



Class A Accident Report

# Lucky No.5

# Capsize/Fatality

At Raglan on 16 January 2005

KEEPING YOUR SEA SAFE FOR LIFE



**Maritime Safety**

MARITIME SAFETY AUTHORITY OF NEW ZEALAND  
*Kia Maanu Kia Ora*



**REPORT NO: 05 1163**

**VESSEL NAME: LUCKY No.5**

<b>Ship Type:</b>	Recreational McLay 650 Hardtop cruiser
<b>Flag:</b>	New Zealand
<b>Built:</b>	2002
<b>Construction Material:</b>	Aluminium Alloy
<b>Length Overall (m):</b>	6.750
<b>Maximum Breadth (m):</b>	2.35
<b>Hull Weight:</b>	1 000 Kg
<b>Accident Investigator:</b>	Andrew Hayton

## SUMMARY

On 16 January 2005, an unnamed recreational vessel, with two people onboard, attempted to cross Raglan bar bound for sea. The vessel's engine failed and waves broke over the vessel causing it to fill with water. The Skipper ignited a hand held flare. Another recreational vessel, *Lucky No.5*, was close by and proceeded towards the vessel in distress in order to offer assistance. One of the crewmembers' of the distressed vessel transferred into *Lucky No.5* but the Skipper remained onboard. *Lucky No.5* took the other vessel under tow but capsized when hit by a wave. The unnamed vessel then also capsized. One of *Lucky No.5's* passengers was trapped in the upturned hull and was unconscious when she eventually surfaced and was rescued by Surf Lifesavers.

Unfortunately, the passenger died in hospital a few days later.



PHOTO 1 - RAGLAN BAR

## NARRATIVE

*Lucky No.5* was a 2001 built McLay 650 aluminium vessel powered by a 4-stroke Yamaha 115 horsepower outboard. Its present owner bought the vessel when it was new.

The Skipper of *Lucky No.5* was a 57 year old male. He held a Local Certificate of Competency – Master Hong Kong, issued in 1974 and a New Zealand Certificate of Competency as Skipper of a Coastal Fishing Boat, issued in 1979. He had considerable maritime experience. Living in Raglan for 14 years, he claims to have crossed the Raglan bar ‘hundreds’ of times.

There were five other people onboard *Lucky No.5*. Three males aged 29, 33 and 52, and two females aged 27 and 41. None possessed any maritime qualifications and all had limited boating experience

The Skipper claims that there were eight lifejackets of various manufacturers onboard at the time of the incident.

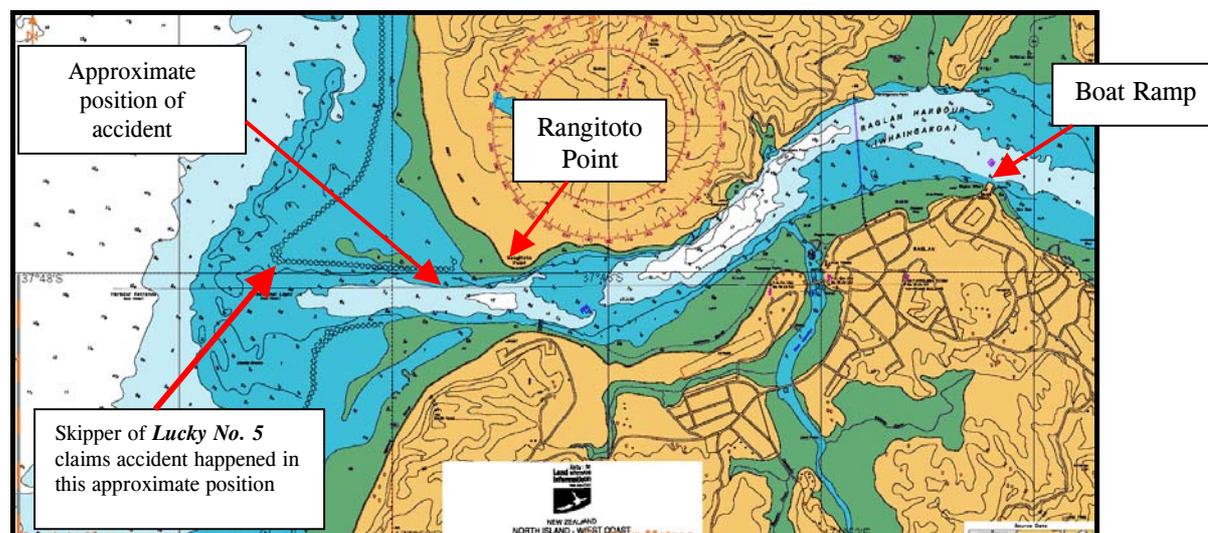
The unnamed Stabicraft was built in 2001. Its present owner bought the vessel new. The vessel was of aluminium construction and was powered by a Honda 90 horsepower outboard. The vessel was fitted with a bimini type awning.

