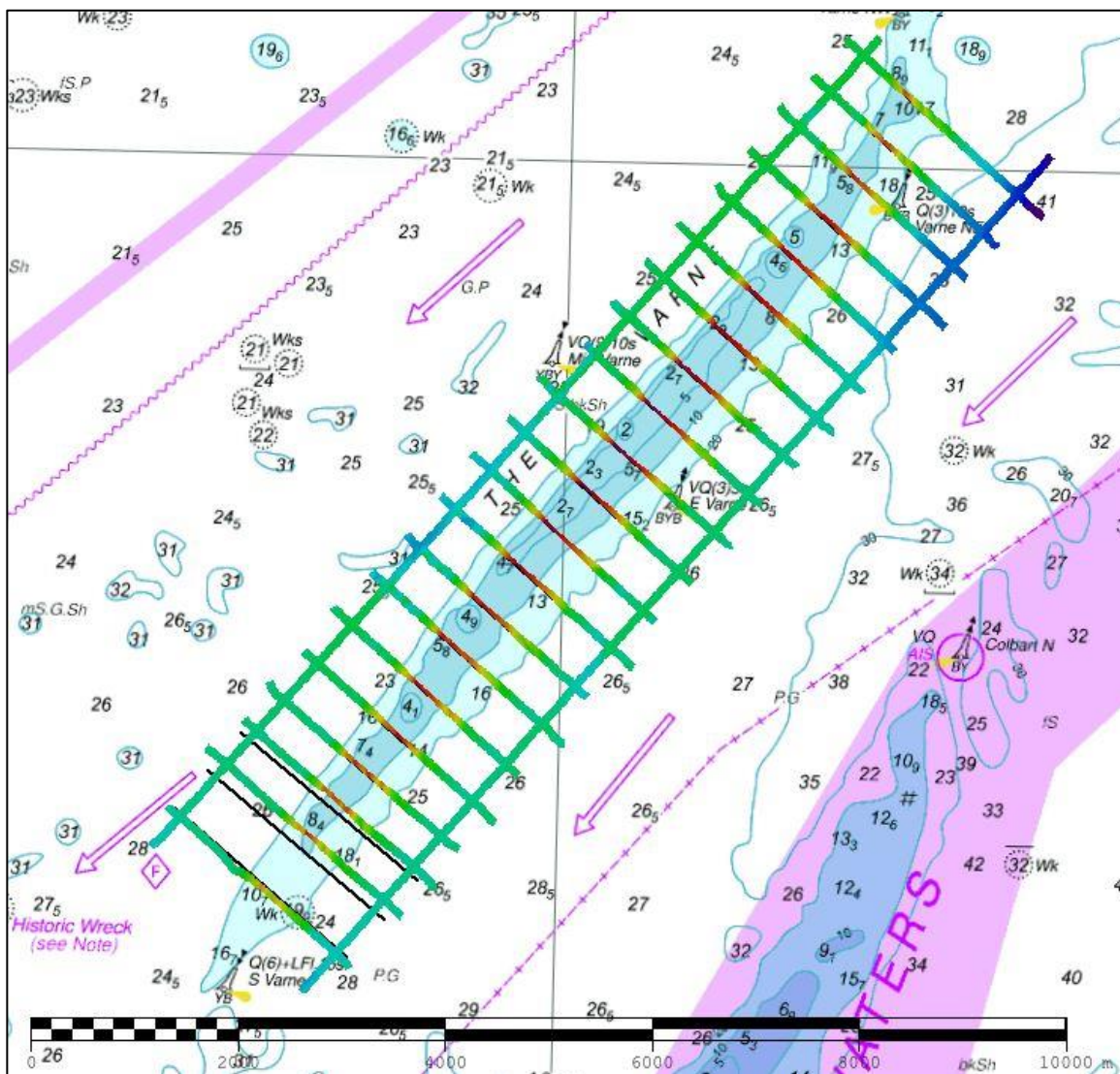




UK Hydrographic
Office

DEEP WATER ROUTE DS6 – THE VARNE CHECK-LINES 2019 ASSESSMENT

An assessment of the 2019 hydrographic survey of the area DS6 The Varne Check-lines: to monitor recent seabed movement; to identify any implications for shipping; and to make recommendations for future surveys.



