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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 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 Vertical Offshore Reference Frame (VORF) Model.

EA8A THE ROADS FOCUSED, 2023

1. SUMMARY

Changes Detected

- 1.1 The southwestern edge of Holm Sand has migrated west, into Corton Road. The north of the survey area has experienced very little change in depths or migration of contours, whilst the centre of the survey, through Corton Road has shoaled by approximately 3m since the previous Routine Resurvey in 2017.

Reasons for Continuing to Resurvey the Area

- 1.2 Significant shoaling along the southeast of Corton Road due to the westward migration of Holm Sand poses a risk to marine traffic through the area.

Recommendations

- 1.3 Given the extent of change in the west/southwest corner of Holm Sand, EA8A Focused should be increased to a 3-year interval.
- 1.4 EA8A should be extended west in the W/SW area to monitor the movement of Holm Sand. The northern area should be analysed in the next survey to see whether this area can be reduced if little change.

2. LOCATION

- 2.1 Survey interval at time of resurvey: 6 years, with a 12-year interval for the whole EA8 area.
- 2.2 Area Covered: 6.9 km²

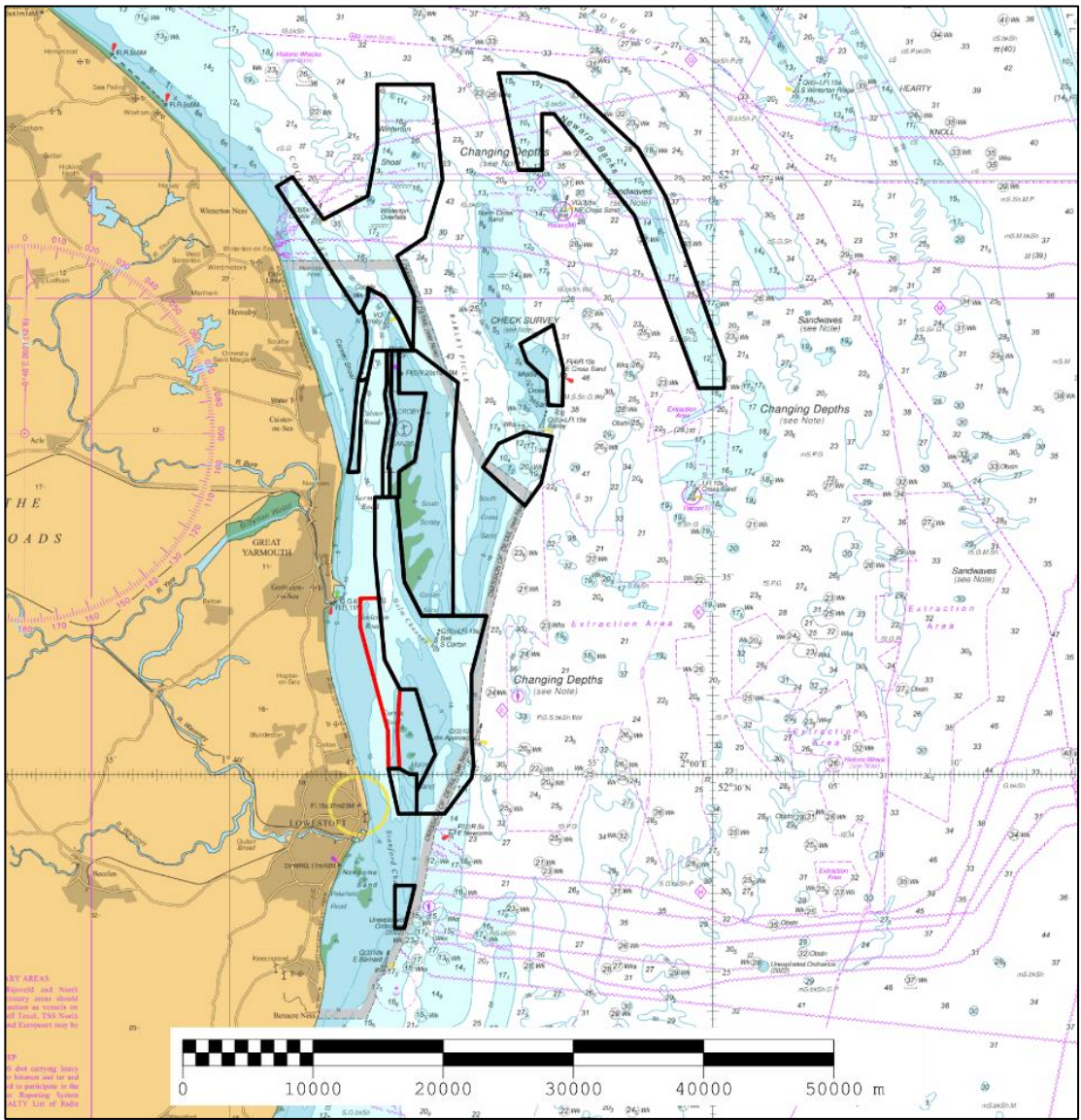


Figure 1: 2023 East Anglia Routine Resurvey areas overlaid on BA Chart 1543 with area EA8a in red.

