Audit posed the additional question Re: **Sealark** and **San Pedro** as to whether the officers and crew of the ship qualified at the levels required by PNG Manning Scales and the STCW Convention. The answer in both cases was no. None of the crew appeared to have been qualified to carry the level of authority they had.

The Process Audit also posed the question:

‘In respect of the M.V. **Sealark**, the M.B. **San Pedro** and the M.V. **Lihir Express**, did the NMSA carry out its duties of registration, ship inspection, certification, monitoring qualifications and members of crew monitoring search and rescue
operations in a proper manner from prior to the incidents and accidents, during the incidents and accidents and after the incidents and accidents?’

The Process Audit Report found that:

‘These examples would suggest that NMSA has not been proactive in assessing the ship inspection regime and the level of qualification of crew competence aboard these three ships before the casualties in which they were involved. Post event, the NMSA has not reacted to the evidence presented in the preliminary investigation reports to address these deficiencies with the Bismark Shipping and allied companies.’

The Process Audit Report noted relevantly that:

‘The fact remains, whether NMSA has sufficient resources or not, and regardless of local difficulties, the NMSA has a legal duty to fulfil the requirements of the MS Act and the NMSA Act.’ [Emphasis added by the Commission]

Ominously there was a recommendation that the NMSA Board seriously consider the risks to the Directors of any underperformance by the NMSA.

The findings, as prescient as they are, are equally applicable to the events surrounding the sinking of Rabaul Queen. Therefore, the Commission adopts these findings and reiterates the point that whether NMSA has sufficient resources or not, and regardless of local difficulty, the NMSA has a legal duty to fulfil the requirement of the MS Act and the NMSA Act.

Process Audit on the circumstances surrounding the appointment of the Pacific Register of Ships (PRS)

In November 2010, a Process Audit into the circumstances surrounding the appointment of the Pacific Register of Ships (PRS) to carry out statutory surveys and statutory certification services for PNG registered ships on behalf of NMSA was conducted.

As the Audit Report found, the involvement with PRS in PNG predates the establishment of the NMSA. An agreement was signed between the former Department of Transport and PRS in relation to the provisions of survey services for PNG ship owners.

The reasons for the establishment of PRS and their desire to become a Recognized Organization (RO) are articulated in the ‘Company Profile and Rules’ document provided to the NMSA on 11 August 2006 in support of their application as appointment as a RO. It states that PRS ‘has been created in response to the high costs of survey fees currently experienced by small ship owners in this region ...’. It goes on to state that ‘the company has not been set up to compete with the established classification societies, rather it has been formed to offer structured service for the many ships in the regime not covered by them.’

As the Audit Report noted:

‘The documentation provided in support of this contention fails to meet even the simplest test of compliance with international standards for such an organization. PRS has no resources in PNG and is manifestly unable to provide the services required of a class society. At the time of their application PRS were contracted to 2 shipping companies in PNG.'
PRS were the authors of the proposed Agreement with the NMSA and this document, whilst on the face of it appears to follow the IMO Agreement, fails to adequately address any of the essential matters that a Flag State Administration would be obliged to address in delegating its authority to a third party.’

The Audit Report concluded as follows:

‘The Agreement proposed by PRS seriously deviates from the IMO draft in relation to the key clauses concerning ‘liability’ is an apparent attempt to relieve PRS of much of the intended liability that the standard IMO Agreement provides.

The essential details of the capability and experience of PRS are either absent or where provided, clearly illustrated the inadequacy of PRS to fulfil the role of a credible RO.

The whole scheme of arrangement derived by PRS is without foundation and has no substance. The capability of PRS to seriously and professionally give effect to this delegated authority does not exist.

The documentation provided in support of their proposal is without substance and is an extensively plagiarized document using large portions of another reputable classification societies’ intellectual property.

All attempts by the staff of NMSA to follow the most basic administrative actions with probity and fair dealing have been unwittingly supported by other parties, who should have known better’.

A current extract for PRS as at 29 May 2012 discloses that the shareholders of the company are: Ami Maxine Baloiloi (Nationality PNG), Lu Su Chiu (Nationality Malaysian), Len Michaels (Nationality Australian), Wong Kai Ming (Nationality Malaysian), Pius Pundi (Nationality PNG) and Sir Michael Somare (In trust for Independent State of Papua New Guinea) (Nationality PNG).

As the Audit Report found:

‘The entire documentary record reveals a trail of maladministration, abuse of authorities and blatant self interest amounting to a comprehensive conflict of interest by the former Chairman of NMSA (Mr Hamish Sharp)...

The whole intention of the ‘scheme of arrangement’ was purely to enable the ‘clients’ of PRS to avoid the true intention of the Parliament of Papua New Guinea as laid down in the MS Act for the safe operation of ships under its jurisdiction.

A major and possibly only beneficiary of this scheme of arrangement was Bismark Maritime Pty Ltd owned and operated by the former Chairman of the NMSA (Mr Hamish Sharp). His abuse of the power of his position as the then Chairman of NMSA to try to give effect to the arrangement is evidenced in the documentation of proceedings of the Board.

It is apparent that this arrangement between the former Chairman of NMSA and the principals of PRS was made without any concern for:

• the international reputation of the Independent State of Papua New Guinea;
• the longer term consequences for safety and security of ships and shipping in the region;
the potential for a major environmental disaster, or
the potential for loss of life.

The whole ‘scheme of arrangement’ appears to have been set up and executed in a manner solely to financially benefit PRS and the ship owners whose ships were ‘surveyed’ by PRS.

There is a very clear trail of ship casualties involving ships surveyed by PRS which amply illustrates the serious consequences of the lack of a rigorous survey system and manifestly poor operational management by the shipping company involved. A major environmental disaster or loss of life may well result.’

This whole sorry saga may represent the nadir in the fortunes of NMSA. All of this might be referred to in colloquial terms as a blatant ‘scam’.

**Independent accident and incident investigation**

Section 165 of the MS Act gives jurisdiction, when a casualty has occurred, to cause a preliminary investigation into the casualty to be held by a person appointed for the purpose by the NMSA. Whether a preliminary investigation is held or not a Marine Inquiry is required to be conducted. Pursuant to section 167 of the MS Act, the Authority may, for the purpose of a Marine Inquiry under section 165, nominate a person to hold a Marine Inquiry.

NMSA is responsible for carrying out flag State inspections of PNG registered ships and also surveys. This Commission has revealed serious failings in NMSA, including in relation to its dealings with Rabaul *Queen* and the operator of the ship.

There is some considerable force in the opinion expressed by Captain Filor in his Process Audit Report into the sinking of *Sealark* and *San Pedro* and the near capsize of *Lihir Express* (*Exhibit 340*). At page 19 of the Process Audit Report, Captain Filor noted the regulator’s conflict of interest. He said:

‘In any marine investigation conducted by an interested party there is the potential for a conflict of interest. In almost all investigations in marine accidents, whether the vessels are under PNG Registry or a foreign flag vessel in PNG waters, NMSA will have a potential conflict of interest. Such conflicts will arise from NMSA’s regulatory role for ship safety standards, navigation aids, search and rescue, or oil pollution response.

‘All marine accidents should be carried out independent of the regulator. Ideally investigations should be conducted by an independent bureau or commission reporting directly to the government. In any event, even where the regulator retains functional responsibility, some mechanism should be in place to ensure that the investigator acts, and can be shown to act, independently of the regulator’s interest.’

The General Manager and CEO of NMSA, Mr Chris Rupen, expressed the matter as follows:

‘The need for an independent body to investigate maritime accidents similar to the Aviation Accident Investigation Commission. The current practice with maritime incidents and accidents is that NMSA do carry out ships inspections and ship surveys and at the same time is required to carry out investigations in the event of a
maritime accident. To avoid this conflict of interest situation arising, consideration be given to setting up an independent body to investigate all transport (maritime, road & aviation) accidents similar to the Australian Transport Safety Bureau.’

The Commission agrees that there should be an independent body, properly resourced, able to investigate in a timely fashion, maritime accidents. In particular, the Commission recommends that the PNG Government should establish, fund and develop an agency with the capacity to investigate maritime casualties in keeping with the International Maritime Organisation (IMO) casualty investigation code standards and practices as contained in IMO Resolution MSC.255(84).

The Government of PNG has already established the Accident Investigation Commission (AIC) to carry out these responsibilities in the Aviation industry. It is the opinion of the Commission that, because of the synergies in transport sector investigation techniques, the best way forward may be to expand the role of the AIC to incorporate the investigation of maritime accidents and incidents.

Conclusions

The Commission considers that NMSA has:

- failed to hold regular Board meetings demonstrating very poor corporate governance and a sense of disinterestedness;
- held Board meetings where there have been clear conflicts of interests, including those in relation to its former Chairman, Mr Hamish Sharp;
- failed to ensure that periodical inspections of ships, such as Rabaul Queen, are conducted within the time required by law resulting in ships being allowed to sail while ‘out of survey’;
- failed to ensure that ships, including Rabaul Queen are manned by crew that have the appropriate qualifications, as stipulated in the Safe Manning Certificates issued by NMSA itself;
- failed to carry out flag State inspections of ‘high risk’ ships such as Rabaul Queen, (i.e. random inspections of ships) with the regularity required to ensure the safety of passengers and crew travelling on such ships is not compromised;
- failed to engage a sufficient number of appropriately qualified staff such as surveyors/inspectors;
- failed to raise sufficient funds to properly and effectively operate; and
- allowed itself to be intimidated and bullied by Captain Sharp, with the result that it has not properly discharged its duties and functions, with the consequence that Rabaul Queen and other ships have sailed in Papua New Guinea when it was unsafe for them to do so.
CHAPTER 11 – THE LAW

Introduction
The Term of Reference (3) and (4) require the Commission to inquire into and report on the following matters:

‘(3) evidence leading to any criminal act contributing to the disaster;
(4) evidence leading to any civil responsibility for the disaster.’

Any consideration of these two terms of reference must lead inexorably to a consideration or interpretation of relevant law in relation to the facts as the Commission finds them and the Commission proposes to refer to those laws in this chapter.

Civil responsibility for the disaster
It is not necessary for the Commission to ultimately determine pursuant to the terms of reference, any civil liability or responsibility for the disaster. It is only required to consider the evidence leading to any civil responsibility for the disaster. The courts, in the exercise of civil jurisdiction will ultimately determine civil liability if proceedings are commenced. However, given the terms of reference, it is appropriate for the Commission to consider briefly the law that may be relevant to the issue of possible civil responsibility for the disaster. The Commission has set out elsewhere the relevant evidence.

Legislation
In this Chapter, ‘the MS Act’ refers to the Merchant Shipping Act 1975 (Chapter 242) and any reference to ‘the Regulation’ relates to the Merchant Shipping (Safety) Regulation 2006.

Merchant Shipping Act 1975 (MS Act) Chapter 242
Under Section 1 of the MS Act (Chapter 242), a ‘Ship’ is defined to include:

(a) in relation to the ownership of a ship, a share in the ship and any interest in the ship or share; and
(b) an air cushioned vehicle; and
(c) every description of ship used, or capable of being used in navigation by water, but does not include a ship ordinarily propelled by oars or a ship or air cushioned vehicle belonging to the Defence Force or to any of the defence forces of any other country.’

There can be no dispute that Rabaul Queen is a ship within the ordinary meaning of the word and importantly as specifically defined under section 1 of the MS Act.

Pursuant to provisions contained in Divisions 1 & 2 of Part III of the MS Act Rabaul Queen was required to be registered. According to Section 11(1) of the MS Act, the Registrar of Ships is required to keep at the principal port of registry a register book to be known as the Register of Ships which is to contain particulars of all ships registered in Papua New Guinea (and such other entries). This was done in relation to Rabaul Queen.
By reason of Section 22 (1) of the MS Act, the Registrar of Ships was required to enter particulars of *Rabaul Queen* in the Register of Ships upon being satisfied that the requirements set out for registration under the MS Act were complied with by the owner of the ship. Upon registration of *Rabaul Queen* the Registrar is and was required to issue a Certificate of Registry in accordance with Section 23 of the MS Act. The official Register Book also records these details.

The extract of the Register of Ships produced by the National Maritime Safety Authority (NMSA) records Hamamas Lines Limited as the owner of *Rabaul Queen*. The extract of the Register also records that the ship was previously owned by Auspac Limited, another company in which Captain Sharp was a shareholder and director.

A *‘Passenger Ship’* is defined under section 1 of the MS Act to mean *‘a ship that is: - (a) engaged on an international voyage; and (b) carrying more than 12 passengers.’*

On one interpretation, a ship that carries more than 12 passengers but on a domestic voyage could not be categorised as a ‘passenger ship’ under the MS Act. However, the Commission does not consider this to be beyond argument.

The MS Act defines a *‘Passenger’* in Section 1 to mean *‘a person carried on board a ship with the knowledge or consent of the owner of Master of ship but does not include:-(a) a person engaged in any capacity on board the ship in the business of the ship; or (b) a child under the age of one year.’*

By this definition, it can be said that even if *Rabaul Queen* was not classified as a Passenger Ship under the MS Act, it was carrying passengers within the meaning of section 1 as the definition of the ‘passenger’ does not specifically refer to a passenger on board a ‘passenger ship’ but rather on board a ‘ship’.

By Section 61 (subject to Section 62) of the MS Act a ship must not go to sea without a valid and current safety certificate granted under Section 70 of the MS Act. In contravention of section 61, the owner or Master is guilty of an offence and subject to a fine not exceeding K40,000.00.

By Section 88 of the MS Act:

‘where more persons are carried in a ship than the number stated in the safety certificate of the ship as being the maximum number of persons that may be carried in the ship the owner and Master of the ship are both guilty of an offence. Penalty: A fine not exceeding K8,000.00 and in addition a fine not exceeding K200 for each person carried on board the ship in excess of the number stated in the safety certificate.’

Section 94 of the MS Act states that:

‘A ship shall be deemed to be unsafe where the Authority is of the opinion that, by reason of -

(a) the defective condition of the hull, machinery or equipment; or
(b) undermanning; or

(c) improper loading; or

(d) any other matter,

the ship is unfit to go to sea without danger to life having regard to the voyage which is proposed." [Commission emphasis]

Section 95 of the MS Act prescribes a fine not exceeding K40,000.00 on any person and the Master for knowingly taking an unsafe ship to sea.

Section 48 of the MS Act provides:

‘48. Liability of owners
(1) Subject to subsection (2) where a person has a beneficial interest in a ship registered under this Act and that ship is registered in the name of some other person as owner, the person having the interests shall, as well as the registered owner, be subject to all pecuniary penalties imposed by this Act on the owners of ships, and proceedings may be taken for the enforcement of any such penalties against both or either of those person, with or without joining the other of them.
(2) Subsection (1) does not apply to a person having a beneficial interest by way of mortgage, except in the case of a mortgagee in possession of a ship.’

Section 77 of the MS Act prescribes that a ship going to sea must carry all required equipment. Failure to do so attracts a maximum fine of K40,000.00 for the owner and Master.

By Section 79 (Reports by Radio) of the MS Act, the Master of a ship is required to report by radio any serious danger to navigation that comes to his notice while the ship is at sea. A failure to do so is an offence with a maximum penalty of K1,000.00.

Section 91 of the MS Act provides for the loading of ships. Section 91 (2) states:

‘A passenger ship must not be so loaded that-

(a) if the ship is in still water of specific gravity of 1.025 and has no list – the appropriate subdivision load line on each side of the ship is submerged; or

(b) the appropriate load line on each side of the ship would be submerged if the ship were in still water of specific gravity of 1.025 and had no list.

