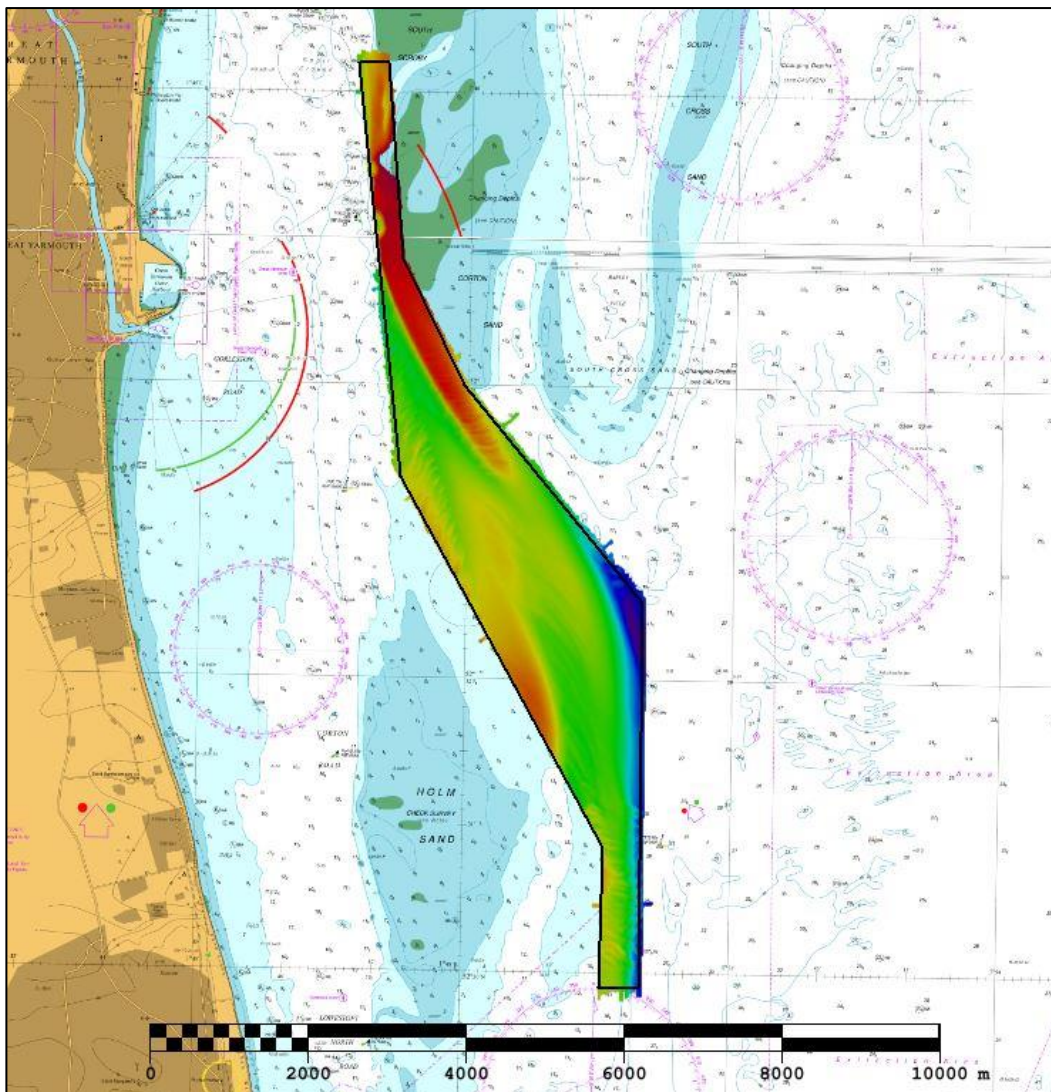




UK Hydrographic
Office

EAST ANGLIA HOLM CHANNEL FOCUSED (EA9A) 2019 ASSESSMENT

An assessment of the 2019 hydrographic survey of the area EA9a: 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).

The Admiralty Chart extracts, other graphics and tables in this Report are included for illustrative purposes only and are NOT TO BE USED FOR NAVIGATION.

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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

HOLM CHANNEL FOCUSED, 2019

1. SUMMARY

Changes Detected

- 1.1 In EA9a there is continuing sand wave migration which is consistent with historical trends. In the northern section, Corton Sand is gradually moving west.
- 1.2 The central region is showing sand wave migration in a north-east direction.
- 1.3 Some stability is seen in the southern region, with relatively little change.

