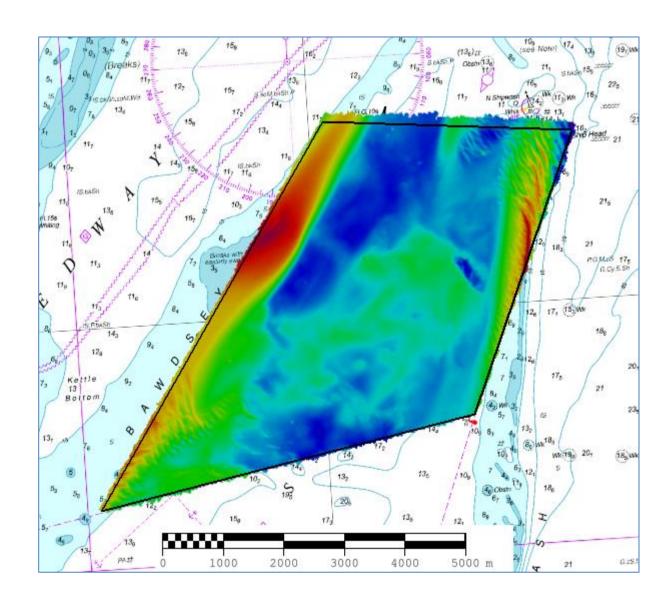




THAMES ESTUARY SOUTH SHIPWASH (TE2B) 2020 ASSESSMENT

An assessment of the 2020 hydrographic survey of the area TE2B South Shipwash: 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

TE2B SOUTH SHIPWASH, 2020

1. SUMMARY

Changes Detected

1.1 Movement of sand waves in the NE corner of the survey area and some depth change along the edge of Bawdsey Bank.

Reasons for Continuing to Resurvey the Area

1.2 The sandbanks at either side of the Shipway Channel are changeable and hazardous to navigation in the area, the depths within the channel are also changeable and hazardous to deep draught traffic navigation in the area.

Recommendations

1.3 Given the location of the area in relation to the DWR and the draught of vessels navigating the area, TE2b should have a regular survey interval of 12 years.

2. LOCATION

- 2.1 Survey interval at time of resurvey: 12 years (although not fully undertaken for 27 years).
- 2.2 Area Covered: 28.3 km²

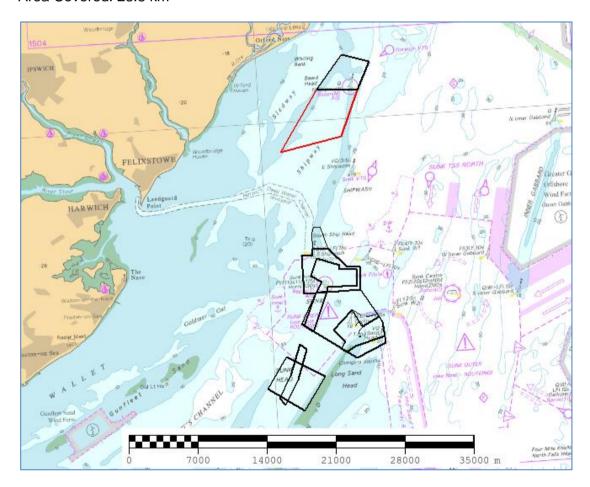


Figure 1: 2020 Thames Estuary Routine Resurvey areas overlaid on BA Chart 1406 with area TE2B in red

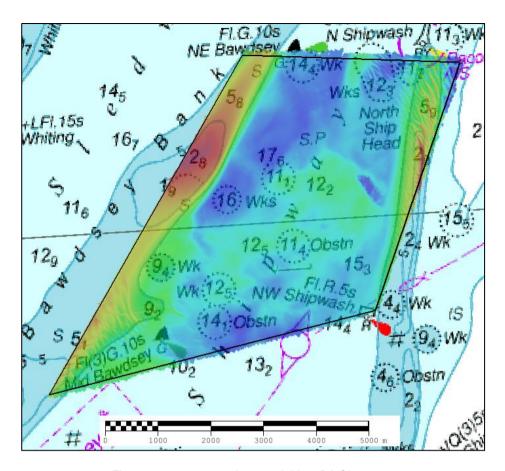


Figure 2: 2020 survey data overlaid on BA Chart 2052

3. REFERENCE SURVEY DETAIL

- 3.1 HI1522 completed 29/10/2016 and HI572 completed 28/07/93.
- 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 HI1698 completed 28/09/2020.
- 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 between the 2016 survey the 2020 in Figure 3 shows the movement of the sand waves in the NE of the survey area migrating NE away from the channel and out of the survey area. Figure 3 also shows that Bawdsey Bank on the west side of the survey is moving/expanding NNE. There is also shoaling to the SE of these sand waves between 0.5 and 1.5m.

In Figure 4 the 2020 survey is compared to a 60m interpolated grid of a 1993 Single beam survey and shows the movement of Bawdsey Bank westwards. Also indicated is movement of sand waves in the SW corner of the survey area in a SW direction.

