



# Accident Report

*Kathleen G*

Grounding, North side of Double  
Bay on 30 May 2004



REPORT NO.: 04 3484

VESSEL NAME: *KATHLEEN G*

Ship Type:	Fishing
Flag:	New Zealand
MSA No.:	105855
Registered Length (m):	13.6
Gross Tonnage:	48
Owner:	Guard Fishing
Accident Investigator:	Domonic Venz



## SUMMARY

On 29 May 2004, the fishing vessel, *Kathleen G*, departed Port Nelson bound for Cook Strait. The Skipper was in sole charge of the navigation and decided, due to inclement weather at the northern end of Cook Strait, to go around Arapawa Island via Queen Charlotte Sound. As the vessel was running down the Sound, towards the western entrance to Tory Channel, the Skipper fell asleep and the vessel grounded in Double Bay, on Arapawa Island. The vessel was checked for damage and later towed off by another vessel.



# 1. KEY EVENTS

- 1.1 At approximately 1200 hours New Zealand Standard Time (NZST), on Saturday 29 May 2004, the fishing vessel ***Kathleen G*** departed Port Nelson. On board were the Skipper and two crew members.
- 1.2 The Skipper navigated the vessel out of the port and then initially set course of broadly northwest for Separation Point, with the intention of fishing down the west coast of the South Island. The Skipper then received a poor forecast for that area, so instead decided to head for Cook Strait and altered course for French Pass.
- 1.3 The two crew went to bed shortly after departure. They woke for an evening meal and then went back to their bunks to sleep.
- 1.4 At 1904 hours, the Skipper made a call on VHF channel 16, notifying all ships that he was about to transit French Pass. He did so approximately 5 minutes later.
- 1.5 After clearing French Pass the Skipper headed around the top of the Marlborough Sounds.
- 1.6 At about 2230 hours, when the light at Cape Jackson was abeam, the Skipper decided to head into Queen Charlotte Sound, steam around Arapawa Island and then head out of Tory Channel and back into Cook Strait (*See Appendix I*).
- 1.7 At about 2400 hours, when the vessel was in a position with Blumine Island abeam to port, the Skipper fell asleep (*See Appendix II - Position A*).
- 1.8 At 0030 hours, on 30 May 2004, the vessel grounded on the southwestern extremity of Double Bay on Arapawa Island (*See Appendix II- Approximate course: Position B*).
- 1.9 The Skipper and crew checked the vessel for damage and ingress of water, but none was found. The Skipper contacted another fishing vessel on his cellular phone and arranged for them to tow his vessel clear.
- 1.10 At 0130 hours, ***Kathleen G*** was towed stern first off the beach. A further check was made for water ingress but none was found. The Skipper then headed for Picton where the owner arranged for a diver to inspect the hull.
- 1.11 Minor paint damage was found and the vessel sailed on the same day to continue the fishing trip.



## 2. KEY CONDITIONS

### 2.1 Vessel Details

- 2.1.1 *Kathleen G* is a trawler of wooden construction, built in 1995. She has an overall length of 15.7 metres, a breadth of 5.15 metres and a gross tonnage of 48. A single 12 cylinder GM main engine drives the vessel through a conventional fixed pitch propeller.
- 2.1.2 Guards Fisheries Nelson Limited owns *Kathleen G*.
- 2.1.3 The vessel has a valid Safe Ship Management (SSM) Certificate with Survey Nelson Ltd. The vessel was fit to ply offshore-restricted limits, within 100 nautical miles of the New Zealand coast, including Chatham and Stewart Islands.

### 2.2 Audits and Inspections

- 2.2.1 The local Maritime Safety Inspector for the Maritime Safety Authority, inspected the vessel in Nelson on 11 February 2004. Survey Nelson Ltd inspected the vessel on 26 September 2003. No deficiencies were noted at either inspection.

### 2.3 Manning Details

- 2.3.1 The Skipper holds an Inshore Launch Master's (ILM) Certificate, obtained in March 1999. He also holds a 2<sup>nd</sup> Class Diesel Trawler Engineer's (2DTE) Certificate, obtained in October 1993.
- 2.3.2 One of the crew held an ILM Certificate. The other was unqualified.
- 2.3.3 The vessel was correctly manned in accordance with **Maritime Rule Part 31C**.