Reasons for Continuing to Resurvey the Area

- 1.4 Depths in the area remain potentially hazardous and changeable to vessels navigating the area and therefore require continued monitoring through annual focused resurveys and 3-yearly full resurveys.

Recommendations

- 1.5 Given the location of the area, the mobility and changes in the seabed, EA9a should remain on an annual survey interval.
- 1.6 The focused area survey limits were updated after the 2019 HI was issued. This readjustment of the survey area takes into consideration the mobile areas seen in the 2019 survey and therefore should remain the same until the EA9 full survey in 2020 where limits can be reassessed if needed.

2. LOCATION

- 2.1 Survey interval at time of resurvey: The full EA9 area is surveyed every 3 years with an annual focused area covering EA9a.
- 2.2 Area Covered: 12.54 km²



Figure 1: 2019 East Anglia Routine Resurvey areas overlaid on BA Charts 1534 and 1535 with area EA9a in red

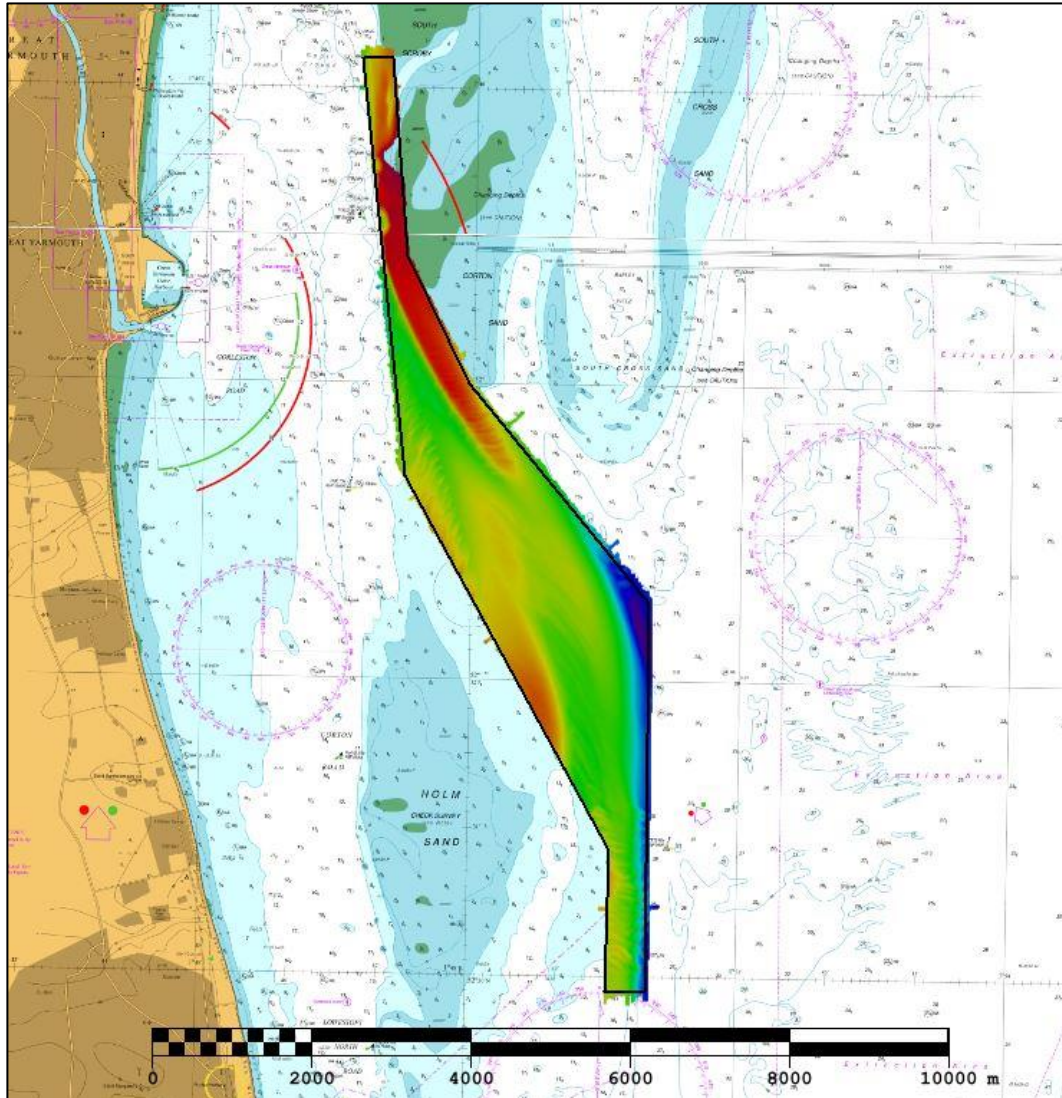


Figure 2: 2019 survey data overlaid on BA Charts 1534 and 1535

3. REFERENCE SURVEY DETAIL

- 3.1 The previous focused survey was conducted as part of the 2018 Routine Resurvey Programme in October 2018 as part of HI1610.
- 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 The latest focused survey was conducted as part of the 2019 Routine Resurvey Programme between September and October 2019 as part of HI1638.
- 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 depth plot in Figure 3 shows that the controlling depth in the 2019 survey is 9.2 meters, located near the centre of the survey. The least depth is 0.8m located to the north west of Corton Sand.
- 5.2 The difference surface in Figure 4 shows significant shoaling near Corton Sand as the sandbank migrates west. The south section shows some stability with little change in depth. The central region is showing a migration of the main sandbanks in a north east direction.
- 5.3 The contour plots in Figures 5 and 6 shows significant shoaling due to sand wave movement, with some areas seeing changes of 8m. The controlling depth has shoaled 2m since 2018.

