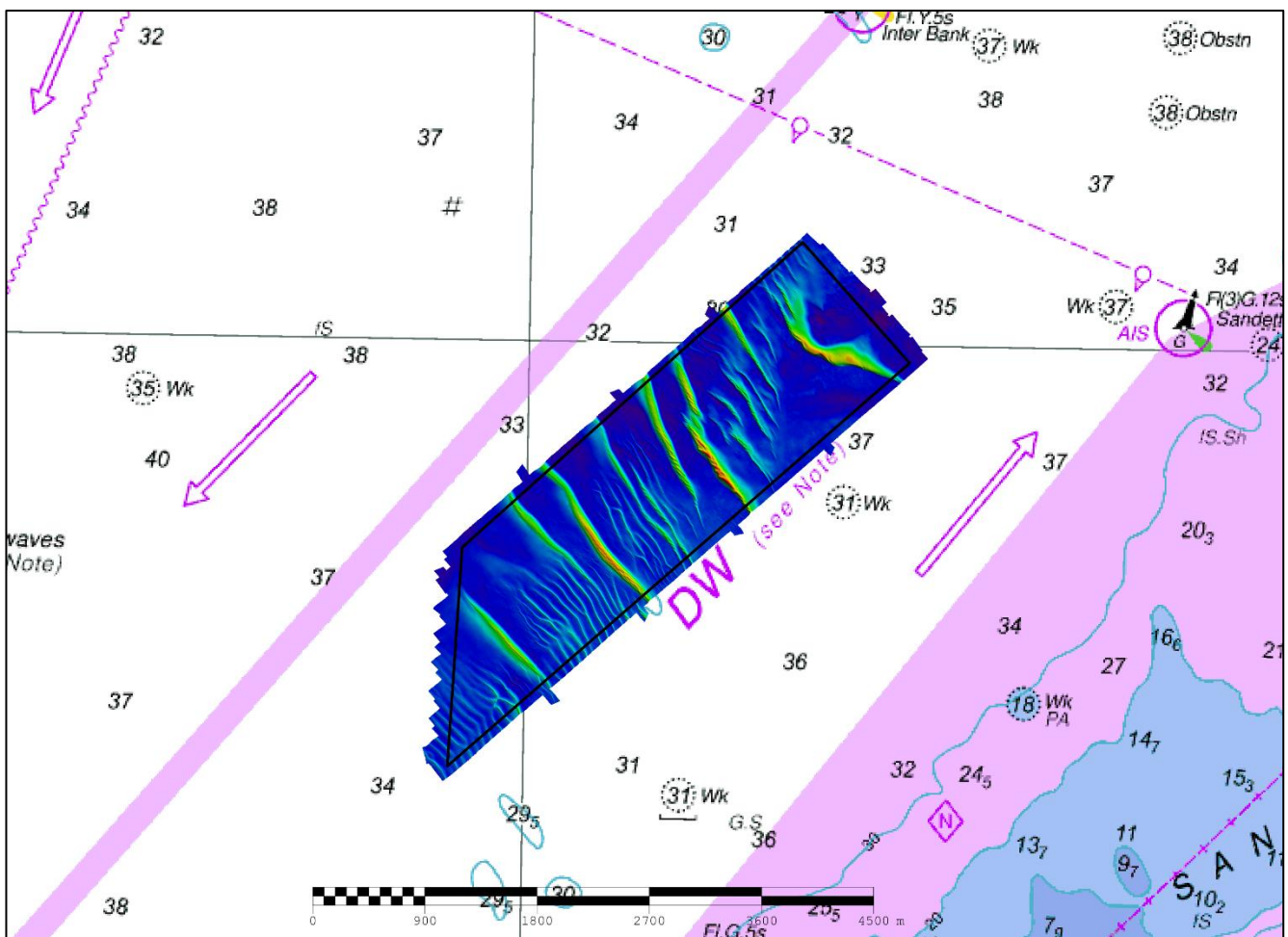




DEEP WATER ROUTE T FOCUSED 2020 ASSESSMENT

An assessment of the 2020 hydrographic survey of the area DWR T: 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

DEEP WATER ROUTE T FOCUSED, 2020

1. SUMMARY

Changes Detected

- 1.1 The controlling depth is 0.5m shoaler than previous 2019 full survey but still 0.2m deeper than currently charted.
- 1.2 Sandwaves have shown movement in both a south-westerly and north-easterly direction since the 2019 full survey. Outside of sandwave areas, depths have been stable.
- 1.3 Any significant depth changes noted from the 2019 full area survey are due to sandwave migration.

