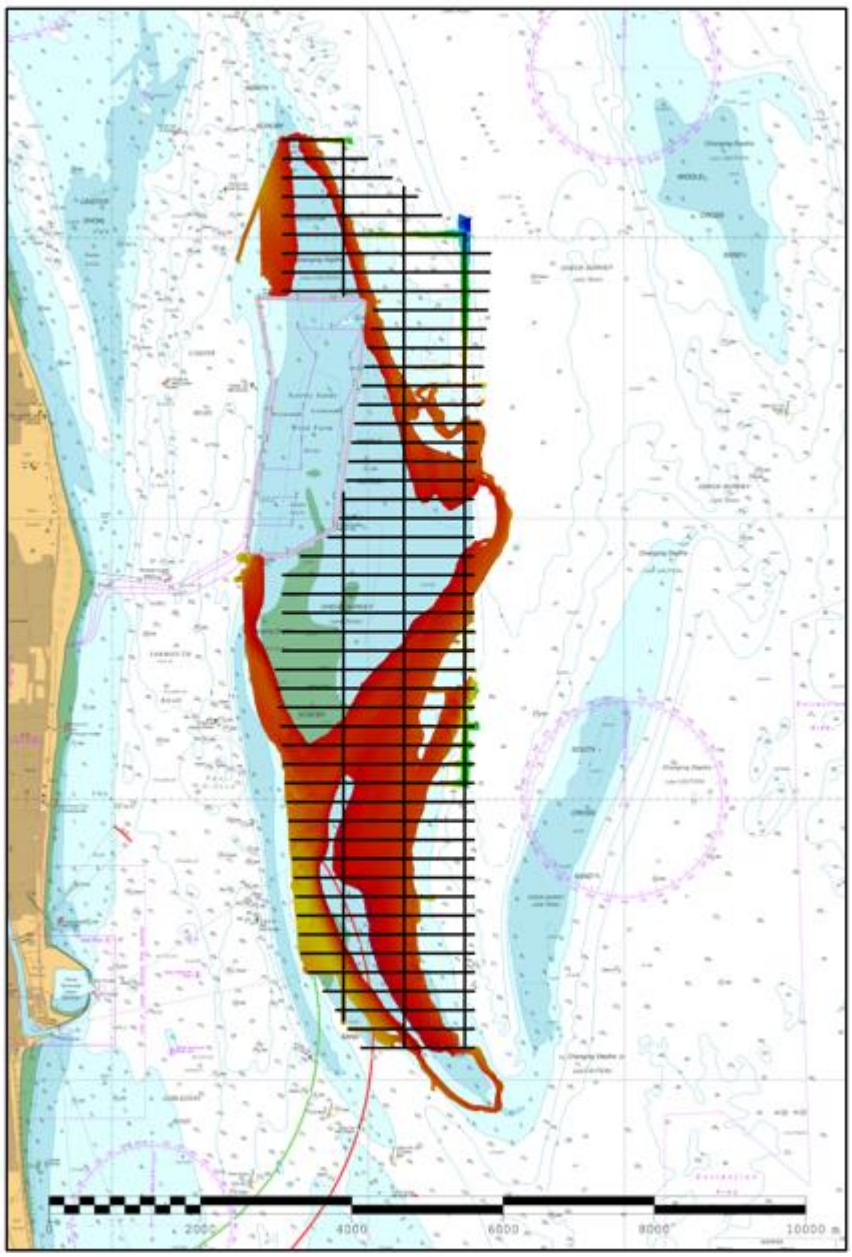
UK Hydrographic Office

EAST ANGLIA
SCROBY SANDS CHECKLINES (EA5)
2025 ASSESSMENT

An assessment of the 2025 hydrographic survey of the area EA5: 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 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.

All depths are to Chart Datum, defined using the UKHO Vertical Offshore Reference Frame (VORF) Model.

SCROBY SANDS CHECKLINES (EA5), 2025

1. SUMMARY

Changes Detected

1.1 The least depth in the 2025 survey was 0.8m, found over Corton Sands in the southern half of the survey area.

1.2 The northern half of Corton Sands sandbank has migrated east.

1.3 South Scroby sandbank has migrated north.

1.4 The area directly east of Middle Scroby has deepened, and the southeastern extents of Middle Scroby has shoaled.

1.5 The 5m+ channel in the south of Corton Sands has moved slightly southwest.

Reasons for Continuing to Resurvey the Area

1.6 Shoal depths and sandbanks in the area remain hazardous and changeable to vessels navigating the area and therefore require continued monitoring through annual resurveys.

Recommendations

1.7 EA5 Full should remain on the current interval, with consideration given to creating additional focused areas in zones of concern, if required.

1.8 Due to difficulties completing full coverage in the past years, the EA5 full area could be split into northern and southern halves, allowing increased efforts to fully survey a smaller area when due.

2. LOCATION

2.1 Survey interval at time of resurvey: 6 years focused area, 12 years full area. Checklines requested in 2025 due to lack of full coverage in 2023 and 2024.

2.2 Area Covered: 12.5 km^2

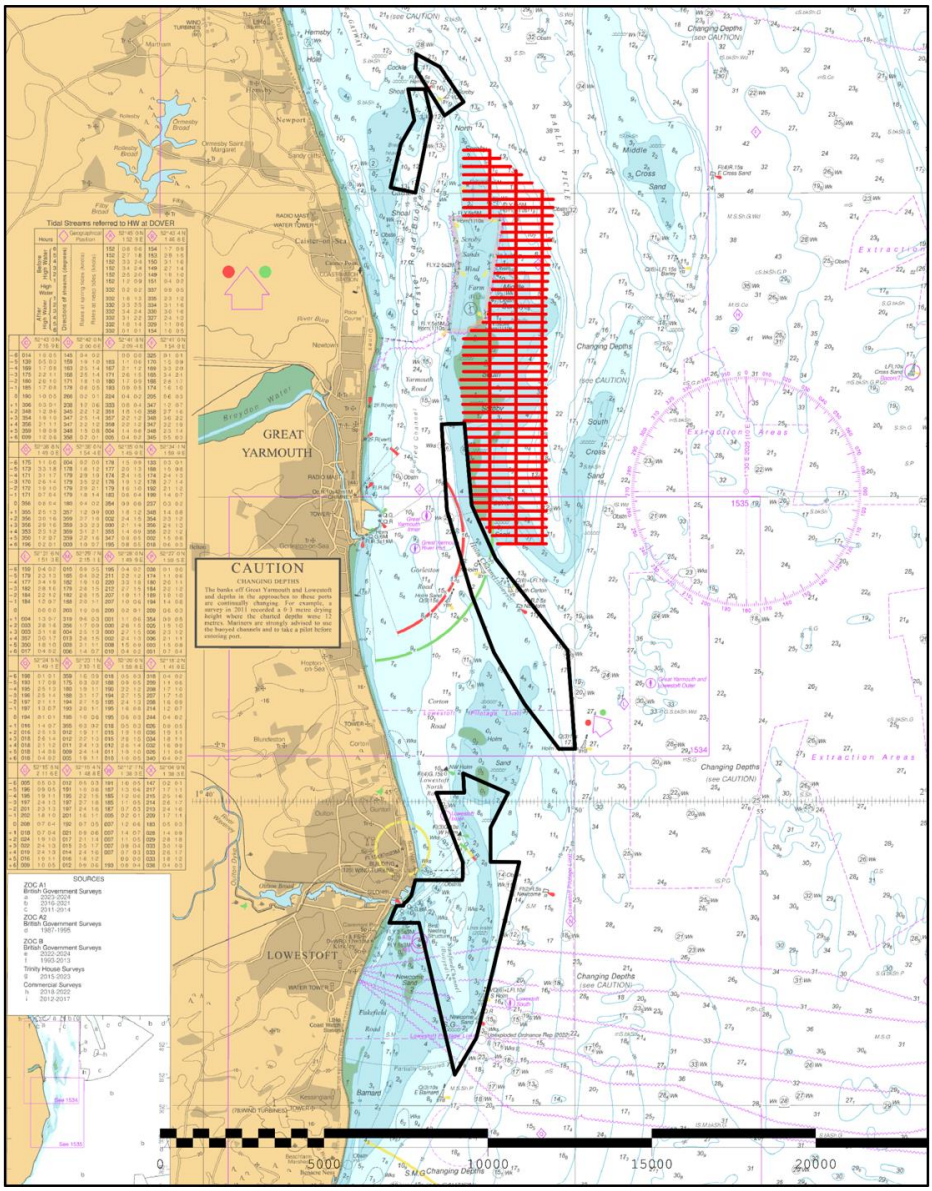

Figure 1: 2025 East Anglia Routine Resurvey areas overlaid on BA Chart 1543 with area EA5 in red