The outboard engine was purchased new very recently. It had approximately 30 hours on the clock. The engine had not yet had its first service and had given no trouble prior to the incident.

The Skipper of the Stabicraft was a 34 year old male. Although he has no formal maritime qualifications, he undertook a boating safety course when he was an apprentice. He has considerable boating experience and claims to have crossed the Raglan Bar approximately 25 times prior to the accident.

The other person onboard the Stabicraft was a 26 year old female who possessed no maritime qualifications and who had limited boating experience.

## THE INCIDENT



On Sunday 16 January 2005 at approximately 0945 hours New Zealand Daylight Time (NZDT), *Lucky No.5* departed Raglan with six people onboard. The Skipper navigated the vessel to a position south of Rangitoto Point where he stopped the vessel to assess the bar conditions. Shortly after, he decided that it was too rough to cross the bar.

At approximately 1020 hours, an unnamed Stabicraft vessel departed the boat ramp in Raglan. Onboard were two people. The Stabicraft proceeded directly to the bar at approximately 25 knots.

The crew of *Lucky No.5* were amongst those who witnessed the Stabicraft approach the bar.

After reducing speed slightly, the Skipper of the Stabicraft attempted to cross the bar. The Stabicraft successfully rode over two waves but hit the third wave head on and its bow was lifted. At this point, the engine of the Stabicraft stalled. The Skipper endeavoured to restart the engine whilst the other crewmember used a paddle to keep the vessel stern into the waves. The vessel shipped a lot of water over the stern to the point that the water was almost level with the gunwales. The Skipper broadcast a distress message on Very High Frequency (VHF) radio channel 04.

Approximately a minute and a half after the engine stopped, the Skipper of the Stabicraft managed to restart the engine and tried to motor back into the harbour. The vessel was so full of water that it could barely make headway. The Skipper made a decision to turn the vessel into the waves and try and power over a wave in an attempt to force the bulk of the water out over the stern, hoping the remainder would exit via the self-draining scuppers at the stern of the vessel. Most of the water was displaced over the stern after the first wave, however on the second wave the engine stalled once again, and waves started to break over the vessel once more.

At approximately 1040 hours, realising his vessel was in danger, the Skipper activated a hand held flare and made a 'Mayday' broadcast on VHF channels 04, 63 and 77. The other crewmember again used the paddle to keep the vessel's head or stern to the waves. A fish bin was used to bail out some of the water.

Upon observing the flare, the Skipper of *Lucky No.5* made a decision to proceed towards the Stabcraft in order to offer assistance. Two of the vessel's passengers donned a lifejacket, upon the Skipper's orders, at this stage. The Skipper of *Lucky No.5* made a VHF radio broadcast on VHF channel 04, but did not hear any response. He then used a cell phone to dial '111' to inform the Police of the distress and of the fact that he was proceeding to assist. The call was recorded as being made at 1045 hours.