### 2.4 Navigation Details

- 2.4.1 The vessel was equipped with the following navigation aids: -
- JRC JLU 121 GPS Plotter
  - Seaplot 5 GPS Plotter
  - Kodon KGP 931 GPS Receiver
  - Kodon MD 3600 Radar
  - Kodon CVS 8832 Echo Sounder
  - Ocean Watch, Watch Keepers Alarm
  - Getrek Auto Pilot
- 2.4.2 All of the above electronic equipment was operating satisfactorily at the time of grounding.
- 2.4.3 The Watch Keepers Alarm was not switched on. No alarms were set on any of the other electronic aids to navigation.
- 2.4.4 The Skipper was not plotting his position on a paper chart, nor was he using waypoints on the GPS plotter to monitor the vessel's position. He was manipulating the plotter cursor to provide him with course and distance information.

## 2.5 Company Instructions

2.5.1 Guards Fisheries has "Standing Orders" displayed on board, which advises Skippers and crew of the following: -

- Keep a proper lookout at all times
- Monitor radios properly
- Make sure you or crew are not fatigued on watch
- Plot Lat/Long every half hour while on watch
- Monitor sounder, radar and GPS for appropriate position
- Don't totally rely on a plotted track on GPS for steaming

2.5.2 There is no mention in the standing orders of the need to activate the Watch Keepers Alarm, when steaming.

## 2.6 Weather Details

2.6.1 The wind at the time was 20 to 30 knots from the northwest. This was blowing on the starboard side of the vessel, as it transited south, down Queen Charlotte Sound. The Skipper described the visibility as good.

2.6.2 The vessel had been travelling with the tidal current and had made good time as it approached Cape Jackson. As the tide would be against them with an adverse wind, when they were due to pass the Cape Koamaru/ Brothers Island area, the Skipper decide to take a detour around Arapawa Island.

2.6.3 The Skipper had set a course using his GPS plotter cursor. When he fell asleep the vessel maintained it's heading, but the vessel was affected by the northwest wind causing leeway to port.

## 2.7 Human Factors

2.7.1 The vessel had returned to Nelson on Thursday 27 May at 0400 hours. That trip was seven days long and the Skipper estimated that he worked for about 140 hours in total. This would have given the Skipper only approximately 4 hours sleep for any 24-hour period, if divided up equally, over the entire trip. On two occasions during that trip, he had worked continuously for over 40 hours.

2.7.2 The Skipper stated that his sleeping patterns had "been all over the place". He had got 'some' sleep while at home during the evenings of Thursday 27 and Friday 28 May.

2.7.3 He states that he would do all the fishing of the vessel while the crew operated the deck and put the fish away. The trip from 29 May was his fourth trip on the vessel. He said he did not know the crew well enough to trust them with enough watch keeping duties, to completely relieve him.

2.7.4 The Skipper was fatigued but did not have anything in place to help combat this.



2.7.5 In a study compiled by the Canadian Transport Safety Board they state that although individual rhythms may vary, everybody's cycle has two distinct peaks and dips. The big dip is at night, with the time of our lowest alertness in the hours just before dawn between 0300 and 0500 hours. During the dips it can be particularly difficult to maintain alertness. Whenever alertness is affected by fatigue, human performance can be significantly impaired. Alertness cycles closely follow the body temperature cycle, with peak alertness occurring when the body temperature is highest, near midday and low alertness occurring when the body temperature is lowest, between 0300 and 0500 hours.

2.7.6 A person deprived of sleep for an extended period, such as by working all night and then not being able to obtain significant sleep the next day, will usually take 2 normal nights sleep to fully recover. Workers who are required to sleep during the day are more likely to experience shortened sleep and frequent awakenings. Fatigue can lead to forgetting or ignoring normal checks or procedures, reversion to old habits, and inaccurate recall of operational events. The most extreme form of fatigue is uncontrollable sleep, i.e. falling asleep against the will of the individual.

## 2.8 Safety Management Policy

2.8.1 **Kathleen G** has a Safety Management Policy Manual, compiled by Survey Nelson Limited. Under the section **Designated Persons**, Land Based, there is a passage that reads "*The land based designated person with the authority to ensure safe management of the ship is the Safety Manager of Survey Nelson Ltd*" (See Appendix III - Excerpt from SSM manual).