Sub-division load line’ by definition means a load line indicating the depth to which a passenger ship may be loaded having regard to-

(a) the extent to which the ship is sub-divided; and

(b) the space for the time being allotted to the passenger.’

Penalties apply for such overloading being a fine not exceeding K40,000.00 and an additional fine not exceeding K20,000.00 for every complete centimetre and for every part of a centimetre over one or more complete centimetres by which the appropriate load line or subdivision load line was, or would have been submerged, as the National Court thinks fit to impose having regard to the extent to which the earning capacity of the ship was increased by reason of the overloading.
Section 103 of the MS Act provides that a ship must carry such number and grades of qualified crewman as are prescribed. The owner or Master of a ship that contravenes the provision is liable to a fine not exceeding K8,000.00. A ‘Qualified crewman’ is defined as meaning a member of the crew of ship who holds a valid certificate of competence issued under section 104.

Section 106 of the MS Act provides that an unqualified person going to sea as a qualified crewman is guilty of an offence and a Master of a ship who knowingly permits such a person to go to sea is likewise guilty of an offence.

Section 108 of the MS Act provides that Regulations can be made for the standard of competence to be attained by a crewman.

**Merchant Shipping (Safety) Regulation 2006**

The *Merchant Shipping (Safety) Regulation* was introduced pursuant to Section 89 of the MS Act.

Under Section 81 of the Regulation, a ship is required to carry lifeboats or liferafts or a combination of both capable of being launched on either side of the ship with capacity to accommodate all of the persons on board.

Section 124 of the Regulation provides that a ship that is at sea is required to report its position, speed and destination to Coastal Radio at least twice within 24 hours after leaving port and before arriving at the next port. If the ship encounters any serious danger to navigation on or near her course, the Master is obligated to report such an encounter to any ships in the vicinity and Coastal Radio.

According to section 141(2) of the Regulation:

‘when a ship leaves a port carrying passengers, the Master of the ship must cause each passenger to be mustered and to be informed of the –

(i) emergency signal referred to in Section 144 (General Alarm Bell)
(ii) method of use of lifejackets; and
(iii) positions for embarkation into lifeboats and liferafts.’

Section 142 of the Regulation requires that boat drills and fire drills must be carried out on the ship concurrently with the muster under section 141.

Pursuant to Section 143, where a ship carries an inflatable liferaft, there must be an instruction card displayed in a prominent position on the ship giving clear and simple directions for launching the liferaft.

By Section 152, the safety certificate of a ship shall have endorsed on it the maximum number of unberthed passengers to be carried on the ship. It is an offence for the ship to carry a greater number of unberthed passengers than permitted by the Safety Certificate and section 152(6) prescribes a maximum penalty of a fine K300.00 and a fine of K10.00 for each unberthed passenger in excess of the number permitted to be carried.
Companies Act 1997

Under Section 115 of the Companies Act, the Director of a Company has the following ‘duty of care’:

‘115. Directors duty of care

(1) A director of a company, when exercising powers or performing duties as a director, shall exercise the care, diligence, and skill that a reasonable director would exercise in the same circumstances taking into account but without limitation-

(a) the nature of the company; and

(b) the nature of the decision; and

(c) the position of the director and the nature of the responsibilities undertaken by him.

(2) A director who acts in contravention of this section commits an offence and is liable in conviction to the penalty set out in Section 413 (4).’

Pursuant to Section 413(4) of the Companies Act:

‘(4) A person convicted of an offence against any of the sections listed in Part 4 of Schedule 13 is liable to a fine not exceeding K200,000.00 or imprisonment for a term not exceeding five years, or both.’

Section 112(1) of the Companies Act further provides:

‘(1) Subject to this section, a director of a company, when exercising powers or performing duties, shall act in good faith and in what the director believe to be the best interests of the company.’

Contractual obligations

In the current case, the passengers paid to travel on Rabaul Queen. The passengers purchased and received tickets from the offices of Rabaul Shipping in Buka, Kokopo and Rabaul, and Kimbe. All the tickets were purchased within a week of the respective voyages departing from Buka, Rabaul and Kimbe.

The tickets issued to passengers included the name of the passengers (even if abbreviated), a ticket number, the issue date and the place of issue, the place of departure and destination, cost of the ticket and the initial ‘RQ’ in reference to Rabaul Queen.

From the evidence given by Captain Sharp, at the time Rabaul Queen sank, Hamamas Lines Ltd was its owner and Rabaul Shipping Ltd its operator. The company records produced by the Registrar of Companies indicate that Captain Sharp was a shareholder and director of both companies. In fact, Captain Sharp gave sworn evidence that he was the Managing Director of both companies and the main driving force behind both companies at the time of the sinking of the ship.

In the Marine Enquiry, The Sinking of MV Ovalau II [2005] FJHC 369, Hon. M. Justice Davendra Pathik considered the sinking of Ovalau II and found that the owner of the ship was negligent and in breach of contract. The decision is, with respect, instructive because
it, for example, usefully cites certain authorities in relation to the law of contact in relation to the owners of ships carrying goods and passengers.

In Steel v The State Line Steamships Company (1877) AC 72, the Lord Chancellor stated:

‘I think there cannot be any reasonable doubt entertained that this is a contract which not merely engages the shipowner to deliver the goods in the condition mentioned, but that it also contains in it a representation and an engagement – a contract – by the shipowner that the ship on which the wheat is placed is at the time of its departure reasonably fit for accomplishing the service which the shipowner engages to perform. Reasonably fit to accomplish that service the ship cannot be unless it is seaworthy. By ‘seaworthy’, my Lords, I do not desire to point any technical meaning of the term, but to express that the ship should be in a condition to encounter whatever perils of the sea a ship of that kind, and laden in that way, may be fairly expected to encounter in crossing the Atlantic. My Lords, if there were no authority upon the question, it appears to me that it would be scarcely possible to arrive at any other conclusion than that this is the meaning of the contract.’

Lord O’ Hagan in the Steel case (supra) at p. 84 said:

‘... a shipowner who accepts goods which he is to deliver in good order and condition, impliedly contracts to perform the voyage in a ship which is seaworthy.’

Further Lord Blackburn (ibid) at 86 said:

‘...where there is a contract to carry goods in a ship, whether that contract is in the shape of a bill of lading, or any other form, there is a duty on the part of the person who furnishes or supplies that ship, or that ship’s room, unless something be stipulated which should prevent it, that the ship shall be fit for its purpose. That is generally expressed by saying that it shall be seaworthy; and I think also in marine contracts, contracts for sea carriage, that is what is properly called a ‘warranty’, not merely that they should do their best to make the ship fit, but that the ship should really be fit.’

Lord Blackburn, in the words of Justice Pathik in Marine Enquiry, The Sinking of MV Ovalau II (200) FJHC 369, ‘hits the nail on the head’ when at p.88 he said:

‘My Lords, I think that exactly the same considerations would arise here as to the implied duty – the duty which, though not expressly mentioned, arises by implication of law – on the part of the shipowner to furnish a ship really fit for the purpose. If that duty is neglected, as in the case of Kopetoff v. Wilson (1), or as in the case here, as it is alleged – I do not say that it is so, because that is a point not yet determined – the shipowner is liable. If, as is alleged here, a port gives way and the seas come in and wet the wheat, and if it is a consequence of the ship having started unfit that that mischief is produced, it seems to me to be exactly like the case of Philips v.Clark (2), where negligence, not provided for by the contract, occasioned the breakage or the leakage, which it was said was an exception, but which the Court determined was not an exception of which the shipowners could avail themselves, seeing that it was brought about by their negligence. So here I think that if this failure to make the ship fit for the voyage, if she really was unfit, did exist, then the loss produced immediately by that, though itself a peril of the seas, which would have been excepted, is nevertheless a thing for which the shipowner is liable, unless by the terms of his contract he has provided against it.’
Copies of the terms and conditions were produced by Rabaul Shipping (Exhibit 402) However, there is no evidence that any passenger saw the conditions or understood them.

The Commission has set out evidence in this Report as to the condition and seaworthiness of Rabaul Queen.

**Negligence**

An action in negligence will arise against a ship owner, operator of a ship and crew member under the principles established by the House of Lords in *Donoghue v. Stevenson* (1932) A C 562 In order to establish negligence, a plaintiff has to prove:

(a) the defendant owed him a duty of care;
(b) the defendant breached that duty; and
(c) as a result of that breach he has suffered loss.


The duty of care is imposed by law in accordance with the test of what ‘a reasonable man in the position’ of the defendant would do. The standard of care to be exercised in accordance with the duty of care is also measured by what was reasonable in the circumstances. It is not a standard of unrealistic perfection nor is it to be established by the deceptive illumination of hindsight.

The ship owner or operator of a ship will be vicariously liable, in appropriate circumstances, for the negligence of the crew of the ship as its employees. *The ship owner will remain responsible for the crews defaults unless they can be said to constitute a ‘frolic of their own’* so taking their conduct outside the remit of their employment. This is extremely difficult to prove...’ (S. Baughen, *Shipping law*, Cavendish Publishing Limited. Fourth Edition, 2009 at page 279).

In addition to the ship owner or operator being liable for the negligence of the crew, the crew will also be held personally responsible for their own negligence. Thus in *Adler –v-Dickson* [1955] 1 Q.B. 158, a passenger of a cruise ship was injured whilst disembarking and successfully sued the Master whose negligence had been a contributing factor to the accident. It was held that although the Master was not vicariously liable for the faults of other crew members involved in the berthing, he had personal responsibility because he failed to supervise the berthing.

Criminal acts contributing to the disaster

It is not for the Commission to ultimately determine, pursuant to the terms of reference, any criminal liability contributing to the disaster. That is a matter for the courts invested with criminal jurisdiction.

The Commission is however required to inquire into and report upon evidence leading to any criminal act contributing to the disaster. This requires a consideration of the relevant criminal law. The facts in relation to this issue have been set out in detail in other parts of this Report.

Having said that, unless laws are enforced, for example, in relation to contravention of maritime safety legislation or which result in the loss of life by reason of gross negligence, laws will be likely to be ignored in the future. Appropriate law enforcement authorities need to look very carefully at the facts and circumstance relating to this tragedy.

Manslaughter by negligence

Given the death of passengers and crew on board Rabaul Queen and the facts set out in this Report, it is relevant to consider the law in relation to manslaughter by negligence.

Section 299 of the Criminal Code Act provides that a person who unlawfully kills another is guilty of the crime of willful murder, murder, infanticide or manslaughter, according to the circumstances of the case.

According to Section 302, a person who unlawfully kills another under such circumstances as not to constitute willful murder, murder or infanticide, is guilty of manslaughter.

Section 287 of the Criminal Code states:

‘(1) It is the duty of every person who has in his charge or under his control anything whether living or inanimate and whether moving or stationary, of such a nature that in the absence of care or precaution in its use or management, the life, safety or health of any person may be endangered, to use reasonable care and take reasonable precaution to avoid that danger.

(2) A person in whom a duty is imposed by subsection (1) shall be deemed to have caused any consequences that result to the life or health of any person by reason of any omission to perform that duty.’

Although not specific, it is evident that the provision in Section 287 of the Criminal Code is in reference to criminal negligence.

The classic definition of criminal negligence is said to be contained in the case of R-v-Bateman [1925] 28 Cox's Crim Cases 33 where the Lord Chief Justice Hewart said at page 36:

‘In explaining to juries the test which they should apply to determine whether the negligence, in the particular case, amounted or did not amount to a crime, judges have used many epithets such as 'culpable,' criminal,' 'gross,' 'wicked' 'clear,' 'complete,'. But whatever epithets be used, and whether an epithet be used or not, in order to establish criminal liability the facts must be such that in the opinion of the jury, the negligence of the accused went beyond a mere matter of compensation between the subjects and showed such disregard for the life and safety of others as
Where death results from criminal negligence, it is necessary to show that the actions in issue were a substantial cause of the death and something more than ‘de minimus’: See *The State v. Andrew Amoy* (1978) P.N.G.L.R 266 and Anna Sainsbury v. Jack Wartovo (1983) N 402.

In the case of the *State v. Vincent Waluka* unreported judgment of 30 September, 2011 (CR 109 of 1999) the State invoked Section 287 to have the accused indicted with one count of manslaughter arising from criminal negligence. That case is particularly apposite as the charge arose out of the alleged failure of the accused to take reasonable precautions as skipper of a dinghy carrying building materials and people which capsized and sank in rough seas, resulting in the death of a passenger, such negligence arising pursuant to section 287 of the *Criminal Code*. Kawi, J stated the following in his judgment:

> ‘The words used here, viz, ‘to use reasonable care and take reasonable precautions’, sound like words describing civil liability for negligence. But in my view this words imposes a very high duty of care upon persons in charge of dangerous things. Here the accused as the skipper of the boat had a very high duty of care to his passengers and the company boat. It was his duty to ensure that as the skipper he was to take all reasonable care and take reasonable precaution so as to avoid dangers that lie ahead of him and not to unnecessarily place the life and safety of passengers in danger or compromise the life and safety of his passengers and the company boat all of whom were under his care and responsibility. A breach of this duty of care will entail serious criminal sanctions.’

In 2009, *Princess Ashika* sank in the waters of the Kingdom of Tonga with some 74 people losing their lives. The ship’s Master and the Managing Director of the operating shipping company were charged and convicted of manslaughter by negligence and sending a ship to sea that was unseaworthy.

The courts have endeavoured to define what the expression ‘reasonable care and take reasonable precautions to avoid that danger’ mean, in terms of what amounts to criminal negligence in order for a charge of manslaughter to be sustained.

The ordinary principles of the law of negligence apply to determine whether a defendant is in breach of the duty of care towards the victims; on the establishment of such breach of duty the next question is whether it caused the death of the victim and if so, whether it should be characterized as gross negligence and therefore a crime; it is eminently a jury question to decide whether, having regard to the risk of death involved, the defendants conduct was so bad in all the circumstances as to amount to a criminal act or omission: *R v Adomanko* [1995] AC 171.

**Unseaworthiness**

There is no definition of unseaworthy in the MS Act as exists in Shipping Acts in other jurisdictions. However, in practical terms, there is little difference with the term ‘Unsafe Ship’ in Section 94 of the MS Act and unseaworthy. The Commission has dealt with the seaworthiness of the ship and safe operation of the ship in separate chapters of this Report.
A number of different factors and circumstances can result in a ship being unseaworthy or unsafe. Under Section 94 of the MS Act as alluded to above, a ship is deemed to be unsafe by reason of:

‘(a) the defective condition of the hull, machinery or equipment; or
(b) undermanning; or
(c) improper loading; or
(d) any other matter,
the ship is unfit to go to sea without danger to life having regard to the voyage which is proposed.’

It can be seen from the definition that a number of different factors and circumstances can result in a ship being unseaworthy. Any matter can be taken into account and the circumstances applicable in one case may not apply in another.

The authorities establish that examples of unseaworthy include a leaky hull [Lyon v Mells (1804) 5 East 428]; defective propeller (Snia v. Suzuki (1924) 29 Com Cas 284); a crankshaft with a flaw in a weld; The Clenfruin (1885) 10 PD 103); lack of appropriate documentation required by law (Ciampa and Ors v. British India SN Co (1915) 2KB 774); inadequate pumps (Stanton v. Richardson (1874) LR 9 CP390); and inadequate storage of cargo (Kopitoff v. Wilson [1876] QBD).

In this case the evidence before the Commission establishes that Rabaul Queen was unsafe and that it should not have sailed from Kimbe on 1 February, 2012.

The ship was unfit to go to sea without danger having regard to the voyage which it undertook.