Reasons for Continuing to Resurvey the Area

- 1.4 The survey area covers a major shipping route in the Dover Strait. The seafloor has mobile sandwave features which should be monitored for continued safety of maritime traffic; therefore, continued resurveying is recommended.

Recommendations

- 1.5 Given the location of the area in relation to the DWR and the draught of vessels navigating the area, DWR T focused area can remain on 3-year survey interval.
- 1.6 Major sand wave features and the least and controlling depth is monitored within the 3-year focused so the focused survey area is therefore sufficient.

2. LOCATION

- 2.1 Survey interval at time of resurvey: 3 years (The focused DWR T area is surveyed every 3 years with the full area surveyed every 6 years)
- 2.2 Area Covered: 6.53 km²

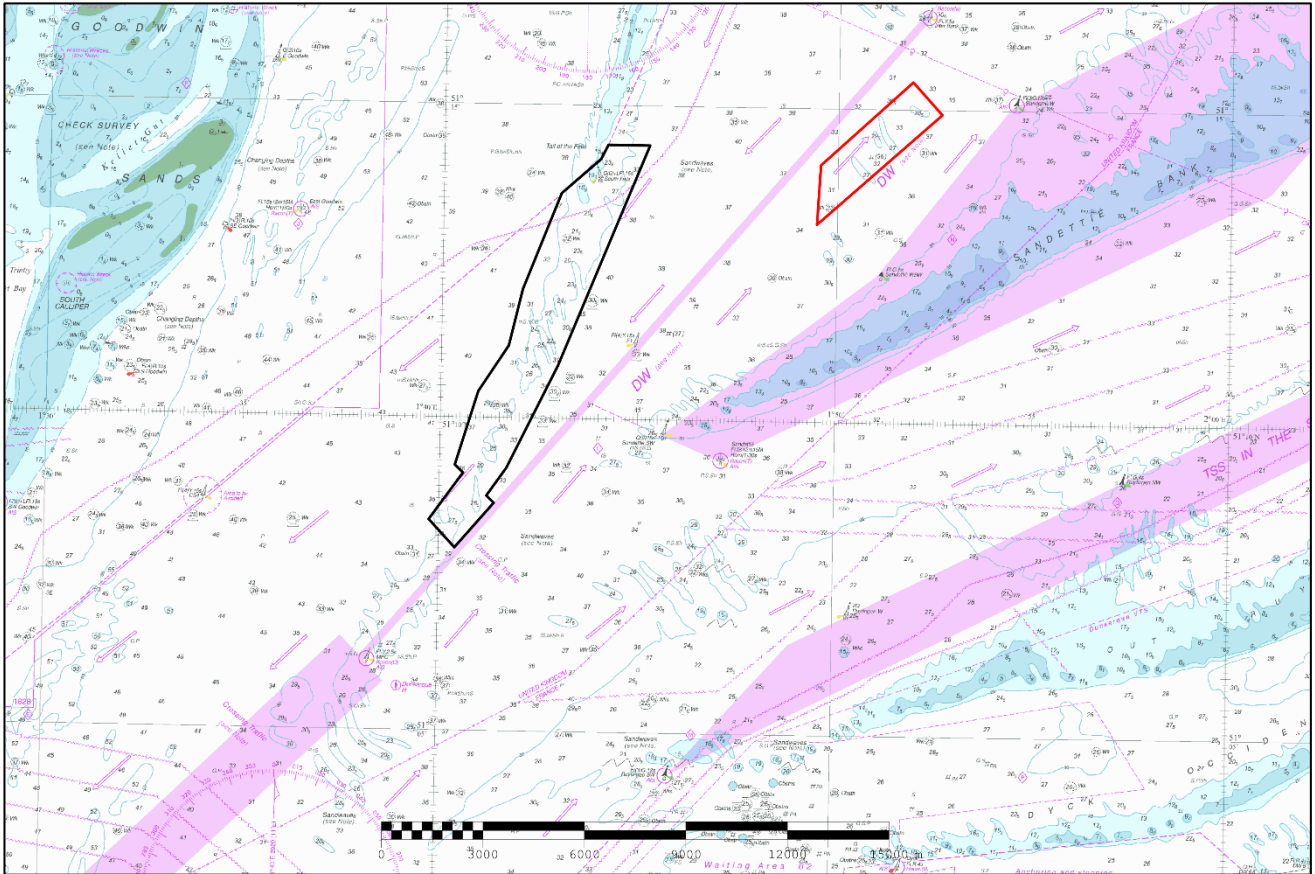


Figure 1: 2020 Deep Water Route Routine Resurvey areas overlaid on BA Chart 0323_0 with area DWR T in red