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Notes

This Assessment is produced by the UK Hydrographic Office (UKHO) for the Maritime and Coastguard Agency (MCA). Analysis of the Routine Resurvey Areas forms part of the Civil Hydrography Programme and the reports are made available to through the UKHO website and are presented to the Civil Hydrography Working Group. When approved, the recommendations are incorporated into the Routine Resurvey Programme. The report is governed by a Memorandum of Understanding between the DfT (including the MCA) and the MOD (including the UKHO).

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No analysis of shipping traffic has been included within this report due to no AIS data being supplied by MCA.

All depths are to Chart Datum, defined using the UKHO VORF Model

DEEP WATER ROUTE DS6 – THE VARNE CHECK-LINES, 2019

1. SUMMARY

Changes Detected

- 1.1 Very minor changes since the 2007 survey. The Varne bank shows a general move of approx. 50m to the South East with overall depths staying constant.

Reasons for Continuing to Resurvey the Area

- 1.2 Potential migration of the Varne Bank in the centre of this busy deep-water shipping lane poses a danger to navigating vessels. Due to the nature of the seabed type and currents and tides in the area sediment can be mobile and needs continued long term monitoring.

Recommendations

- 1.3 Due to the importance of monitoring this shoal and potentially migration into busy shipping routes, it is recommended to retain the current check-lines of the area.
- 1.4 While there is potential for sediment in this area to move, there has been very little change since the last survey in 2007, therefore it is recommended to retain the 12-year re-survey period.

2. LOCATION

- 2.1 Survey interval at time of resurvey: 12 years
- 2.2 Area Covered: 70.83 km²

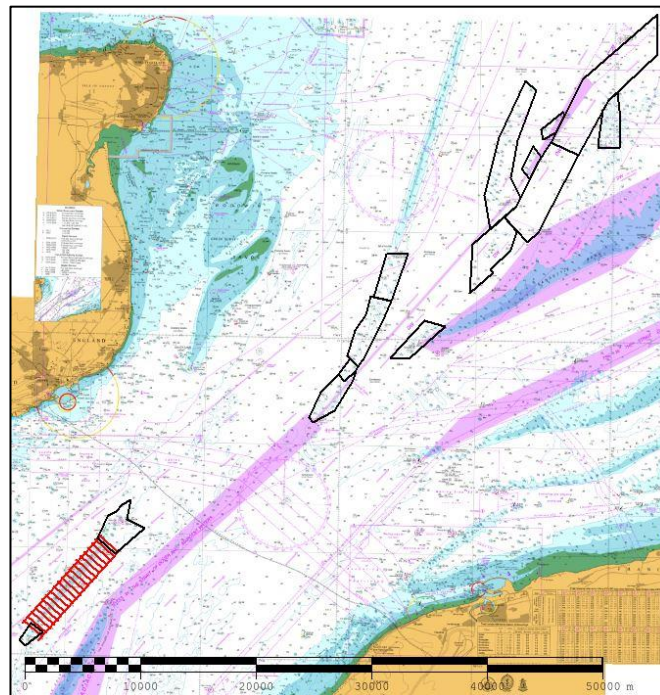


Figure 1: 2019 Deep Water Routine Resurvey areas overlaid on BA Charts 1892-0 and 0323-0 with DS6 check-lines in red