Section 95 of the MS Act states:

‘(1) where an unsafe ship goes to sea –
(a) any person who has knowingly sent; or
(b) the Master who has knowingly taken
the unsafe ship to sea is guilty of an offence
Penalty: A fine not exceeding K40,000.00.’

**Commissions of Inquiry Act**

Pursuant to Section 9 of the **Commissions of Inquiry Act** (Ch. 131):

‘A person served with a summons to attend the Commission whether the summons is served personally or by being left at his usual place of abode, who fails, without reasonable excuse:-

(a) to attend the Commission; or
(b) to produce any document, book or writing in his custody or control which he is required by the summons to produce,
is guilty of an offence.’
Section 9 prescribes a penalty of a fine not exceeding K5,000.00 or imprisonment for a term not exceeding two years, or both.

Section 10 goes on to state that:

‘A person appearing as a witness before the Commission who-

(a) refuses to be sworn; or
(b) refuses to make an affirmation; or
(c) refuses to answer question relevant to the inquiry put to him by a Commissioner; or
(d) leaves the Commission without the permission of the Commissioner, is guilty of an offence.’

A person found guilty of an offence under Section 10 is liable for a fine not exceeding K5,000.00 or imprisonment for a term not exceeding two years, or both.

According to Section 10A of the Commissions of Inquiry Act, a person appearing as a witness before a Commission who having been sworn, gives false evidence, is guilty of an offence and if found guilty is liable for imprisonment for up to 14 years.

By section 11 of the Commissions of Inquiry Act:

‘A person who-

(a) wilfully insults the Commission; or
(b) wilfully interrupts the proceedings of the Commission; or
(c) is in any manner guilty of wilful contempt of the Commission,

is guilty of an offence.’

The maximum penalty for an offence under Section 11 is a fine of K5,000.00 or imprisonment for a term of two years, or both.

A number of these sections become relevant when analysis is made of evidence given and documents produced or not produced by various witnesses as reported elsewhere in this Report. However, in this regard, reference is made to section 19 of the Commission of Inquiry Act.

Section 19 of the Commissions of Inquiry Act provides: -

‘Proceedings for an offence under this Act (other than an offence under Section 11) may be commenced by the Police or by the Public Prosecutor.’
CHAPTER 12 – SEARCH AND RESCUE

The International Maritime Convention on Search and Rescue

The International Maritime Convention on Search and Rescue, adopted in 1979, included an international search and rescue (SAR) plan. The plan was established so that, no matter where an accident occurs, the rescue of persons in distress at sea will be coordinated by a SAR organisation and, when necessary, by cooperation between neighbouring SAR organisations. The Convention was substantially modified in 1998 and again in 2004 to clarify nations’ responsibilities which are detailed in a technical annex.

Following the adoption of the 1979 SAR Convention, the International Maritime Organization’s (IMO) Maritime Safety Committee divided the world’s oceans into search and rescue areas, known as Search and Rescue Regions (SRR’s). For each of these areas a specific country has the responsibility for coordinating and managing the provision of SAR services.

The Papua New Guinea Search and Rescue Region (PNG SRR)

The PNG SRR (Figure 22) is one of the SRRs mentioned above and has an area of about 690,000 square nautical miles, covering both sea and land. Maritime SAR services are provided by the NMSA, through the Maritime Rescue Coordination Centre in Port Moresby (MRCC POM). Aviation SAR activities are provided by the Rescue Coordination Centre (RCC) located at Port Moresby’s Jacksons International Airport.

To the south, the PNG SRR is bounded by the Australian SRR and the Solomon Island SRR.

Figure 22: Amended diagram from the Admiralty List of Radio Signals (NP285) showing the PNG SRR and the SRRs surrounding it

![Map of Search and Rescue Regions](image)

Each year, in addition to the number of domestic ships, small and large, the PNG SRR is transited by a large number of ships trading between Japan/Asia and Australia’s east coast, New Zealand and the islands of the South Pacific Ocean.
The following figure (Figure 23) gives an indication of the number of ships operating within or transiting the PNG SRR in the period between September 2010 and December 2010, with each dot representing a signal received from an Automatic Identification System (AIS) unit on board a ship. This figure does not include the domestic ships that are not equipped with AIS units.

Figure 23: Satellite AIS data for AIS equipped ships within the PNG SRR

According to the Admiralty List of radio Signals (Volume 5):

‘As party to the International Convention of Safety of Life at Sea (SOLAS), the International Convention on Maritime Search and Rescue or the Convention on International Civil Aviation, a State is obliged to provide certain maritime or aeronautical SAR coordination activities and services. The international community expects these commitments to be fulfilled.’

Maritime Rescue Coordination Centre, Port Moresby (MRCC POM)

MRCC POM operates within the confines of a small room in NMSA offices in Port Moresby’s central business district. MRCC POM does not operate in a 24 hour capacity. The Senior Search and Rescue Coordinator (SSRC) is the only member of NMSA to work in a dedicated capacity for SAR and associated tasks. There are no other SAR staff, either in Port Moresby or in any other NMSA office in the country.

At the time of Rabaul Queen’s sinking, the SSRC was Mr Freddie Loya Siroi. Mr Siroi provided information to the Commission (Exhibit 311) which showed that he graduated from the Papua New Guinea Defence Academy in 1975 and entered the navy. In 1997,
following a 3 year assignment as the Director of Maritime Operations at the Papua New Guinea Defence Force Headquarters in Port Moresby, Mr Siroi retired from the navy.

Mr Siroi was employed by the NMSA as the SSRC in July 2010. Apart from SAR training he received in the Papua New Guinea navy, at the time of the sinking of *Rabaul Queen*, he had partially completed an online introductory training course on search and rescue. The course was completed shortly after the sinking. He had not completed any other SAR training.

This training was conducted by Search & Rescue (SAR) Training Australia, a delivery partner of CareFlight Training Services, the training division of the CareFlight Group. Search & Rescue Training Australia is based in Queanbeyan, NSW, and was established in 2002 to offer specific training programs to the search, rescue, emergency medical system and the aviation and maritime industries (Exhibit 322).

Mr Siroi’s working day is usually from 0830 to 1730. When not in the office, he has a NMSA issued mobile telephone to which his work phone and that of MRCC POM are diverted between 1730 and 0830 the next day.

The communications capability of MRCC POM is extremely limited, given its role as a SAR coordination centre. The MRCC has no satellite, high frequency or medium frequency capability, and only has a small very high frequency radio set for use to when communicating with ships in the Port Moresby area. Therefore, MRCC POM is totally reliant on the services and assistance of another country’s RCC to broadcast maritime safety information, and urgency and distress relay messages.

MRCC POM does not have any SAR drift planning technology and if a SAR plan is needed during an operation, it falls to the skills of the SSRC to manually calculate water drift and search areas, in accordance with his training and the directions contained in the International Aviation and Maritime Search and Rescue (IAMSAR) Manual. Again, MRCC POM is totally reliant on the assistance of another country’s RCC for sophisticated drift information and search area determination.

MRCC POM does not have access to dedicated or trained SAR aircraft and crews and therefore is reliant on the services and assistance of another country’s RCC for the identification and tasking of aerial SAR assets.

**Australian Rescue Coordination Centre (RCC Australia)**

The Australian Rescue Coordination Centre (RCC Australia) operates 24 hours a day from the Australian Maritime Safety Authority’s (AMSA’s) head office in Canberra, Australia. RCC Australia is a component of AMSA’s Emergency Response Centre (ERC), and is responsible for the coordination of both maritime and aviation search and rescue in the Australian Search and Rescue Region (SRR).

The Australian SRR is one of the largest in the world and covers approximately 15.45 million square nautical miles of the Indian, Pacific and Southern Oceans, and across the Australian continent.

AMSA is also responsible for the management and operation of the Australian ground segment of the Cospas-Sarsat distress beacon detection system. As such, the Australian...
Mission Control Centre (AUMCC) is housed within RCC Australia and the centre’s staff are responsible for the AUMCCs operation on a day-to-day basis.

RCC Australia is staffed by search and rescue specialists who have naval, merchant marine, defence force, civil aviation or police service backgrounds. They have all had specialist training in search and rescue and liaise closely with search and rescue responders around Australia and overseas during incidents. RCC Australia also coordinates medical evacuations, broadcasts maritime safety information and operates the Australian Ship Reporting System (AUSREP).

AMSA operates dedicated search and rescue aircraft from strategic locations around Australia. These Dornier 328 turbo-prop aircraft are equipped with search and rescue technology including forward looking infrared (FLIR) surface search radar, satellite communications and direction finding equipment to detect and home in on emergency beacon transmissions and radio distress calls. Liferafts and other emergency equipment can be deployed from the aircraft to those in distress. RCC Australia is responsible for the tasking of these dedicated SAR assets during SAR operations.

In addition to AMSA’s dedicated SAR aircraft, RCC Australia maintains a database of fixed and rotary wing aircraft available for SAR tasking and can call on a host of specialist SAR agencies, assets and government organisations to carry out operations.

**Arrangements between Papua New Guinea and Australia in SAR matters**

Both Papua New Guinea and Australia recognise the importance of cooperation in both maritime and aviation SAR. Consequently, arrangements exist between AMSA, NMSA and Papua New Guinea Air Services to ensure expeditious and effective SAR services (*Exhibit 186*).

The scope of the arrangements are, as listed in section 2 of the arrangements:

‘Subject to the legislation of each Party, the RCC of each Party will:

2.1 Promptly and regularly exchange SAR information concerning an actual distress or a potential distress situation with the other;

2.2 Assist the other, to the extent possible, in the conduct of SAR missions in their respective Search and Rescue Regions (SRRs) and across their common SRR boundaries;

2.3 Take appropriate measures for the use of facilities in each other’s SRRs while engaged on a SAR mission;

2.4 Exchange information on SAR resources available to it to ensure mutual knowledge of each other’s SAR capabilities;

2.5 Conduct regular communications checks with the other to ensure the efficiency and effectiveness of SAR communications links;

2.6 Conduct periodic SAR exercises with the other to test its ability to conduct a SAR response across the common SRR boundary;

2.7 Without prejudicing the ownership of intellectual property and copyright, exchange SAR operational and procedural manuals (and ongoing amendments), and form documents, to allow for the development of procedures and practices that will interface smoothly in practice.’
The arrangements also set out the standard operation procedures to be followed by the respective RCCs during a SAR operation. These include the determination of the responsible RCC; transferring responsibility for the overall coordination or part of a SAR operation; SAR operations in adjacent SRRs; promulgation of search areas and liaison during a SAR operation.

The arrangements also set out directions for using another party’s SAR units or facilities, SAR operations costs and the recovery of supplies and equipment.

The arrangements were signed off on by the heads of these three agencies in August and September 2007 and, in accordance with the 1979 International Maritime Convention on Search and Rescue, the Secretary General of the IMO was notified of the arrangements.

**Search and Rescue (SAR) methodology**

In 1998, alongside the revision of the 1979 International Maritime Convention on Search and Rescue, the IMO and the International Civil Aviation Organization (ICAO) jointly developed the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual, published in three volumes, covering Organisation and Management, Mission Coordination and Mobile Facilities.

This international manual details the search and rescue model and methodology that should be employed by RCCs across the world. It lays down guidelines, procedures and processes that should be used in providing SAR services and allows nations to work to a common set of definitions, standards and terminology.

**The International Aeronautical and Maritime Search and Rescue (IAMSAR) Process**

The process of coordinating a response to a search and rescue incident can be generalized under the following headings:

- Receive information
- Determine the SAR phase – Uncertainty, Alert (PAN) or Distress (MAYDAY)
- Plan the search
- Conduct of search
- Conclude the search

The first part of the process, receiving information, is critical. Often the initial information is sparse and time must be devoted to filling the information gaps to a point that the SAR phase is clear and search planning can commence. The IAMSAR Manual Volume II lays down guidelines for SAR mission coordination and at Chapter 3 (Exhibit 321) describes the three emergency phases, providing guidance as to the actions required at each stage.

In simple terms, an **Uncertainty Phase** exists when there is knowledge of a situation that may need monitoring or the gathering of further information but that does not require resources to be dispatched. For ships, an **Uncertainty Phase** is declared when the craft has been reported overdue at its intended destination or has failed to make an expected position safety report.
An **Alert Phase** exists when there is knowledge that a ship or other craft or persons on board are having some difficulty and may need assistance but are not in immediate danger. Resources may be dispatched to provide assistance if it is believed that the situation will worsen. An **Alert Phase** will be declared for an overdue craft when there is a continued lack of information concerning the progress or position of the craft.

A **Distress Phase** exists when there is reasonable certainty that an aircraft, ship or other craft or persons on board is in danger and requires immediate assistance. For overdue craft a distress exists when the communications searches and other forms of investigation have not succeeded in locating the craft or revising its estimated time of arrival (ETA) so that it is no longer considered overdue.

The IAMSAR manual has been developed over many years and distils the best advice available from worldwide experience at the most expert level. Each SAR operation, however, is unique in its own way and those people coordinating the operation must use initiative, judgment and experience to formulate the best possible course of action. The entire process is dynamic and depends critically on the quality of the information available. Sometimes events unfold very rapidly and a SAR operation may move almost instantly into a **Distress Phase**, at other times it can be days or even weeks before sufficient information is available to move out of the **Uncertainty Phase**.

**Emergency distress beacon system**

The Cospas-Sarsat organisation is a joint, international, satellite aided SAR system, established by Canada, France, Russia and the United States and which now has over 40 countries and organisations contributing to the system’s operation and management.

The Cospas-Sarsat system provides distress alert and location information to SAR services for sea, air and land users in distress throughout the world. The system comprises:

- Satellites in ‘Low Earth Orbit’ (LEOSAR) and ‘Geostationary Orbit’ (GEOSAR) that process and/or relay signals transmitted by distress beacons;
- Ground receiving stations called Local User terminals (LUTs) which process the satellite signals to locate the distress beacon; and
- Mission Control Centres (MCCs) that provide distress alert information/messages to SAR authorities.

**Satellites**

LEOSAR satellites are low-altitude orbiting satellites which orbit the Earth around the poles. According to the Cospas-Sarsat website *(Exhibit 325)*:

> ‘...a single satellite, circling the Earth around the poles, eventually views the entire Earth surface. The ‘orbital plane’, or path of the satellite, remains fixed, while the Earth rotates underneath it. At most, it takes only one half rotation of the Earth (i.e. 12 hours) for any location to pass under the orbital plane. With a second satellite, having an orbital plane at right angles to the first, only one quarter of a rotation is required, or 6 hours maximum. Similarly, as more satellites orbit the Earth in different planes, the waiting time is further reduced. The Cospas-Sarsat System design constellation is four satellites which provide a typical waiting time of less than one hour at mid-latitudes.’
The transmission of an activated distress beacon will not be detected by a LEOSAR satellite until the beacon enters the orbiting satellite’s ‘footprint’ (Figure 24). By monitoring the change of the beacon frequency of the received beacon signal as the satellite passes over the Earth’s surface (known as the Doppler\(^{29}\) processing technique) and knowing the exact position of the satellite, the LUT is able to calculate the location of the beacon, with respect to the path (or track) of the satellite. However, the system cannot establish on which side of the track the beacon is located so it produces two possible positions, each equidistant off the track.

Figure 24: LEOSAR satellite coverage from the Cospas-Sarsat website

In order to resolve the ambiguity in the two positions, a second satellite pass is required, thus repeating the process. In the second pass, one of the two positions produced by the Doppler processing technique will be in approximately the same position as one of the first satellite derived positions and it is this approximate position in which the active beacon is located.

Relying only on the LEOSAR system to produce a ‘resolved’ position of the active beacon can take up to 90 minutes.