Approximately two minutes later, the Skipper of *Lucky No.5* positioned his vessel close enough for the female passenger from the Stabcraft to jump onboard. The Skipper of the Stabcraft would not leave his vessel as he thought it could be saved. He passed a line to *Lucky No.5* and requested they tow his vessel. The initial towline parted almost immediately. The Skipper of the Stabcraft then passed over the anchor, and its attached chain and line, from his boat. He turned the line up on the bowsprit at a length of approximately 20 metres. One of the passengers onboard *Lucky No.5* made the anchor line fast on its port quarter.

*Lucky No.5* then proceeded towards the harbour whilst the Skipper of the Stabcraft continued bailing his vessel with a 20-litre fish bin.

Shortly afterwards, a large wave struck *Lucky No.5* on its starboard quarter, causing it to capsize. The vessel rolled over to port. The Skipper, the female from the Stabcraft and the victim, were trapped underneath the upturned hull in an air pocket. The Skipper and the Stabcraft crewmember managed to dive down and surface outside the hull.

Soon after *Lucky No.5* capsized, the Stabcraft also capsized. The Skipper of that vessel managed to climb onto the upturned hull of his vessel.

After witnessing each of the vessels capsize, the Skipper of *Rebel* broadcast a Mayday Call on VHF channel 4.

At 1050 hours, Raglan Coastguard received a call out alert.

At 1052 hours, the Police scrambled the Westpac Rescue helicopter.

After the other passenger didn't surface, *Lucky No.5's* Skipper dived down a couple of times in an attempt to locate her. After the second attempt, he started to feel ill and was totally exhausted.

The two vessels were being set into shallow water and waves were breaking over them, causing the vessels to roll. At times, the water was shallow enough for the passengers to touch the seabed with their feet.

Surf Lifeguards observed the vessels' in trouble on the bar from their watchtower located on Ngarunui beach. The lifeguards launched their Inshore Rescue Boat (IRB) off the beach and headed towards the two vessels. The IRB was manned by two crewmembers. When the IRB arrived, it found both vessels capsized with the occupants of *Lucky No.5* holding onto the upturned hull and the Skipper of the Stabicraft sitting on top of his vessel's upturned hull.

The IRB arrived first at the Stabicraft. The Skipper informed the rescuers that he was okay and to go to *Lucky No.5* first. The IRB brought three people onboard from *Lucky No.5* followed by the Stabicraft Skipper, who had swum over to the IRB. At this point, the IRB's propeller got fouled briefly. One of the surf rescue crew jumped into the water and stayed with the other passengers, whilst the IRB transferred the four to another vessel, *Rebel*, which was standing by in the vicinity.

The IRB returned to the scene to pick up the lifeguard, a passenger and the Skipper. As they were pulling the Skipper onboard the IRB, a female passenger floated to the surface in a face down position. A lifeguard jumped into the water and swam towards her.

The IRB crew hauled the woman onboard their vessel and was taken, along with the Skipper of *Lucky No.5* and another passenger, to the shore.