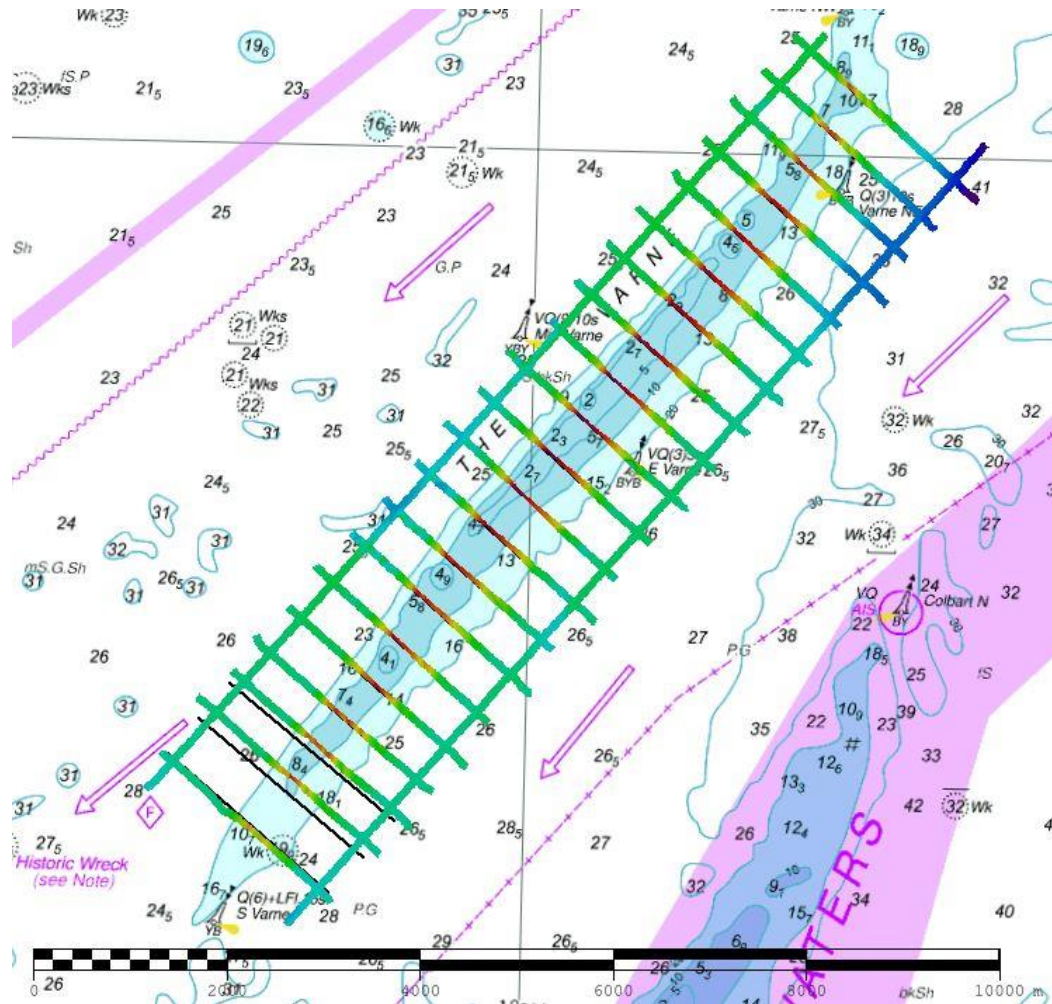


Figure 2: 2019 survey data overlaid on BA Chart 1892-0

3. REFERENCE SURVEY DETAIL

3.1 HI1159 Dover Strait, 2007

3.2 The Report of Survey for this survey is available upon request from the UKHO and the validated bathymetric surfaces are available to download from the Admiralty Marine Data Portal.

4. NEW SURVEY DETAIL

4.1 HI1654 DS6 The Varne Check-lines, 2019

4.2 The Report of Survey for this survey is available upon request from the UKHO and the validated bathymetric surfaces are available to download from the Admiralty Marine Data Portal.

5. DESCRIPTION OF RECENT BATHYMETRIC CHANGE

- 5.1 The difference surface in Figure 3 shows that general depths over The Varne bank have become approx. 1.0m deeper at the North Eastern and South Western ends, and approx. 1.0m shoaler in the centre of the bank.
- 5.2 The general movement of sediment has moved to the South East, with the Varne having moved a maximum of approx. 50m South East since 2007.
- 5.3 The depth plot in Figure 4 shows that the shoalest depth measured on the bank in the 2019 survey is 3.7 meters. This is 0m change in this location since 2007.