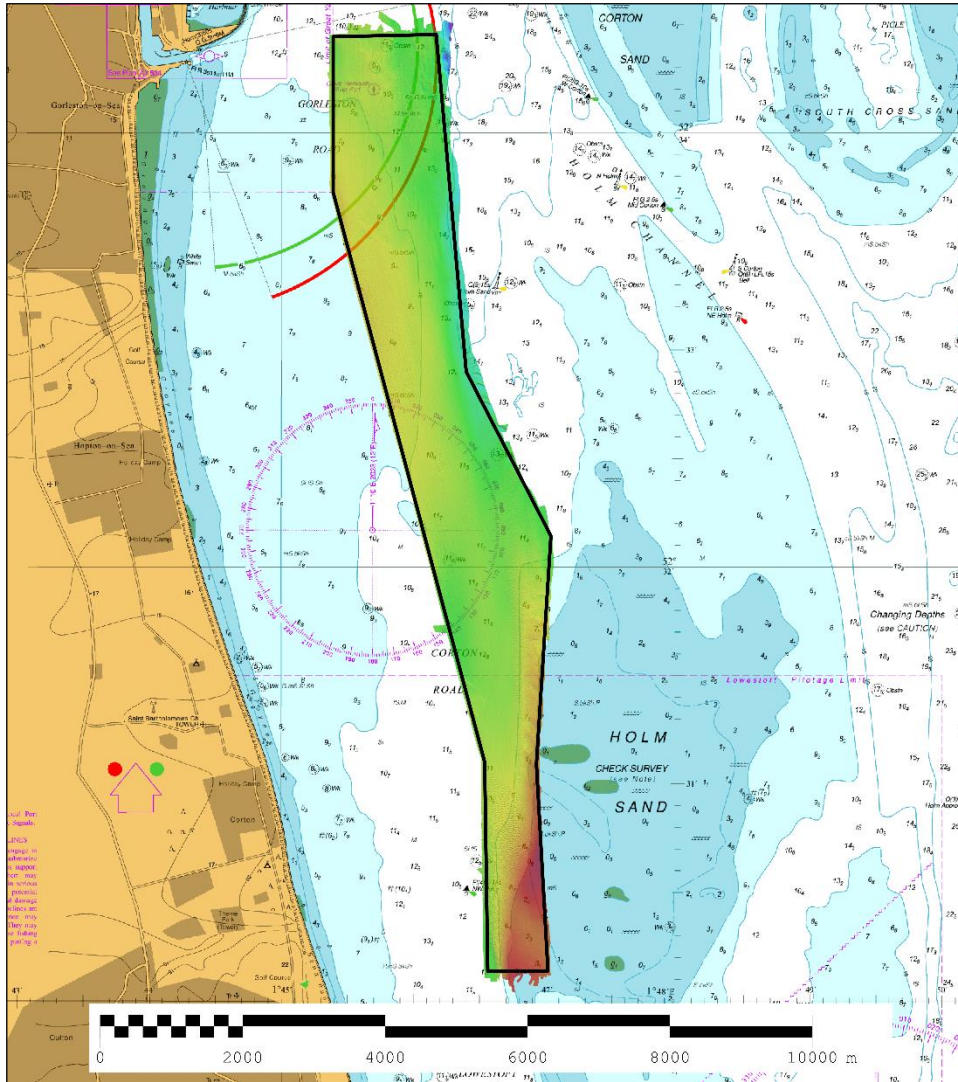


Figure 2: 2023 survey data overlaid on BA Chart 1543.

3. REFERENCE SURVEY DETAIL

- 3.1 The previous full survey was conducted as part of the 2017 Routine Resurvey Programme between July and November 2017 as part of HI1545. Following the analysis in 2017, the EA8a Focused area was established. 2023 is the first year that the EA8a Focused area has been surveyed as part of the Routine Resurvey Programme.
- 3.2 Between 2017 and 2023, the Holm Sand area has been surveyed annually by Trinity House.
- 3.3 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 The current survey was part of HI1827 – EA8a The Roads Focused Area, surveyed between the 7th to the 9th of September 2023.
- 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 Since the previous RRS carried out over the Roads, in 2017 under HI1545; the southern end of Holm Sand has migrated westward with the 10m contour moving approximately 1km west over the 6-year period, and the least depth decreasing by approximately 10m.
- 5.2 Along Corton Road, the narrowest point between the 10m contours to the east and west has become shoaler by approximately 3m, from 14.6m to 11.6m, as shown in Figure 4.
- 5.3 The northern half of Holm Sand has migrated eastward, with the 5m contour moving outside the eastern limits of the focus area.
- 5.4 In general, the northern half of the focused area has deepened slightly, in contrast to significant shoaling in the southern half the focused area; as shown in the difference surface in figure 5.

