Passenger’s legs caught in unguarded propeller

**Category:** Operations  
**Vessel type:** Passenger Vessels  
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The below Case study has been taken from: Maritime New Zealand’s Lookout, Issue 25

**The incident**

The female passenger was with a party enjoying a dolphin-swimming charter trip aboard a 12 metre catamaran.

The guide gave a detailed safety briefing about the trip and explained the procedure for getting in and out of the water, warning the swimmers about avoiding two propellers just below the surface at the rear of the boat.

When the skipper located a pod of dolphins, he would position the boat about 250 metres ahead of it, put the vessel into neutral and then sound a horn to signal to the guide that it was now safe to enter the water. After their swim, the passengers would climb up a ladder in the centre of the stern and sit on the rear step as the skipper manoeuvred the vessel ahead of the dolphins, stopping about 300 metres in front of the pod. He would then put the engines into neutral and sound the horn.

On this day, four of the six passengers were fitted with wetsuits and booties so they could enter the water with the dolphins. The four passengers moved to the step at the rear of the vessel. The guide removed a gate and directed them to sit on the step leading to a duck board across the stern, and then ease themselves into the water to avoid scaring the dolphins.

As the woman entered the water, a propeller, still turning, hit her legs. She was knocked over to the left and, when she resurfaced, realised she had been seriously injured.

The guide jumped into the water to help hold the woman up, while a knife was used to cut her free of the propeller. The woman was then lifted on board and first aid administered, while the vessel rushed to meet an ambulance at the nearest access point.

The woman was airlifted to hospital for emergency surgery. For a time, her survival was uncertain. It was unclear whether her leg could be saved or whether she would walk again, and although she did recover, she has needed long-term medical treatment and rehabilitation.

The impact on her active lifestyle and career is permanent.

**Observations**

- There was no guarding around the vessel's propellers, which were located immediately below the point where people entered the water.
- Apart from the guide warning them not to, there was nothing to prevent a passenger sitting on the rear step from slipping into the water while the vessel was moving and the propellers were turning.
- Despite the very real risk of people coming into contact with the propellers, this was not listed as a possible hazard on the vessel's hazard register. No action was taken to prevent it occurring, apart from the guide's safety briefing and the skipper waiting after shifting.
- The owners of the business had engaged a reputable company to review the vessel's safety systems. They recognised that the propellers were a hazard, but assumed the previous owner's safety measures would be sufficient. These measures included leaving an interval of five seconds between placing the boat into neutral and sounding the horn to signal that it was safe to enter the water.
The skipper had a responsibility to keep his crew and passengers safe from harm, and should have identified the risk of putting people into the water beside two large operating propellers. He should have raised the issue with his employer and asked for it to be fixed.

Since the accident, new safeguards have been put in place, including fitting large drop-down guards over the propellers. Other possible options to reduce the risk to passengers were to replace the surface drive system with a safer system like jets, or creating an area forward of the stern for people to get into and out of the water safely, away from the propellers.

As well as being convicted and fined as a result of this event, the company had to pay substantial damages for the woman's loss of livelihood and quality of life.