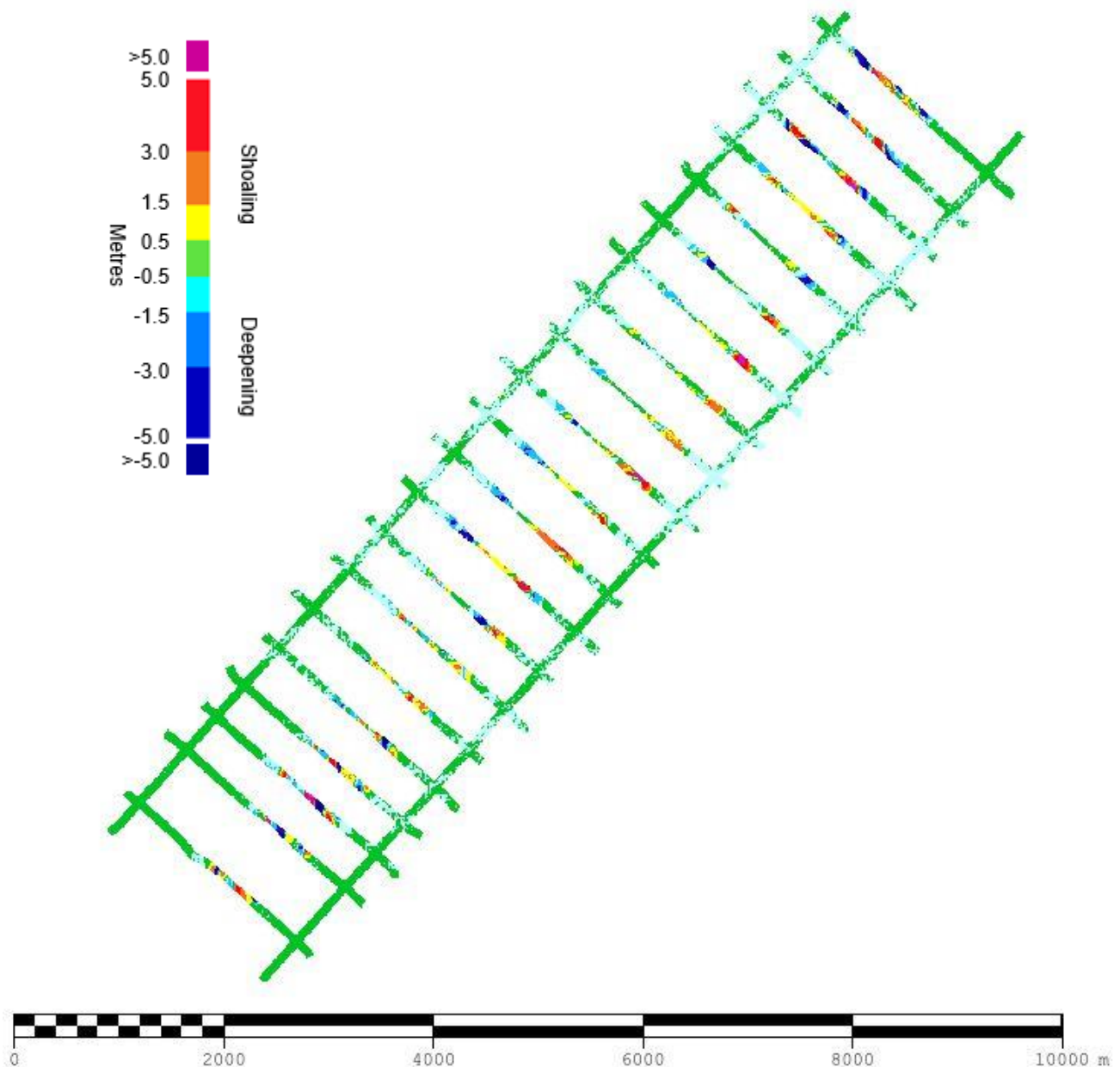


Figure 3: Difference surface showing bathymetric changes between the 2019 and 2007 surveys overlaid on BA Chart 1892-0