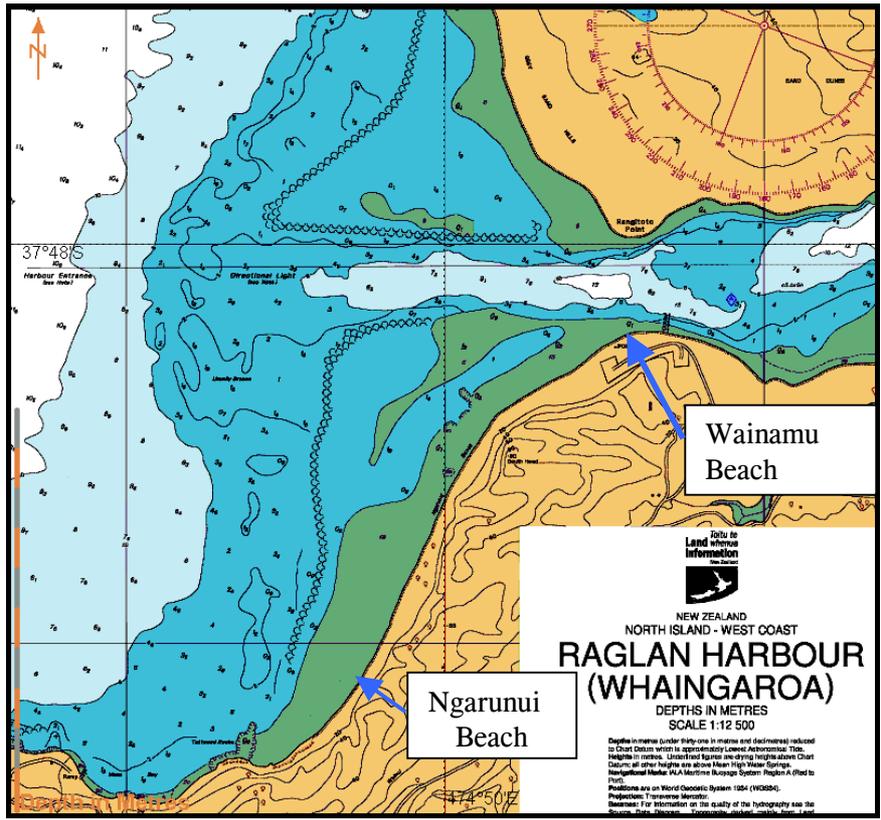
The last passenger held onto the upturned hull of *Lucky No.5*, but eventually started to swim towards shore. At 1055 hours, as he was swimming, the Raglan Coastguard Jet Ski arrived on the scene, picked him up and took him to *Rebel*. Once he was onboard, *Rebel* took the rescued passengers to Wainamu Beach where they were checked by medical staff.

The Westpac Rescue helicopter arrived at Raglan at 1118 hours.

The victim had CPR administered to her and the Skipper was treated for shock and hypothermia. He was administered oxygen.

The Raglan Coastguard vessel *Moa*, which arrived on the scene at 1112 hours, picked up debris at the scene and towed *Lucky No.5* and the Stabicraft back into harbour.

The rescue helicopter flew the victim to hospital in Hamilton where she died on 19 January 2005.



**PHOTO 2 - UNNAMED STABICRAFT (WITHOUT AWNING)**

## COMMENT & ANALYSIS

### **Engine**

The Honda outboard on the Stabicraft had not received its first service.

The Honda Warranty Service Interval for such an engine calls for a one-month or 20 hour initial service check. It then moves to every 200 hours or every 12 months, whichever happens first.

When the Investigator examined the vessels after the accident, the engine gauge on the Stabicraft showed 31.3 hours.

The Stabicraft is fitted with a manufacturer's plate recommending a maximum engine size of 75 horsepower. The engine fitted to the Stabicraft was 90 horsepower.

The Skipper of the Stabicraft had refueled his boat to capacity prior to launching his vessel that day. The vessel was carrying 80 litres of fuel.

### **Personal Floatation Devices**

The two crewmembers of the Stabicraft were wearing personal floatation devices (PFD's) throughout.

According to the Skipper, *Lucky No.5* had 8 PFD's onboard. Of the persons onboard *Lucky No.5*, none were initially wearing PFD's, however once they proceeded to the scene of the distress, the victim and one other passenger donned PFD's.

**Maritime Rule Part 91.4(6)** states:-

*No person in charge of a recreational craft may use that craft in circumstances where tides, river flows, rough seas, adverse weather, emergencies or other situations cause danger or a risk to the safety of persons onboard, unless every person on board is wearing a properly secured personal floatation device of an appropriate size for that person.*

When the victim surfaced from the upturned hull of *Lucky No.5*, the Surf Rescue Lifeguard observed she was no longer wearing a PFD, however, the Skipper of *Lucky No.5* disagrees with that, stating that she was wearing a PFD until landed on the beach. Considering that the Skipper was traumatised and exhausted in the period after the accident, he may be mistaken.

## Weather

At the time of the accident, the actual wind was approximately 8-10 knots from the west. The waves on the bar were approximately 1.0 to 1.5 metres in height. The seas in the harbour and beyond the bar were calm. The Skipper of *Lucky No.5* claims that the waves were 2-4 metres in height.