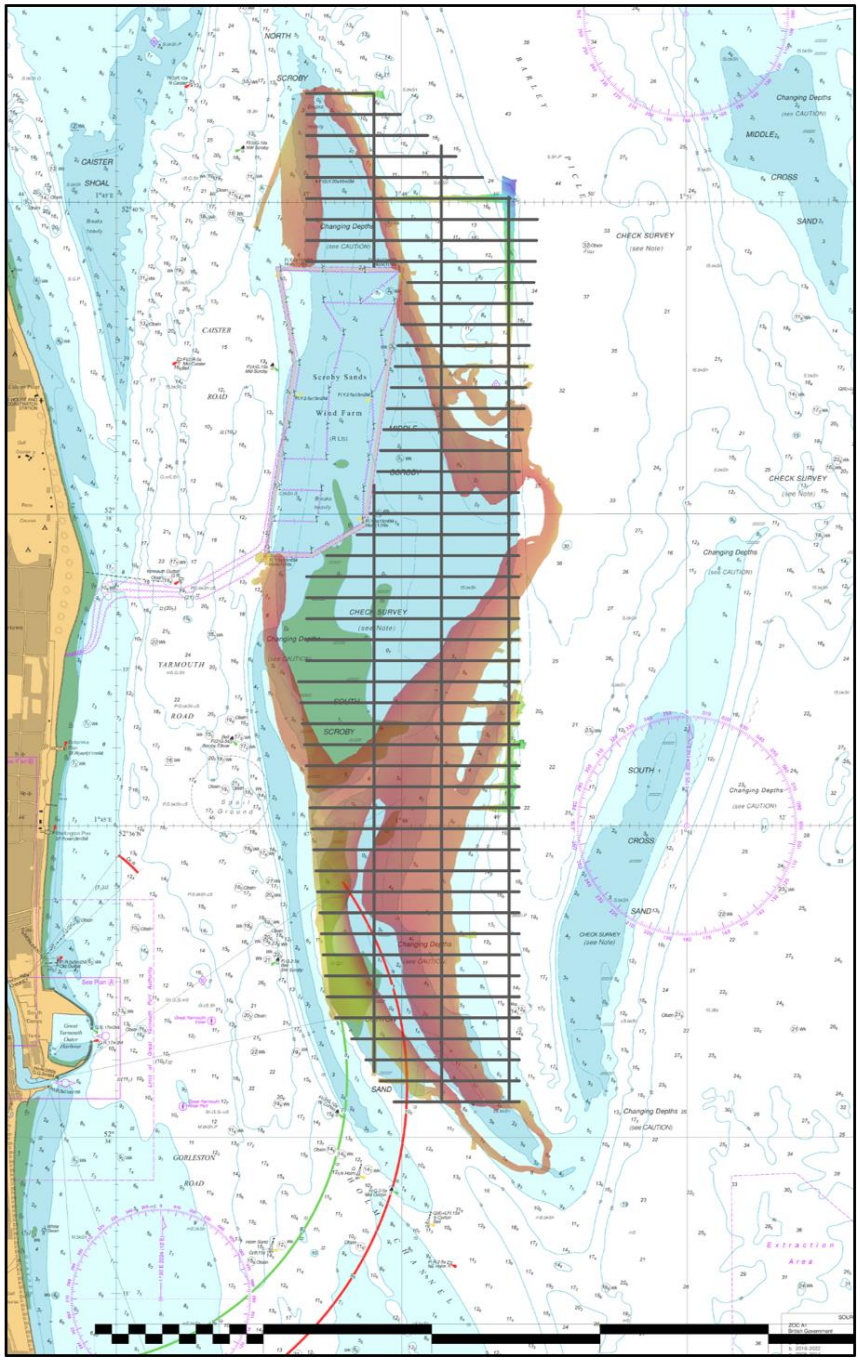

Figure 2a: 2025 survey data with checklines in grey, overlaid on BA Chart 1534

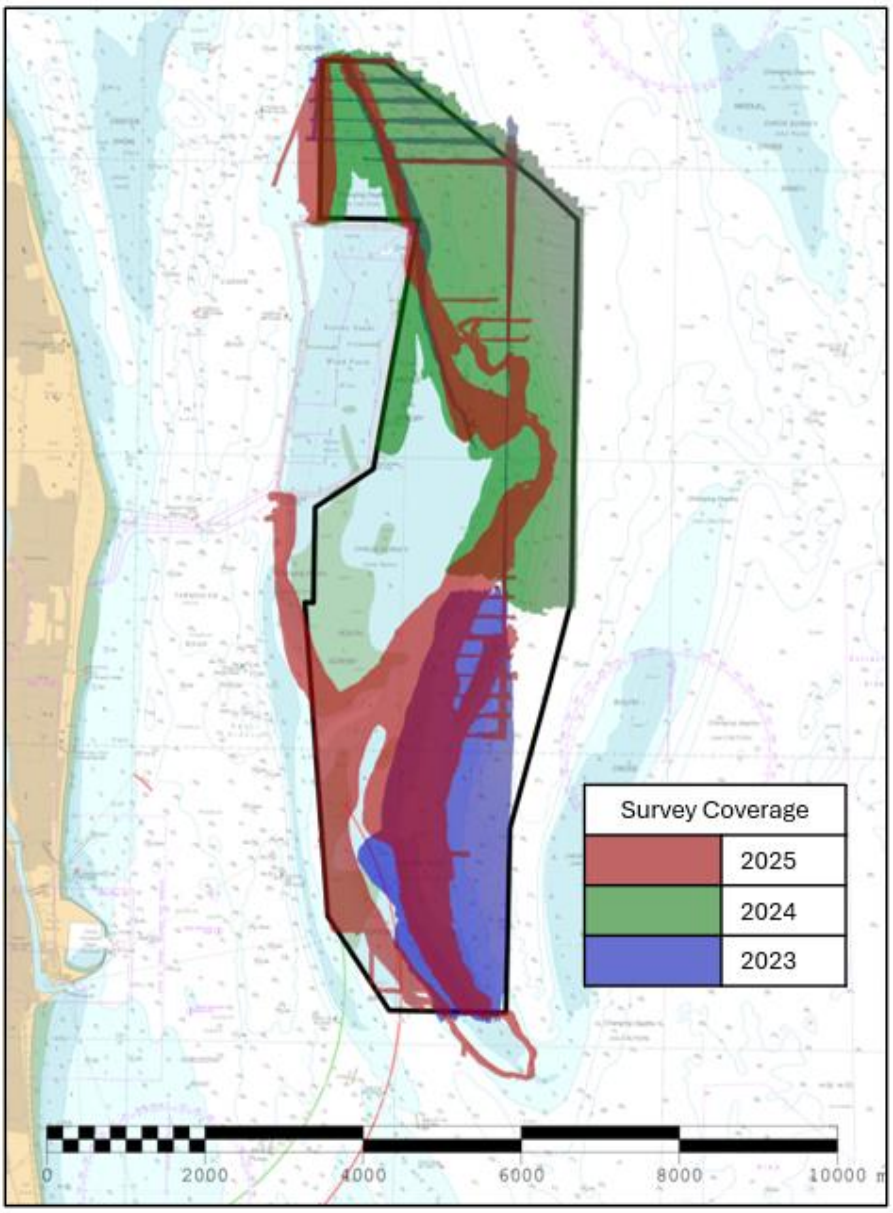

Figure 2b: Survey data from 2025, 2024 and 2023, with EA5 full in black overlaid on BA Chart 1534

3. REFERENCE SURVEY DETAIL

3.1 The previous two full surveys, HI1856 and HI1825, did not achieve full coverage of the intended areas (see Figure 2b). HI1825, in 2023, was intended to be a full survey but only part of the south half was completed, with a few checklines in the north. In 2024, HI1856 covered most of the northern half. Therefore, comparisons between 2025 and previous years will be based on limited data.