2.8.2 Referring to the **New Zealand Safe Ship Management Code (NZSSMC)**, there is a definition contained under section 4 for Designated Person, which states as follows: "*To ensure the safe operation of each ship and to provide a link between the owner and those on board, every owner, as appropriate, should designate a person ashore having direct access to the highest level of management. The responsibility and authority of the designated person or persons should include monitoring the safety and pollution protection aspects of the operation of each ship and to ensure that adequate resources and shore based support are applied, as required*" (See Appendix IV - Excerpt from NZSSMC).

2.8.3 As the Designated Person, Survey Nelson Ltd failed to fulfil their responsibilities to ensure that the vessel was operated in a safe manner and that adequate resources and shore based support was applied.

## 2.9 Medical Details

2.9.1 On 9 June, the Skipper underwent an initial thyroid function blood test. The results came back showing that he had a T4 level of 8.7 and a TSH level of 10.6. This indicated that he suffers from mild hypothyroidism. Normal ranges have been calculated giving levels of T4 between 4.6 and 12, and TSH levels of between 0.5 to 6.

2.9.2 In a typical person with an under active thyroid gland (Hypothyroidism), the blood level of T4 will be low while the TSH level will be high. Each individual person will have any number of the following symptoms of Hypothyroidism, which will vary with the severity of the thyroid hormone deficiency, and the length of time the body has been deprived of the proper amount of hormone.

- Fatigue
- Weakness
- Weight gains or increased difficulty losing weight.



- Coarse, dry hair
- Dry, rough pale skin
- Hair loss
- Cold intolerance
- Muscle cramps and frequent muscle aches
- Constipation
- Depression
- Irritability
- Memory loss
- Decreased libido

**2.9.3** To date the Skipper has not had a repeat thyroid function test and is not being prescribed any preventative medication.



### 3. CONTRIBUTING FACTORS

*N.B. These are not listed in order of importance.*

- 3.1 The mild hypothyroidism suffered by the Skipper.
- 3.2 Lack of training given to the watch keepers.
- 3.3 The Skipper not giving enough relief watch keeping to the crew.
- 3.4 The Skipper not setting any waypoints and associated alarms on the GPS. Additionally, not setting any radar guard alarms or echo sounder shallow water alarms.
- 3.5 Not activating the Watch Keeping alarm.
- 3.6 The Skipper, Owner and Designated Person not complying with **Maritime Rule Part 31C.14(1) Fitness for Duty**. *The owner and the master of a fishing vessel must establish and implement procedures in respect of the vessel's crew, taking into account the requirement to ensure that all crew are fit for duty when keeping a watch.*
- 3.7 The Skipper, Owner and Designated Person failing to comply with **Maritime Rule Part 31C.15 Fatigue**.... (1) *When the owner and the master of a fishing vessel establish and implement procedures for ensuring a seafarers fitness for duty, they must take into account that: -(a) the level of alertness of a person keeping a navigational or engine room watch may be affected by fatigue. (b) whenever alertness is affected by fatigue, performance can be impaired. (2) A seafarer on a fishing vessel, when considering his or her fitness for duty, must take into account: - (a) the signs and symptoms, and effects of fatigue (b) that fatigue will affect his or her level of alertness (c) that the performance of any person whose alertness is affected by fatigue can be impaired.*



## 4. CAUSE

### Human Factor

<input type="checkbox"/> Failure to comply with regulations	<input type="checkbox"/> Drugs & Alcohol	<input type="checkbox"/> Overloading
<input type="checkbox"/> Failure to obtain ships position or course	<input checked="" type="checkbox"/> Fatigue	<input type="checkbox"/> Physiological
<input type="checkbox"/> Improper watchkeeping or lookout	<input type="checkbox"/> Lack of knowledge	<input type="checkbox"/> Ship Handling
<input type="checkbox"/> Misconduct/Negligence	<input type="checkbox"/> Error of judgement	<input type="checkbox"/> Other . . .

### Environmental Factor

<input type="checkbox"/> Adverse weather	<input type="checkbox"/> Debris	<input type="checkbox"/> Ice	<input type="checkbox"/> Navigation hazard
<input type="checkbox"/> Adverse current	<input type="checkbox"/> Submerged object	<input type="checkbox"/> Lightning	<input type="checkbox"/> Other . . .