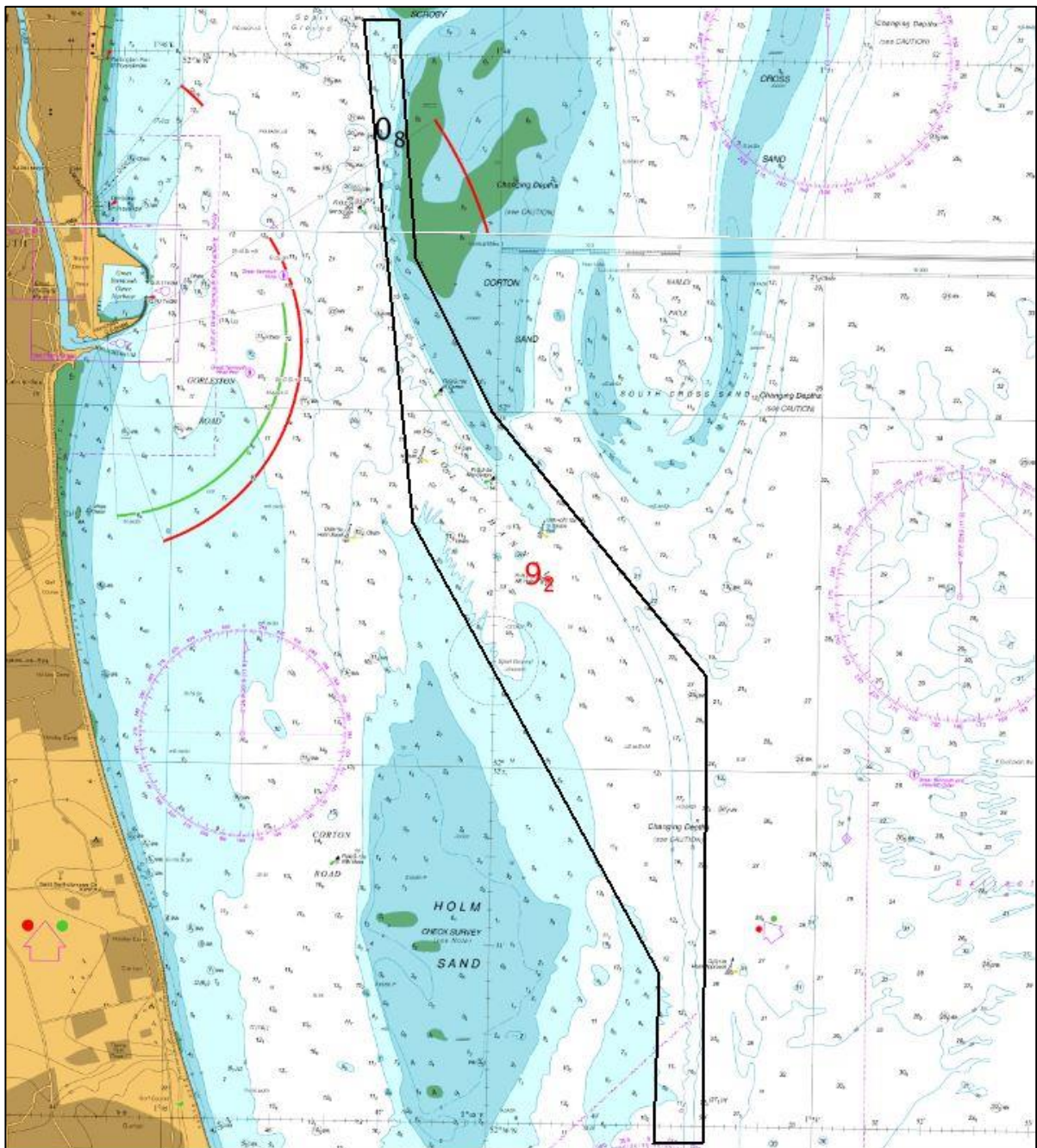


Figure 3: Controlling depth (shown in red) and least depth (shown in black) overlaid on BA Charts 1534 and 1535.