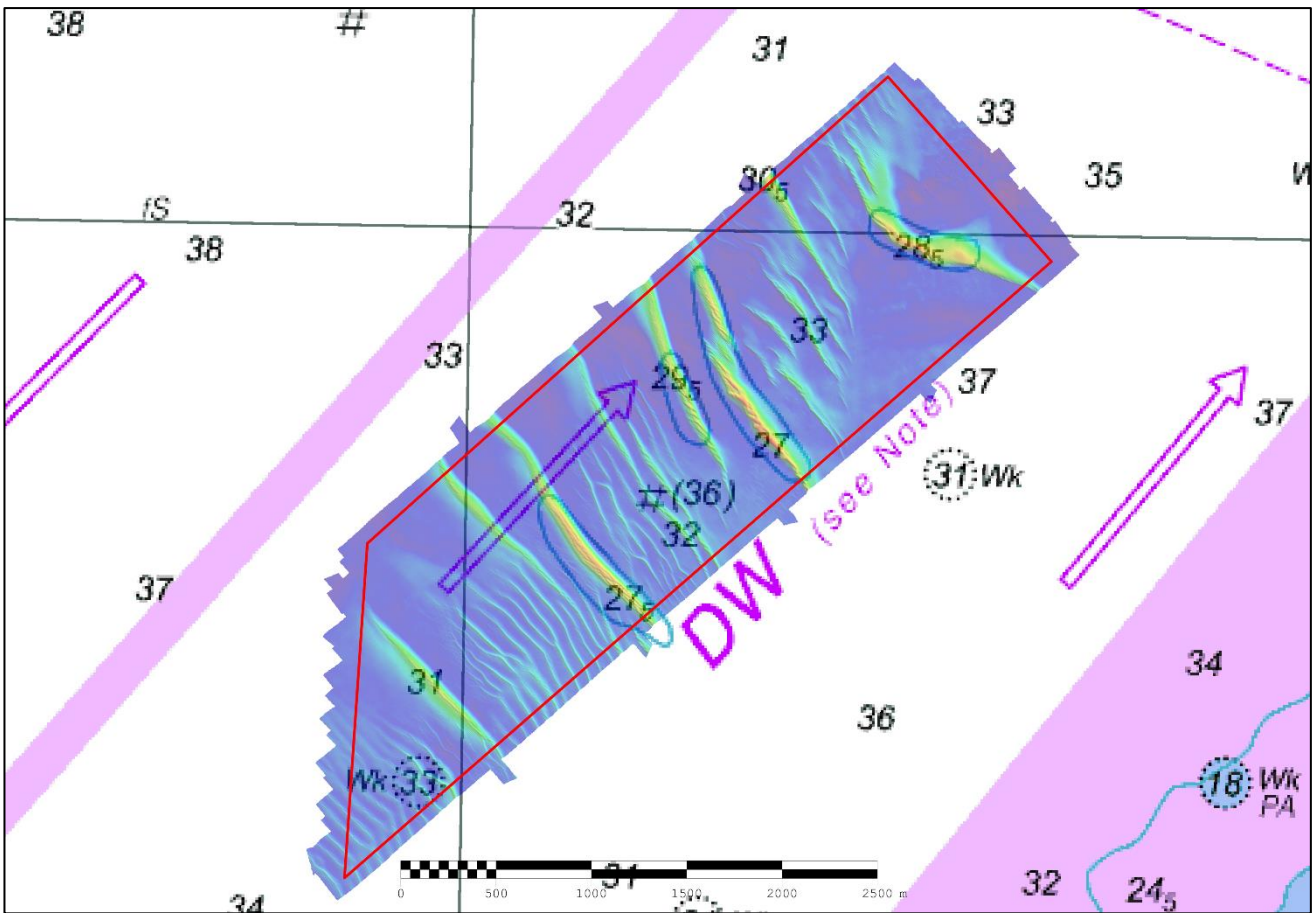


Figure 2: 2020 survey data overlaid on BA Chart 0323_0

3. REFERENCE SURVEY DETAIL

- 3.1 The previous full survey within the Routine Resurvey Programme was conducted in June and July 2019 as part of HI1658. The previous focused survey was conducted in July and August 2016 as part of HI1523.
- 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 survey within the 2020 Routine Resurvey Programme, was conducted in August 2020 as part of HI1695.
- 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 Significant depths from the 2020 survey can be seen in Figure 3, with the least depth of 27.2m also being the controlling depth. This controlling depth is shoaler than the 27.7m depth from the 2019 survey but deeper than the 25.8m depth in the 2016 survey, all located along the same sandwave.
- 5.2 The difference surfaces in Figures 4 and 5 both show slight sandwave migration in a north-east direction for sandwaves in the south-west and a more prominent south-west migration for the sandwave in the north-east, since the 2019 survey. Outside of the sandwave areas, depths are stable. The sandwave migration can be seen more clearly in the contour plots of Figures 6 and 7.
- 5.3 The largest differences within the survey area shown in Figure 4 show a difference of -5.4m in the north-west and +4.1m in the south-west but these changes are associated with migrating sandwaves.
- 5.4 Figure 8 is a colour banded depth plot, with changes since the 2019 full and 2016 focused surveys labelled. Several larger sandwaves show significant depths changes as the sandwaves have changed position.

