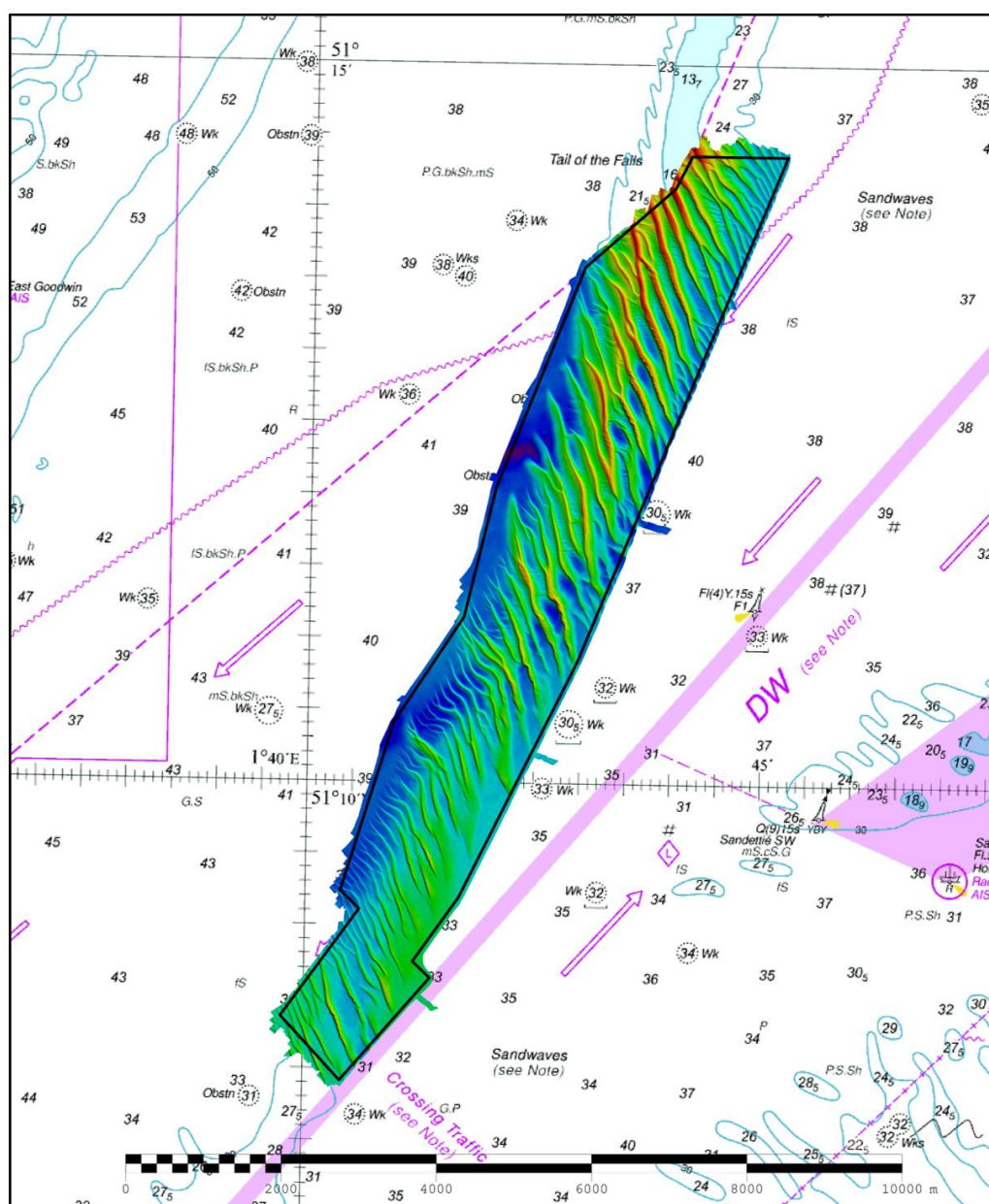


DOVER STRAIT

TAIL OF THE FALLS (DWR C1)

2025 ASSESSMENT

An assessment of the 2025 hydrographic survey of the area DWR C1: 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).

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

TAIL OF THE FALLS (DWR C1), 2025

1. SUMMARY

Changes Detected

- 1.1 The least depth in the HI survey area deepened in 2025 to 19.3m, compared to the previous least depth of 18.5m in 2024, located 25m to the north.
- 1.2 Significant depths in the Deep Water Route (DWR) are 20.9m, 27.4m and 26.7m all of which have shoaled on the same sandwaves since 2024. Significant depth 23.3m in the centre of the DWR has deepened over the same sandwave since 2024.
- 1.3 Sandwaves continue a rotational movement with the northwestern side of the survey migrating northeast, and the southeastern side migrating southwest.
- 1.4 Despite sandwaves moving, the main bank has maintained its overall shape since 2024.