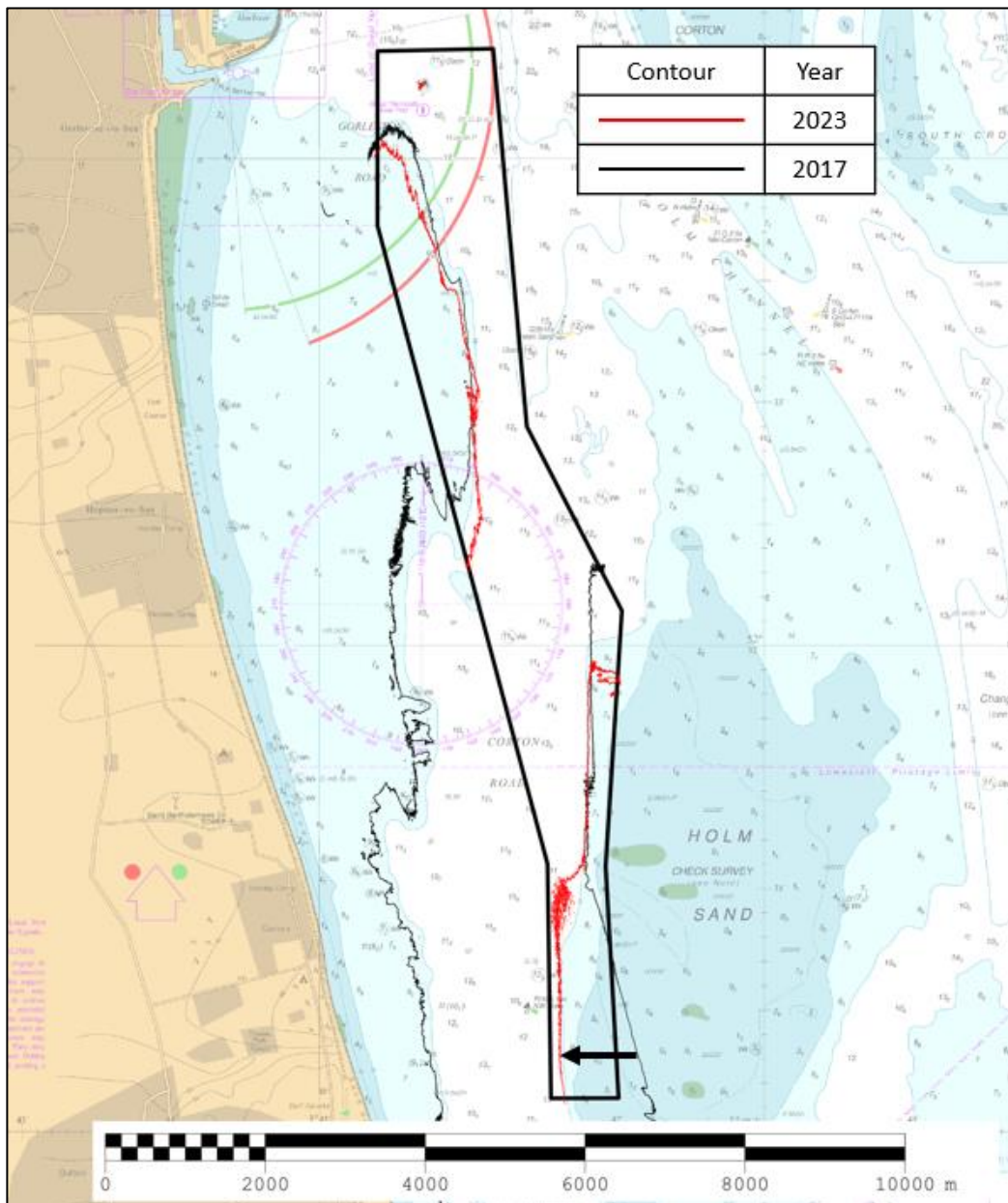


Figure 3: Contour plot showing changes in the 10m contour between 2023 (red) and 2017 (black). Black arrow represents feature migration.