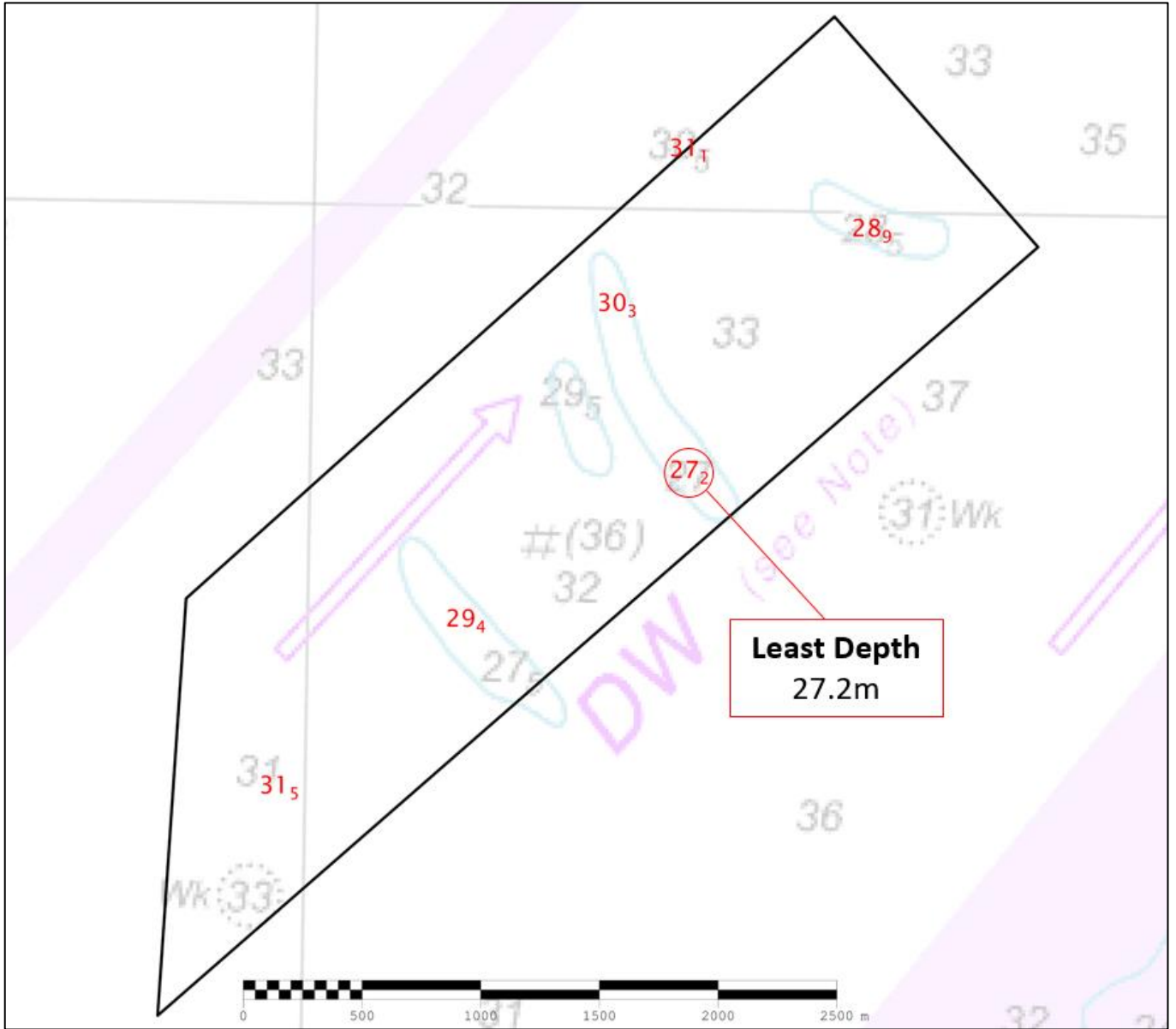


Figure 3: Significant depth soundings highlighted, overlaid on BA Chart 0323_0

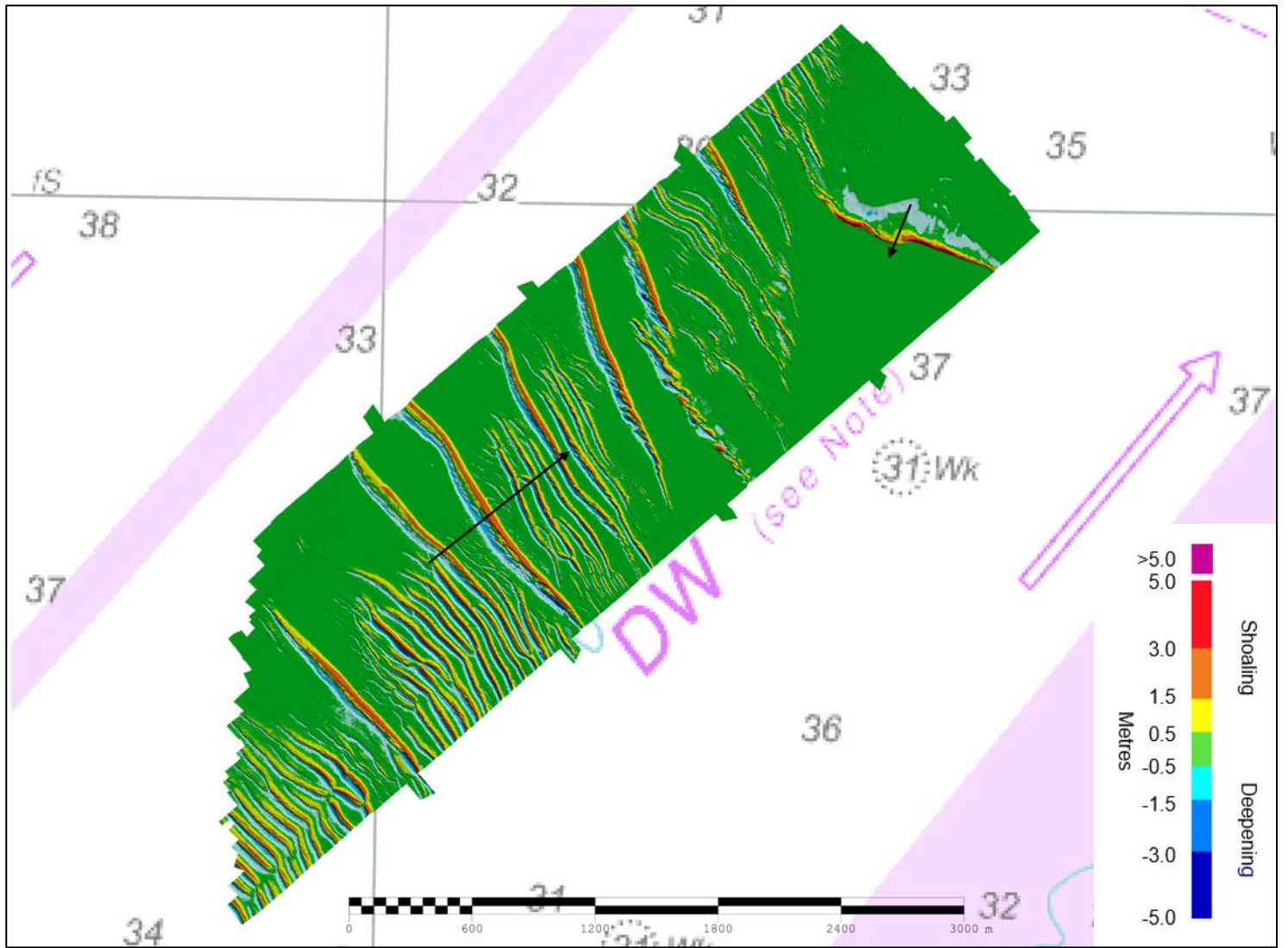


Figure 4: Difference surface showing bathymetric changes between the 2020 focused and 2019 full surveys overlaid on BA Chart 0323_0 (Black arrows represent sandwave migration since 2019 survey)