Reasons for Continuing to Resurvey the Area

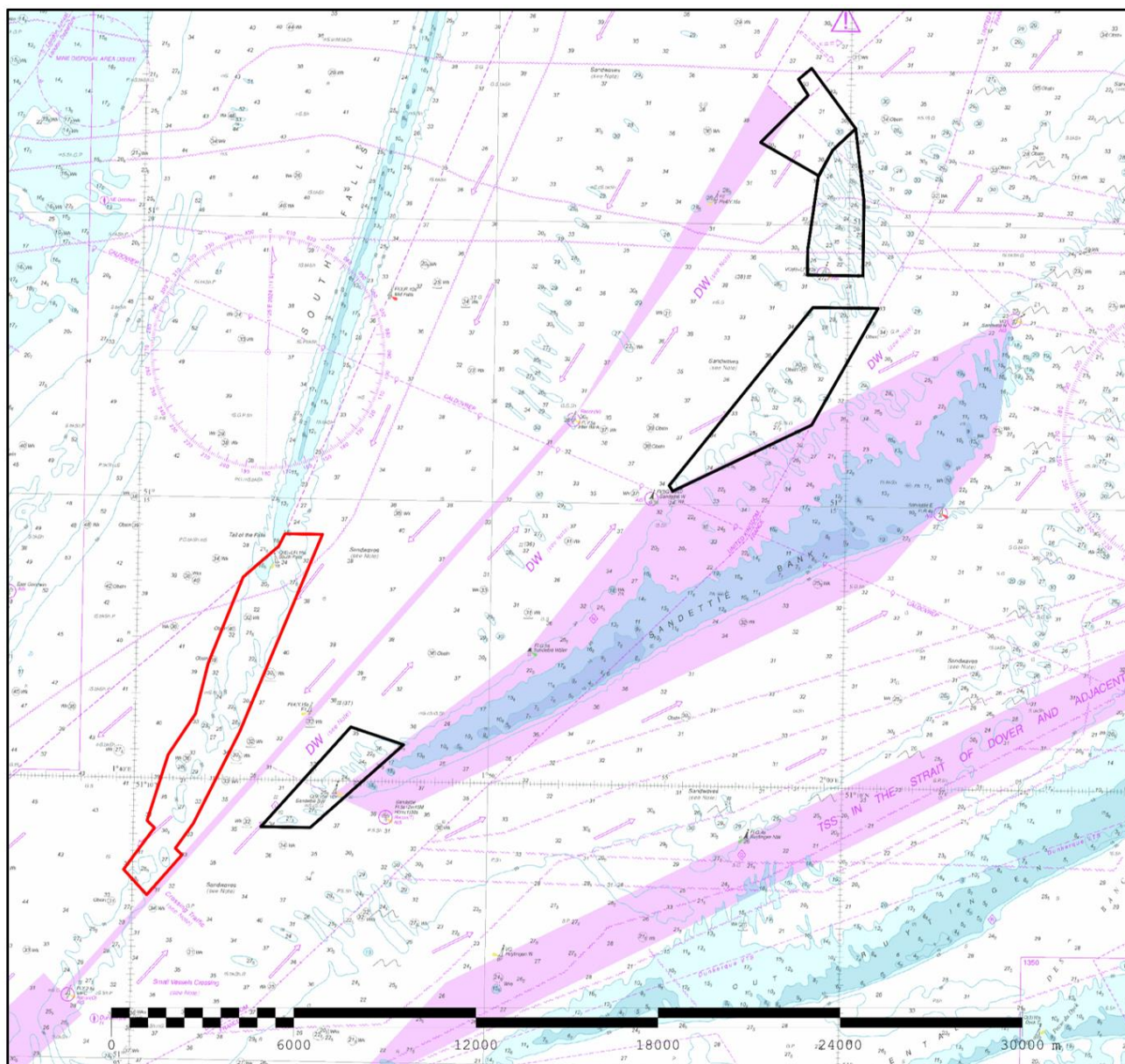
- 1.5 Depths in the area remain hazardous and changeable to deep draught vessels navigating the area. The area sees a high volume of traffic (see AIS data in Figure 9) and therefore requires continued monitoring through annual resurveys.

Recommendations

- 1.6 Given the location of the area in relation to the DWR and the draught of vessels navigating the area, C1 should remain on the annual survey interval.
- 1.7 Due to minimal migration of the sandwaves affecting overall sandbank location, there are no recommended changes to the survey area. However, the survey area should be monitored closely due to continuing sandwave shoaling.