The GEOSAR system consists of 406 MHz repeaters carried on board various geostationary satellites (Figure 25), and the associated ground facilities are called GEOLUTs. It is these GEOLUTs which process the satellite signal.

Due to the extremely large, continuous coverage footprint provided by each geostationary satellite, GEOLUTs are able to produce near instantaneous alerting over extremely large areas. However, due to the fact that the satellite remains stationary with

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\(^{29}\) Doppler processing is based upon the principle that the frequency of the distress beacon, as ‘heard’ by the satellite instrument, is affected by the relative velocity of the satellite with respect to the beacon.
respect to distress beacons, GEOLUTs are not able to determine beacon locations using Doppler processing techniques. In view of this, 406 MHz beacons with location protocols, such as a Global Positioning System (GPS) unit, allow for the encoding of position data in the transmitted 406 MHz message, thus providing for quasi-real time alerting with position information via the GEOSAR system.

**Figure 25: GEOSAR satellite coverage from the Cospas-Sarsat website**

If a distress beacon does not have any position fixing ability, then the GEOSAR satellite only knows that a beacon has been activated, and the unique identification number of that beacon. Positional information of the beacon cannot be arrived at until a LEOSAR satellite passes overhead the active beacon and then the signal is processed as with any active beacon.

In the area where *Rabaul Queen* sank, three GEOSAR satellites have a ‘footprint’: GOES-15; INSAT-3A and ELEKTRO-L1. A GEOLUT in Wellington, New Zealand (numbered 12 in Figure 25), tracks the GEOS-15 satellite and a GEOLUT in Bangalore, India (numbered 10 in Figure 25), tracks the INSAT-3A satellite.

**Distress beacons**

At the moment, there are three types of distress beacons which all operating on the international distress radio frequency of 406 MHz, namely Emergency Locator Transmitters (ELTs), which are fitted to aircraft, Emergency Position Indicating Radio Beacons (EPIRBs), which are fitted to ships/boats and Personal Locator Beacons (PLBs), which are carried by individuals, typically for land based or small boat activities.

These 406 MHz beacons are specifically designed for use with the Cospas-Sarsat system. These beacons transmit a powerful signal and have a very stable transmitted frequency.

In the Papua New Guinea region, the Australian regional MCC (AUMCC) is linked directly to two LUTs in Australia and one in New Zealand. The AUMCC is located within RCC Australia and Cospas-Sarsat alerts for Papua New Guinea registered 406 MHz EPIRBs are
sent directly from the AUMCC to MRCC POM and RCC Port Moresby, the country’s aviation rescue coordination centre. These alerts are sent by email.

In addition to the distress signal and, for GPS equipped beacons, position information, all 406 MHz beacons transmit a unique 15 digit digital message, known as the Hexadecimal Identification (HEX ID), in every transmission which identifies the individual beacon. This identification code, effectively similar to a bar code, allows the system to distinguish a beacon from other beacons or other transmissions and, if the user registers the beacon with SAR authorities, allows information about the operator of the beacon to be stored in a database and used to help in any SAR operation. Typically, this information includes ship or craft details and emergency contact details.

In Papua New Guinea, the NMSA maintains a database of all Papua New Guinean registered maritime 406 MHz EPIRBs. As at March 2012, there were 248 beacons registered on this database and MRCC POM has used the information extensively both to save lives in actual rescues and to reduce the number of costly responses to false alerts.

It is strongly recommended that all 406 EPIRBs are registered so that the appropriate response can be made as soon as the distress message is received. The process is further enhanced by the EPIRBs being equipped with GPS to give an immediate accurate position of the distress.

The EPIRB installed on *Rabaul Queen* was registered but it was not fitted with GPS. The NMSAs database showed the EPIRB registered to *Rabaul Queen* had a HEX ID of 4524364880FFBFF. However, the EPIRB that was activated and detected on 2 February had the HEX ID of C529D75D75C64D1 (*Exhibit 183*). As a result, this beacon could not be associated with *Rabaul Queen*. This evidence shows that while the NMSA was maintaining a database of EPIRB registrations the information contained within it was not accurate. This is probably attributable to the fact that ship operators are not sufficiently aware of the importance of immediately notifying the Authority of any changes to EPIRBs carried on board their ships.

**Types of distress alerts**

The signal from a distress beacon without GPS capability may be detected by either a GEOSAR or a LEOSAR satellite. If detected by a GEOSAR satellite, the system will report the detection as an *Unlocated Alert* because no position information has been supplied by the beacon. If the beacon is registered in a database, SAR authorities may be able to obtain positional data from the contacts listed in the registration and initiate a response sooner than for an unregistered beacon.

If a non-GPS equipped beacon is detected by a LEOSAR satellite, the MCC will generate the two possible positions described earlier. This *Initial Alert* will be sent to the SAR authority responsible for the country of registration of the beacon, and in which the two positions are located. When a second pass, by either the same LEOSAR satellite or a different one, occurs, the position ambiguity is resolved and the MCC generates a *Resolved Alert*. This alert is then sent to the SAR authority in the country of registration of the beacon and in the country in which the resolved position is located.
A distress beacon with GPS capability will typically provide an alert, with a position in latitude and longitude, within minutes of activation, via a GEOSAR satellite. This is immediately a **Resolved Alert**.

At 0625 on 2 February, an **Unlocated Alert** from a distress beacon with a unique HEX ID of C529D75D75C64D1 was processed by the AUMCC, having received the alert information from the GOES-15 GEOSAR satellite through the New Zealand GEOLUT. This time corresponds with witness accounts that the ship sank about 10 minutes after it capsized. There was no distress message broadcast from the ship before it sank so there is no other time to reference the EPIRB transmission with. The EPIRB was housed in a cradle and was secured in that cradle by a hydrostatic release. When the ship sank to a pre-determined depth, the hydrostatic release would have cut the line holding the EPIRB in its cradle and the EPIRB floated to the surface. A magnetic switch inside the EPIRB would have been activated on its release from the cradle and the EPIRB would have been broadcasting when it surfaced.

At 0632, 7 minutes after processing the **Unlocated Alert**, the AUMCC processed an **Initial Alert** from a beacon with the same HEX ID. The two positions generated in the detection of the beacon were 14° 13.44’S 176° 43.80’W (about 363 nautical miles northeast of Suva, Fiji) and 06 25.20’S 147 39.00’E (on land, about 16 nautical miles northwest of Finschhafen, Papua New Guinea).

**Figure 26:** Google Earth image showing positions of ‘Initial’ and ‘Resolved’ satellite alerts

The first of the **Resolved Alerts** for this particular beacon was received by the AUMCC at 0706, 41 minutes after the **Unlocated Alert** was received and 35 minutes after the **Initial Alert** was received by the AUMCC. The first **Resolved Alert** resolved the position ambiguity to 06° 30.1’S 147° 56.1’E, 17.6 nautical miles from the Papua New Guinea...
position in the *Initial Alert* (Figure 26). The beacon continued to broadcast over the next 3 days, providing valuable surface drift information to SAR authorities.

**Searching for persons lost at sea.**

There are significant difficulties in searching for a person or persons at sea, especially if they do not have means, such as flares, smoke generating devices or a light source such as a torch, for attracting attention to themselves. The weather, (wind, cloud cover, visibility, lighting conditions) and sea state (swell, waves, spray) all pose significant challenges. For a person in the water, if they are not wearing a flotation device, the only part that may be visible is their head, which is a very small object and very difficult to see, even in very good search conditions. The probability of seeing the person decreases markedly as environmental conditions deteriorate. Searching at night compounds these difficulties; searching with the naked eye for a person with no signalling devices is largely ineffective at night. Night vision devices, that amplify ambient light many 100s or 1,000s of times can be very helpful but are adversely affected by poor weather. Therefore, effective searching at night is extremely challenging.

Ships at sea can search small areas quite effectively by day in good weather conditions but, because of the height above the sea of the persons looking from the ship, they have a limited visual horizon. Ships are also relatively slow and it is difficult to maintain course and speed in such a way as to ensure a high level of confidence in the coverage of an area. Modern navigation equipment can make this task easier but it remains very difficult to spot people in the water. At night, searching by ships at sea is much more difficult.

Searches by aircraft can be very effective if the search is for ships or other significant objects in the water, such as liferafts. An aircraft, or helicopter, can travel relatively quickly and can cover quite large areas of sea. With modern radar systems it is possible to detect quite small physical objects under certain sea conditions.

Searching for people in the water remains very challenging. Where possible aircraft and helicopters should utilise trained air observers; that is, people who have undergone formal training in how to conduct visual searches from aircraft. If the weather is poor or the sea state is anything other than calm the task of searching for individual people in the water becomes increasingly difficult; in addition the searching aircraft will be travelling at speed and may be affected by turbulence. Even a trained observer will have only a few brief seconds to identify a point of interest and decide if it needs further investigation.

**Rabaul Queen Search and Rescue (SAR) operations**

In the following narrative, the times and dates are taken from the incident file of RCC Australia and the log of the SSRC of MRCC POM. The times are all in Papua New Guinea time (UTC + 10).

**Initial Awareness and Action**

At 0625 on 2 February 2012, the AUMCC received an unlocated 406 MHz distress beacon activation from an EPIRB with the unique Hex ID of C529D75D75C64D1. As the country of registration of this EPIRB was Papua New Guinea, at 0628, in accordance with
procedures, the details contained in the unlocated alert were emailed to the MRCC POM and the aviation RCC by the RCC Australia officer responsible for monitoring the AUMCC. As there was no position information contained in the alert, no other action was undertaken by the RCC Australia SAR staff.

At 0632, the AUMCC received an initial alert from the 406 MHz with the same Hex ID. At 0640, again in accordance with procedures, the details contained in the alert were emailed to MRCC POM and the aviation RCC. No further action was taken by RCC Australia staff at this time.

At 0706, the AUMCC received a resolved beacon alert from the same 406 MHz EPRIB. At 0710, the details contained in the alert were again emailed to MRCC POM and the aviation RCC. No further action was taken by the SAR staff at RCC Australia.

At about 0740, the SSRC of MRCC POM, Mr Fred Siroi, received a telephone call from Mr Charlie Masange of the Morobe Disaster Centre in Lae. Mr Masange told Mr Siroi that he had been advised by a police officer that Rabaul Queen may have sunk off Finschhafen.

Mr Siroi, who was on his way into his office, acknowledged the telephone call. He then proceeded to his office where, a little later, he met with Captain Nurur Rahman, Executive Manager, Maritime Operations Division of the NMSA, his immediate supervisor, and informed him of the situation and the information he had to date.

At 0755, Captain Sharp, of Rabaul Shipping, contacted RCC Australia and told the SAR officer that he could not contact one of his ships, the passenger ferry Rabaul Queen. The ship was enroute from Kimbe to Lae and had about 350 passengers on board. He also told the SAR officer that the last known position he had for Rabaul Queen was at 0500 that morning, when the ship was off Finschhafen.

Captain Sharp did not make initial contact with MRCC POM because he considered that, from past experience, it would have been a waste of time (Transcript page 262 to 263).

At about 0805, the SAR officer at RCC Australia rang Mr Siroi at MRCC POM, telling him that the EPRIB on board the ferry Rabaul Queen had been activated, that the ship had about 350 passengers on board and that it was possible that the ship had sunk. The SAR officer did not tell Mr Siroi that Captain Sharp had contacted RCC Australia. Mr Siroi asked the SAR officer to initiate a broadcast to shipping in the vicinity of the EPRIB location.

At 0814, RCC Australia, on behalf of MRCC POM, issued a distress relay broadcast to shipping in the vicinity of the EPRIB activation via Inmarsat-C. The broadcast stated that:

‘Distress beacon detected from 47 mtr passenger ship Rabaul Queen with 350 people on board in position 06° 28.8’S 147° 58.5’E. Unconfirmed reports received that Rabaul Queen is sinking. Attempts to contact Rabaul Queen unsuccessful. Search and rescue operations underway.

Ships within 8 hrs report best ETA and intentions to this station or RCC Australia via telephone +61262306811 Inmarsat through LES Burum (POR 212, IOR 312) Special Access Code (SAC) 39, HF DSC 005030001, email rccaus@amsa.gov.au or fax +61 2 6230 6868.’
At about 0810, RCC Australia contacted the Australian company AeroRescue, the company that provides dedicated SAR aircraft under contract to AMSA, and advised them that a beacon had been activated in Papua New Guinea and requested that they prepare the aircraft personnel and equipment in Cairns, Queensland, ready for tasking. RCC Australia also contacted Australian Customs and Border Protection Service (ACBPS) to ascertain if they had any aircraft available. In addition, a number of companies with helicopters in Australia and Papua New Guinea were contacted to ascertain what assets could be deployed to assist in the SAR action.

At 0843, Captain Rahman sent an email to Captain Sharp stating:

‘Information received from a reliable source that the ship mv Rabaul Queen may have been in trouble in the Finschhafen coast. As owners and operators of the subject ship, please advise urgently whether the ship and its crew are safe.’

At 0830, in an email to a Mr Laka, his insurance broker, and copied to Captain Rahman, Captain Sharp stated that:

‘We have received reports that the Rabaul Queen sank near Finschhafen travelling (sic) from Kimbe to Lae last position at about 0500 Lat 6 deg 10 m S 148 deg 8 min E. ships EPIRB activated at about 0700 SAR Canberra has been advised and they have contacted National disaster.’

At about 0838, Mr Siroi rang Mr Masange requesting him to use his knowledge of local shipping operators in Lae to see what ships and craft were available in Lae which could be tasked immediately to assist in the SAR operation. He also asked Mr Masange to organise a helicopter which could be used to located survivors and send information back to Lae which could help in the initial SAR operation.

About 15 minutes later, Mr Masange called Mr Siroi back, telling him that two helicopters were being prepared in Lae to support the SAR operation.

At 0900, in response to Captain Sharp’s email, Captain Rahman emailed Captain Sharp stating:

‘Acknowledge receipt of your email to Harry Laka just now. I have sent you an email some five minutes ago enquiring about the safety of passengers, if any, on board the Rabaul Queen at the time of the casualty. Please revert what your plans are with regards to addressing this issue immediately as lives would be at risk. The Provincial Disaster Office at Lae, Mr Charlie [Masange], has been contacted and a SAR response is being organized immediately. A helicopter is being assembled in Lae to take a NMSA officer and the Lae Provincial Disaster Officer to the scene of the casualty for an accurate assessment of the situation. Meanwhile a broadcast is being promulgated through the Port Moresby Coastal Radio (CRS) and through the NFA channels to divert to the area (6 deg 10 min S Long 148 deg 8 min E) for rescue of passengers in distress.’

Captain Sharp did not reply to Captain Rahman’s email.

Several merchant ships responded to RCC Australia’s distress relay broadcast. The first ship to be tasked to assist in the SAR operation was the container ship MOL Summer, which responded to the broadcast to shipping at 0835. When MOL Summer arrived on scene at 0938, its Master advised RCC Australia that while they could not see any ship in
distress, they could see a number of liferafts and people in the water. At about the same time, a second ship, Cap Scott, arrived on scene.

At 0911, RCC Australia issued a situation report (sitrep) advising the Australian Department of Foreign Affairs and Trade, the Australian High Commission in Papua New Guinea, and RCC Moresby that MRCC POM had confirmed that it was the coordinating authority for the incident. The sitrep advised that RCC Australia would provide assistance to MRCC POM during the SAR operation, by coordinating surface and aviation assets into the search area, on their behalf.

Initial search and rescue activities

The Master of MOL Summer assumed the role of On-Scene Coordinator (OSC) when the ship arrived at the location. At 0950, MOL Summer’s Master reported to RCC Australia that they had located survivors in the water and that they required additional assistance. At 1017, as an indication of the weather and sea conditions being experienced, MOL Summer’s Master reported that the wind was northerly at force 8 (see Appendix 3).