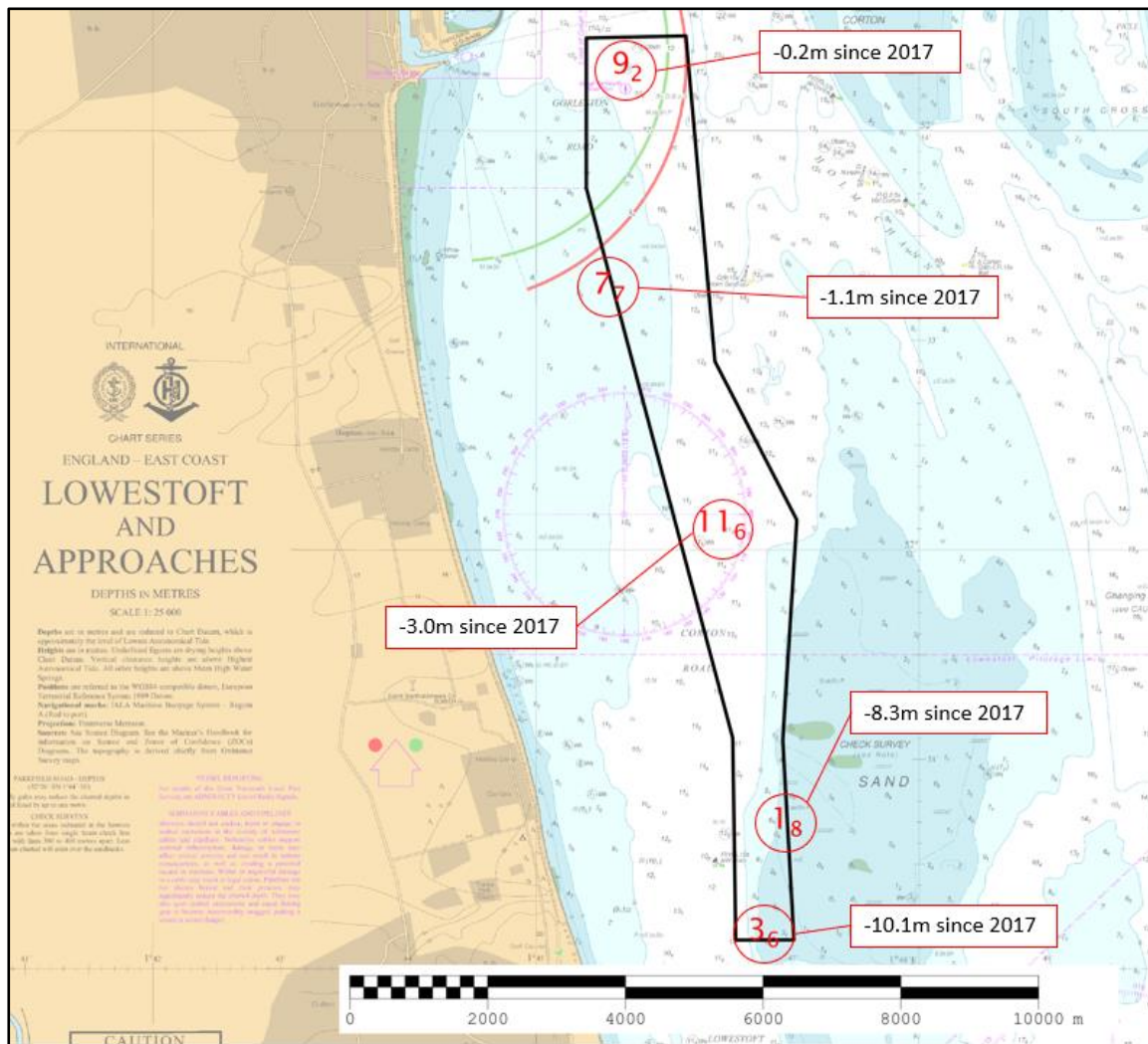


Figure 4: Controlling & Significant Depth soundings highlighted, overlaid on BA Chart 1535. Positive values (+) represent deepening. Negative values (-) represent shoaling.