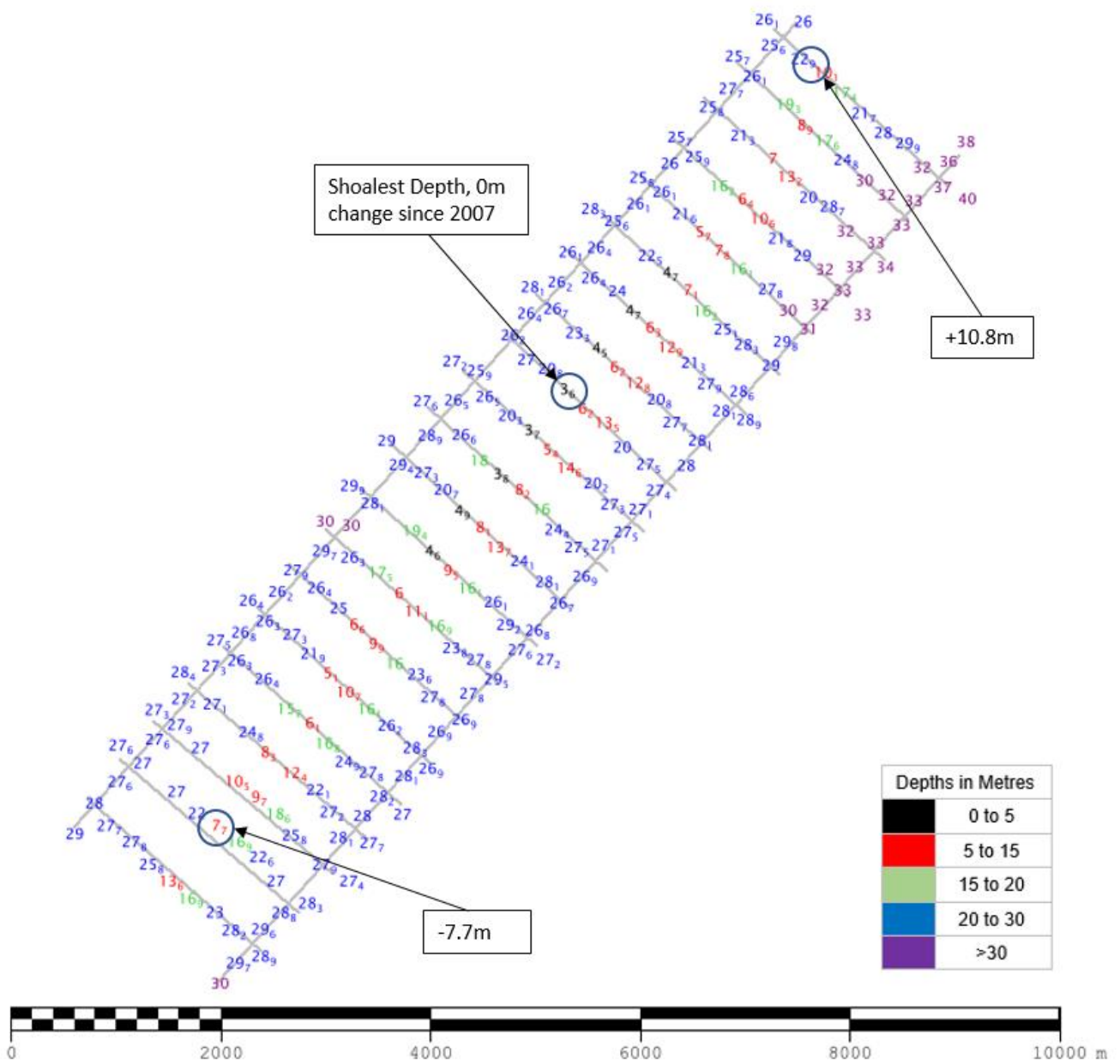


Figure 4: Colour banded depth plot from the 2019 survey with selected depth changes since the 2007 survey. Positive values (+) represent deepening. Negative values (-) represent shoaling.

6. RECOMMENDATIONS FOR FUTURE SURVEYS

Survey Interval

- 6.1 Despite the lack of seabed change in the last 12 years it is important to consider the location of the area, in the centre of the DWR, and the draught of vessels navigating immediately adjacent to the bank. Therefore, it is recommended that DS6 The Varne Check-lines should remain on a 12 year survey interval.

Survey Area

- 6.2 The current area for DS6 The Varne Checklines fully covers the central section of The Varne bank and any possible areas of mobile sediment, and as there has been very little sediment movement in the last 12 years the area currently does not need revision.