The Skipper of the Stabicraft had obtained a weather forecast the day before the accident from a weather website.

## Tide

On 16 January, high water at Raglan was at 0903 hours and low water was at 1541 hours. The tidal stream to the south of Rangitoto Point would have been approximately 265°(T) at 1.2 knots

## General Comments

The Stabicraft had an anchor line of approximately 100 metres in length.

The Skipper of *Lucky No.5* states that he did not observe the stabicraft slow down or stop prior to attempting to cross the bar. He also states that he attempted to persuade the Skipper of the stabicraft to leave his vessel and jump across to *Lucky No.5* on numerous occasions prior to the capsizing.

An acknowledged expert in bar harbours commented that:

*“It is often claimed that ‘I have years of experience cross the bar’. It is a very dangerous myth. There is no person with the experience and no boat capable of crossing a bar when it is rough. One to one and half metres on a bar such as in this report, will produce seas past safe parameters. Certainly they would be beyond any of the recreational boat types or Skippers in this report.*

*.... towing with an outboard propelled planing type vessel in sheltered water is very difficult and in a bar situation should never be contemplated.”*

The Skipper of the Stabicraft did not inform the Coastguard of his intentions prior to crossing the bar.

The **National Code of Practice for Bar Crossings** states:

*“3.1 Effective communication must be established before attempting a crossing between the Skipper and the Harbourmaster or if unavailable another responsible person.”*

## CONCLUSIONS

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

- The reason for the failure of the unnamed Stabircraft's engine is not known. There is a possibility that as the bow lifted out of the water on hitting a large wave, the engine was submerged. It is unknown if the fact that the engine appears to be overdue its first service contributed to its failure, although this is considered unlikely.
- There is no evidence that the two vessels made physical contact with one another prior to capsizing.
- *Lucky No.5* and the unnamed Stabircraft capsized due to the fact that they were attempting a tow in the vicinity of the bar.
- The accident would not have occurred if the Skipper of the Stabircraft had not attempted to cross the Raglan bar.
- The Skipper of *Lucky No.5* responded to the distress signal and proceeded to offer assistance. If the Skipper of the Stabircraft had transferred onto *Lucky No.5*, it is doubtful that the accident would have occurred.
- The Skipper of *Lucky No.5* should have ensured that his passengers donned lifejackets and made sure they were properly secured before going to assist the vessel in distress.
- The Skipper of the stabircraft did not comply with his obligation to inform the Coastguard prior to crossing the Bar under the **National Code of Practice for Bar Crossings**.

## **SAFETY RECOMMENDATIONS**

### **Bar crossings**

Bars form at the entrances to rivers and inshore waterways because of the drift of sand along the coasts. The west coast of New Zealand has many dangerous coastal bars and often they are the only way boats can get access to, or reach shelter from, open waters. Even on a good day, conditions on a bar can change quickly and without warning. Local knowledge, experience and the right kind of boat are critical factors when attempting bar crossings. If the weather looks adverse, Skippers should not risk a bar crossing.

Maritime Safety Queensland issue advice for Bar Crossings. Their advise is:

### **Before crossing a bar**

All sand bars are different. Only experienced skippers should attempt to cross a coastal bar, and even then they should exercise caution. They should observe the wave patterns and conditions prior to crossing.

Skippers should learn what they can from local operators or the local Coastguard. They should ask about any leads and beacons that assist in navigation over the bar. Skippers should always report their intentions by radio before crossing and advise when they are safely over.

Skippers should gain experience by crossing with an experienced operator before attempting a bar crossing. They should ensure the boat is seaworthy and capable of taking some impact from waves. Smaller, open boats are less appropriate as these can fill with water and capsize.

Conditions offshore can be ideal for boating but the conditions on the bar can be dangerous due to swell. Skippers should not attempt a bar crossing in heavy swells and strong wind. They should avoid crossing a bar on an ebb tide when the most dangerous wave conditions usually occur. Finally, they should be prepared to cancel or delay the crossing.