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

4. NEW SURVEY DETAIL

4.1 The latest survey is HI1893, surveyed in April 2025 as part of the 2025 Routine Resurvey Programme. This was intended to be a Checkline survey but due to logistical and safety

considerations of running perpendicular lines towards the shoaling sandbanks, the contractor (upon agreement with the MCA) was instead requested to find the 5m contour. As a result, the survey comprised some areas of full coverage, with other areas left unsurveyed.

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

5. DESCRIPTION OF RECENT BATHYMETRIC CHANGE

Note: Due to sparse survey cover in the 2023 and 2024 surveys (see Figure 2b), comparison is limited in places.

5.1 Figures 3a and 3b show significant depths from the 2025 survey, with depth comparisons included where previous surfaces overlapped. The shoalest depth captured in 2025 was 0.8m in the central south area. Due to inconsistencies in the area surveyed this has no comparison depth to recent years. It appears that the northern half of Corton Sands sandbank has migrated east, and this least depth is on the west bank, not the east bank as charted in chart 1534. This is supported by Figure 5b, where there is significant shoaling to the east of the Corton Sands drying area. The southern end of Corton Sands looks to be migrating west, as mentioned in 5.7

5.2 On the eastern edge of the survey the least depth captured is 7.2m, seen in Figure 3a, which has shoaled by 1.7m since 2024.

5.3 The 3m depth in Figure 3b shows that the drying area over South Scroby is now further north than currently charted. This can also be seen in Figure 6, where the 5m contour is now over the charted drying heights indicating the sandbank has migrated northwards. Unfortunately, the southwestern quadrant of EA5 Full has not been covered in recent years (see Figure 2b) so no depth comparisons can be made.

5.4 2024 AIS data in Figure 9 shows the majority of shoal soundings highlighted in Figures 3a and 3b are in areas which see very little to no traffic. However, there is a significant number of vessels that navigate around the Scroby Sands Wind Farm around the 3.2m and 3.9m soundings.

5.5 Figures 4 and 5a both show northern movement of small sandwaves in the checkline coverage of the northeast corner of the survey. These Figures also show that directly east of Middle Scroby it has deepened by up to 6m since 2023, as seen in the blue colouring on the difference surfaces.

5.6 To the southeast of Middle Scroby, on the eastern extents of the 2025 survey it has shoaled by up to 6.3m since 2024, as seen in the red and pink colouring in Figure 4. This is also seen in Figure 6 as the 5m contour has moved east since 2024.

5.7 The 5m contour in Figure 6 also shows that at the southern boundary of the area the 5m+ channel has moved slightly to the southwest, and further north has expanded to the east, compared to 2023. The difference surface in Figure 5b also shows the southwest movement of the channel as it deepens to the east and shoals to the west.

5.8 Figure 7 shows the 10m contour (where captured) has seen little to no change.

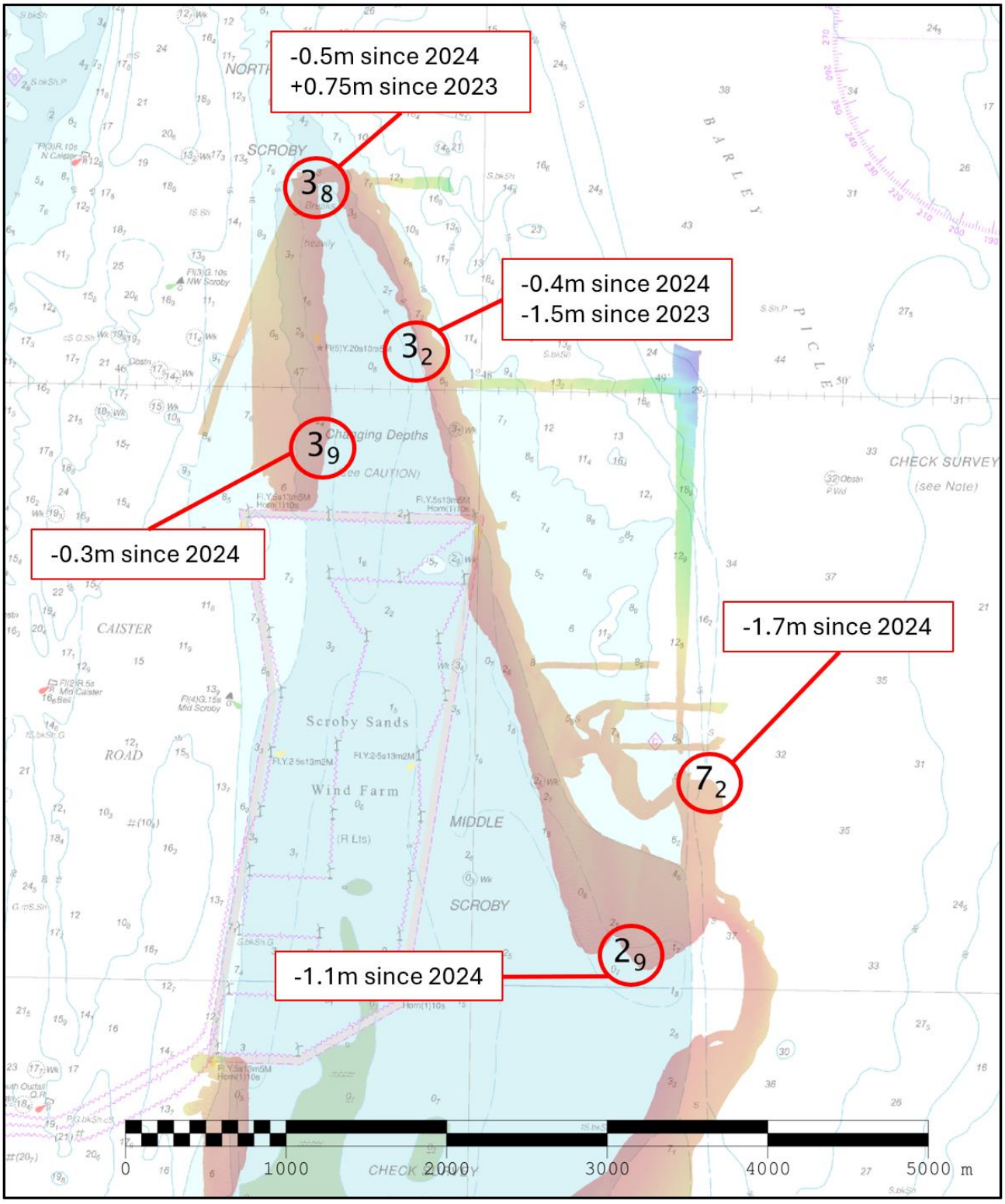

*Figure 3a: Significant Depth soundings in the **north** highlighted, overlaid on BA Chart 1534*