### Technical Factor

<input type="checkbox"/> Structural failure	<input type="checkbox"/> Wear & tear	<input type="checkbox"/> Steering failure
<input type="checkbox"/> Mechanical failure	<input type="checkbox"/> Improper welding	<input type="checkbox"/> Inadequate firefighting/lifesaving
<input type="checkbox"/> Electrical failure	<input type="checkbox"/> Inadequate maintenance	<input type="checkbox"/> Insufficient fuel
<input type="checkbox"/> Corrosion	<input type="checkbox"/> Inadequate stability	<input type="checkbox"/> Other . . .

4.1 The Skipper fell asleep due to his being fatigued.



## 5. OPINIONS & RECOMMENDATIONS

### 5.1.1 Opinions

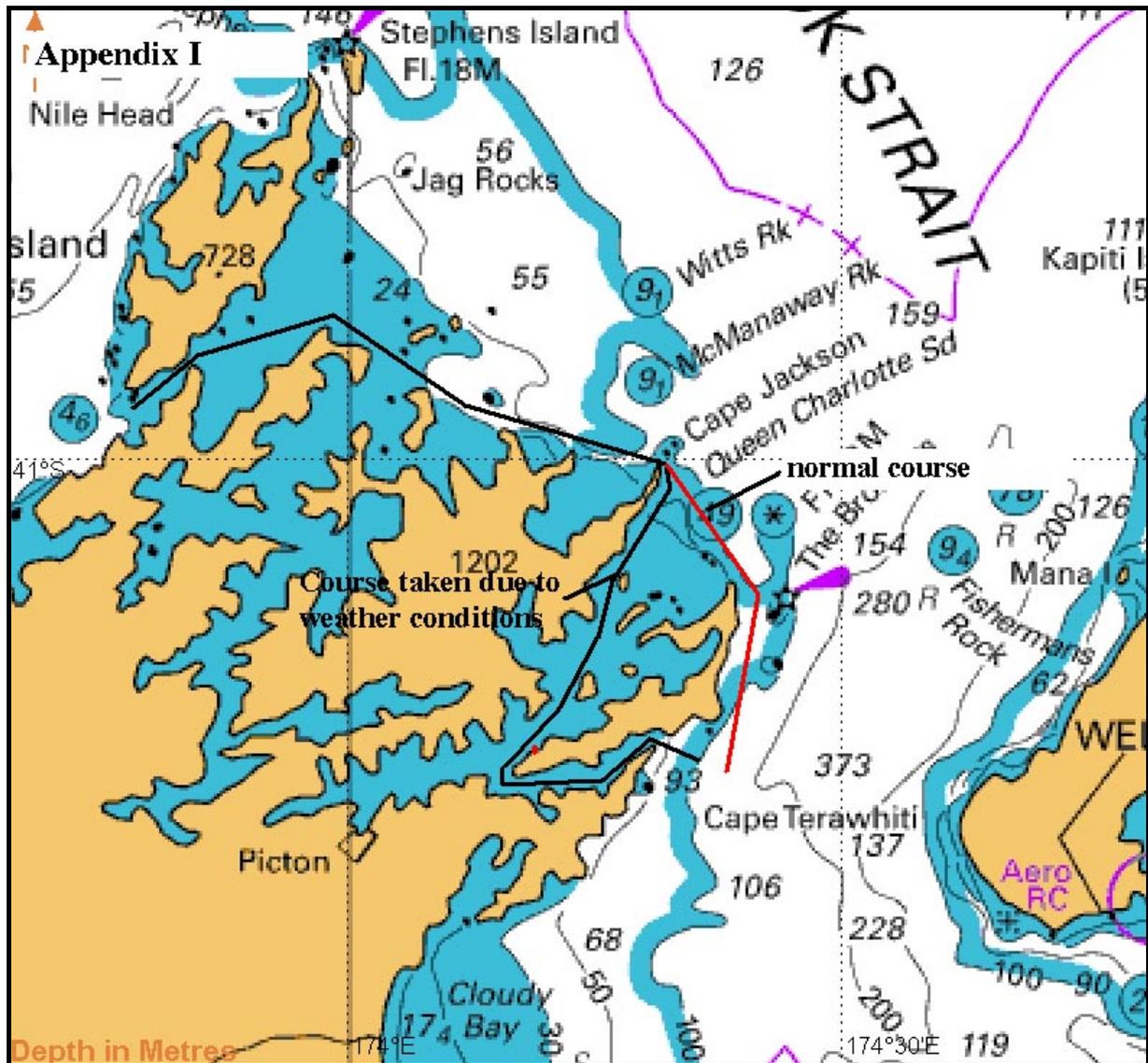
- 5.1.2 As Designated Person, Survey Nelson Ltd has a responsibility to oversee the safe operation of *Kathleen G*. It would be more appropriate in this case that Survey Nelson Ltd remove themselves from the Safety Management Policy Manual as the designated person and instead the Operations Manager or Owners of Guards Fisheries be listed as the designated person.