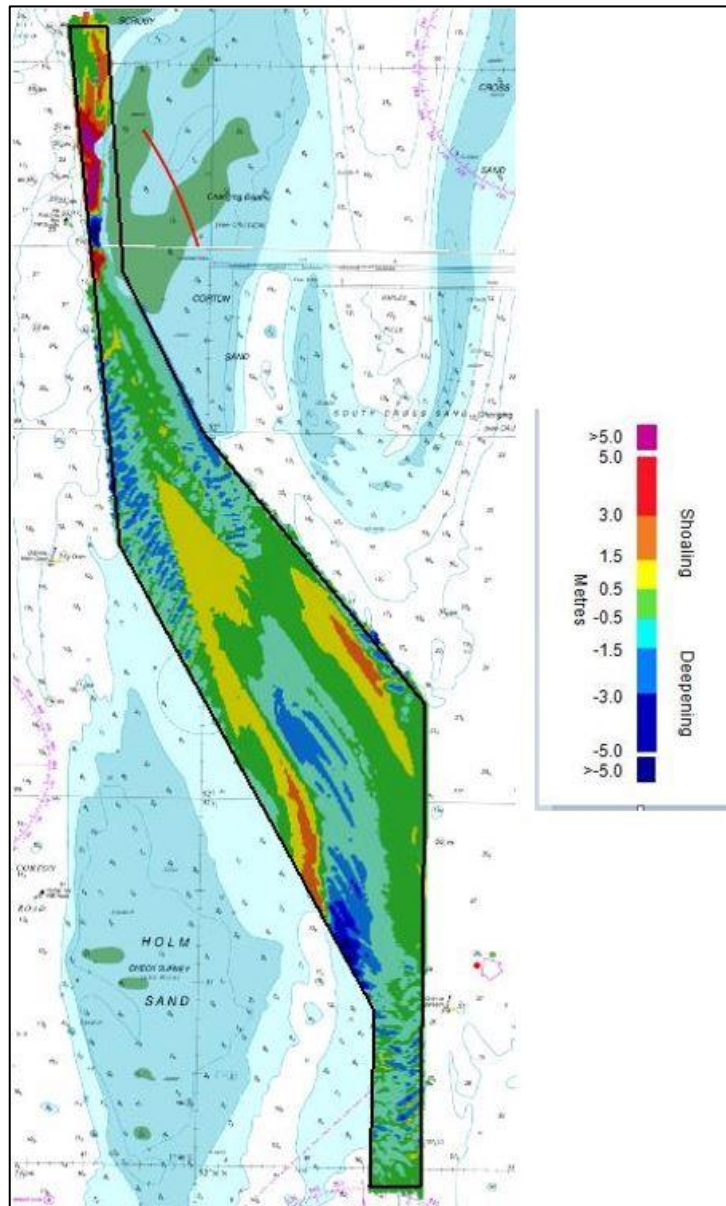


Figure 4: Difference surface showing bathymetric changes between the 2018 and 2019 surveys overlaid on BA Charts 1534 and 1535.