2. LOCATION

- 2.1 Survey interval at time of resurvey: Annual
- 2.2 Area Covered: 22.7 km²



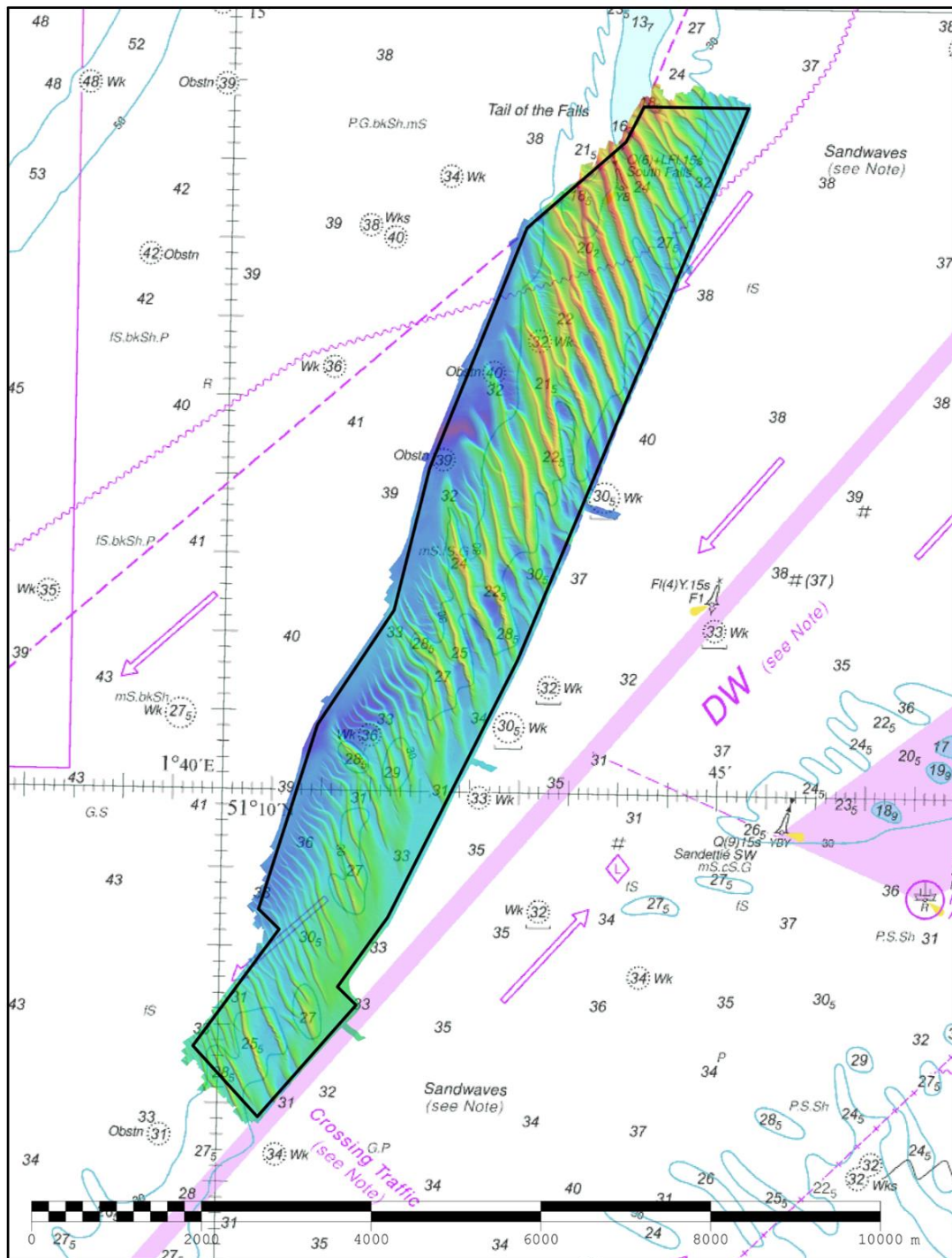


Figure 2: 2025 survey data overlaid on BA Chart 0323

3. REFERENCE SURVEY DETAIL

- 3.1 The previous full survey was conducted as part of the 2024 Routine Resurvey Programme, in July 2024 as part of HI1865. It was surveyed prior to this in October 2023 as part of HI1834.
- 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 full survey is HI1901, surveyed in April-May 2025 as part of the 2025 Routine Resurvey Programme.
- 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

- 5.1 Significant depths from the 2025 survey are shown in Figure 3:
 - The least depth in the 2025 survey is 19.3m, 0.3m deeper than the same location in 2024. It is located at the northern edge of the survey limits in a DWR to the south of the Tail of the Falls. The previous least depth was only 25m away to the north at 18.5m in 2024, now 19.4m, indicating that this whole sandwave has deepened slightly within the year.
 - A controlling depth of 20.9m is located north of the centre of the DWR and has shoaled in place by 0.8m. However, the previous controlling depth on this sandwave was found a few metres away at 21m in 2024, so the least depth has only shoaled by 0.1m in a year.
 - A controlling depth of 23.3m is in the centre of the DWR. This depth has shoaled by 0.5m since 2024, but the least depth over the bank has increased by 0.4m compared with depth 22.9m found 5m to the east by the 2024 survey.
 - To the south of the area there are two significant depths highlighting the crest of two sandwaves. The 27.4m sounding has shoaled in place by 4.4m since 2024 but overall, the sandwave has deepened by 0.4m, with a least depth of 27m in 2024. Similarly, the 26.7m sounding has shoaled in place by 2.5m, but the sandwave itself has deepened by 0.8m, with a least depth of 25.9m in 2024. Generally, sandwaves in the south of the area have deepened since 2024.
- 5.2 The difference surface in Figure 4 shows most of the area has remained at a stable depth since 2024, with smaller localised movement of sandwaves causing the major changes.
- 5.3 Figure 5 shows that since 2023 the more significant depth changes have been occurring on the central western and northwestern side of the survey, as the sandwaves migrate northeast. The 30m contour plot in Figure 6 also shows this northeastern movement since 2023.
- 5.4 The 40m contour plot in Figure 7 shows that whilst the northwestern side of the survey is migrating northeast, sandwaves in the centre of the southeastern side are moving in the opposite direction, to the southwest; a rotating trend that has continued since 2023 and can also be seen in Figures 4 and 5.
- 5.5 Continued sandwave migration is evident throughout the survey area as seen in the changing depths in Figure 8. Sandwave movement has caused both deepening and shoaling, but despite these changes, the overall depth, main shoal bank shape and position in the survey area have remained consistent.

