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safe and reliable transport services for new south wales



Ferry Safety Investigation

19 February 2004

Betty Cuthbert - collision with Cockatoo Island Wharf

Interim Factual Statement

SYDNEY FERRIES BETTY CUTHBERT - Collision with Cockatoo Island Wharf on 19 February 2004

Factual information

The Sydney Ferries river catamaran (rivercat) Betty Cuthbert was operating a scheduled passenger service from Sydney to Parramatta. There were 13 passengers on board and three crew including the master. The vessel departed Circular Quay at approximately 0908 and proceeded west, up the Parramatta River, making headway at approximately 23 knots.

At approximately 0920 the master received 'speed' and 'steering' alarms on the wheelhouse monitoring panel for the starboard propulsion system. At the time, the vessel was approaching Cockatoo Island from the east and was estimated to be approximately 200 m from the wharf located on the north-eastern side of the island. With the master on the bridge were the vessel's other two crewmembers, the General Purpose Hand (GP) and the Cashier.

The master reacted to the alarms by reducing the main engine speed setting levers on both schottel controls. At the same time the master asked the GP to go to the starboard engine room at the rear of the vessel to investigate the alarms. The starboard propulsion system remained running at passage speed RPM while the port propulsion system responded and slowed. The master could see that the vessel was turning to port and attempted to slow the vessel by rotating the schottel co-pilot controls to the astern position to reverse the thrust of the schottel units. The port schottel unit responded accordingly and thrust astern, however, the starboard schottel continued to thrust ahead. Consequently, the vessel's rate of turn to port increased. At about the same time the master recalled the GP to the bridge.

The master could see that the vessel was rapidly approaching Cockatoo Island. In an attempt to avoid a collision, he attempted to de-clutch the starboard main engine but was unsuccessful. At about this time the master instructed the GP and the Cashier to tell the passengers to brace themselves for a collision.

In a last attempt to slow the vessel before an imminent collision with Cockatoo Island, the master operated both main engine stop buttons on the manoeuvring console.

Shortly thereafter, Betty Cuthbert struck the Cockatoo Island wharf at an estimated speed of between 15 and 18 knots.

Immediately after the collision the master instructed the GP and the Cashier to check for injured passengers and contacted Sydney Ferry Control and Sydney Harbour Control to inform them of the accident. The time was 0921. The master then started the port main engine and berthed Betty Cuthbert alongside the pontoon adjoining Cockatoo Island wharf.

At approximately 0930 the Sydney Ferry supercat Susie O'Neill arrived alongside Betty Cuthbert and the uninjured passengers were transferred to this ferry and dropped off at the Valencia Street Wharf. At 0955 an ambulance arrived at the Valencia Street wharf and the ambulance officers were transported by Susie O'Neill back to Betty Cuthbert where the officers attended to the two injured passengers. The injured passengers were subsequently transferred to Susie O'Neill and then transported back to the Valencia Street wharf where they were transferred to the ambulance and then to Royal North Shore hospital. During this time, the master returned a negative reading for alcohol when breath tested by the Sydney Water Police.

Sydney Ferries Technical Branch investigated the failure and determined that a faulty 'Speedtronic sensor' in the vessel's starboard engine had short-circuited, resulting in a control failure that prevented normal operation of throttle and direction vector control from the wheelhouse.

Injuries, loss and damage

Police, ambulance and Sydney Ferries reports indicate that two passengers and one crew member were injured; one passenger sustained injuries to her back and ribs when she was thrown forward onto the starboard bow rail; a second passenger sustained an injury to her wrist and the master was burned when a kettle full of hot water located on the console at the rear of the wheelhouse was thrown forward by the impact.

The bow of the vessel's port hull above the waterline was severely damaged by the impact and the wharf sustained structural damage to its timber facing and concrete deck.

Interim Safety actions

1. A modification to prevent recurrence of similar control failures has been undertaken by Sydney Ferries in all other vessels to which such control systems are fitted, as a matter of priority.
2. The accident also highlighted the need for high-speed passenger ferries, such as the Rivercat class, to be fitted with onboard data logging equipment to allow accurate examination of commands and responses during the accident sequence and to independently verify witness accounts of the occurrence. Sydney Ferries is currently trialling such equipment on one of its ferries and will review the project status of that trial.

The investigation is continuing

The report of the completed investigation will be tabled in Parliament by the Minister for Transport Services as required by Section 46D of the *Passenger Transport Act 1990*.