### 5.2 Recommendations

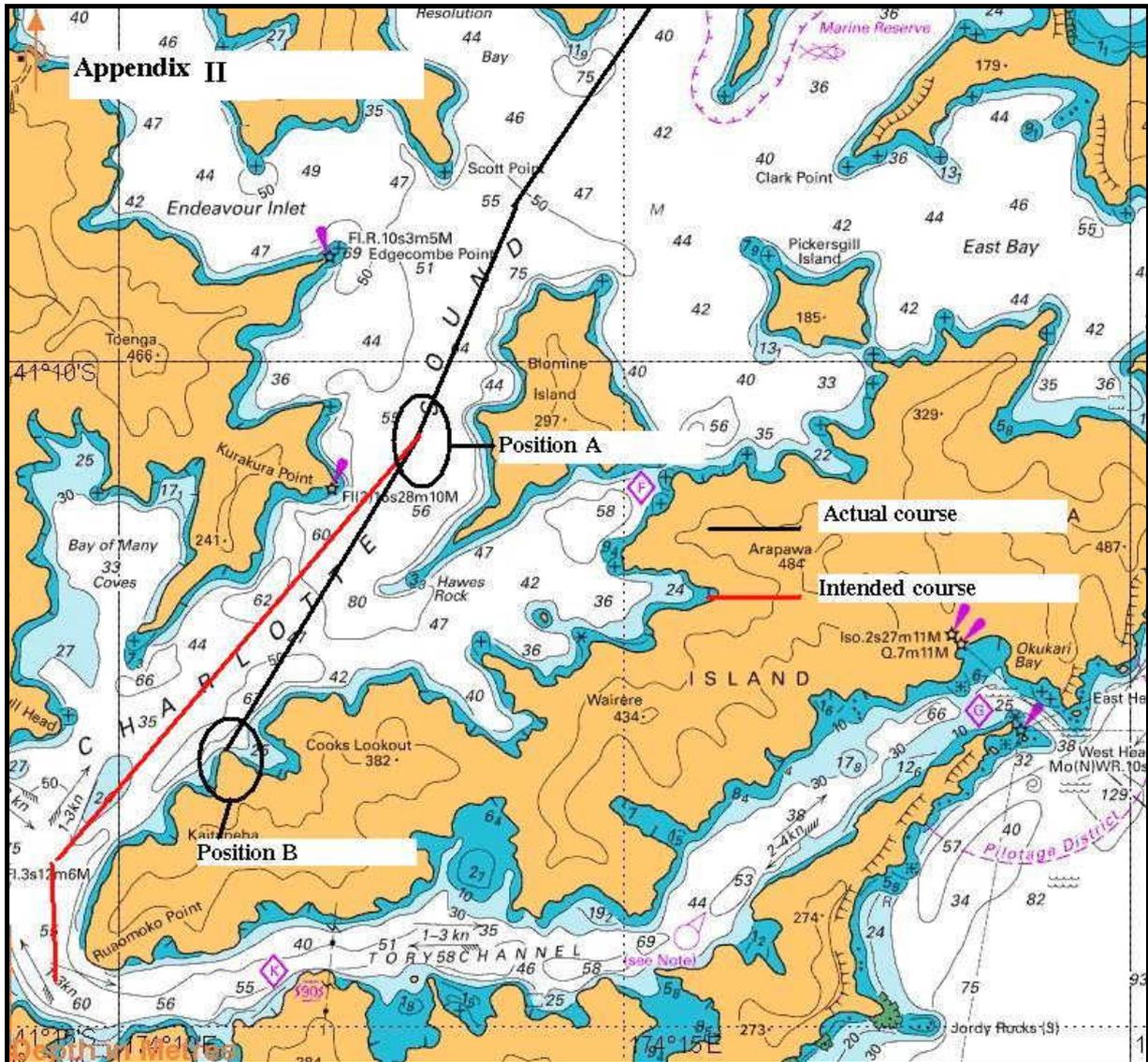
- 5.2.1 That the Owners re-issue their written instructions to skippers and crew that should include the requirement to activate the watch keepers alarm at all times when the vessel is steaming.
- 5.2.2 That the Owners, in conjunction with Survey Nelson, establish a training regime on board all of Guards Fisheries vessels. This should include training of watch keepers in accordance with **Maritime Rule Part 31C.16**. Further, that in conjunction with the Skipper, the owners implement written procedures in respect of the vessel's crew, taking into account the requirement to ensure that all crew are fit for duty when keeping a watch, pursuant to **Rule Part 31C.14(1)**. Finally, that the owners implement written procedures to manage fatigue pursuant to the requirements of **Rule Part 31C.15**.
- 5.2.3 That the Skipper be censured for his failure to maximise the use of the navigational aids available to ensure the safe operation of the vessel.
- 5.2.4 That the Skipper undergoes a repeat thyroid function test and that he take any medication deemed appropriate by his Doctor to combat the condition as necessary.