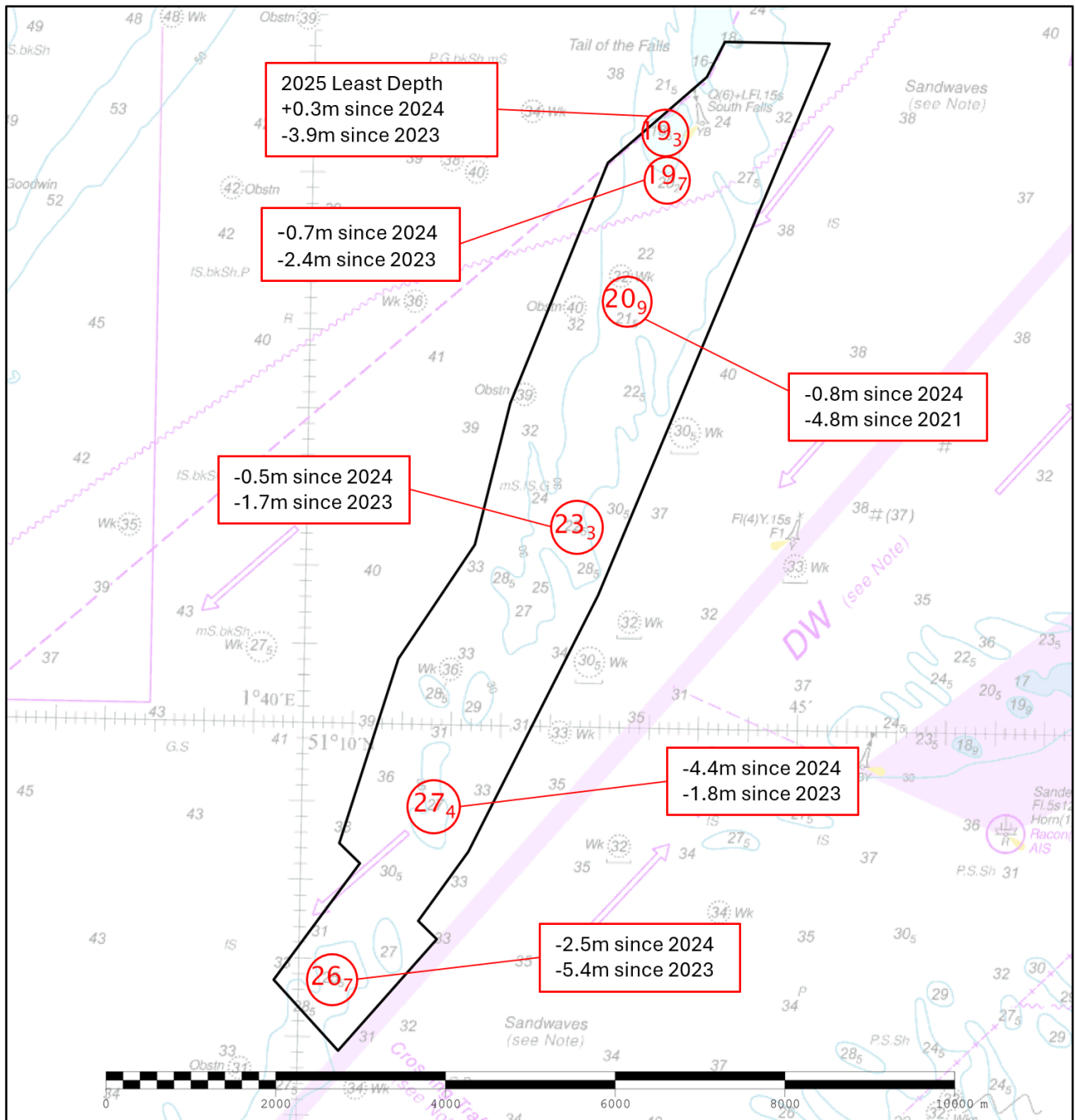


Figure 3: Significant Depth sounding(s) highlighted, overlaid on BA Chart 0323

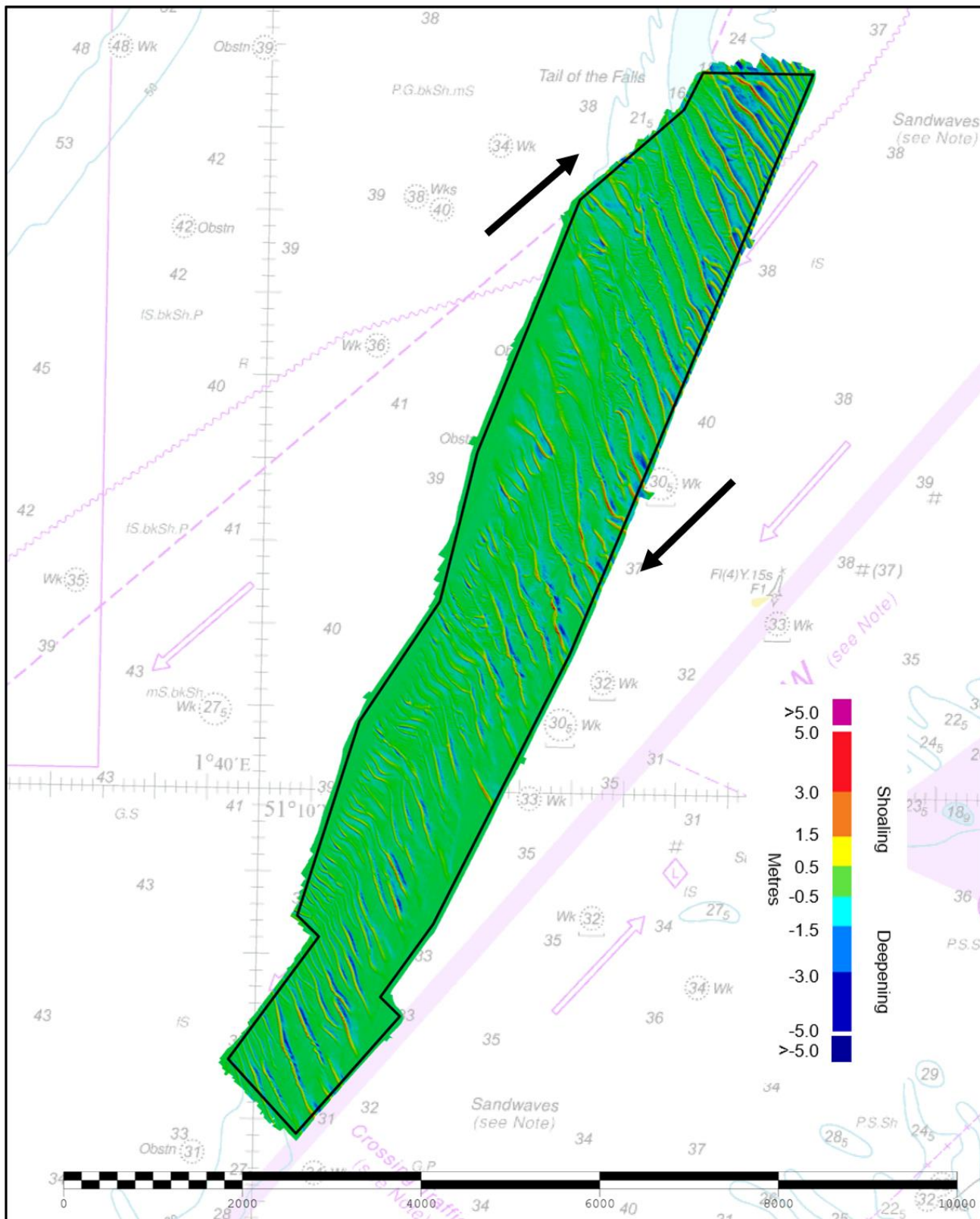


Figure 4: Difference surface showing bathymetric changes between the 2024 and 2025 surveys overlaid on BA Chart 0323 (Black arrows represent sandwave migration since 2024 survey)

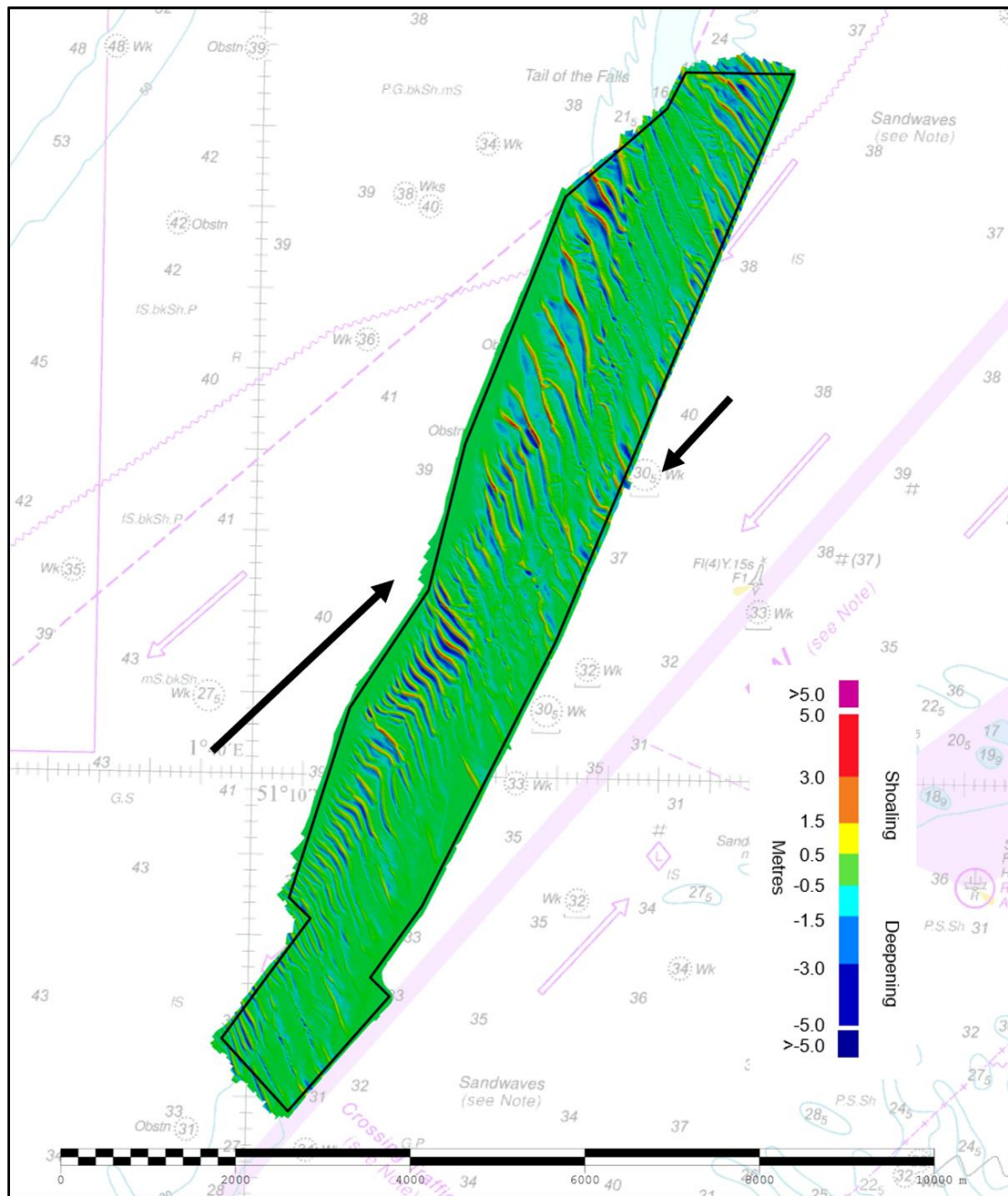


Figure 5: Difference surface showing bathymetric changes between the 2023 and 2025 surveys overlaid on BA Chart 0323 (Black arrows represent sandwave migration since 2023 survey)