Within the next hour, two other ships, Violet and Zhong He arrived and assisted by recovering survivors from the water. Soon after, a fourth ship Coral Ruby, arrived and a further two ships were reported to be proceeding to the incident scene. Helicopters were also in the area and were directing ships to liferafts.

Figure 27: Photograph of survivors on an upturned liferaft taken from the deck of one of the rescue ships

At 1018, the first of the RCC Australia tasked aviation SAR assets arrived on scene. This was one of AMSA’s dedicated Dornier SAR aircraft (callsign Rescue 441).
At 1104, RCC Australia updated the broadcast to shipping, advising:

‘Rescue operations underway for survivors of foundered passenger ship *Rabaul Queen*, last known position 06-31.5S 147-59.7E at 012349 UTC Feb 11. Ships transiting the area requested to reduce speed, keep a sharp lookout for survivors and monitor VHF 16 for coordinating instructions from rescue aircraft/ships. MOL Summer/C4VF2 is on scene coordinator. Sighting should be reported to this station or RCC Australia via telephone +61262306811, Inmarsat through LES Burum (POR 212, IOR 312) Special Access Code (SAC) 39, HF DSC 005030001, email rccaus@amsa.gov.au or fax +61262306868.’

At 1125, the second of RCC Australia’s tasked aviation assets, a Royal Australian Air Force AP-3C Orion, arrived on scene (callsign Rescue 251). The second AMSA Dornier aircraft arrived on scene at 1400 (callsign Rescue 481).

At about 1140, RCC Australia was advised that between seven and 10 liferafts had been sighted by helicopters. Over the next couple of hours, the OSC reported that survivors were being recovered from liferafts and that the liferafts were being discarded in the ocean. By about 1730, the helicopters were reporting that a number of empty liferafts only had been sighted.

**Figure 28:** Photograph of survivors clinging to a float free platform taken from the deck of one of the rescue ships

Throughout the day, the transmission from *Rabaul Queen*’s EPIRB continued to be detected by the Cospas-Sarsat system. The direction of drift of the EPIRB was to the southeast.
At about 2020, RCC Australia was advised that the AMSA dedicated SAR aircraft, call sign Rescue 441, had dropped a self-locating datum marker buoy (SLDMB) in the middle of the search area. The aircraft reported that the weather was ‘atrocious’ with turbulence and 5 m swells.

**Day 1 - 2 February - Relocation of survivors**

At 1900, *MOL Summer, MSC Carole, Violet, Cap Scott* and *Zhong He* departed the search area with survivors onboard, bound for Lae, with an ETA of 0200 on 3 February. In total, RCC Australia was advised that 246 survivors (including crew members) had been recovered. No other survivors were found after 2 February. Local shipping companies offered ships which could be used in the SAR operation.

**Figure 29: Survivors being transferred onto the tug *Victory* at Lae**

RCC Australia used special computer modelling to determine the movement of the water in the Vitiaz Strait and using this ‘Net Water Movement’, determined search areas into which surface and air assets would be allocated during the period of the search for survivors or bodies. These search areas were sent to MRCC POM so that the MRCC officers were aware of where was to be, or had been, searched.

RCC Australia despatched four SAR officers to Papua New Guinea (Lae and Port Moresby) to assist in the coordination of the air assets at Nadzab airport and overall SAR operations in MRCC POM.

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30 A SLDMB can be deployed to the water from a ship or by an aircraft and is a floating device which is able to be tracked by aircraft by tuning into a certain radio frequency. The buoy provides information which SAR authorities can use to determine the rate and direction of drift of an object in the water.
Day 2 - 3 February

The weather continued to deteriorate on the second day of the search and the search for survivors became more difficult. The size of the search area was increased and numerous sightings of objects confirmed the integrity of the search area.

Day 3 - 4 February

The weather conditions improved marginally on 4 February. However, the wind and swell made recovery of objects difficult. Four bodies were recovered by the coastal ship Bougainville Coast. Three were subsequently transferred from the ship by helicopter to Lae, while the fourth body remained onboard until Bougainville Coast arrived at Lae. A helicopter conducted coastline search operations but no survivors were reported.

Day 4 - 5 February 2012

Weather conditions initially proved favourable for visual search operations however deteriorated significantly throughout the day. Debris was reported within the search area, confirming that the integrity of the search was high. Search aircraft reported sighting three bodies within the search area. However, owing to a combination of the lack of suitable surface assets available in the area, together with the weather on scene, they were not recovered.

At the completion of search activities on 5 February, Australian personnel and assets departed Papua New Guinea.

In total, 15 ships and 13 aircraft had taken part in SAR operations (Appendix 4 - search area chart and Appendix 5 - asset list).

The search and rescue operation moved to a victim retrieval operation on 6 February.

Suspension of Search Operations

All air search operations were suspended on the evening of 6 February 2012. RCC Australia was advised that MRCC POM would continue surface search operations until such a time that a formal transfer of responsibilities would pass to NMSA.

RCC Australia recorded that the decision to suspend the search took the following factors into consideration:

- Specialist medical advice received indicated that survivability of persons in the water would have been exceeded.
- Initial response time was relatively short with the first surface asset on-scene by 0938 on 2 February. At that time, the search area was small and allowed for a surface search with high integrity around a datum 31.
- High integrity of the search area was verified by numerous sighting reports of debris and objects associated with the ship throughout the 4 days of searching.

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31 A geographic point, line, or area used as a reference in search planning.
• Surface assets conducted thorough investigations of the search area and confirmed that there were no survivors associated with the objects that were sighted.
• Deterioration of the weather in the search area significantly diminished the survivability of persons in the water.
• No survivors were located after the first day of searching.

Comments on the search and rescue operation

The cooperation between the MRCC POM and RCC Australia to plan and coordinate an extensive aerial and surface search over 4 days worked very well, with RCC Australia locating, tasking and coordinating the surface and air assets (including ADF assets), deriving search areas using their SAR drift modelling applications and providing four experienced SAR personnel on the ground in Lae and at MRCC POM.

All the survivors and the bodies of the four deceased passengers were located within the defined search areas and no further deceased passengers or crew were located, which may indicate that the search areas did not cover all the possible locations of survivors/deceased.

The Commission acknowledges the efforts of all those involved in the search and rescue operation, in particular the masters’ and crews’ of the ship’s that took part in the on scene rescue operations.

However, the evidence put before the Commission does show that there are three areas of concern. These are addressed below.

EPIRB type

*Rabaul Queen* was fitted with an EPIRB that was not equipped with a GPS unit. As a result, the initial unlocated alert signal that was received by the AUMCC at 0625 on 2 February did not contain any position information. It was not until 0706, 41 minutes later, that a resolved alert was received by the AUMCC.

Had *Rabaul Queen’s* EPIRB been fitted with a GPS unit, the initial alert would have contained position information and, as a result, SAR activities could have been initiated 41 minutes earlier than they were.

Initial notification of an active distress beacon

In his evidence provided to the Commission (Transcript page 2563 – 2598), the NMSA SSRC, said that he was told of the incident at 0740 on 2 February when Charlie Masange from the Morobe District Disaster Centre in Lae rang him. He then went into the MRCC and by the time he looked at his email and found the distress beacon alerts sent from the AUMCC in the MRCC email in-tray, it was after 0800.

He did not speak to anyone from RCC Australia, who had sent the AUMCC emails, until just after 0800 when an officer from RCC Australia rang confirming that the beacon was resolved and giving the position.

The initial unlocated beacon was detected at 0625 and this beacon’s position was resolved at 0706. However, it took until 0800, an hour later for the officer on RCC
Australia to physically make contact with MRCC POM and confirm that a resolved PNG maritime distress beacon was active off the Finschhafen coast.

The question that immediately arises is: why did it take an hour, and probably the telephone call from Captain Sharp at 0755 informing them that he could not contact one of his passenger ships, for the officers at RCC Australia to contact MRCC POM by telephone to inform them of the active beacon and make sure that the SAR officer at the MRCC had received the emailed notifications?

The Australian Maritime Safety Authority have a procedure (Exhibit 186) which provides guidance to the SAR officer responsible for monitoring the functions of the AUMCC. That procedure states:

‘RCC Australia’s Role as AUMCC

Whenever a resolved or encoded position 406 MHz beacon distress alert is sent to a MRCC, RCC or SPOC [SAR Point of Contact] in the AUMCC Service Area, RCC Australia, will within 60 minutes of dispatch, confirm receipt of the alert by telephone and ascertain that they have coordination of the response. If the MRCC, RCC or SPOC requires further assistance, RCC Australia is to assist when it can.’

AMSA and the officers in RCC Australia have been involved with MRCC POM for a number of years and they are aware of the difficulties the MRCC POM face in undertaking SAR action in their area of maritime SAR responsibility.

Given this, it is the opinion of the Commission that the RCC Australia officers should have been much more proactive than they were in attempting to contact the MRCC POM by telephone as soon as the beacon was resolved at 0706 to make sure they had received the email containing the resolved alert and position of the active beacon.

It is of paramount importance for every person involved in monitoring the receipt of 406 MHz EPIRB activation information remember that every resolved 406 MHz beacon detection is a potential SAR action.

Section 3.6 of Volume II of the IAMSAR Manual (Designation of the RCC or RSC Responsible for Initiating SAR Action) (Exhibit 321) states that:

‘Typically, an RCC will receive a distress alert and assume responsibility for SAR operations for that incident. However, there may be times when the first RCC to receive the distress alert will not be the responsible RCC, such as when the distress is in another SRR. Figure 3-1 depicts the recommended actions of the “First RCC” that receives the distress alert. The following text provides guidance on the responsibilities of that RCC. There should be no undue delay in initiating action while determining the responsible RCC.’

In this case, RCC Australia should have run with the SAR incident as soon as the alert resolved to a position at 0706. In other words, they should have done all they could to alert MRCC POM that there was a confirmed beacon activation off Finschhafen and not waited until the 60 minutes was almost up, or for Captain Sharp to tell them one of his ships was missing and that the 0500 position he had of it was in the vicinity of Finschhafen.

As it was, an hour was lost in which a broadcast to shipping could have been put out to all ships in the vicinity of the position, and a search for assets commenced. All this could
have been happening before RCC Australia officially handed the incident over to MRCC POM for their overall coordination, and then making the offer to MRCC POM to assist in whatever way they could.

Some might say that the functions of the AUMCC are not those of RCC Australia (the AUMCC function being to monitor the Cospas-Sarsat Mission Control Centre and is not directly involved in the prosecution of any SAR incident). However, it is the role of the Senior Search and Rescue Officer (Maritime) within the RCC to monitor the functions of the AUMCC (including seeing the alerts that are produced and then sending those reports by email to an appropriate SAR authority). That person cannot say that at one moment ‘I am just monitoring the AUMCC’ and then the next minute, ‘I am a SAR officer’. That person is a SAR officer and should be able to read that AUMCC alert information and then, if able, be proactive in establishing whether the responsible SAR authority is aware of a resolved (and therefore active) EPIRB transmission (especially in the case of MRCC POM) and prosecute SAR action until contact can be made with MRCC POM and responsibility for the SAR action can be handed over.

The ‘within 60 minutes’ requirement of the procedure, particularly when dealing with alerts sent to MRCC POM, is not within keeping of best SAR practices and should be amended to read ‘as soon as possible after dispatch’ and in event, not more than 60 minutes. Sixty (60) minutes is a long time if there is someone in the water. If the RCC officer waited for up to an hour to act on a resolved EPIRB anywhere in Australia’s area of SAR responsibility, he or she would be likely to come under severe and justifiable criticism.

Papua New Guinea’s ability to provide proper SAR coordination in its SRR

Having a dedicated search and rescue region (Figure 22), recognised by the international maritime community, places responsibilities and expectations on Papua New Guinea to be able to undertake search and rescue activity within that region.

Currently, the maritime search and rescue coordination capability of the country is severely limited in that:

- MRCC POM has only one staff member, Mr Siroi. Therefore, it cannot maintain a 24 hours operation in times of a protracted search and rescue action.
- With only one staff member, there is no ability to share any 24 hour point of contact arrangements and that person is, in effect, on duty ‘all day-every day’.
- At the time this Report was written, Mr Siroi had only had basic training in the maritime search and rescue environment – an introduction to SAR conducted on line with no ‘face-to-face’ contact with the Australian trainers. He has not been trained in the most important and critical SAR operations - search planning and coordination of search organisations and assets.
- MRCC POM does not have any capacity to directly contact a ship in regions beyond very high Frequency (VHF) radio range in Port Moresby. This range is only ‘line-of-sight’.
- MRCC POM cannot broadcast maritime safety, urgency or distress relay to ships at sea, either by high frequency (HF) radio or by satellite (INMARSAT).
• MRCC POM does not have a capability to conduct sophisticated drift planning modelling to determine surface search areas during a search and rescue operation.

Given these limitations, it can be said that MRCC POM is a truly operational rescue coordination centre in name alone and has no ability to provide proper SAR coordination. This is extremely disturbing for a country that is so dependent on transportation by sea.

With regard to Rabaul Queen sinking, while MRCC POM maintained ‘overall coordination’ of the SAR operation, it was RCC Australia which:

• issued and updated the broadcasts to shipping (via satellite and HF radio);
• used its drift modelling (including the tracking of the SLDMBs which had been deployed) to determine search areas during the first 4 days of the operation;
• identified and tasked the aerial and maritime assets during the first 4 days of the operation; and
• flew four (4) SAR officers to Papua New Guinea to provide expertise to the MRCC POM, advising Mr Siroi and maintaining a communications link with RCC Australia, and to coordinate the on-ground operation of the aerial assets at Nadzab Airport in Lae.

Additionally, RCC Australia covered the costs associated with the tasking of the aerial assets, and deployment of its own officers to Papua New Guinea.

Therefore, without the extensive assistance of RCC Australia, MRCC POM would have not been able to cope with the intense activity which surrounds the first couple of days of any large scale SAR operation. Had this been the case, then it is possible that more people would have died in the water while waiting to be rescued.

It is the Commission’s opinion that, given the extensive traffic passing though the SAR region each year, both domestic and international shipping, the Government of Papua New Guinea, through the NMSA, needs to provide sufficient funding to enable the capacity (in staff, training, communications and drift planning capability) of the MRCC to be immediately increased so that the country can fulfil its maritime SAR obligations. This requires urgent attention.

If this cannot be done, then the issue of whether Papua New Guinea maintains a dedicated SAR region or whether the country opts out of its obligation and the SAR region (and the resultant obligations and responsibility) is incorporated into that of another, in a manner similar to the smaller countries of the South West Pacific, needs to be considered. If this were to be the case, then the NMSA could use the time to develop a maritime SAR capacity in all the afore-mentioned areas, so that in the future, the country can again be allocated a maritime SAR region.
CHAPTER 13 –PROPOSALS TO PROMOTE MARITIME SAFETY

This Chapter contains proposals for any measures that would help prevent the future occurrence of a similar disaster, or may assist in future search, rescue and recovery of disaster victims. [Term of Reference (6)]

Maritime legislation

1. The Merchant Shipping Act 1975 and its subordinate regulations are deficient and are in need of radical amendment to ensure that they are consistent with, or exceed, the current international merchant shipping standards. There are many provisions which are unclear and ambiguous and the legislation should be amended in consultation with appropriate stakeholders.

2. The amendment to the Merchant Shipping Act 1975 should include a new category for coastal passenger ships and that category should ensure that the best international standards for passenger ship design, safety, stability and safety management are contained within it.