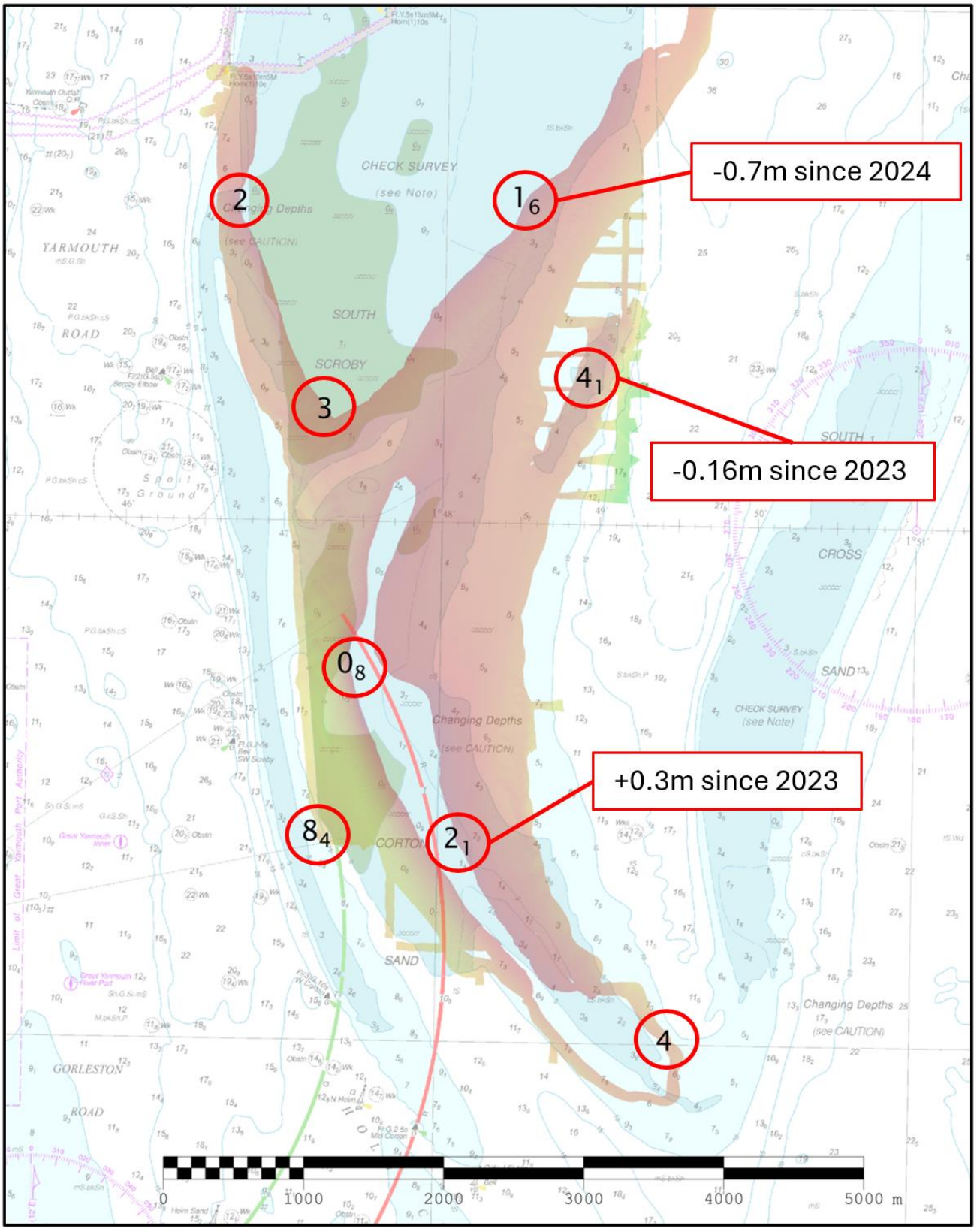

*Figure 3b: Significant Depth soundings in the **south** highlighted, overlaid on BA Chart 1534*

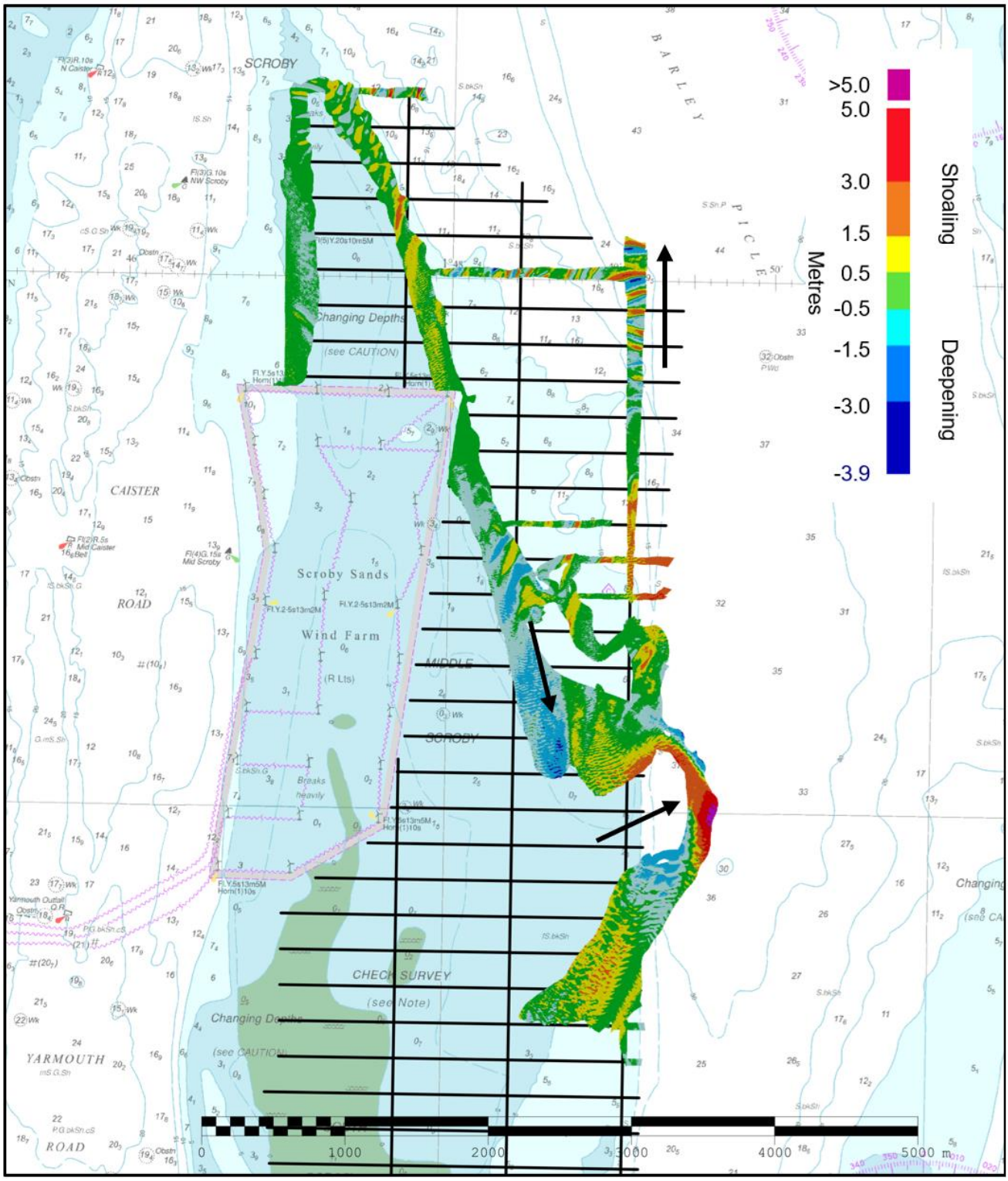

*Figure 4: Difference surface showing bathymetric changes in the **northern** half of the survey area between the 2024 and 2025 surveys overlaid on BA Chart 1534 (Black arrows represent sandwave migration since 2024 survey)*