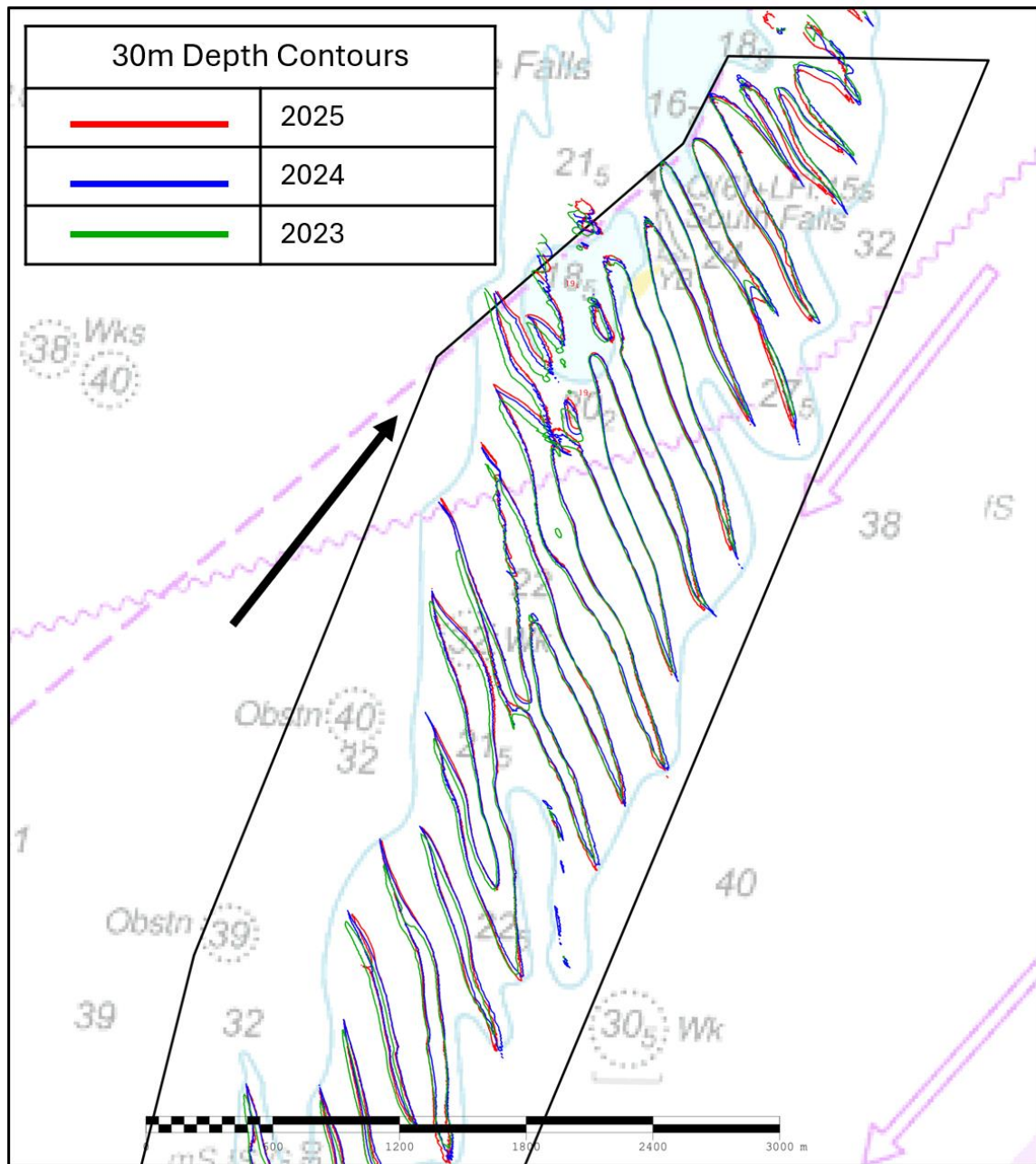


Figure 6: Contour plot showing changes in the 30m contours between 2025 (red) 2024 (blue) and 2023 (green). Black arrow represents feature migration.