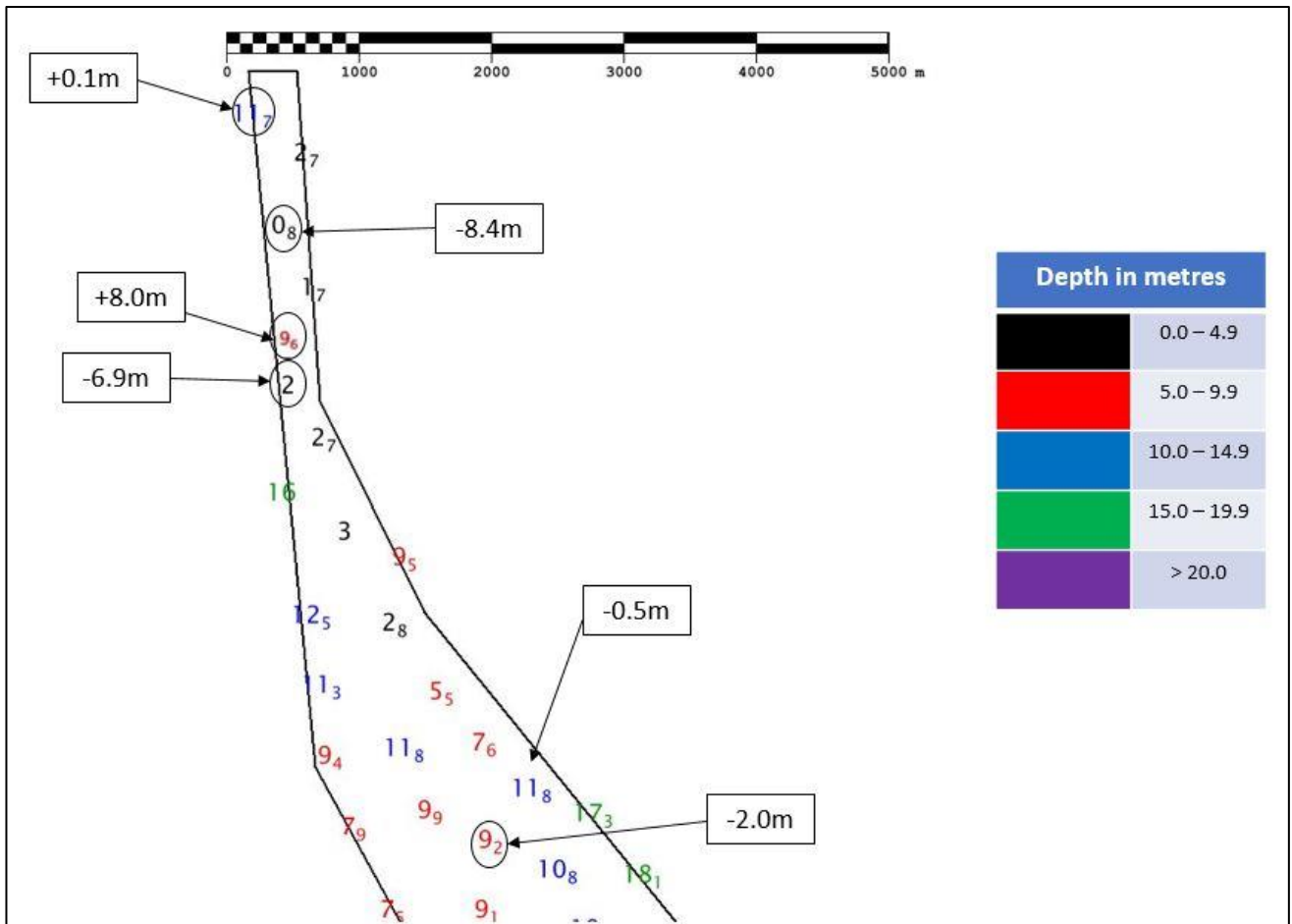


Figure 5: Colour banded depth plot from the 2019 survey with selected depth changes since the 2018 survey. Positive values (+) represent deepening. Negative values (-) represent shoaling.