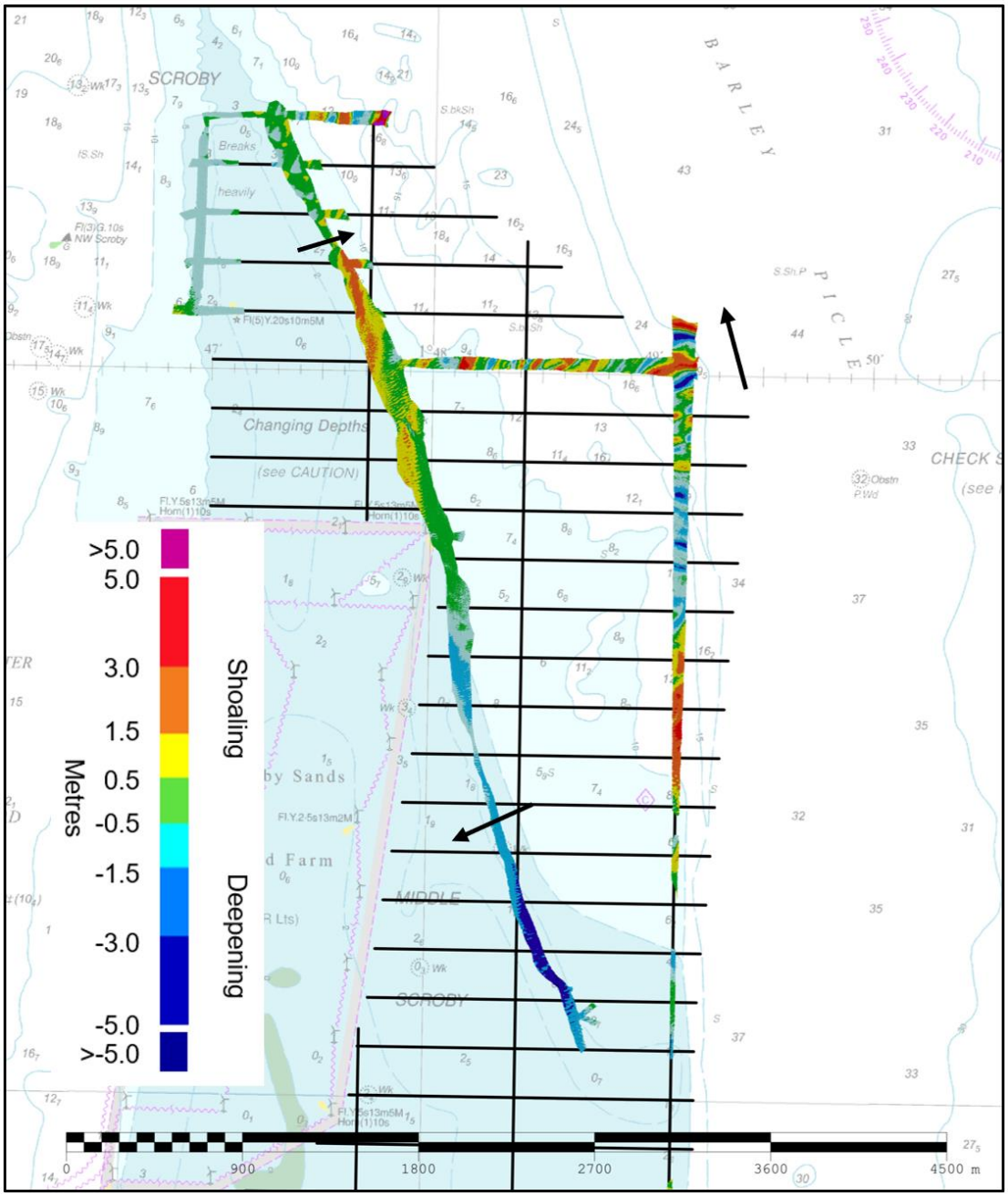

*Figure 5a: Difference surface showing bathymetric changes in the **northern** half of the survey area, between 2023 and 2025. Surveys overlaid on BA Chart 1534 (Black arrows represent sandwave migration since 2023 survey)*

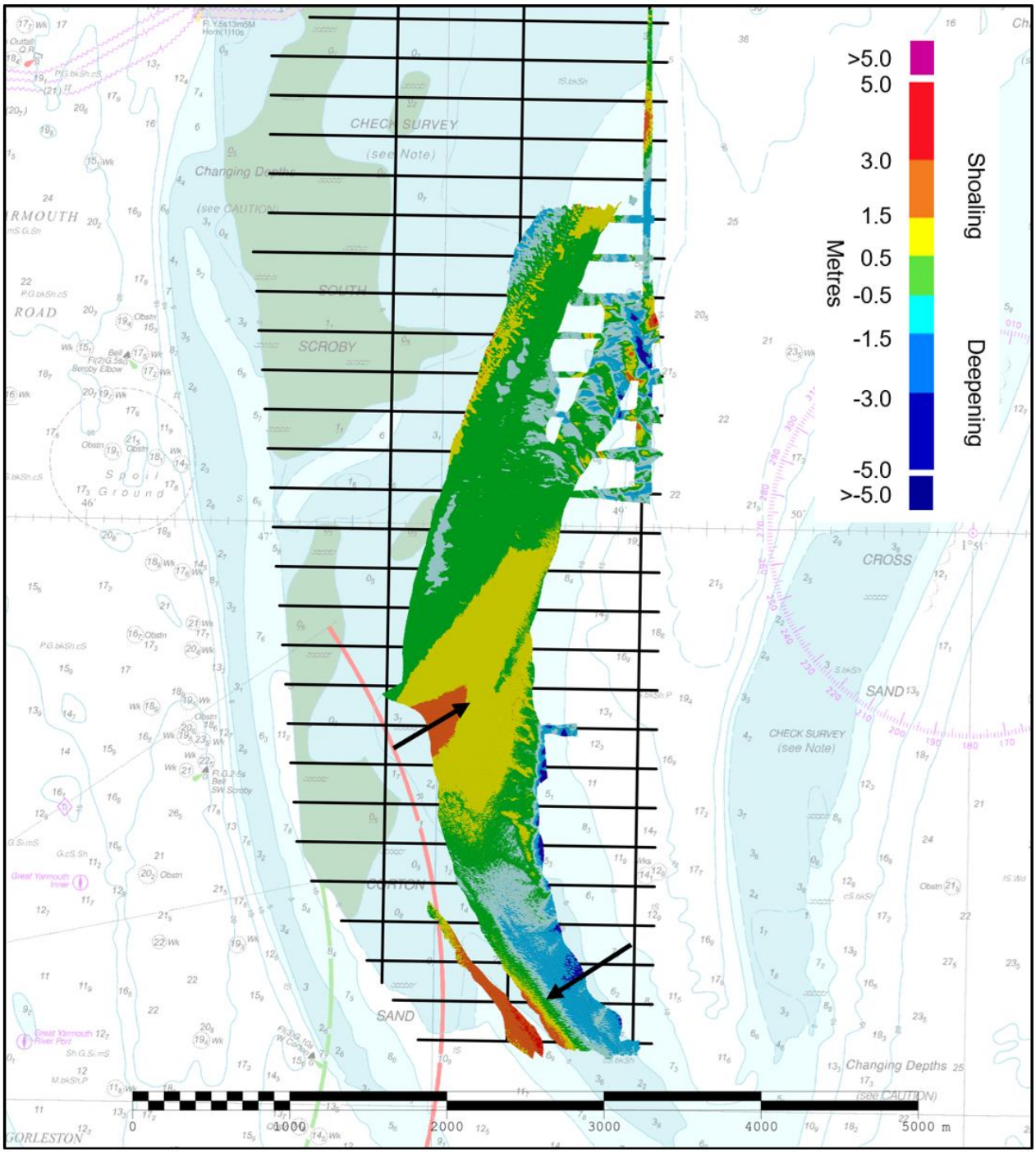

*Figure 5b: Difference surface showing bathymetric changes in the **southern** half of the survey area, between 2023 and 2025. Surveys overlaid on BA Chart 1534 (Black arrows represent sandwave migration since 2023 survey)*