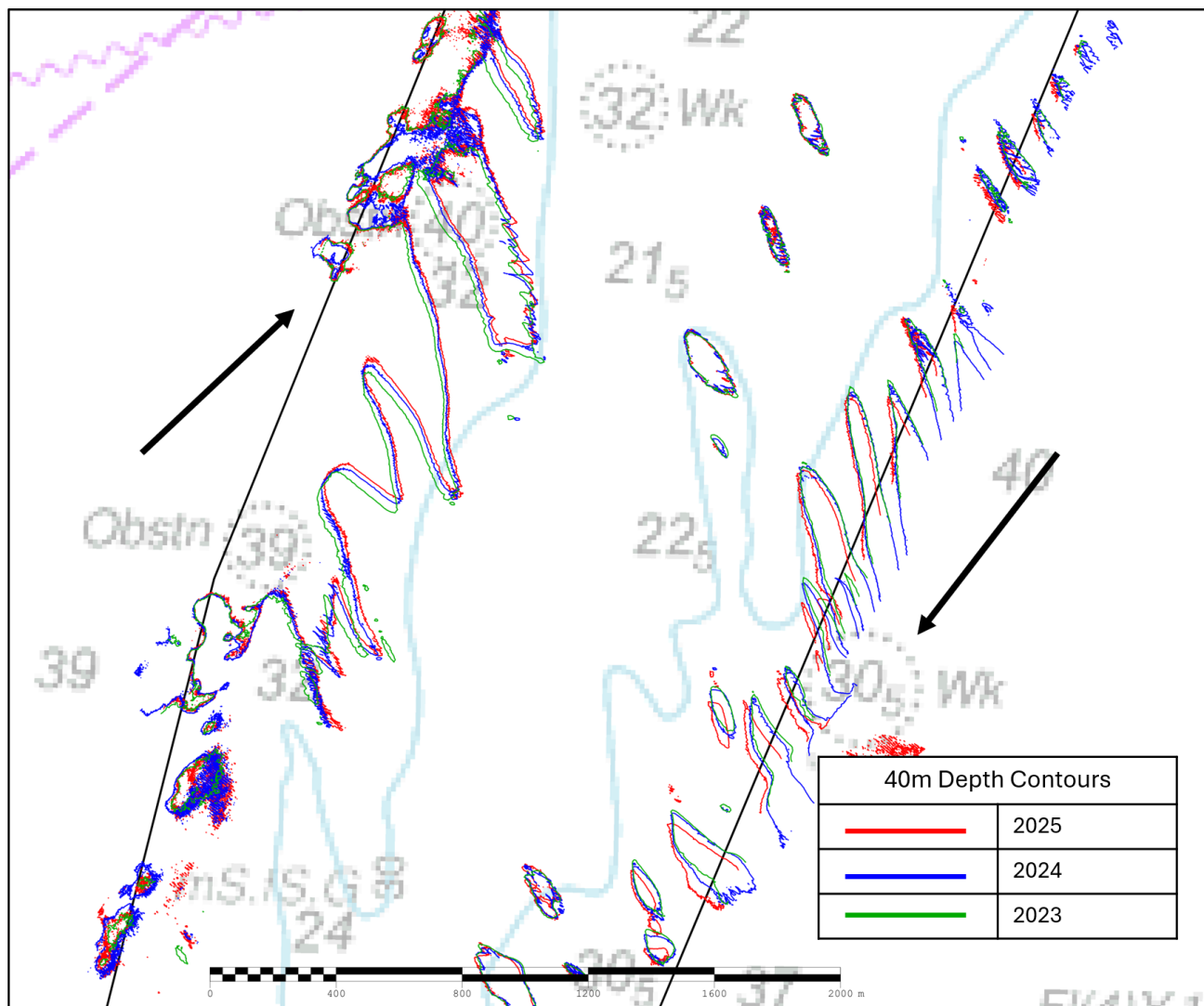


Figure 7: Contour plot showing changes in the 40m contours between 2025 (red) 2024 (blue) and 2023 (green).
Black arrow represents feature migration.