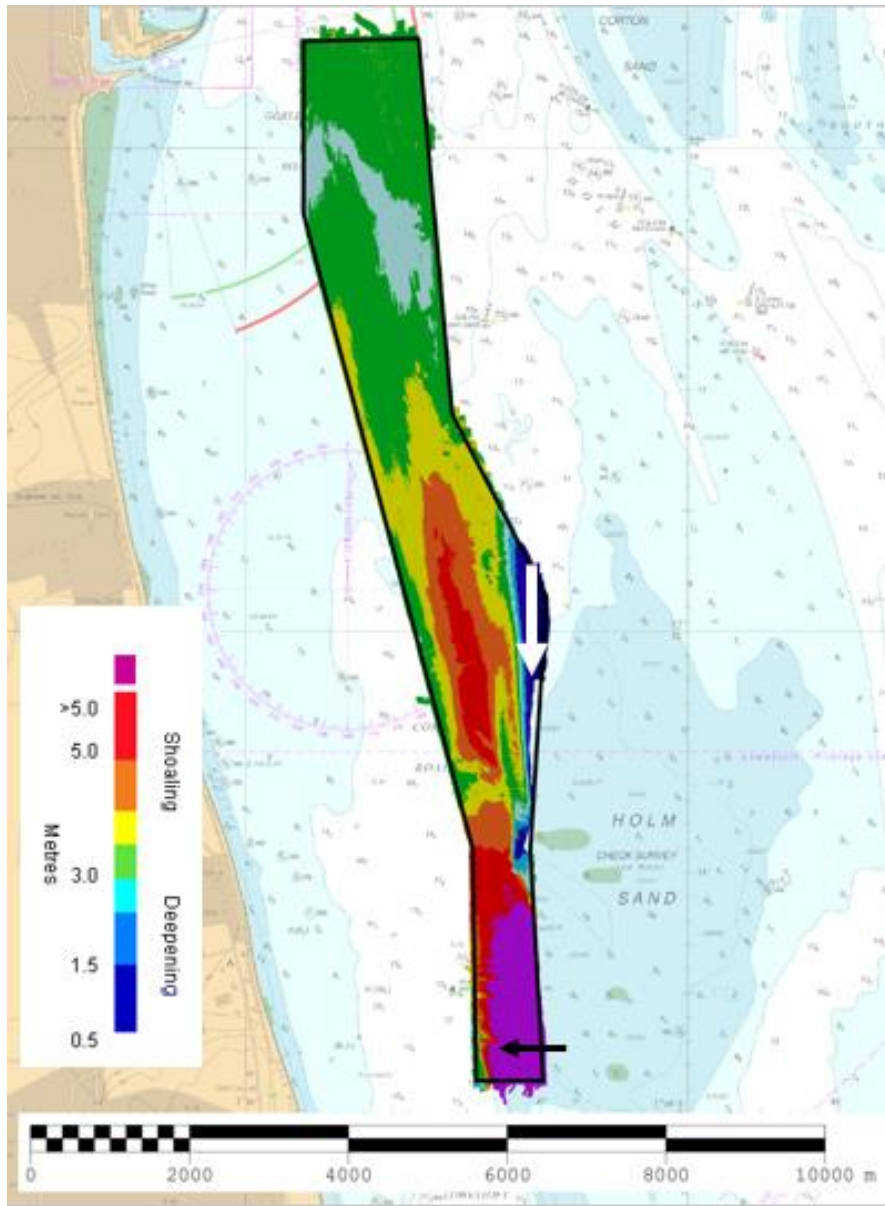


Figure 5: Difference surface showing bathymetric changes between the 2023 and 2017 surveys overlaid on BA Chart 1535 (Arrows represent seabed migration since 2017 survey).

