

Class B Non Serious Harm Accident Report

Waima

Back Injury

Fulljames Rapid, Waikato River on 21
November 2004

KEEPING YOUR SEA SAFE FOR LIFE



Maritime Safety

MARITIME SAFETY AUTHORITY OF NEW ZEALAND
Kia Maanu Kia Ora



REPORT No: 96 325

WAIMA – BACK INJURY

On 21 November 2004, the vessel *Waima*, whilst travelling through the Fulljames Rapid on the Waikato River, a passenger failed to take her full weight onto her legs and jarred her back. She was taken to hospital where it was found she had suffered a compression fracture of the 12th Thoracic Vertebral body. She spent just over a week in hospital before flying home to England.





Name of Vessel: *Waima*

Vessel Type: Commercial Passenger Jet boat

Date of Injury: 21 November 2004

Time of Injury: 1100 hours New Zealand Daylight Time (NZDT)

Weather: Visibility was clear with no wind. A weather forecast was not obtained.

NARRATIVE

On 21 November 2004 at approximately 1100 hours New Zealand Daylight Time (NZDT), the jetboat *Waima* was travelling in the Fulljames Rapid on the Waikato River with six passengers (4 adults and 2 children) on board (*See Photograph 1*).



PHOTOGRAPH 1

On the 5th and final drive through the rapid's, Passenger One, who was seated in the front with her husband, next to the driver, jarred her back (*See Photograph 2*). She immediately alerted the driver to the injury. The vessel was stopped and idled to shore. The driver radioed the Safety Officer who was at the Fulljames Rapid, advising her of the injury. The Safety Officer called 111 for ambulance assistance. *In commenting on the draft report, an interested party stated that Passenger One was very insistent about wanting to sit in the front seat. So much so that she asked the office receptionist twice whilst making payment for the trip and again after the Safety Briefing Card had been read. Whilst the passengers were putting on their lifejackets, Passenger One again requested to sit in the front seat. The driver judged Passenger One and her husband to be fit and strong enough to do so. In further comments, the interested party also stated that Passenger One seemed to be enjoying the trip and having no problems whatsoever. The trip would have been going for approximately 20-25 minutes before the injury occurred.*

Upon their arrival, the ambulance crew assessed Passenger One's injury and decided to call for the rescue helicopter. No other passengers were injured.



PHOTOGRAPH 2



Weather

The weather conditions at the time of the injury was warm and cloudy.

River Conditions

The river was quite low and the rapids were small. The driver estimated the flow was 120 c/m/s (cubic metres per second) which is quite low.

The flow obtained from the Mighty River Power Flow phone was 70 c/m/s.

Pressure waves are caused by the narrowing of the river at the Fulljames Rapid. The height of these waves will depend on the flow rate of the river.

Driver

The driver of *Waima* holds a Local Launchman's Certificate and is qualified under Rule Part 80 to operate *Waima*.

The Boat

This was of alloy construction, measuring 5.6 metres in length with a gross tonnage of 1.5. The boat was powered by a 454 cubic inches Chevrolet engine, driving a Hamilton 212 waterjet.

The Safe Operational Plan (SOP) was last audited 7 July 2004 and is due for its annual audit in 2005.

INJURY

Passenger One, who was 57 years of age, sustained an Anterior Wedge compression fracture of the 12th Thoracic Vertebral body. It was a stable fracture and she suffered no damage to her spinal cord.

Whilst in hospital Passenger One was also diagnosed with osteoporosis which possibly contributed to the injury.

Passenger One spent just over a week in hospital before she was discharged and flew home to England.

HAZARD IDENTIFICATION

A Safety Briefing was conducted at the beginning of the trip by the driver and Safety Briefing Cards were shown to the passengers. Both the Briefing cards and the driver's briefing informed passengers to take their weight onto their legs at the start of the rapid.

It appears that Passenger One did not take enough of her weight onto her legs as the vessel travelled through the rapid, causing the injury to her spine. *In commenting on the draft report, Passenger One stated that the report presumes that she did not take her weight onto her legs. The first four runs up and down the river were fine. The speed was fine and the rapids were exciting. On the penultimate run, the vessel travelled much faster and went up in the air much higher, hitting the water harder. At this point, Passenger One was going to say something to the driver, but did not want to be a "party pooper". Passenger One's daughter was also concerned as the children on board at the time were being thrown upwards on impact with the rapids and had stopped laughing. Her daughter indicated to her husband to hold the children tighter and reassured her 10 year old daughter that it would be the last run. The driver then stated that they would do one more run to get some spectacular pictures. The vessel then increased its speed which made the vessel hit the rapids much harder. On this last run, the vessel sped towards the rapid and Passenger One braced herself as instructed, but left her seat as the vessel went into the air. She hit the seat hard causing her spine to take the full impact. Passenger One and her family, who were all on board at the time, felt this would have happened regardless of how much they braced their bodies, as they had been hitting the rapid harder each time and the vessel was faster. Passenger One's daughter also pointed out, in commenting on the draft report, that the children's feet did not reach the floor, so how could they have braced themselves as instructed. The children nearly came out of the boat and possibly would have done if Passenger One's daughter and son in law had not increased their hold on them as there was no safety belt.*

The Maritime Safety Authority Advisor for Adventure Tourism stated to the Investigator that the owners of the jetboat were very specific about the importance of passengers taking their weight onto their legs at the start of the rapid. This message was repeated several times.

ACTION TAKEN

In future, all older passengers will be seated at the rear of the vessel to reduce the risk of injury when encountering pressure waves. The Operator has altered his SOP to reflect the above action and has conducted driver meetings and front staff meetings to minimise the risk in future.

In commenting on the draft report, Passenger One and her family would like to recommend that seat belts be worn or that automatic bars be installed to sit across your legs, similar to those used in Adventure Park rides. They also felt that the age of passenger should be taken into consideration. At the briefing they felt that it should have been discussed with the paying passengers about what they would like the boat trip to be. In this case, the boat on the last run was going too fast for a boat carrying senior citizens and young children. They believe that this was reckless and felt it was done to get spectacular pictures and unfortunately Passenger One's injury was the result.

Passenger One and her family also commented that they felt the vessel owners were professional and efficient following the mishap and that this was an unfortunate accident. However, they cannot help feeling a little aggrieved that their holiday of a lifetime was ruined because of a simple boat trip.