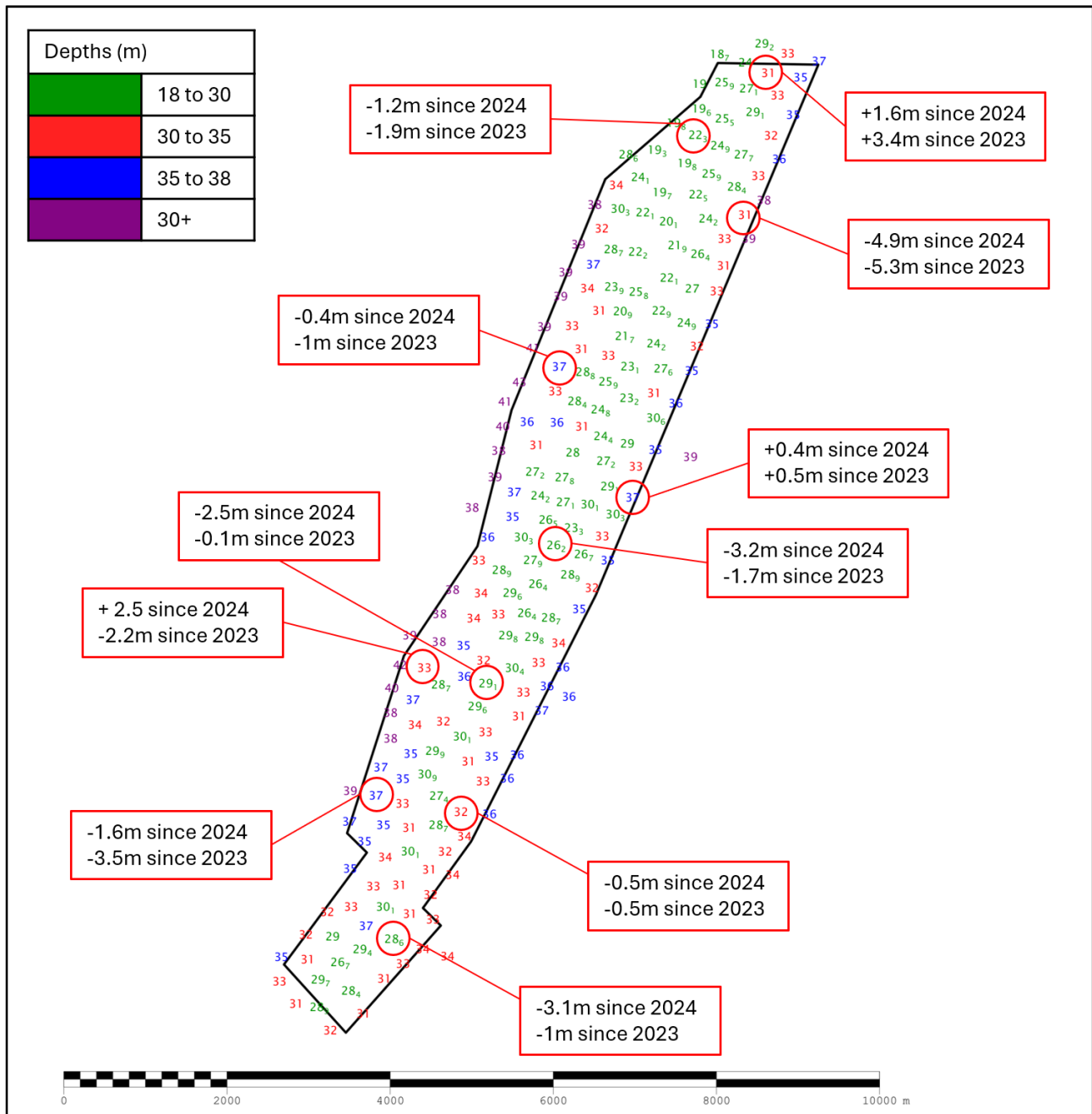


Figure 8: Colour banded depth plot from the 2025 survey with selected depth changes since the 2024 and 2023 surveys. Positive values (+) represent deepening. Negative values (-) represent shoaling.

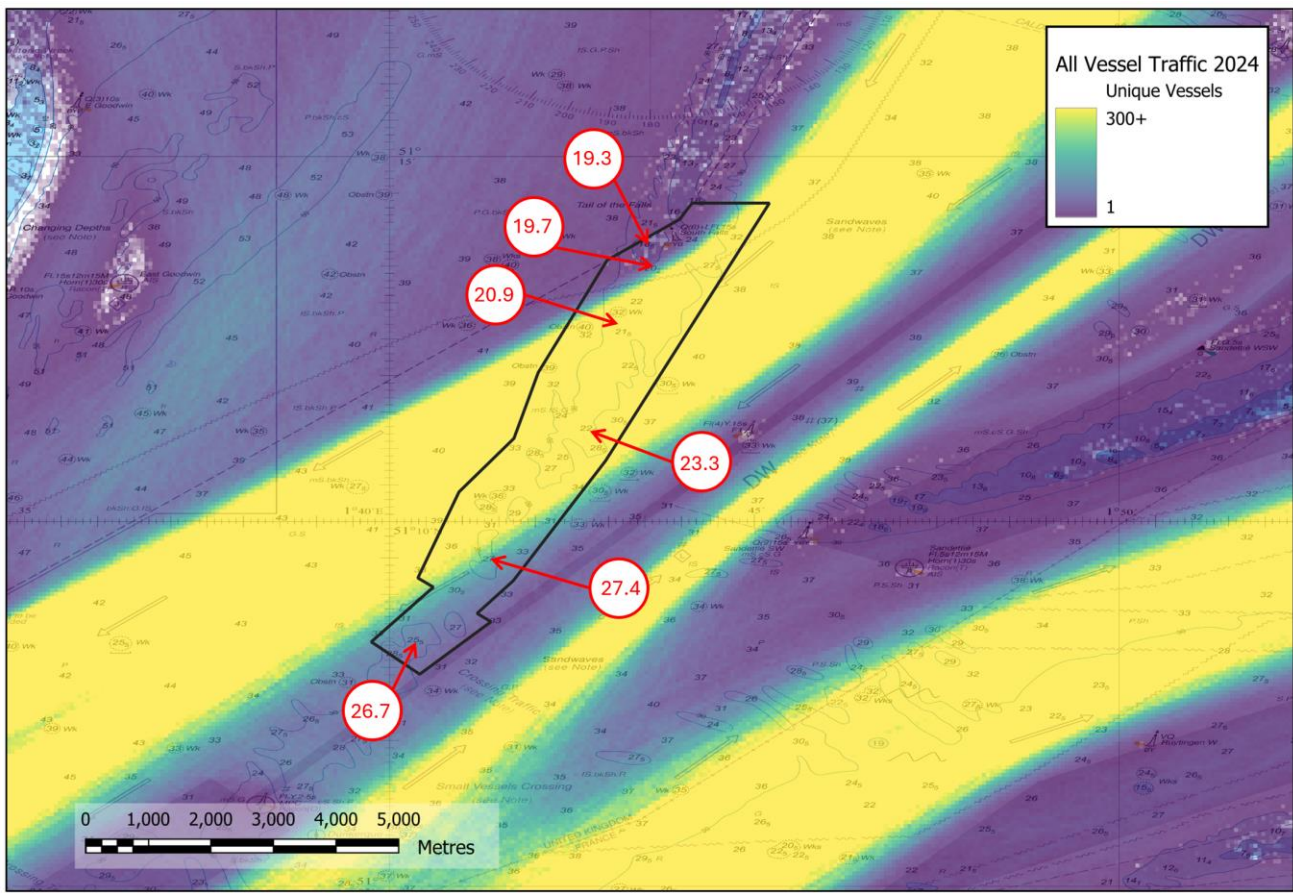


Figure 9: AIS heatmap at 100m resolution grid size. Density unit is unique vessels within the grid square within 2024. DWR C1 area in black and significant depth soundings (m) overlaid on chart 0323.

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, in addition to the continued migration and shoaling of the sandwaves, DWR C1 should remain on an annual survey interval in the RRS programme.

Survey Area

- 6.2 The survey area limits are adequate at present, however, should be closely monitored due to continued sandwave mobility.