3. The requirements for the carriage of liferafts on board ships should be amended with a view to increasing the total capacity to 125 per cent of the maximum number of persons carried on board a ship (so as to take account of, for example, liferafts not inflating, hydrostatic releases not operating and liferafts being trapped or damaged by the sinking ship).

4. The requirements for the carriage of lifejackets on board ships should be amended with a view to increasing the total capacity to 125 per cent of the maximum number of person carried on board a ship. A proportion of lifejackets should be required to be stowed in float free lockers on deck so that, if not accessed prior to a ship sinking, they will be available in the water for anyone who was unable to obtain a lifejacket before entering the water.

5. There should be a requirement for the carriage of lifejackets, on board all ships capable of carrying passengers, that are suitable for the use of all those who are on board the ship. This requirement should include the need to carry lifejackets suitable for use by children and infants.

6. There should be a requirement for the holders of all levels of Papua New Guinea maritime certificates of competency to revalidate their certificates at regular intervals.

7. There should be a requirement for all ships capable of carrying passengers to have their Emergency Position Indicating Radio Beacons (EPIRBs) fitted with Global Positioning System (GPS) capability.
National Maritime Safety Authority (NMSA)

Note: The Commission, whilst critical of the NMSA, does not suggest that the Authority should be disbanded. The concept of an independent autonomous body funded as a not-for-profit organisation from a levy on all ships operating in Papua New Guinea in line with best international practice for maritime administration. It is a fair way in which the cost of maritime safety is spread as a general taxation on all the users of maritime transport collected at the port of entry.

8. The Government of Papua New Guinea needs to commission an independent and thorough review of NMSA. The review needs to consider the composition of the Board, the qualification of the Board members, the qualification and competency of senior officers of the organisation and also in terms of appropriate qualifications and competency of inspectors/surveyors.

9. The Government of Papua New Guinea needs to provide additional funds to NMSA to ensure its continuing development and so that the Authority has sufficient funding to meet the country’s domestic and international legal obligations with regard to enhancing maritime safety. The Commission considers that critical functions of NMSA, like search and rescue, could be largely funded by Government.

10. NMSA must ensure that it meets its statutory obligations under the National Maritime Safety Authority Act 2003, including carrying out its functions as required by Section 4, holding Board meetings as required by Section 12, preparing a Corporate Plan as required by Section 16 and furnishing a report to the Minister as required by Section 18.

11. NMSA must ensure that all Papua New Guinea registered ships have valid Survey and Safe Manning Certificates and are being operated in accordance with such certificates and the conditions specified therein.

12. NMSA must immediately carry out a thorough flag State inspection of all Papua New Guinea registered ships that are capable of carrying passengers.

13. The NMSA must ensure that all ships registered in Papua New Guinea undergo a flag State inspection at intervals not exceeding 6 months.

14. NMSA must ensure that all records pertaining to ships and their survey are appropriately maintained, accessible to all surveyors/inspectors and properly reflect the ships under survey in Papua New Guinea.

15. NMSA must ensure that it employs a sufficient number of appropriately qualified and experienced surveyors/inspectors to meet all of its legislative responsibilities and functions.
16. NMSA must reassess the minimum manning requirements for ships that carry passengers with a view to ensuring that the Master and the ship’s officers have the requisite knowledge to comprehend and carry out their responsibilities.

17. NMSA must take immediate steps to revoke the appointment of Peter Robert Sharp as a recognised surveyor of ships under Section 57 of the *Merchant Shipping Act 1975*.

18. NMSA must stringently enforce all aspects of the *Merchant Shipping Act 1975* and its subordinate regulations. In particular, the requirements contained in Sections 141 and 143 of the *Merchant Shipping (Safety) Regulation 2006* that all ships carrying passengers conduct a safety demonstration for passengers when leaving port. This demonstration should be delivered in both English and Tok Pisin.

19. NMSA must take immediate steps to ensure that its website contains the most up to date information, including legislation and advice from the International Maritime Organization (IMO), and that it continues to do so.

**Search and rescue**

20. The Government of Papua New Guinea should immediately allocate sufficient funds to the NMSA to enable the Maritime Rescue Coordination Centre in Port Moresby to be properly manned, equipped and resourced so that it can operate on a 24/7 basis. This is important given the number of ships which transit the Papua New Guinea Search and Rescue Region each year and to whom the Government of Papua New Guinea have an international obligation to provide search and rescue services in the case of an emergency. It is also important because of the number of domestic ships operating in Papua New Guinea waters at any given time.

21. The Government of Papua New Guinea should invest in the necessary country wide communications infrastructure to ensure that the Maritime Rescue Coordination Centre and Coastal Radio have the ability to communicate with all ships operating within the Papua New Guinea search and rescue region on a 24/7 basis.

22. The Government of Papua New Guinea should undertake an assessment to determine whether the country is able to fulfil the international maritime search and rescue obligations, responsibilities and expectations that are associated with it having a dedicated maritime search and rescue region.

23. NMSA should ensure that its database of EPRIB (Emergency Position Indicating Radio Beacon) registrations is kept up to date and properly reflects the ship that specific beacons are carried on.
The National Weather Service

24. The National Weather Service should take steps to improve the reliability of its weather facsimile service. The Service should also ensure that appropriate and up-to-date weather information is available on a publicly accessible website and investigate the feasibility of the dissemination of weather information through social media like Facebook and Twitter.

25. The National Weather Service should consider providing warnings on its weather forecasts similar to those issued by the Australian Bureau of Meteorology that warn ‘Wind gusts can be 40 per cent stronger than the averages given here, and maximum waves may be up to twice the height.’

Independent safety investigation of maritime incidents and accidents

26. The Government of Papua New Guinea should provide funding and the necessary legislative amendments to provide a capacity to investigate maritime casualties in keeping with the International Maritime Organisation (IMO) casualty investigation code standards and practices as contained in IMO Resolution MSC.255(84). The Commission considers that this could be best achieved by expanding the current independent ‘no-blame’ safety investigation functions of the Papua New Guinea Accident Investigation Commission (AIC) to incorporate the maritime transport sector.

Captain Peter Sharp

27. Captain Peter Sharp must take immediate action to ensure that his companies, and the ships they operate, comply with all of the requirements of the Merchant Shipping Act 1975 and its subordinate regulations.

The Australian Maritime Safety Authority

28. The ‘within 60 minutes of dispatch’ requirement contained in Rescue Coordination Centre Australia’s procedure under its function as AUMCC, is not in keeping with best SAR practices and should be amended to read:

‘Whenever a resolved or encoded position 406 MHz beacon distress alert is sent to a MRCC, RCC or SPOC [SAR Point of Contact] in the AUMCC Service Area, RCC Australia, will as soon as possible after dispatch and in any event not more than 60 minutes after dispatch, confirm receipt of the alert by telephone and ascertain that they have coordination of the response. If the MRCC, RCC or SPOC requires further assistance, RCC Australia is to assist when it can.’ [Proposed amendments underlined by the Commission]
General

29. While the legislation does not currently require it, the Commission considers that every ship operator in Papua New Guinea should ensure that all of its ships capable of carrying passengers are fitted with Emergency Position Indicating Radio Beacon (EPIRB) which have Global Positioning System (GPS) capability.

30. While the legislation does not currently require it for all ships, the Commission considers that every ship operator in Papua New Guinea, particularly those operating ships capable of carrying passengers, should introduce and implement a safety management system for any ships operated by it, in line with the requirements of the International Safety Management (ISM) Code.

31. There needs to be proper and effective enforcement of the merchant shipping laws and these laws need to be respected and complied with by all shipowners and operators within the Papua New Guinea maritime industry. There has been a practice of ignoring the laws, including the Merchant Shipping Act 1975 and its subordinate regulations, which the Commission considers will only change if the law is taken seriously by shipping companies and rigorously enforced by the regulator.

32. Ship owners and operators in Papua New Guinea must ensure that they are familiar with the International Maritime Organization (IMO) document ‘Revised guidance to the Master for avoiding dangerous situations in adverse weather and sea condition’ (MSC.1/Circ.1228), and other relevant IMO advice, and develop simple instructions for the Masters of their ships to assist them in reducing risk.

33. Owners and operators of ships operating in Papua New Guinea should ensure that lifejacket storage is clearly signposted, in English and Tok Pisin, and strategically located to facilitate easy access by passengers. The location should be close to exits on the route to muster stations, but clear of doorways. A proportion of lifejackets should be stowed in float free lockers on deck so that, if not accessed prior to a ship sinking, they will be available in the water for anyone who was unable to obtain a lifejacket before entering the water.

34. All Masters and crews of passenger ships should wear a form of distinctive uniform to distinguish themselves from passengers. (Thus, should an emergency arise, passengers will know who to turn to for advice).
APPENDIX 1 – PRACTICE NOTE NUMBER 1

COMMISSION OF INQUIRY INTO THE SINKING OF MV RABAUL QUEEN

Practice Note No. 1

Commencement of hearings

Section 5 of the Commissions of Inquiry Act 1951 (‘the Act’) provides that the Commission may make such rules, not inconsistent with the terms of the instrument of its appointment, for the conduct of proceedings before it, for the times and places of its meetings and for adjournment, as it thinks proper.

1. The Inquiry shall be held in public unless directed otherwise by the Commission.

2. The Commission will conduct a preliminary public hearing commencing at 9:30 am on Wednesday 11th April, 2012 at Level 1, Muruk House, Waigani, National Capital District, Papua New Guinea (above the Government Printing Office). Public hearings are currently intended to be held, subject to revision, as follows:

<table>
<thead>
<tr>
<th>NO</th>
<th>LOCATION</th>
<th>HEARING DATES</th>
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Leave to appear

3. Any person or organization who contends that they have a bona fide interest in the subject matter of the Inquiry or who desires to seek leave to attend the Commission either in person or by Counsel will be given the opportunity to make an application before the Commission on Wednesday 11th April, 2012 at Level 1, Muruk House, Waigani. Any person or organization (person) who contends that they have a bona-fide interest in the subject matter of the Inquiry or who desires to seek leave to attend the Commission should lodge written notice personally signed by them of that intention by 4:00 pm, 9th April, 2012. The notice should comprise a brief outline of no more than three pages identifying the term or terms of reference in which the person claims an interest, explaining the nature of that interest, giving reasons why they should be given leave to appear before the Commission having regard to section 8 of the Act and provide contact details.

4. Requests for leave to attend, as contemplated by paragraph 3 in this Practice Note, will be considered by the Commission at 9:30 am on Wednesday 11th April, 2012 at Level 1, Muruk House, Kumul Avenue, Waigani (or such other time or place as may be advised).
5. The Commission may deal with an application administratively, in which case the person will be advised of the result of the application in writing or by email.

6. If the Commission does not deal with an application administratively, the person should attend the hearing at 9:30 am on 11th April, 2012 and be prepared to make brief oral submissions in support of their application for leave to appear.

7. Subject to any rule to the contrary, a party that has satisfied the Commission that they have a bona fide interest in the matter or granted leave to attend may appear at hearings of the Commission at which evidence will be taken or submissions received relating to issues in which the party granted leave has a substantial and legitimate interest having regard to section 8 of the Act. Participation in such hearings by, for example, the cross-examination of witnesses or the presentation of submissions will be subject to the grant of further leave, which may be granted on terms which may include (without limitation) the following:

   (a) limitation of the particular topics or issues upon which the party may cross-examine or present submissions;
   (b) the imposition of time or other limitations upon cross-examination or presentation of submissions;
   (c) the provision of prior notice to the Commission of documents or other evidence relevant to the terms of reference or written outline of any proposed submissions; and
   (d) the requirement that submissions be presented in writing only.

8. Nothing in this Practice Note prevents a person from seeking leave to appear at any time if something that has occurred during the hearing leads the person to believe that his or her interest may be affected which would entitle such person to be represented as provided in section 8 of the Act.

Conduct of hearings

9. The Commission's usual hearing hours will be from 9:30 am to 12:30 pm and from 2:00 pm to 5:00 pm. The Commission may sit different hours, including evening sessions. The Commission accepts no obligation to notify parties given leave to attend or other interested parties of the timing and places of its hearing.

10. Subject to the control of the Commission, Counsel Assisting the Commission will determine what witnesses are called, what documents are sought to be tendered to the Commission, and in what order they will call and examine witnesses.

11. The details of evidence to be produced to the Commission will not be published in advance of the hearing at which it is produced and generally will not be opened before it is called.

The evidence of witnesses

12. Where the witness (or the organization to which the witness belongs) is legally represented, the Commission expects that the witness's statements will be by way of affidavit, unless good reason is shown, and will be prepared by the lawyers for the witness. The Commission expects that the preparation of a witness statement by the witness's lawyers will occur in consultation with Counsel Assisting the Commission.

13. Where a witness is not legally represented, Counsel Assisting the Commission may assist the witness to prepare his statement.

Examination and cross-examination of witnesses

14. All witnesses will be called by Counsel Assisting the Commission. As a general rule a witness's evidence in chief will be given by first adopting his affidavit (if any). Counsel Assisting may examine (including by cross-examining) the witness.

15. Any witness who is legally represented may next be examined by his or her own legal representative, and then be cross-examined by or on behalf of any person considered by the Commission to have sufficient interest in doing so. The witness's own legal representative and
finally Counsel Assisting the Commission may re-examine. At all times, unnecessary duplication and repetition is to be avoided.

16. Cross-examination of witnesses will be by leave only except in the case of Counsel Assisting. No general, open-ended right of examination, cross-examination or tender of evidence will be given to any person. Subject to general considerations of fairness the Commission may impose conditions or restrictions on leave to cross-examine if the interest of efficiency and justice so demand.

17. A copy of any document proposed to be put to a witness in cross-examination must be provided to Counsel Assisting the Commission as soon as possible after a decision is made to use the document for the purpose and in all cases well prior to being put to the witness.

Applications to call a witness or tender a document

18. Any person who has satisfied the Commission that they have a bona fide interest in the matter or granted leave to attend the Commission who wishes to have the evidence of a witness placed before the Commission should notify Counsel Assisting the Commission of the name of the witness in writing and provide a signed affidavit of his or her expected evidence. Counsel Assisting the Commission or Commission staff may interview the witness and take a further statement from him. Counsel Assisting the Commission will decide whether to call the witness.

19. Any person who has satisfied the Commission that they have a bona fide interest in the matter or granted leave to attend the Commission who wishes to tender a document to the Commission should notify Counsel Assisting the Commission in writing of the document, and should provide a copy of the document if it has not already been produced to the Commission. Counsel Assisting will decide whether to seek to tender the document.

20. If Counsel Assisting the Commission has declined a person's request to call a witness or tender a document, the person should write to Counsel Assisting setting out the reasons why the witness should be called or the document tendered. Counsel Assisting may decide to place the evidence before the Commission, or may reaffirm his decision not to do so.

21. If Counsel Assisting has reaffirmed his decision not to place the evidence before the Commission, the person concerned may apply directly to the Commission for leave to call the witness or tender the document.

Procedural Matters

22. If a person who has satisfied the Commission that they have a bona fide interest in the matter or has been granted leave to appear intends to raise a procedural matter, the person should write to Counsel Assisting the Commission identifying the issue to be raised and setting out a brief outline of the submissions the person proposes to make a relation to the issue.

23. A party who wishes to raise such an issue should give the Commission as much advance notice as possible of that intention.

24. Without limiting its generality, the term "procedural matters’ includes objections to or restrictions on the production or use of documents, matters relating to the way in which witnesses are examined and cross-examined, applications for corrections to any transcript and administrative arrangements for the conduct of hearings.

Media

25. Media will be allowed access to public hearings. However the media must respect the integrity of the proceedings and do nothing to interfere with the smooth conduct of proceedings. Cameras or tape recordings will not be allowed in the hearing room during the conduct of hearings, unless specifically allowed by direction of the Commission.