# Appendix I



# Appendix II



# Appendix III

Survey Nelson Ltd.	Ship Safety Manual	FV Kathleen G.doc
<b>Application</b>		<b>Appendix III</b>
The requirements of this manual apply to all personnel involved in the operation of the Kathleen G.		
<b>Responsibility and Authority</b>		
<b>Land Based Management</b>		
The land based safety management system is contracted to Survey Nelson Ltd.		
Survey Nelson undertake to monitor and ensure the following:		
<ul style="list-style-type: none"><li>• Safety Inspections of the ship;</li><li>• Audit of the Ship's Safety System;</li><li>• Training where necessary;</li><li>• Compliance to the Ship Safety management Code.</li></ul>		
<b>Shipboard Operation</b>		
Compliance to this manual and the Code on board the ship is the responsibility of the ships Master.		
<b>Designated Persons</b>		
<b>Land based</b>		
The land based designated person with authority to ensure safe management of the ship is the Safety Manager of Survey Nelson Ltd.		
<b>Shipboard</b>		
The designated person with the authority to ensure safe management of the ship is the Master.		
<b>Masters Responsibility and Authority</b>		
In addition to his duties of the everyday running of the ship he has the responsibility to ensure the:		
<ul style="list-style-type: none"><li>• implementing the safety and environmental policy of the Company</li><li>• motivating the crew in observing the policy;</li><li>• identifying hazards, recording them and reviewing them;</li><li>• issuing appropriate orders and instructions in a clear and simple manner;</li><li>• verifying that specified requirements are observed;</li><li>• reviewing the Safety Management System and reporting its deficiencies to shore based management.</li></ul>		
Amended 9-99, 7-00	February 1997	6



# Appendix IV

## Appendix IV

### 1.3 Functional requirements for a Safe Ship Management System

Every owner should develop, implement and maintain a Safe Ship Management System which includes 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 New Zealand 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 within the provisions of this Code;
- .5 procedures to prepare for and respond to emergency situations; and
- .6 procedures for internal audits and management reviews.

### **SAFETY AND ENVIRONMENTAL PROTECTION POLICY**

- 2.1 The owner should establish a safety and environmental protection policy which describes how the objectives given in paragraph 1.2. will be achieved.
- 2.2 The owner should ensure that the policy is implemented and maintained at all levels of the organisation, both ship based as well as shore based.

### **OWNER RESPONSIBILITIES AND AUTHORITY**

- 3.1 The owner should define and document the responsibility, authority and interrelation of all personnel who manage, perform and verify work relating to and affecting safety and pollution prevention.
- 3.2 The owner is responsible for ensuring that adequate resources and shore based support are provided to enable the designated person or persons to carry out their functions.

### **DESIGNATED PERSON**

To ensure the safe operation of each ship and to provide a link between the owner and those on board, every owner, as appropriate, should designate a person ashore having direct access to the highest level of management. The responsibility and authority of the designated person or persons should include monitoring the safety and pollution protection aspects of the operation of each ship and to ensure that adequate resources and shore based support are applied, as required.

