

SYNOPSIS (all times are UTC)

The accident was notified to the Marine Accident Investigation Branch (MAIB) by ARC Marine Ltd at 1615 on 13 October 1998. An investigation began on 14 October. MAIB Inspector, Captain Nick Beer, carried out the investigation.

Arco Arum, a suction dredger of 98.3m in length, was inbound on the Thames with a full cargo of aggregates, when at 1350 on 13 October, 1½ hours after low water, she momentarily grounded while rounding Broadness Point. She was holed beneath the waterline, and despite being manoeuvred first into the channel and then to a nearby anchorage, she capsized and foundered in shallow water 43 hours later. The MAIB investigation focused on what caused the initial grounding and on the actions of the crew immediately afterwards until the vessel was abandoned. The report identifies causal factors in the capsize and foundering of the vessel which are thought to have significance to other vessels in the trade.

The accident was caused by a navigational error due to poor bridge team management and the lack of a passage plan. With a draught of 6.6m, *Arco Arum* was navigationally restricted to a channel that was unmarked. The inquiry found that those on the bridge failed to use the radar, chart, or echo sounder to good advantage. The master, who was the pilotage exemption certificate (PEC) holder in charge on the bridge, had delegated the first responsibility for navigation to the newly qualified second mate.

In the minutes leading up to the grounding, *Arco Arum*'s radar echo on the vessel traffic services (VTS) screens at the Gravesend port control station indicated that she was moving into dangerously shallow water but this was not noticed by the VTS officers.

Recommendations have been directed at the shipmanager, the port authority and the Maritime and Coastguard Agency (MCA).