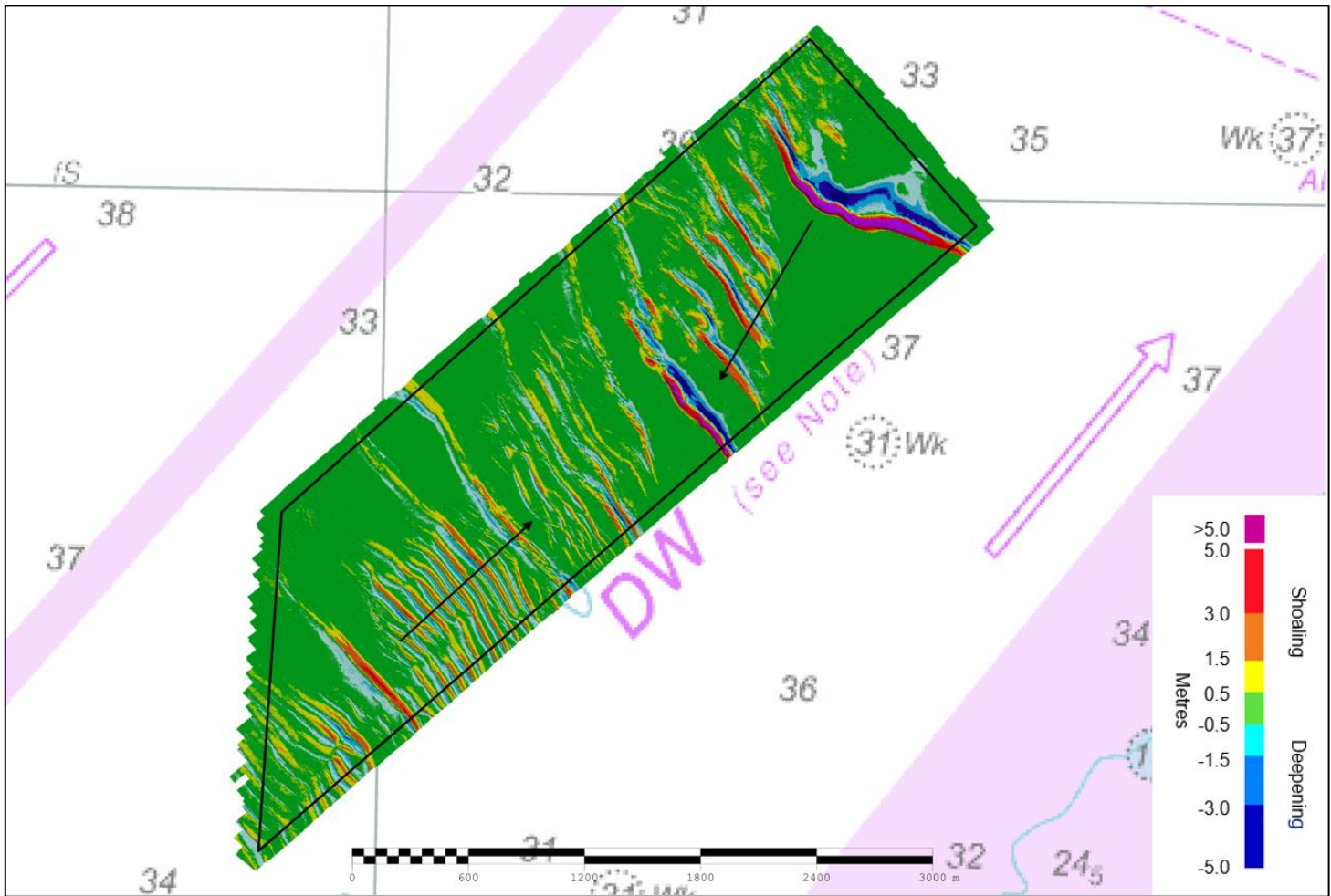