Counsel Assisting the Commission

26. A reference in this practice note to Counsel Assisting the Commission is Mr. M. M. Varitimos. Mr M. M. Varitimos may from time to time delegate responsibilities under this practice note to
junior Counsel Assisting, Mr. Emmanuel Asigau or such other junior Counsel Assisting as may be appointed.

Attendance of Children

27. Due to the nature of various matters being inquired into, unless specifically allowed by direction of the Commission, children shall not be allowed in the hearing room during the conduct of hearings.

Summons to Give Evidence or Produce Documents

28. Unless otherwise directed or determined by the Commission any person served with a summons on behalf of the Commission shall not be entitled to payment of any expenses.

Website

29. The Commission website is www.mvrabaulqueen.com

Variation of practice

30. The Commission reserves the right at any time to vary the practice set out in this Practice Note.

Judge Warwick Andrew, C. B. E., C.R.H.
Commissioner
Dated 29th March, 2012
## APPENDIX 2 – EXHIBIT LIST

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<td>Reconciled missing list reported at Kokopo information booth as missing but not on Lae’s missing list but confirmed, thought to be either on manifests on board <em>Rabaul Queen</em></td>
<td>28 April 2012</td>
<td>1576</td>
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<td>215</td>
<td>Reconciled missing list on manifests but have not been identified as missing in either Lae or Kokopo, East New Britain</td>
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<td>216</td>
<td>Reconcile missing list names appeared on both Lae’s missing and survivor lists</td>
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<td>Records of interview which were held on 23 April with the following Rabaul Shipping staff: Anthony Tsiau (Master, <em>Rabaul Queen</em>), Michael Zirau (Chief Mate, <em>Rabaul Queen</em>), Silas Aila (Second Mate, <em>Rabaul Queen</em>), Samuel Eremas (Seaman, <em>Rabaul Queen</em>), Solomon Kaian (Seaman, <em>Rabaul Queen</em>), John Keko (cleaner, <em>Rabaul Queen</em>), Serah Eliakim (Rabaul ticket sales office) and Jenny Mat (Rabaul ticket sales office)</td>
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<td>Photographs of passengers on board <em>Rabaul Queen</em> at the wharf in Buka on 30 January 2012</td>
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<td>Bougainville Missing Persons Profiles prepared by Autonomous Region of Bougainville Disaster Office</td>
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<td>Statement of Mr Franklyn Lacey, dated 2 May 2012</td>
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<td>Statement by Tommy Yep</td>
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<td>Registration forms, Railyn Florian and Joel Hakit</td>
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<td>Letter from Captain Peter Sharp to Lawrence Dissin, dated 15 February 2012 and received on 16 February 2012</td>
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<td>Copy of Exhibit 160 plan of the Promenade Deck indicating where the witness Mr Liato was situated</td>
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<td>Curriculum Vitae of Mr Michael Livinai</td>
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<td>Documents produced by Mr Michael Livinai of the NMSA</td>
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<td>Amended copy of Exhibit 161 marked by Ezekiel Sauba as to his location</td>
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<td>Copy of Exhibit 160 indicating where passenger Robert Apaita was situated</td>
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<td>Application for berthing of Rabaul Queen</td>
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<td>Ticket number 0006078 in the name of Timothy Wali</td>
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<td>Documents including photocopies of manifests produced by the Provincial Police Commander, Mr Siguyaru</td>
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<td>Ticket in the name of Joe K</td>
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<td>Copy of Exhibit 160 as marked by witness Mr Ongari as to his whereabouts on the boat</td>
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<td>Copy of Exhibit 161 as marked by witness Mr Leo Kum as to his location on the ship</td>
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<td>Berth applications for <em>Rabaul Queen</em> 2010</td>
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<td>Copy of Exhibit 160 as marked by witness Mr Somare as to his position on the ship</td>
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<td>Summary of certificates of various ships owned by Captain Sharp</td>
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<td>Statement from the Secretary of Department of Transport, dated 21 May 2012</td>
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<td>Previously MFI-10 – Flash drive of video footage taken by Clifford Faiparik</td>
<td>21 May 2012</td>
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<td>Copy of a presentation of Mr Michael Pidi to Asia Pacific Heads of maritime safety</td>
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<td>Four photographs of <em>Rabaul Queen</em></td>
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<td>299</td>
<td>Current Extract of registry information of <em>Solomon Queen</em> from the NMSA Register of PNG Ships and extract obtained from Register Book in relation to <em>Solomon Queen</em></td>
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<td>Letter from Michael Livinai of NMSA to Captain Peter Sharp dated 17 April 2012</td>
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<td>Report of Surveyor on completion of survey or inspection dated 13 April 2012 in relation to the <em>Kimbe Queen</em> produced by Michael Livinai (Part of Exhibit 242)</td>
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<td>Statement of Dr. Thomas Webster dated 21 May 2012</td>
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<td>Email from and to Dr. Webster commencing 2 February 2012</td>
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<td>Curriculum Vitae of Chris Rupen, General Manager, NMSA</td>
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<td>Letter from Chris Rupen dated 11 April 2012 to Commission of Inquiry in response to Summons</td>
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<td>314</td>
<td>Email from AMSA to MRCC PNG on 2 February 2012 at 6:32 am</td>
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<td>315</td>
<td>Email from AMSA to MRCC PNG on 2 February 2012 at 6:39 am</td>
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<td>Email from AMSA to MRCC PNG on 2 February 2012 at 6:40 am</td>
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<td>All emails and faxes received through the MRCC from 2 February 2012 commencing from 8:16 am to 4:50 am 11 February 2012 Vol 1</td>
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<td>All emails and faxes received through the MRCC from 2 February 2012 commencing from 9:36 am to 9:40 am 8 February 2012</td>
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<td>Handwritten log entries by Freddie Siroi in relation to Search and Rescue operation relating to <em>Rabaul Queen</em></td>
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<td>Information printed from Search &amp; Rescue (SAR) Training Australia website</td>
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<td>Information printed from Australian Maritime Safety Authority (AMSA) website in relation to search and rescue</td>
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<td>Document in relation to Distress Beacons by AMSA</td>
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<td>Ticket Books Kim 006001- 0006150, 809701-809850, 809851-810000, 810001-810150, 810151-810300, 816301-816450</td>
<td>24 May 2012</td>
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<td>328</td>
<td>Report by surveyor on completion of survey or inspection in relation to the <em>Kimbe Queen</em> dated 13 April 2012</td>
<td>24 May 2012</td>
<td>2602</td>
</tr>
<tr>
<td>330</td>
<td>Miscellaneous Documents produced by Chris Rupen in relation to Rabaul Shipping denying NMSA officials or their families travelling on Rabaul Shipping ships</td>
<td>24 May 2012</td>
<td>2606</td>
</tr>
<tr>
<td>331</td>
<td>Curriculum Vitae of Robin Charles Gehling, Naval Architect</td>
<td>24 May 2012</td>
<td>2609</td>
</tr>
<tr>
<td>332</td>
<td>Report by Robin Gehling dated 15 May 2012 on stability and other naval architectural issues to the Commission of Inquiry</td>
<td>24 May 2012</td>
<td>2613</td>
</tr>
<tr>
<td>333</td>
<td>IMO Circular titled ‘Revised guidance to the Master for avoiding dangerous situations in adverse weather and sea conditions’ dated 11 January 2007</td>
<td>24 May 2012</td>
<td>2614</td>
</tr>
<tr>
<td>334</td>
<td>Copy of side elevation of <em>Rabaul Queen</em> marked by Robin Gehling</td>
<td>24 May 2012</td>
<td>2615</td>
</tr>
<tr>
<td>335</td>
<td>Curriculum Vitae of Captain Nurur Rahman, Executive Manager – Maritime Operations Division, NMSA</td>
<td>24 May 2012</td>
<td>2679</td>
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<tr>
<td>336</td>
<td>Submissions by Captain Nurur Rahman addressing the Commission of Inquiry’s Terms Reference of 5 April 2012</td>
<td>24 May 2012</td>
<td>2681</td>
</tr>
<tr>
<td>337</td>
<td>Statement of Captain Nurur Rahman in relation to dealings with Captain Peter Sharp, Rabaul Shipping Ltd and its associated Group of Companies</td>
<td>24 May 2012</td>
<td>2681</td>
</tr>
<tr>
<td>338</td>
<td>National Maritime Safety Authority: List of Inspectors (Surveyors) employed by NMSA as of Wednesday 23 May 2012</td>
<td>24 May 2012</td>
<td>2682</td>
</tr>
<tr>
<td>339</td>
<td>Facsimile transmission from Rabaul Slipways Ltd to NMSA dated 23 August 2007</td>
<td>24 May 2012</td>
<td>2694</td>
</tr>
<tr>
<td>340</td>
<td>Process Audit Report into Sinking of <em>Sealark</em> and <em>Pedro</em> and near sinking of <em>Lihir Express</em></td>
<td>24 May 2012</td>
<td>2695</td>
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<td>Exhibit No.</td>
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<td>Date tendered</td>
<td>Transcript page tendered</td>
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<td>341</td>
<td>Final Process Audit of the circumstances surrounding the appointment of the Pacific Register of Ships to carry out statutory surveys and statutory certification services for PNG Registered ships on behalf of NMSA</td>
<td>24 May 2012</td>
<td>2696</td>
</tr>
<tr>
<td>342</td>
<td>Ship details in relation to <em>Rabaul Queen</em> and <em>Solomon Queen</em> obtained from the Sea-web website</td>
<td>24 May 2012</td>
<td>2698</td>
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<td>343</td>
<td>Joint Typhoon Warning Centre (JTWC) Products and Services Notice obtained from the website <a href="http://www.usno.navy.mil">www.usno.navy.mil</a></td>
<td>24 May 2012</td>
<td>2698</td>
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<tr>
<td>344</td>
<td>Document in relation to Marine Weather Services obtained from the Australian Government Bureau of Meteorology website</td>
<td>24 May 2012</td>
<td>2699</td>
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<tr>
<td>346</td>
<td>National Standard for Commercial Ships: Chapter 4 - Safety Management of Ships</td>
<td>24 May 2012</td>
<td>2700</td>
</tr>
<tr>
<td>348</td>
<td>Pacific Register of Ships Ltd presentation to the NMSA board 24 January 2007</td>
<td>24 May 2012</td>
<td>2702</td>
</tr>
<tr>
<td>349</td>
<td>Company records of Rabaul Shipping Ltd (1-1275) produced by the Registrar of Companies, Alex Tongayu</td>
<td>25 May 2012</td>
<td>2721</td>
</tr>
<tr>
<td>350</td>
<td>Company records of Auspac Ltd (1-14704) produced by the Registrar of Companies, Alex Tongayu</td>
<td>25 May 2012</td>
<td>2721</td>
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<td>351</td>
<td>Company records of Hamamas Lines Ltd (1-58813) produced by the Registrar of Companies, Alex Tongayu</td>
<td>25 May 2012</td>
<td>2721</td>
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<td>352</td>
<td>Company records of Star Ships Ltd (1-50175) produced by the Registrar of Companies, Alex Tongayu</td>
<td>25 May 2012</td>
<td>2724</td>
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<td>353</td>
<td>Company records of Bismark Maritime Ltd (1-23675) produced by the Registrar of Companies, Alex Tongayu</td>
<td>25 May 2012</td>
<td>2724</td>
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<tr>
<td>354</td>
<td>Gale and Strong Wind Warning received by Coastal Radio from PNG National Weather Service for 28 January 2012 to 5 February 2012</td>
<td>25 May 2012</td>
<td>2728</td>
</tr>
<tr>
<td>355</td>
<td>Coastal Radio Daily Logs for December 2011</td>
<td>25 May 2012</td>
<td>2733</td>
</tr>
<tr>
<td>357</td>
<td>Coastal Radio Daily Logs for the period 1 February 2012 to 6 February 2012</td>
<td>25 May 2012</td>
<td>2734</td>
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<tr>
<td>358</td>
<td>Coastal Radio Services document titled ‘Ships in Range’ for January 2012</td>
<td>25 May 2012</td>
<td>2735</td>
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<tr>
<td>359</td>
<td>Coastal Radio Services document titled ‘Ships in Range’ for the period 1 February 2012 to 6 February 2012</td>
<td>25 May 2012</td>
<td>2736</td>
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<tr>
<td>360</td>
<td>Documents relating to Rescue Coordination in relation to <em>Rabaul Queen</em> in February 2012</td>
<td>25 May 2012</td>
<td>2737</td>
</tr>
<tr>
<td>363</td>
<td>Voyage Summary Report for <em>Atolls Queen</em> for 20 December 2006</td>
<td>25 May 2012</td>
<td>2744</td>
</tr>
<tr>
<td>365</td>
<td>Boarding Summary Sheet for <em>Rabaul Queen</em> for 17 April 2007</td>
<td>25 May 2012</td>
<td>2754</td>
</tr>
<tr>
<td>367</td>
<td>Email Captain Teo to Counsel Assisting dated 27 May 2012</td>
<td>29 May 2012</td>
<td>2758</td>
</tr>
<tr>
<td>368</td>
<td>Photographs of Rabaul Shipping Offices dated 24 April 2012</td>
<td>29 May 2012</td>
<td>2859</td>
</tr>
<tr>
<td>Exhibit No.</td>
<td>Description of Exhibit</td>
<td>Date tendered</td>
<td>Transcript page tendered</td>
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</tr>
<tr>
<td>369</td>
<td>Letter from Gadens Lawyers dated 8 May 2012 enclosing various documents including tickets issued</td>
<td>29 May 2012</td>
<td>2759</td>
</tr>
<tr>
<td>370</td>
<td>Copies of ticket books 26 January 2012 to 31 January in relation to Rabaul and Kokopo, formerly MFI 6</td>
<td>29 May 2012</td>
<td>2759</td>
</tr>
<tr>
<td>371</td>
<td>Documents for application for survey certificates previously MFI 7</td>
<td>29 May 2012</td>
<td>2759</td>
</tr>
<tr>
<td>372</td>
<td>Ticket sales December 2011 to 12 January 2012 previously MFI 8</td>
<td>29 May 2012</td>
<td>2791</td>
</tr>
<tr>
<td>373</td>
<td>Hull claim form to Pacific Insurance Group dated 16 February 2012</td>
<td>29 May 2012</td>
<td>2791</td>
</tr>
<tr>
<td>374</td>
<td>Chart from the Bureau of Meteorology Australia dated 2 February 2012</td>
<td>29 May 2012</td>
<td>2839</td>
</tr>
<tr>
<td>375</td>
<td>Dates on which <em>Rabaul Queen</em> called into port in Kimbe in 2010, 2011 and 2012</td>
<td>29 May 2012</td>
<td>2870</td>
</tr>
<tr>
<td>376</td>
<td>Letter of Captain Sharp to Captain Hossain dated 1 May 2012 in relation to survey of ships</td>
<td>29 May 2012</td>
<td>2891</td>
</tr>
<tr>
<td>377</td>
<td>Government Gazette G62 dated 18 October 2007</td>
<td>29 May 2012</td>
<td>2891</td>
</tr>
<tr>
<td>378</td>
<td>Statement of Captain Rahman dated 28 May 2012</td>
<td>29 May 2012</td>
<td>2897</td>
</tr>
<tr>
<td>379</td>
<td>Email Captain Rahman being additional response to Counsel representing RSL dated 29 May 2012</td>
<td>29 May 2012</td>
<td>2897</td>
</tr>
<tr>
<td>380</td>
<td>Pacific register of ships limited extract dated 29 May 2012</td>
<td>30 May 2012</td>
<td>2917</td>
</tr>
<tr>
<td>381</td>
<td>Survey Master sheet for <em>Rabaul Queen</em></td>
<td>30 May 2012</td>
<td>2926</td>
</tr>
<tr>
<td>382</td>
<td>Correspondence between Gadens Lawyers and Counsel Assisting</td>
<td>30 May 2012</td>
<td>2943</td>
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<tr>
<td>383</td>
<td>Passenger numbers on Rabaul Shipping ships and attached documents</td>
<td>30 May 2012</td>
<td>2960</td>
</tr>
<tr>
<td>384</td>
<td>Voyage summary report <em>Madang Queen</em> and survey certificate of <em>Madang Queen</em> 15 July 2004</td>
<td>30 May 2012</td>
<td>2963</td>
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<tr>
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<td>Description of Exhibit</td>
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<td>385</td>
<td>Rabaul Shipping ticket books for passengers from Rabaul to Lae being Exhibits 139 and 178</td>
<td>30 May 2012</td>
<td>2974</td>
</tr>
<tr>
<td>386</td>
<td>Schedule Rabaul Shipping ticket books for passengers from Kimbe to Lae previously Exhibit 327</td>
<td>30 May 2012</td>
<td>2978</td>
</tr>
<tr>
<td>387</td>
<td>Tally of passengers from Rabaul to Lae</td>
<td>30 May 2012</td>
<td>2995</td>
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<tr>
<td>388</td>
<td>Tally of names of people who bought tickets according to the ticket books Kimbe to Lae</td>
<td>30 May 2012</td>
<td>3006</td>
</tr>
<tr>
<td>389</td>
<td>Rabaul Shipping positions vacant advertisement dated 28 January 2008</td>
<td>30 May 2012</td>
<td>3015</td>
</tr>
<tr>
<td>390</td>
<td>Two pages, <em>Rabaul Queen</em> passenger number calculations under 3 hours, under 6 hours and under 24 hours</td>
<td>30 May 2012</td>
<td>3059</td>
</tr>
<tr>
<td>391</td>
<td>Outside clear deck areas provided by Captain Sharp</td>
<td>31 May 2012</td>
<td>3076</td>
</tr>
<tr>
<td>392</td>
<td>Document, numbers of un berthed passengers by Captain Sharp</td>
<td>31 May 2012</td>
<td>3081</td>
</tr>
<tr>
<td>393</td>
<td>Quotation slip from AON Insurance for period 31 December 2011 to 31 December 2012</td>
<td>31 May 2012</td>
<td>3089</td>
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<tr>
<td>394</td>
<td>Insurance quotation slip 1 December 2009 to Rabaul Shipping</td>
<td>31 May 2012</td>
<td>3098</td>
</tr>
<tr>
<td>395</td>
<td>Previously MFI 1 Pacific Assurance, Marine Hull/Cargo Policy File</td>
<td>31 May 2012</td>
<td>3098</td>
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<td>396</td>
<td>Pacific Insurance, Hull Claim File previously MFI 2</td>
<td>31 May 2012</td>
<td>3098</td>
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<tr>
<td>397</td>
<td>Department of Transport Weather Reports Gale and Strong Wind Warnings and Ocean Warnings for 28 January to 5 February 2012</td>
<td>31 May 2012</td>
<td>3115</td>
</tr>
<tr>
<td>398</td>
<td>Photographs in relation to search and rescue</td>
<td>31 May 2012</td>
<td>3116</td>
</tr>
<tr>
<td>399</td>
<td>Letter from Mr Rob Gehling dated 31 May 2012 re capsize and sinking of <em>Rabaul Queen</em></td>
<td>31 May 2012</td>
<td>3137</td>
</tr>
<tr>
<td>400</td>
<td>Instructions to surveyors</td>
<td>31 May 2012</td>
<td>3142</td>
</tr>
<tr>
<td>401</td>
<td><em>Rabaul Queen</em> Passenger Number Calculations prepared by Captain Peter Sharp</td>
<td>31 May 2012</td>
<td>3142</td>
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<td>Exhibit No.</td>
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<tr>
<td>402</td>
<td>Conditions of carriage of passengers and their baggage from Rabaul Shipping</td>
<td>31 May 2012</td>
<td>3143</td>
</tr>
<tr>
<td>403</td>
<td>Rabaul Shipping wind and sea scales</td>
<td>31 May 2012</td>
<td>3155</td>
</tr>
<tr>
<td>404</td>
<td>Letter from Mr Glanville re <em>Rabaul Queen</em> structural review</td>
<td>31 May 2012</td>
<td>3157</td>
</tr>
<tr>
<td>405</td>
<td><em>Rabaul Queen</em> Japanese calculations</td>
<td>31 May 2012</td>
<td>3162</td>
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<tr>
<td>406</td>
<td>Documents produced by Captain Richard Teo being models of questions and hand written notes of interviews</td>
<td>6 June 2012</td>
<td>3188</td>
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<tr>
<td>407</td>
<td>Ticket book of Rabaul Shipping schedule of tickets sold at Kokopo</td>
<td>6 June 2012</td>
<td>3191</td>
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<tr>
<td>408</td>
<td>Revised tally of names of people who bought tickets according to the ticket books from Rabaul to Lae</td>
<td>6 June 2012</td>
<td>3194</td>
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<tr>
<td>409</td>
<td>Passenger names appearing on handwritten manifest but not on tick butt list</td>
<td>6 June 2012</td>
<td>3195</td>
</tr>
<tr>
<td>410</td>
<td>Refund advices and related documents from Rabaul Shipping</td>
<td>6 June 2012</td>
<td>3197</td>
</tr>
<tr>
<td>411</td>
<td>Cheque payment voucher in the name of Kahe Hasu</td>
<td>6 June 2012</td>
<td>3199</td>
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<tr>
<td>412</td>
<td>Letter of Rabaul Shipping to Gadens Lawyers dated 1 June 2012 in relation to ticket books used in Kimbe</td>
<td>6 June 2012</td>
<td>3201</td>
</tr>
<tr>
<td>413</td>
<td>Letter dated 1 June 2012 Rabaul Shipping to Gadens Lawyers with attached schedule</td>
<td>6 June 2012</td>
<td>3201</td>
</tr>
<tr>
<td>414</td>
<td>Rabaul Shipping letter to Gadens Lawyers copies of ticket books and further documents</td>
<td>6 June 2012</td>
<td>3202</td>
</tr>
<tr>
<td>415</td>
<td>Tickets issued by Rabaul Shipping</td>
<td>6 June 2012</td>
<td>3203</td>
</tr>
<tr>
<td>416</td>
<td>Cheque payment voucher in relation to Gilbert Tauka being refund dated 30 April 2012</td>
<td>6 June 2012</td>
<td>3204</td>
</tr>
<tr>
<td>417</td>
<td>Weather reports from Star Ships dated, 25 January, 27 January, 3 February and 5 February 2012</td>
<td>6 June 2012</td>
<td>3205</td>
</tr>
<tr>
<td>418</td>
<td>Invoice for voyage instruction books Rabaul Shipping</td>
<td>6 June 2012</td>
<td>3216</td>
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<tr>
<td>419</td>
<td>Letter from Rabaul Shipping to Gadens 1 June 2012 being conditions of carriage of passengers and luggage</td>
<td>6 June 2012</td>
<td>3219</td>
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<tr>
<td>420</td>
<td>Tally of names of people who bought tickets according to the ticket books from Kimbe to Lae</td>
<td>6 June 2012</td>
<td>3226</td>
</tr>
</tbody>
</table>
# APPENDIX 3 – BEAUFORT SCALE