5.2 The depth plot in Figure 5 shows that the controlling depth in the 2020 survey is 11.1m, located at 52-00.455 N 001-35.696 E.

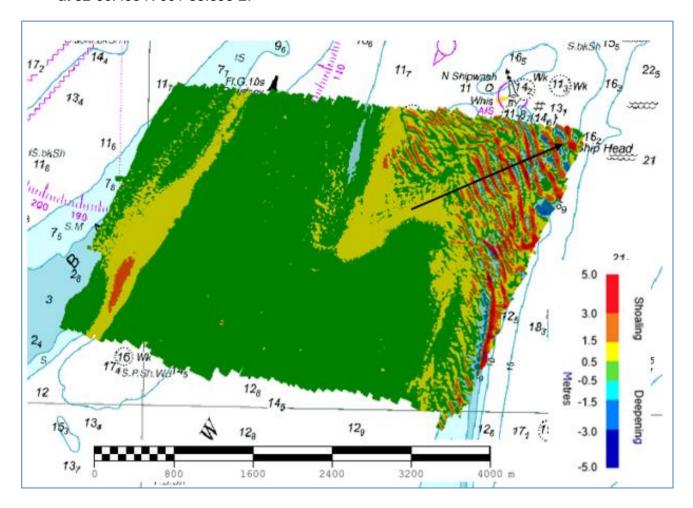


Figure 3: Difference surface showing bathymetric changes between the 2016 survey and northern part of the 2020 survey overlaid on BA Chart 2052 (Black arrows represent sandwave migration since 2016 survey)

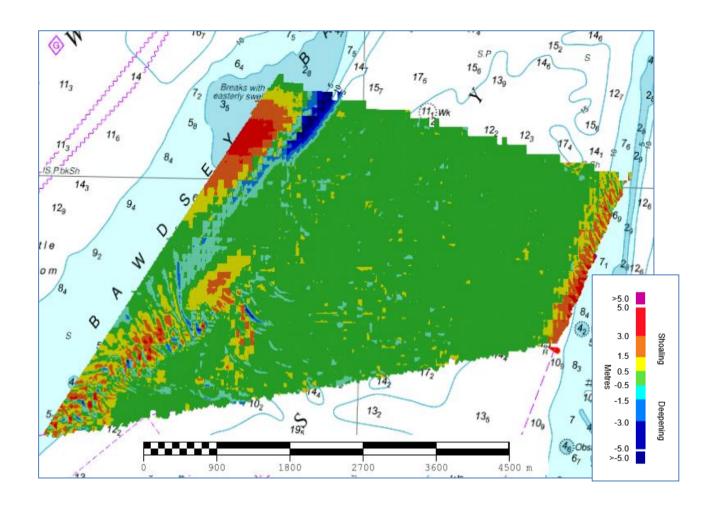


Figure 4: Difference surface showing bathymetric changes between the 1993 single beam survey (interpolated surface 60m grid) and northern part of the 2020 survey overlaid on BA Chart 2052.

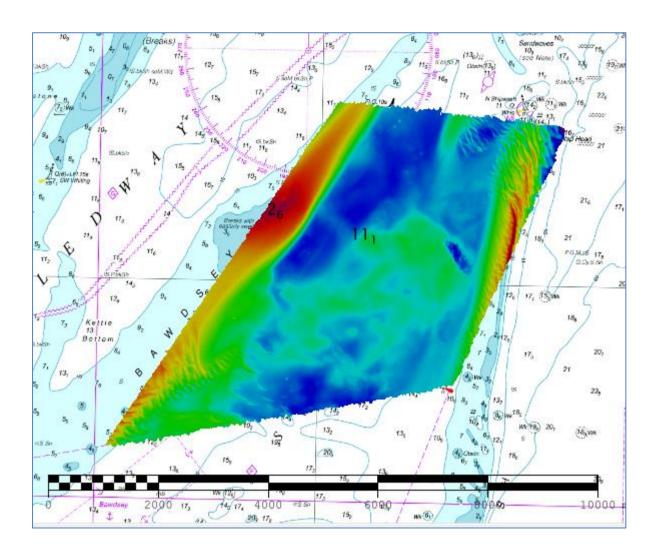


Figure 5: Colour banded surface with the least depth of the 2020 survey 2.6m and the controlling depth of the 2020 survey 11.1m. The controlling depth is located on a wreck near the centre of the channel and has not changed since last surveyed in 2016.

6. RECOMMENDATIONS FOR FUTURE SURVEYS

Survey Interval

6.1 Given the location of the area in relation to the DWR and the draught of vessels navigating the area, TE2b should become established routine resurvey area, re surveyed every 12 years.

Survey Area

6.2 Based on the 2020 survey the survey area should remain the same. The edge of Bawdsey Bank has been captured and shoal area to the E of Shipway Channel has also been captured.