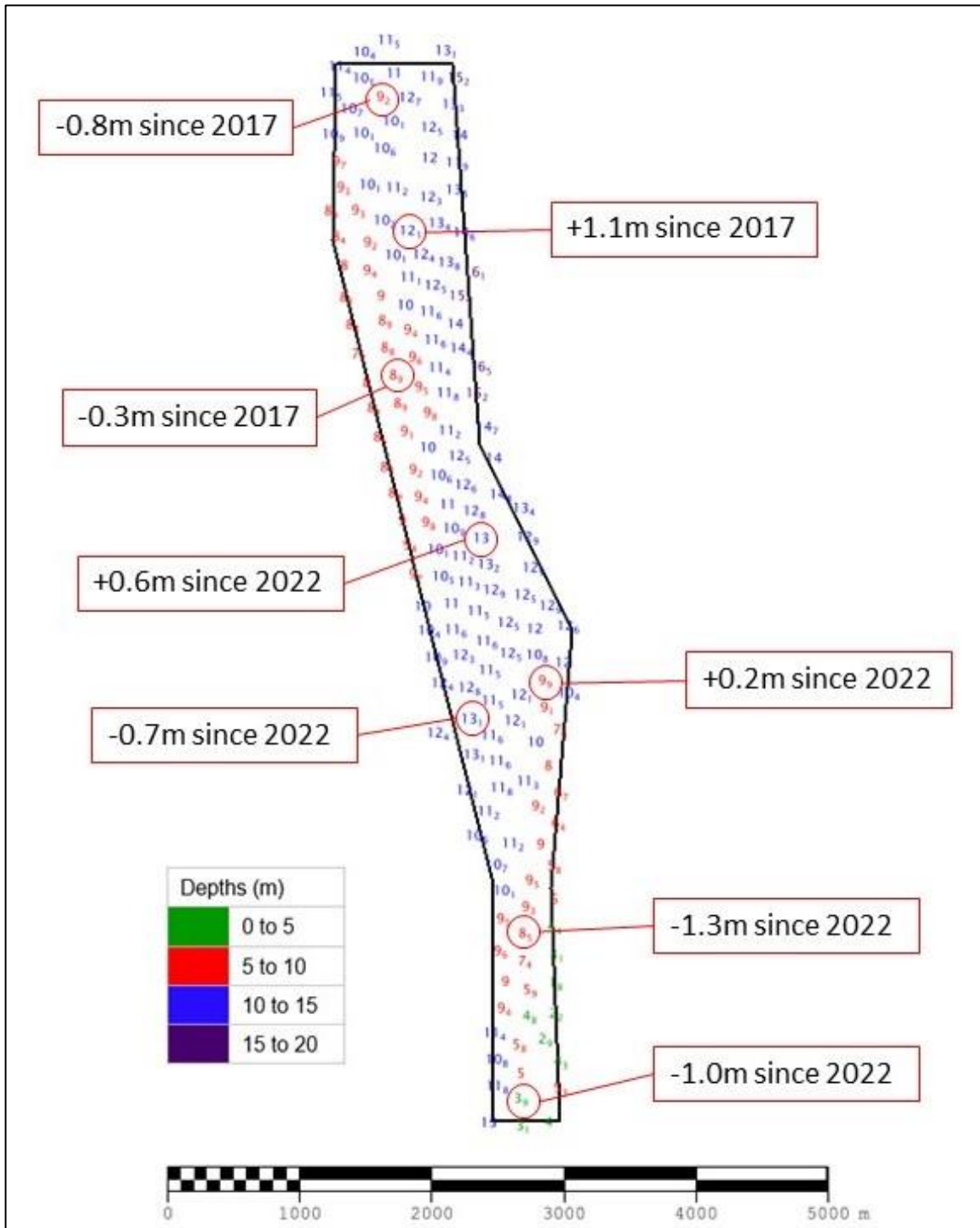


Figure 6: Colour banded depth plot from the 2023 survey with selected depth changes since the 2022 (Trinity House) and 2017 (CHP) surveys. Positive values (+) represent deepening. Negative values (-) represent shoaling.

6. RECOMMENDATIONS FOR FUTURE SURVEYS

Survey Interval

6.1 Given the extent of change in the southwest corner of Holm Sand, EA8A Focused should be increased to a 3-year interval to monitor the western extent of Holm Sand. Further analysis on whether this should be re-adjusted will be completed after the next survey.

Survey Area

6.2 Whilst the northern extents of the survey area have changed little in the 6-year period; the area should remain within the focused area, to monitor any future change which may impact marine traffic through Gorleston Road. Future alterations to the extents of this northern area should be considered in the next survey if there shows little change.

6.3 The W/SW area of EA8A however, should be extended west, in order to capture the westward movement of Holm Sand. The area has also been aligned with the proposed changes for EA10C (see report for EA10A+C Approaches to Lowestoft).