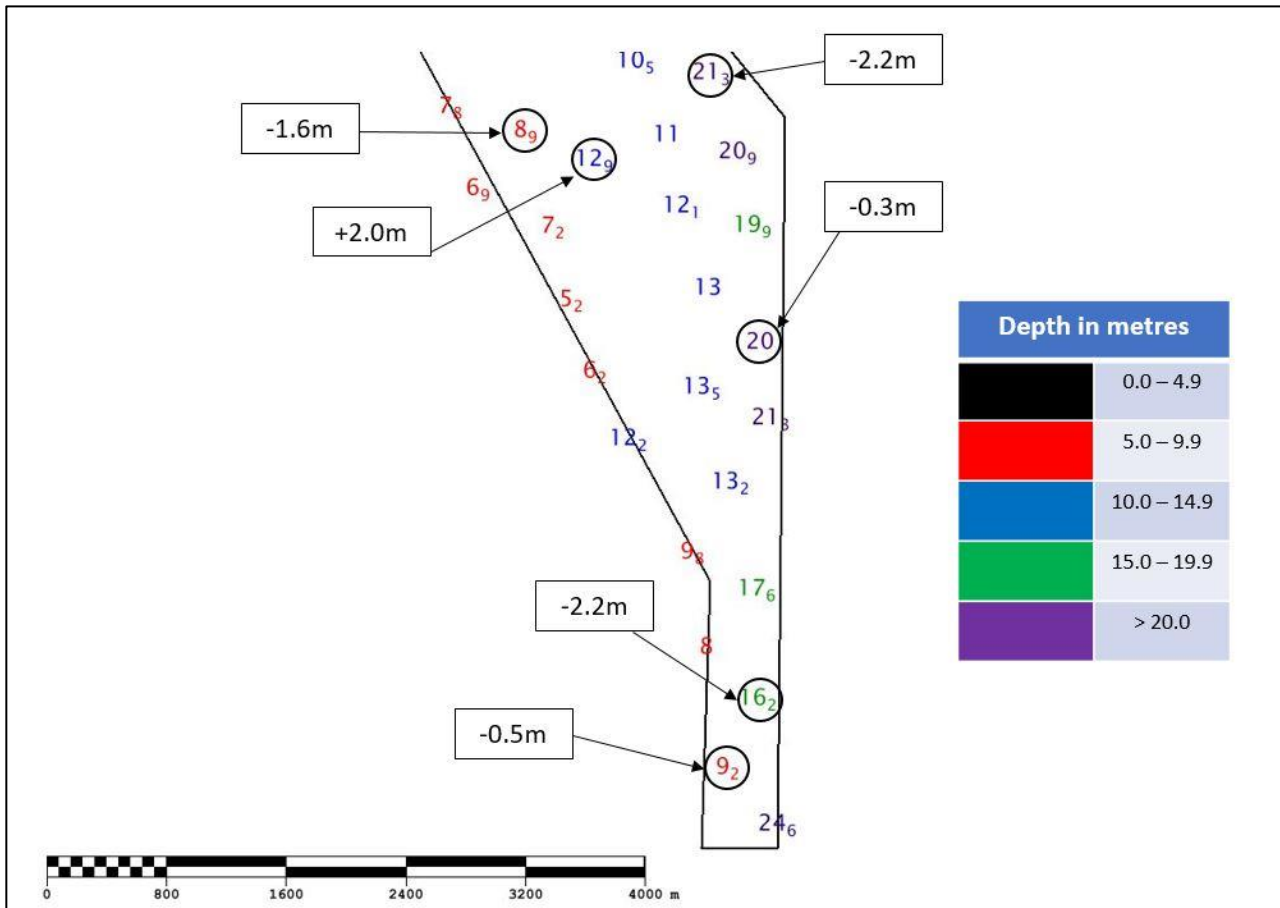


Figure 5: Colour banded depth plot from the 2019 survey with selected depth changes since the 2018 survey. Positive values (+) represent deepening. Negative values (-) represent shoaling.

6. RECOMMENDATIONS FOR FUTURE SURVEYS

Survey Interval

- 6.1 Given the location of the area and the mobility of the seabed within the survey area, EA9a should remain on the annual survey interval with a full survey every 3 years.

Survey Area

- 6.2 The EA9a focused area was readjusted in the 2018 CHWG, however this new survey area was revised and agreed after the HI was issued. Therefore, the revised EA9a survey area should remain the same for the next focused survey in 2021. The full area survey limits should also remain the same. The focused area survey limits and the full area survey limits are highlighted in figure 6.