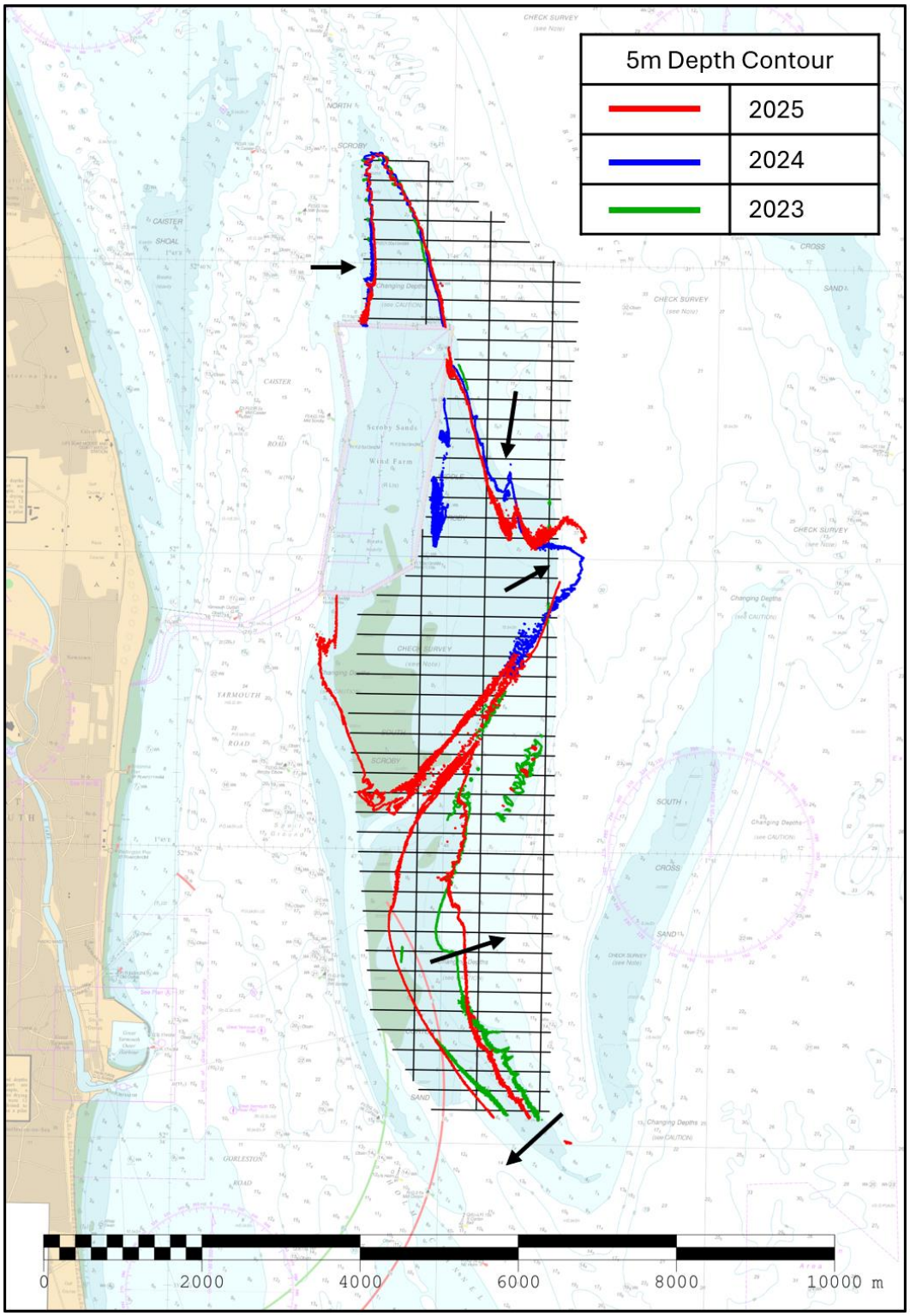

Figure 6: Contour plot showing changes in the 5m contours between 2023 (green), 2024 (blue) and 2025 (red). Black arrow represents feature migration.

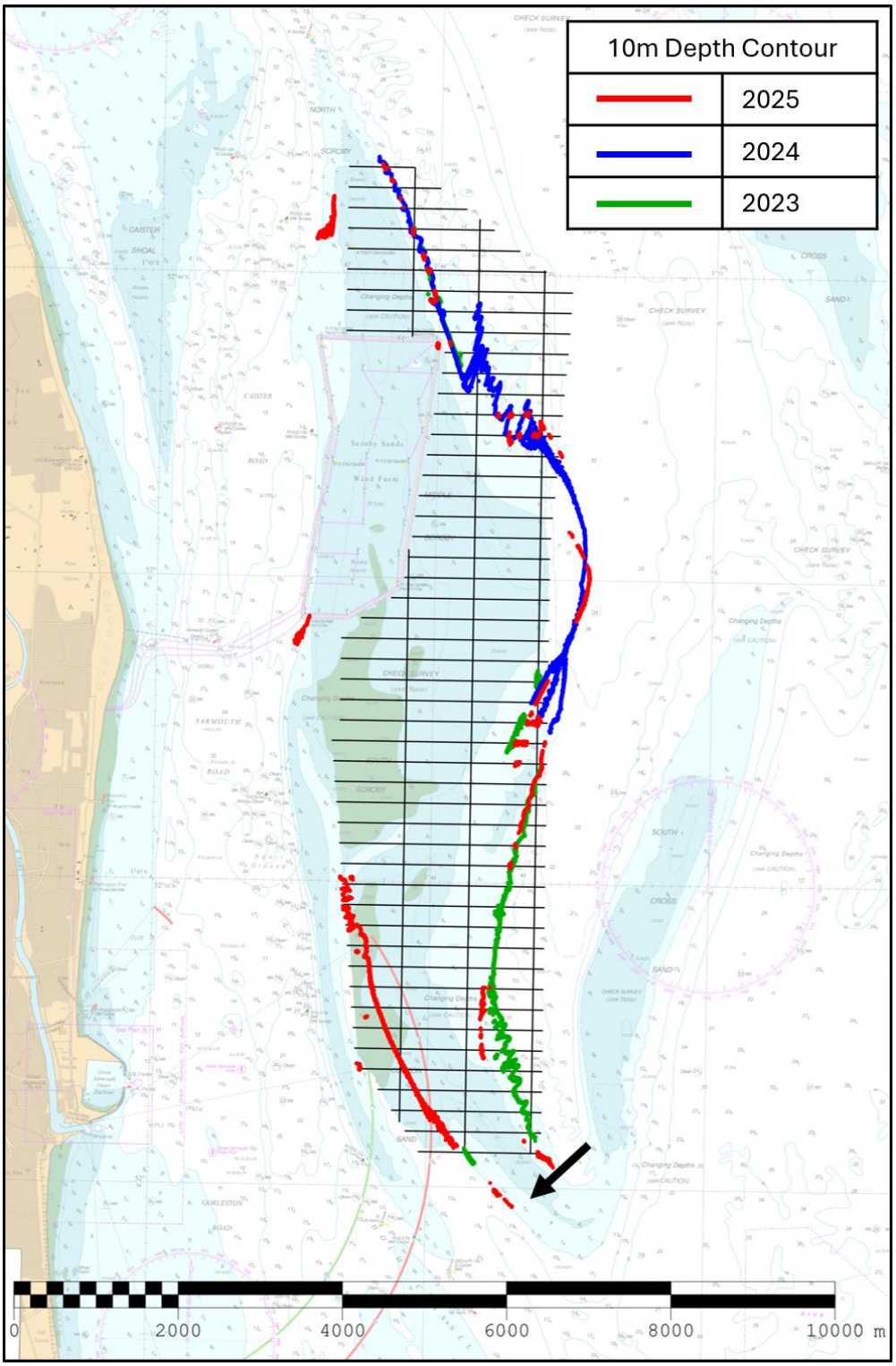

Figure 7: Contour plot showing changes in the 10m contours between 2023 (green), 2024 (blue) and 2025 (red). Black arrow represents feature migration.

