

# Vessel grounding HiPo - BMAPA Alert

## WHAT HAPPENED

A UK operated marine aggregate dredger was entering port in the late evening; winds were light and the sea state calm. The vessel was under pilotage; and although always under the command of the Master, the vessel was under the direct control of the Pilot at the time the incident occurred. The port is locked in with a maintained water level in the harbour; and which varies in width along its length; the fairway lies in on the southern side of the harbour with areas of shoal water on the north side. At the point of grounding the visible width of the harbour is 66 metres; however, a shoal at harbour datum -5.0 m, extends from the North side for about 16 metres, reducing the breadth of the navigable channel at the vessel's draft to 50 metres. To reach her berth, the vessel had to pass another vessel of 16.8 m maximum beam accommodated by the port, moored on the south side, further reducing the navigable channel width to 33 metres. The harbour water level, although not guaranteed, is often maintained higher than the advertised level; the Pilots frequently make use of the additional depth to increase lateral clearance and to provide additional flexibility of navigation. At the material time the harbour water level was 0.6 m above the advertised height.

**LEARNING POINTS / ACTIONS TAKEN**

What analysis of incident revealed Although the vessel's passage plan did not identify the shoal as a 'no go' area, it did include a correctly positioned safe water track along the fairway, taking account of the likely presence of moored vessels on the south side of the harbour. On this occasion, instead of adhering to the lateral clearances dictated by the passage plan track, the Pilot adopted a 'rule of thumb' approach and advised the Master that, "provided the vessel was at least 10 metres off the North side there would be enough water"; which was clearly not the case had an elementary calculation been undertaken. The Master was not sufficiently appraised of the navigational circumstances to challenge the Pilots assertion. Additionally, the Master and Pilot were being provided with estimated lateral clearances by support personnel, which served to validate their perception of the navigational circumstance; however, under analysis, the estimated clearances provided, can be demonstrated to have been in error by as much as 75%. As the vessel strayed into shoal water, she was influenced hydrodynamically by 'bank effect' drawing her closer to the shoal, subsequently grounding lightly on the North side of the harbour. During freeing of the vessel, high engine load and shaft bearing temperature was noted on the starboard propulsion line which was de-clutched. Diver

inspection subsequently revealed a tyre had become jammed in the starboard stern gear. The assessed cause of the grounding was navigational error/loss of spatial awareness by Master and Pilot; compounded by erroneous supporting information provided to them.

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LOCATION:	AGGREGATE DREDGER	ALERT STATUS:	Normal
ACTIVITY:	MARINE OPERATIONS	DATE ISSUED:	19/07/2021 15:24:12
SUB ACTIVITY:	DREDGING	INCIDENT No:	03596