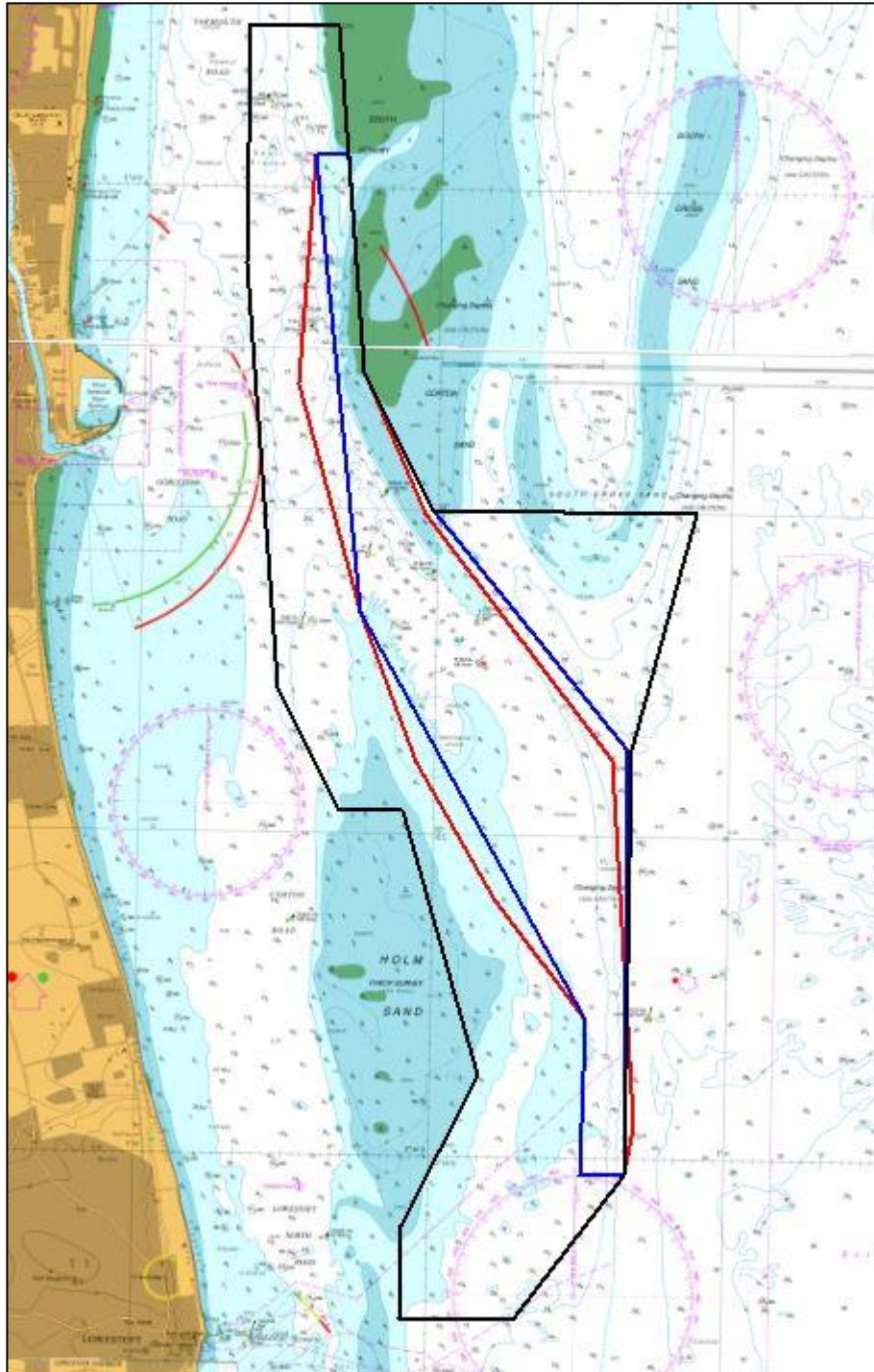


Figure 6: The previous EA9a focused survey is displayed in blue, the updated EA9a focused survey area in red and the full EA9 survey area in black. Survey areas overlaid on BA charts 1534 and 1535.