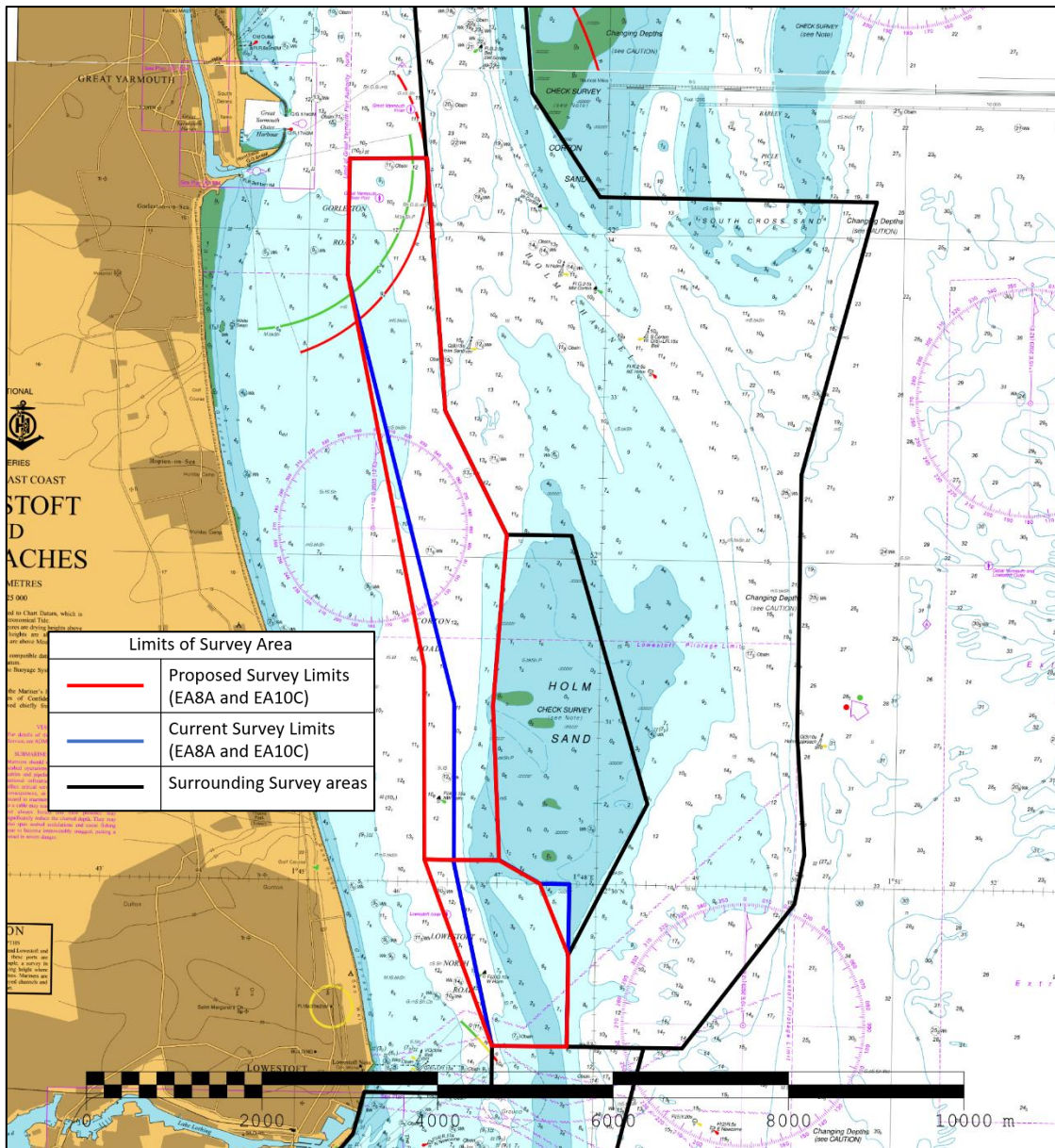


Figure 7: Recommended changes to survey limits of EA8A Focused area, and EA10C Focused area (red), with current limits shown in blue, and adjoining areas in black.

The coordinates of the recommended adjusted survey area limits for EA8A are shown below:

EA8A total area: 7.45 km²

	Latitude	Longitude
1	52.562100N	001.756550E
2	52.574044N	001.756550E
3	52.574209N	001.769545E
4	52.548330N	001.773330E
5	52.535721N	001.784010E
6	52.518196N	001.782183E
7	52.502303N	001.783639E
8	52.502292N	001.771079E
9	52.522107N	001.770494E