### **Preparations for crossing**

Prior to crossing, skippers should check the tides and weather. They should obtain a weather report for the time of crossing the bar and a weather forecast of conditions expected on their return.

Before crossing a bar, the following precautions should be taken:

- ! Prepare the boat.
- ! Check the steering, bilge, hatches and drains.

- ! Check all lifesaving equipment and ensure it is ready for an emergency.
- ! All crew or passengers should wear a lifejacket.
- ! Clear decks and secure all lines.
- ! Secure moveable items.
- ! Ensure watertight integrity.
- ! Ensure correct trim.
- ! Check and test engines, steering and controls.
- ! Ensure the engines are drawing fuel from a full tank.
- ! Use a marine radio to log on and off with a volunteer marine rescue group.
- ! Check the state of the tide (best one hour before high; worst in mid-ebb).
- ! Observe wave patterns and sets to establish when calmer periods occur.
- ! Look for a position marker or lead so as to locate the entrance for the return trip.

## **Going out**

The skill of crossing a bar is to know the best water by judging the wave pattern, crossing at the calmest point and manoeuvring the boat around breaking waves. Skippers should look for the deepest water or channel; going aground on a bar can be disastrous.

Tactics may vary between displacement boats (slow) and high-speed planing boats. Skippers should be patient and watch the sets of swells before choosing the best time to go. Once committed, skippers should keep going – attempting to turn around in front of an incoming wave can be disastrous. Skippers should not hit the waves at high speed and take them as close to head on as possible. Some bars have waves breaking across the whole entrance and finding a way through may be near impossible. Skippers should be prepared to take a wave head on and take water over the bow if they find themselves in a position where there is no alternative.

The boat must meet the incoming wave energy. Skippers should not hit waves at high speed and allow waves to break onto a boat.

Some general principles may include the following:

- Look for lulls and select a line of least wave activity.
- Where possible, cross on an incoming tide when the wave is running with the tide.
- Keep a boat generally bow on as the waves approach and do not let the boat turn sideways to a breaking wave.
- Head up into the waves and bear away quickly on their backs.
- Accelerate where possible, but avoid getting airborne.
- Head for saddles, which occur between peaking waves about to break.
- Navigate quickly clear of the bar.
- Take back leads and marks to locate the entrance for the return trip.

## Coming in

When coming in, high-speed boats (at least capable of 18 knots) should travel at the same speed as the waves. The aim is to travel in on the back of a wave, staying ahead of the waves breaking behind the boat. Again, skippers should watch for patterns and deeper areas.

- Approaching from sea, increase power to maintain speed within the set of the waves.
- Position the boat on the back of the wave – do not surf down the face of the wave.
- Adjust the boat's speed to match the speed of the waves but do not attempt to overtake the waves.

Displacement boats may have to come in very slowly to avoid surfing and broaching-to (getting caught side on to a wave). In extreme conditions, the very difficult but vital decision not to come in may have to be made. It may well be safer to stand off in deeper water until conditions improve or to seek alternative shelter.

## General advice

Skippers must never underestimate a coastal bar. Even small waves can capsize or swamp and sink a boat. If they are unsure or inexperienced, why go out and risk lives? Wait until conditions provide a safe crossing that they can handle.

Skippers should know where the deepest water is and cross during the top of the tide to ensure they don't risk running aground. They should watch for a sufficient time to assess the wave patterns and where waves break the least.

Do not attempt a tow when crossing a bar unless experienced in doing so.

Wear lifejackets while crossing the bar. A capsize can happen instantaneously and trying to put on a lifejacket while in choppy waters is near impossible. Skippers must always have the safety of the crew and passengers at the forefront of their minds and not take risks.

An acknowledged New Zealand expert in Bars states:

*“Put simply, if the conditions are suitable for a recreational boat to cross a bar, then there should be no need to avoid breaking waves, large swells, surfing or broaching. If conditions are adverse then no one should be crossing the bar.”*