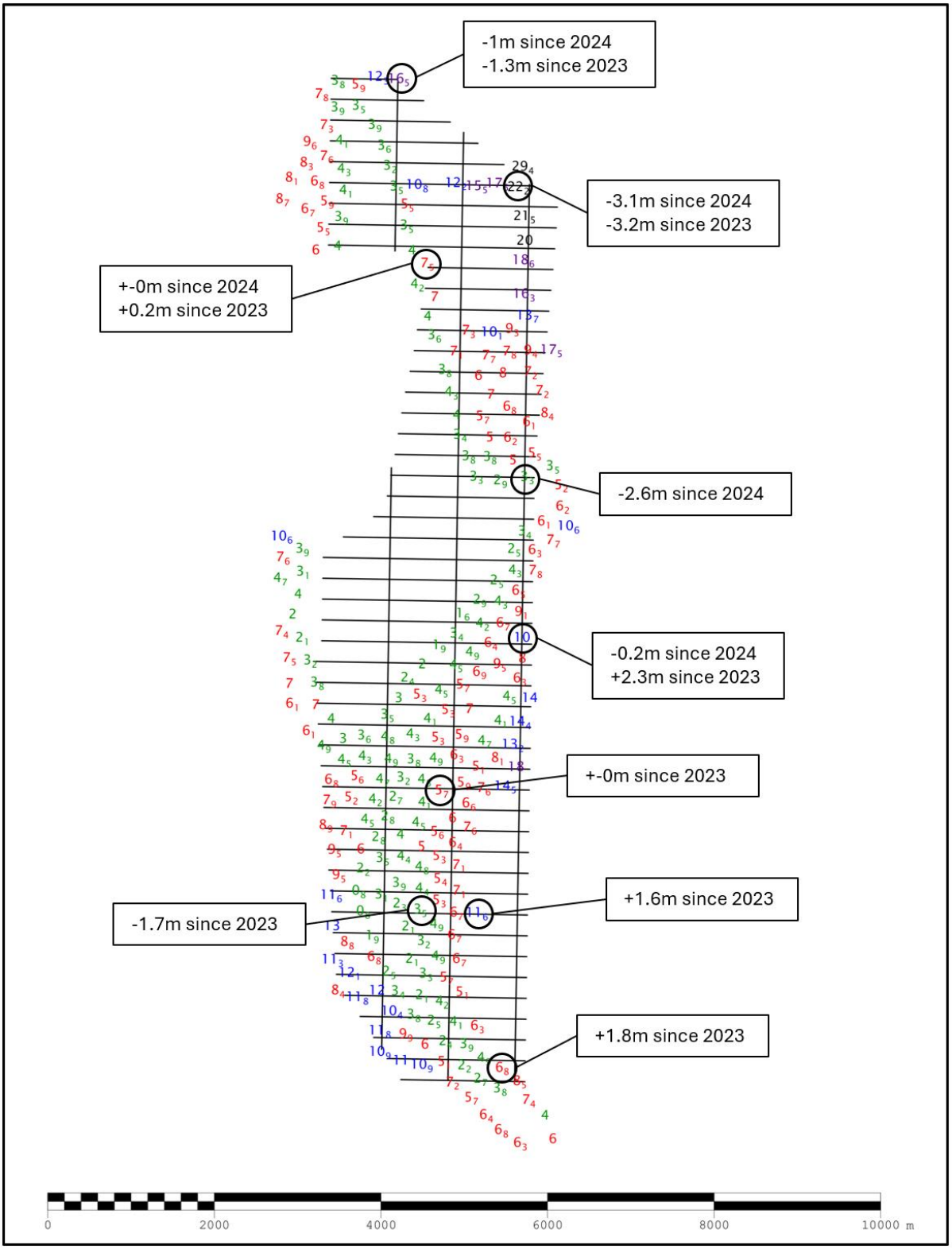

Figure 9: Colour banded depth plot from the 2025 survey with selected depth changes since the 2023 and 2024 surveys. Positive values (+) represent deepening. Negative values (-) represent shoaling.

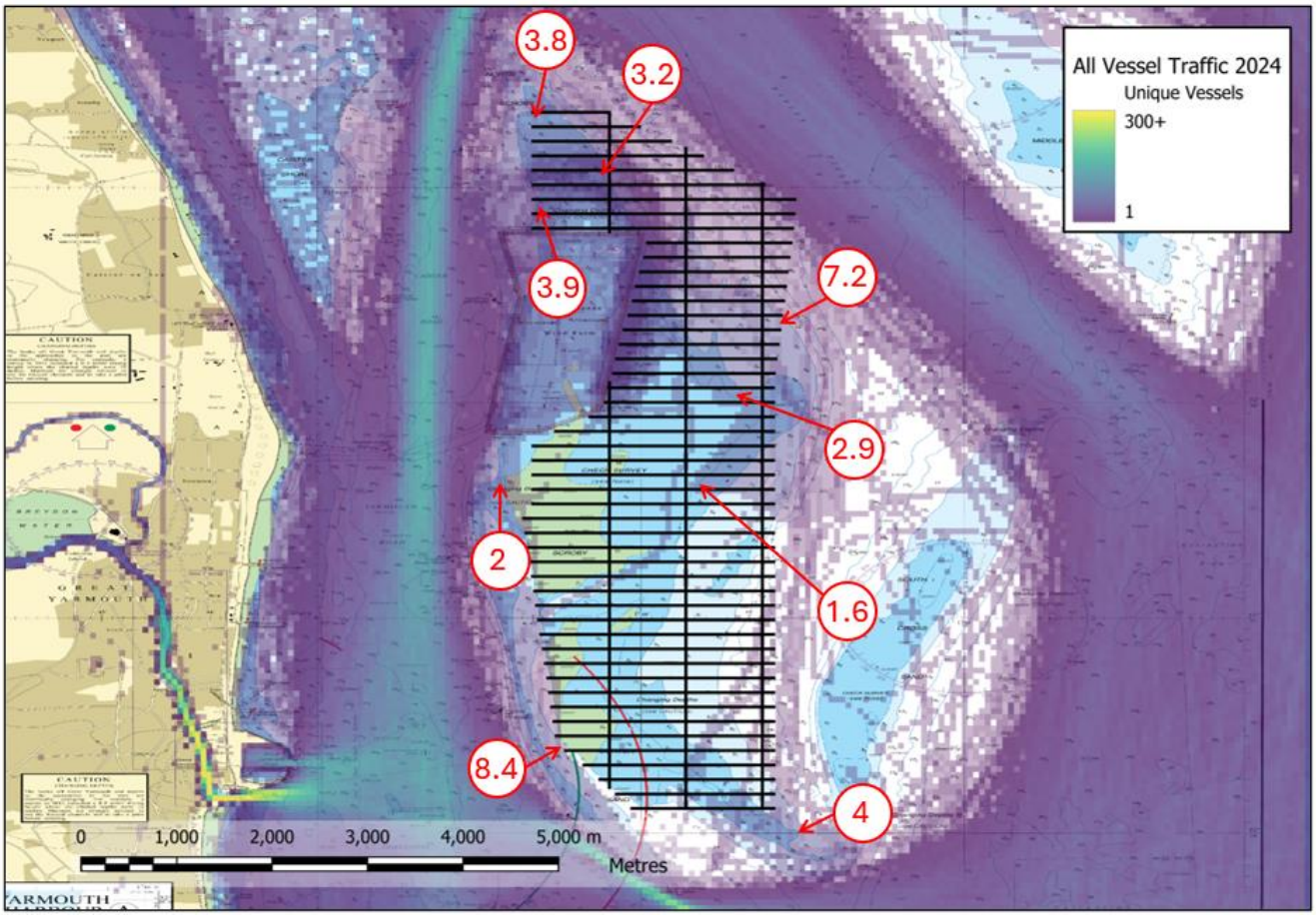

Figure 9: AIS heatmap at 100m resolution grid size. Density unit is unique vessels within the grid square within 2024. EA5 checklines in black and significant depth soundings (m) in trafficked areas overlaid on chart 1534.

6. RECOMMENDATIONS FOR FUTURE SURVEYS

Survey Interval

6.1 Since 2023, most of the Full EA5 area has been surveyed (see Figure 2b), most of the gaps in coverage are likely above the 2m contour where surveying would not be expected to take place. Therefore, continuation of the 6 yearly focused area, (the next of which will take place in 2029) and 12 year full area, would be recommended. The exception to this would be where there are specific areas of interest which have not been covered, or requires continued monitoring. Figure 10 shows that recent survey coverage around Corton Sand has a gap over the charted drying patch which is likely deeper than charted as the surrounding depths are around 12m. Consideration could be given to adding this into the EA9 Holm Channel survey in 2026, or adding as a focused area for EA5.

