## SYNOPSIS

At 2154 on 1 March 2005, the Antigua and Barbuda registered general cargo vessel *Orade* collided with the Apex Light tower at the confluence of the rivers Ouse and Trent while outbound from Howdendyke on the River Ouse. *Orade* subsequently grounded on the stone training walls of the Rivers Ouse and Trent.

Initial attempts to refloat the vessel failed, due to the falling tide, and the vessel remained aground across the Ouse and Trent training walls with her bow protruding into a deep water pocket adjacent to the River Trent training wall. She was refloated at 0955 the following day with the assistance of two tugs.

At the time of the accident, *Orade* was under pilotage and a qualified ABP Humber pilot was at the helm. The pilot had embarked the vessel at about 2140 at Blacktoft, 1.5 miles from the Apex Light tower. The pilot had offered to steer *Orade* after the vessel left the berth, and after having been given brief instructions on her propulsion and steering controls by the master.

The pilot was uncomfortable using manual steering from the vessel's central bridge chair, partly due to the awkward position of the rudder angle indicator on the deckhead above the chair. He asked the master to change steering mode to riverpilot. The pilot had become familiar with this mode over a number of years when he had been the master of vessels using the Ouse and Trent.

After a brief discussion on the use of the riverpilot, the master changed steering mode and the vessel continued downriver. Shortly before reaching the apex, the pilot became aware that the vessel was being set bodily to starboard. He noted that the heading did not alter as he increased the helm request to 20º to port and then to hard to port. He informed the master that the vessel was not responding. The master had not been closely monitoring the navigation or the pilot's actions.

The pilot asked the master to return the steering mode to manual and, once this had been done, he pushed the manual helm control hard to port and this delivered the expected response on the rudder angle indicator. However, there was insufficient time for the rudder movement to have any effect before the vessel passed over the submerged training wall and collided with the Apex light tower.

The investigation found that there had been poor communications between the master and the pilot, and it is probable that the master had engaged autopilot and not riverpilot when requested to change the steering mode by the pilot. The master had never used riverpilot mode on the vessel, and he was also probably suffering from fatigue as he had been working a 6 hours on/6 hours off watchkeeping routine for the previous 5½ months. The pilot had not checked that the changeover had been successful, and did not notice that his initial steering requests were having no effect. The rudder angle indicator was poorly sited, the pilot was unfamiliar with this vessel and there was poor control lighting.

Recommendations have been made to the UK's Port Marine Safety Code Steering Group and the vessel operator, on safety issues identified during the investigation which relate to fatigue, bridge team management and ergonomics.

Figure 1


*Orade*