Exhibit 186

## Beaufort wind force scale

<table>
<thead>
<tr>
<th>Beaufort wind scale</th>
<th>Mean Wind Speed Knots ms(^{-1})</th>
<th>Limits of wind speed Knots</th>
<th>Wind descriptive terms</th>
<th>Probable wave height in metres*</th>
<th>Probable maximum wave height in metres*</th>
<th>Seastate</th>
<th>Sea descriptive terms *</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>&lt;1</td>
<td>Calm</td>
<td>-</td>
<td>-</td>
<td>0</td>
<td>Calm (glassy)</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>1–3</td>
<td>Light air</td>
<td>0.1</td>
<td>0.1</td>
<td>1</td>
<td>Calm (rippled)</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>4–6</td>
<td>Light breeze</td>
<td>0.2</td>
<td>0.3</td>
<td>2</td>
<td>Smooth (waveslets)</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
<td>7–10</td>
<td>Gentle breeze</td>
<td>0.5</td>
<td>1.0</td>
<td>3</td>
<td>Glaight</td>
</tr>
<tr>
<td>4</td>
<td>13</td>
<td>11–16</td>
<td>Moderate breeze</td>
<td>1.0</td>
<td>1.5</td>
<td>3–4</td>
<td>Slight Moderate</td>
</tr>
<tr>
<td>5</td>
<td>19</td>
<td>17–21</td>
<td>Fresh breeze</td>
<td>2.0</td>
<td>2.5</td>
<td>4</td>
<td>Moderate</td>
</tr>
<tr>
<td>6</td>
<td>24</td>
<td>22–27</td>
<td>Strong breeze</td>
<td>3.0</td>
<td>4.0</td>
<td>5</td>
<td>Rough</td>
</tr>
<tr>
<td>7</td>
<td>30</td>
<td>28–33</td>
<td>Near gale</td>
<td>4.0</td>
<td>5.5</td>
<td>5–6</td>
<td>Rough-Very rough</td>
</tr>
<tr>
<td>8</td>
<td>37</td>
<td>34–40</td>
<td>Gale</td>
<td>5.5</td>
<td>7.5</td>
<td>6–7</td>
<td>Very rough-High</td>
</tr>
<tr>
<td>9</td>
<td>44</td>
<td>41–47</td>
<td>Severe gale</td>
<td>7.0</td>
<td>10.0</td>
<td>7</td>
<td>High</td>
</tr>
<tr>
<td>10</td>
<td>52</td>
<td>48–55</td>
<td>Storm</td>
<td>9.0</td>
<td>12.5</td>
<td>8</td>
<td>Very High</td>
</tr>
<tr>
<td>11</td>
<td>60</td>
<td>56–63</td>
<td>Violent storm</td>
<td>11.5</td>
<td>16.0</td>
<td>8</td>
<td>Very High</td>
</tr>
<tr>
<td>12</td>
<td>64+</td>
<td></td>
<td>Hurricane</td>
<td>14+</td>
<td>-</td>
<td>9</td>
<td>Phenomenal</td>
</tr>
</tbody>
</table>

* 1. These values refer to well-developed wind waves of the open sea.
   2. The lag effect between the wind getting up and the sea increasing should be borne in mind.
   3. To convert knots to mph multiply by 1.15, for m/s multiply by 0.514.

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APPENDIX 4 – SEARCH AREAS FROM 2 TO 5 FEBRUARY 2012

Exhibit 119
### APPENDIX 5 – SEARCH ASSETS

<table>
<thead>
<tr>
<th>Asset name, callsign and/or registration</th>
<th>Asset type</th>
<th>Number of days involved in SAR operation</th>
<th>Number of persons recovered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alchem Lugait/9VDE6</td>
<td>Bulk cement carrier</td>
<td>3 February</td>
<td></td>
</tr>
<tr>
<td>Cap Scott/A8RL5</td>
<td>Container ship</td>
<td>2 February</td>
<td>9</td>
</tr>
<tr>
<td>MOL Summer(^{32}/)C4VF2</td>
<td>Container ship</td>
<td>2 February (OSC from arrival till 2000 on the 2(^{nd}))</td>
<td>116</td>
</tr>
<tr>
<td>MSC Carole/3EUN6</td>
<td>Container ship</td>
<td>2 February</td>
<td>53</td>
</tr>
<tr>
<td>Violet/H9NP</td>
<td>Bulk Carrier</td>
<td>2 February</td>
<td>39</td>
</tr>
<tr>
<td>Zhong He/BOAG</td>
<td>Container ship</td>
<td>2 February</td>
<td>29</td>
</tr>
<tr>
<td>Coral Ruby/3ERR6</td>
<td>Bulk carrier</td>
<td>2 – 4 February</td>
<td></td>
</tr>
<tr>
<td>Bougainville Coast/P2V5138</td>
<td>General cargo ship</td>
<td>4 February</td>
<td></td>
</tr>
<tr>
<td>C Oasis/3FMH6</td>
<td>Bulk carrier</td>
<td>3 and 4 February</td>
<td></td>
</tr>
<tr>
<td>Goodwill/DSOW6</td>
<td>Bulk carrier</td>
<td>5 February (OSC on the 5(^{th}))</td>
<td></td>
</tr>
<tr>
<td>Hanjin Dusseldorf/V7ST5</td>
<td>Container ship</td>
<td>3 and 4 February</td>
<td></td>
</tr>
<tr>
<td>Kwangtung/VRAE3</td>
<td>General cargo ship</td>
<td>2 – 5 February (OSC from 2000 on 2(^{nd}) until 5(^{th}))</td>
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<tr>
<td>Kyowa Orchid/V7QV6</td>
<td>General cargo ship</td>
<td>4 February</td>
<td></td>
</tr>
<tr>
<td>Lily Fortune/H3DH</td>
<td>Bulk carrier</td>
<td>3 and 4 February</td>
<td></td>
</tr>
<tr>
<td>Vega Fynen/V2BU6</td>
<td>Container ship</td>
<td>4 February</td>
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</tr>
<tr>
<td>VH-CXJ</td>
<td>Aircraft</td>
<td>3 – 5 February</td>
<td></td>
</tr>
<tr>
<td>VH-LLB</td>
<td>Helicopter</td>
<td>3 and 5 February</td>
<td></td>
</tr>
<tr>
<td>Orion AP-3C (Rescue 251)</td>
<td>RAAF aircraft</td>
<td>2 and 4 February</td>
<td></td>
</tr>
<tr>
<td>Orion AP-3C (Rescue 252)</td>
<td>RAAF aircraft</td>
<td>3 February</td>
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<tr>
<td>VH-PPV (Rescue 441)</td>
<td>AMSAs dedicated SAR aircraft</td>
<td>2 – 5 February</td>
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<tr>
<td>VH-PPG (Rescue 481)</td>
<td>AMSAs dedicated SAR aircraft</td>
<td>3 – 5 February</td>
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</table>

\(^{32}\) MOL Summer’s name was changed to Summer E in April 2012.
<table>
<thead>
<tr>
<th>Asset name, callsign and/or registration</th>
<th>Asset type</th>
<th>Number of days involved in SAR operation</th>
<th>Number of persons recovered</th>
</tr>
</thead>
<tbody>
<tr>
<td>VH-ZZJ (<em>Coastwatch 88</em>)</td>
<td>Aircraft</td>
<td>3 – 5 February</td>
<td></td>
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<tr>
<td>P2-BIB</td>
<td>Helicopter</td>
<td>2 – 4 February</td>
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<td>P2-DRS</td>
<td>Aircraft</td>
<td>4 and 5 February</td>
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<tr>
<td>P2-EMO</td>
<td>Aircraft</td>
<td>3 and 4 February</td>
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<tr>
<td>P2-FXD</td>
<td>Helicopter</td>
<td>2 February</td>
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<tr>
<td>P2-MAX</td>
<td>Aircraft</td>
<td>4 and 5 February</td>
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</tr>
<tr>
<td>P2-WOW</td>
<td>Aircraft</td>
<td>2 – 5 February</td>
<td></td>
</tr>
</tbody>
</table>

Note: Aircraft with ‘P2’ prefixes are registered in Papua New Guinea. Those aircraft with ‘VH’ prefixes are Australian registered aircraft.