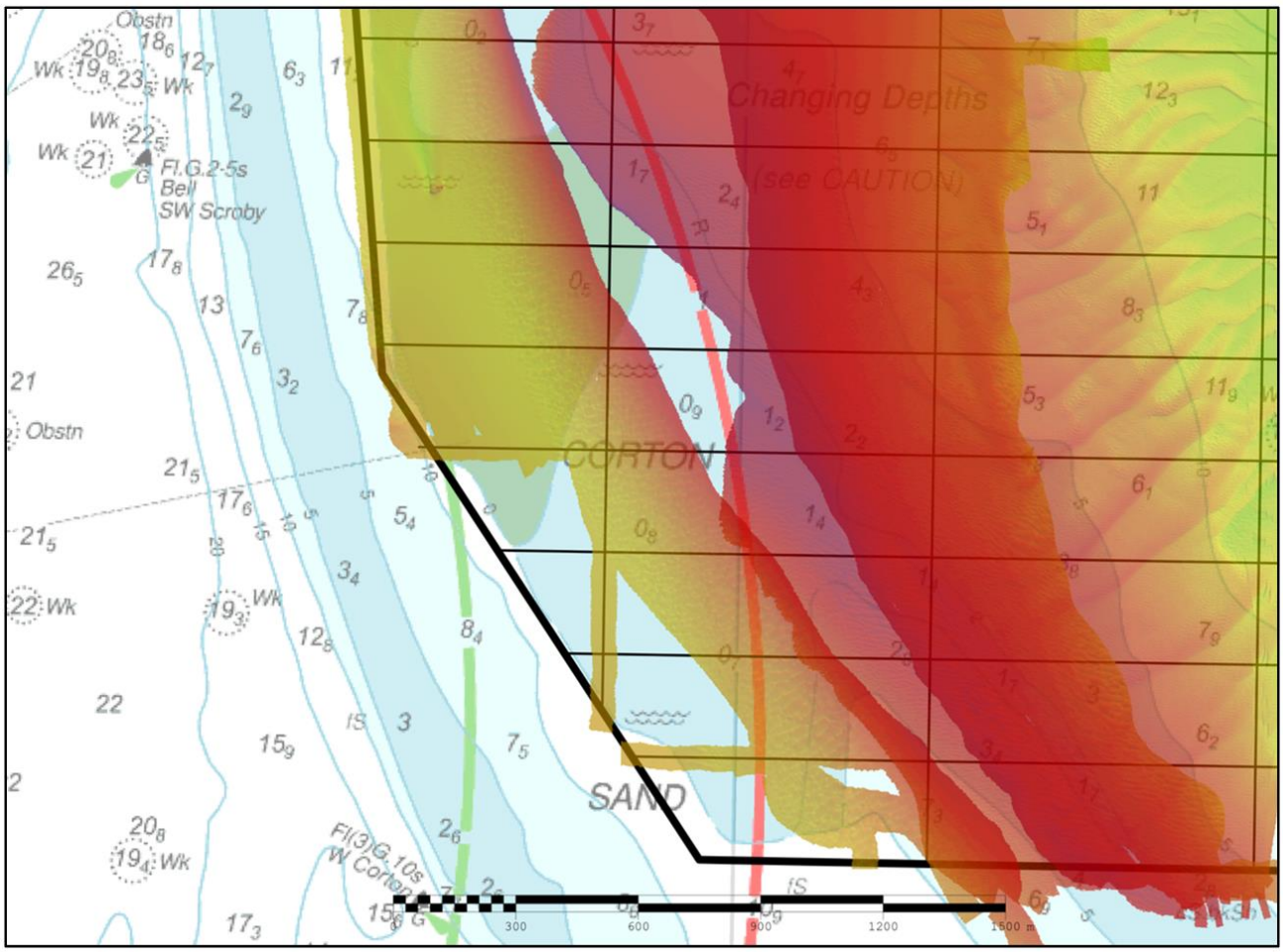

Figure 10: Gap in coverage from recent surveys, with EA5 full and checklines in black. Coverage from 2025 and 2023 survey overlaid. (not covered in 2024)

Survey Area

6.2 The current full EA5 area sufficiently covers from North Scroby down to Corton Sand. However, full coverage has been difficult to achieve in the past 3 surveys, making analysis of sandbank movement difficult where there is little overlapping data. Consideration could be given to splitting the area into separate north and south sections, potentially moving them onto separate years to enable full coverage of at least one area when due. For example, in 2035 when the next full survey is scheduled, the northern half could be surveyed, with the southern half being covered the following year. See Figure 11 below.

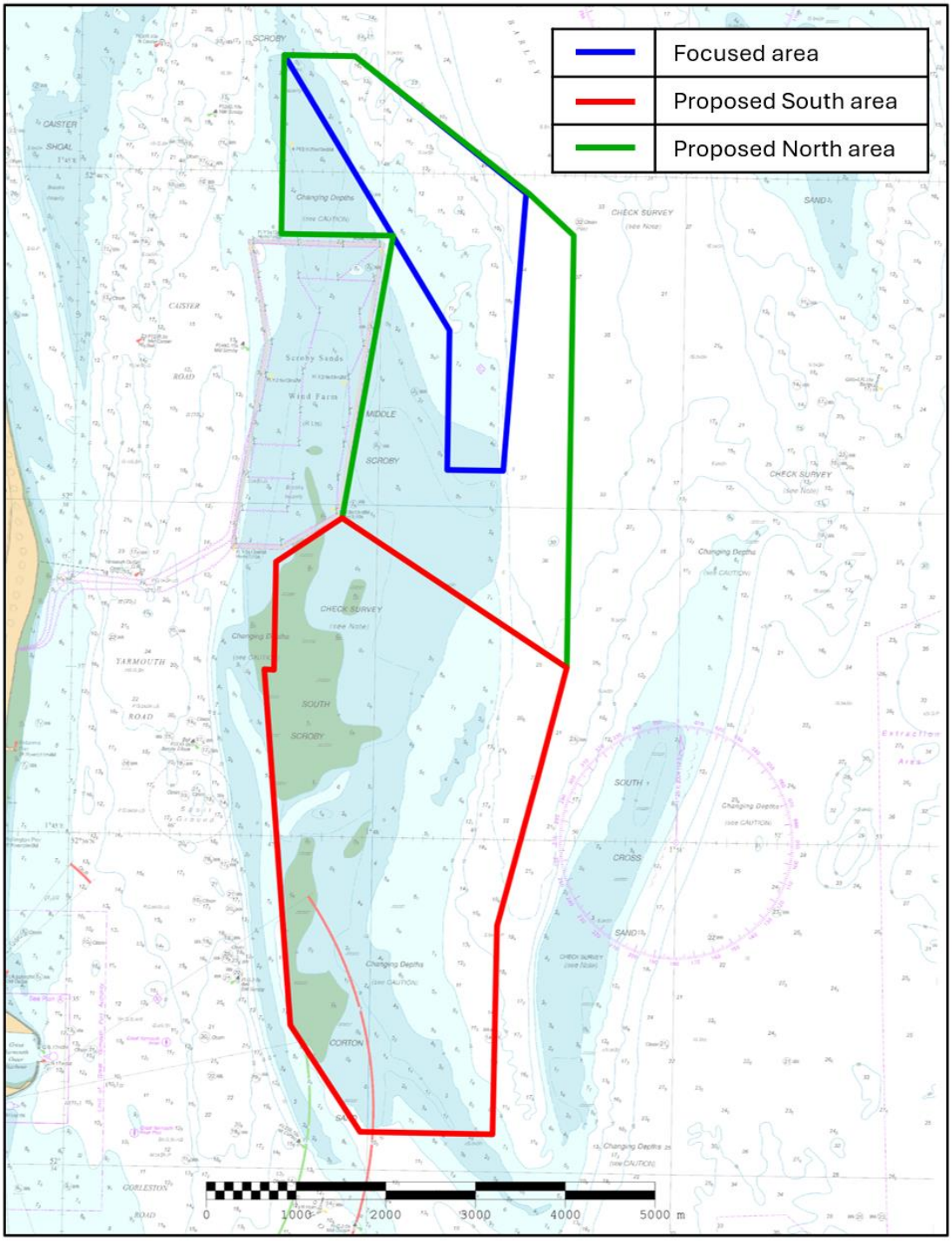

Figure 11: Proposed change to split survey limits of area EA5 Full into North and South blocks

The coordinates of the recommended adjusted survey area limits for the full area EA5 are shown below:

Current Limits:
EA5 full total area: 29.69 km^2

Proposed New Limits:
EA5N total area: 13.39 km^2
EA5S total area: 16.30 km^2

EA5 North Coordinates

	Latitude	Longitude
1	52.678330N	001.795000E
2	52.664819N	001.824056E
3	52.660706N	001.831514E
4	52.640329N	001.831517E
5	52.617362N	001.831520E
6	52.632000N	001.794130E
7	52.660400N	001.801780E
8	52.660400N	001.783330E
9	52.678330N	001.783330E

EA5 South Coordinates

	Latitude	Longitude
1	52.570457N	001.820547E
2	52.570490N	001.798755E
3	52.581080N	001.787000E
4	52.616709N	001.781739E
5	52.616670N	001.783330E
6	52.627510N	001.783365E
7	52.632000N	001.794130E
8	52.617362N	001.831520E
9	52.606683N	001.827184E
10	52.591371N	001.820730E