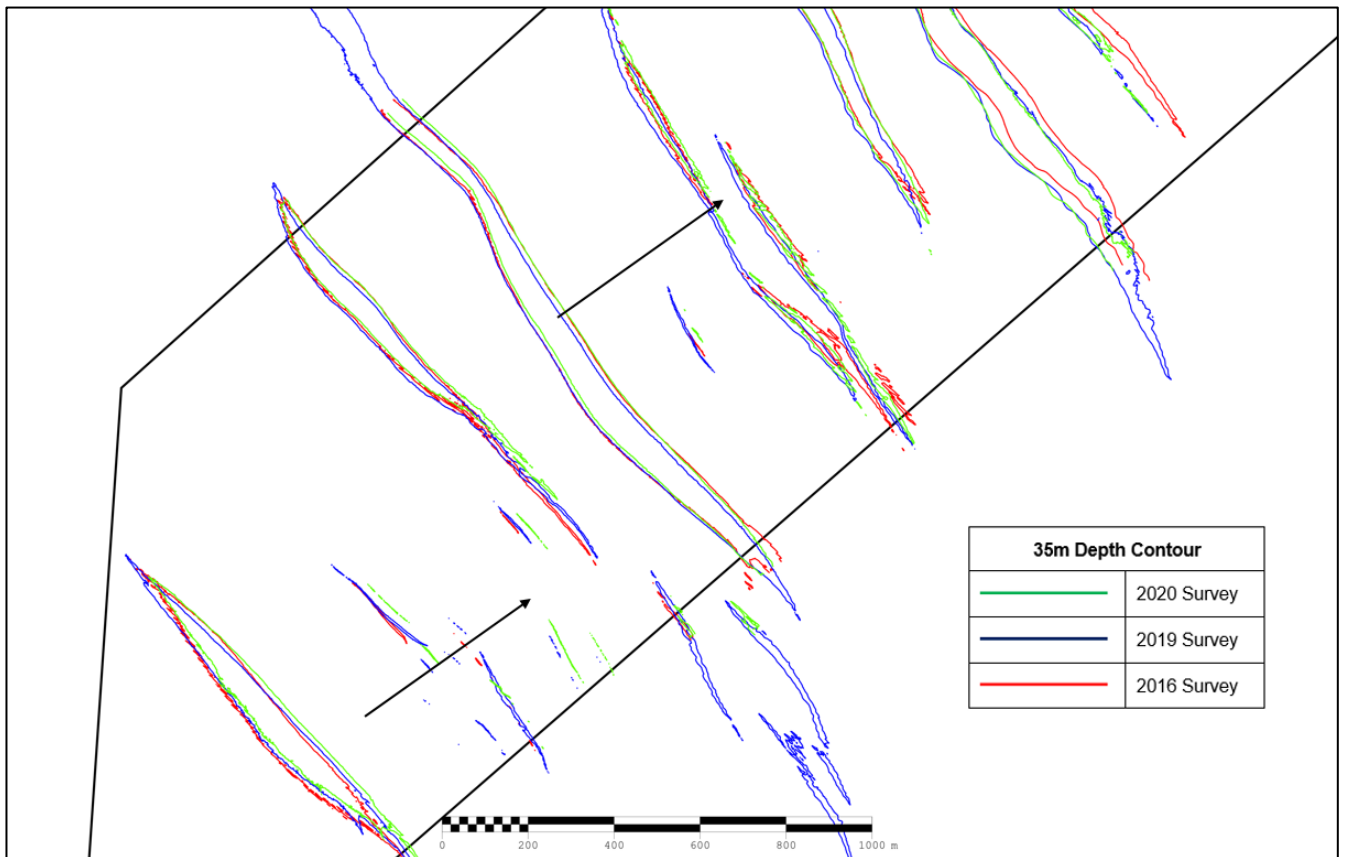
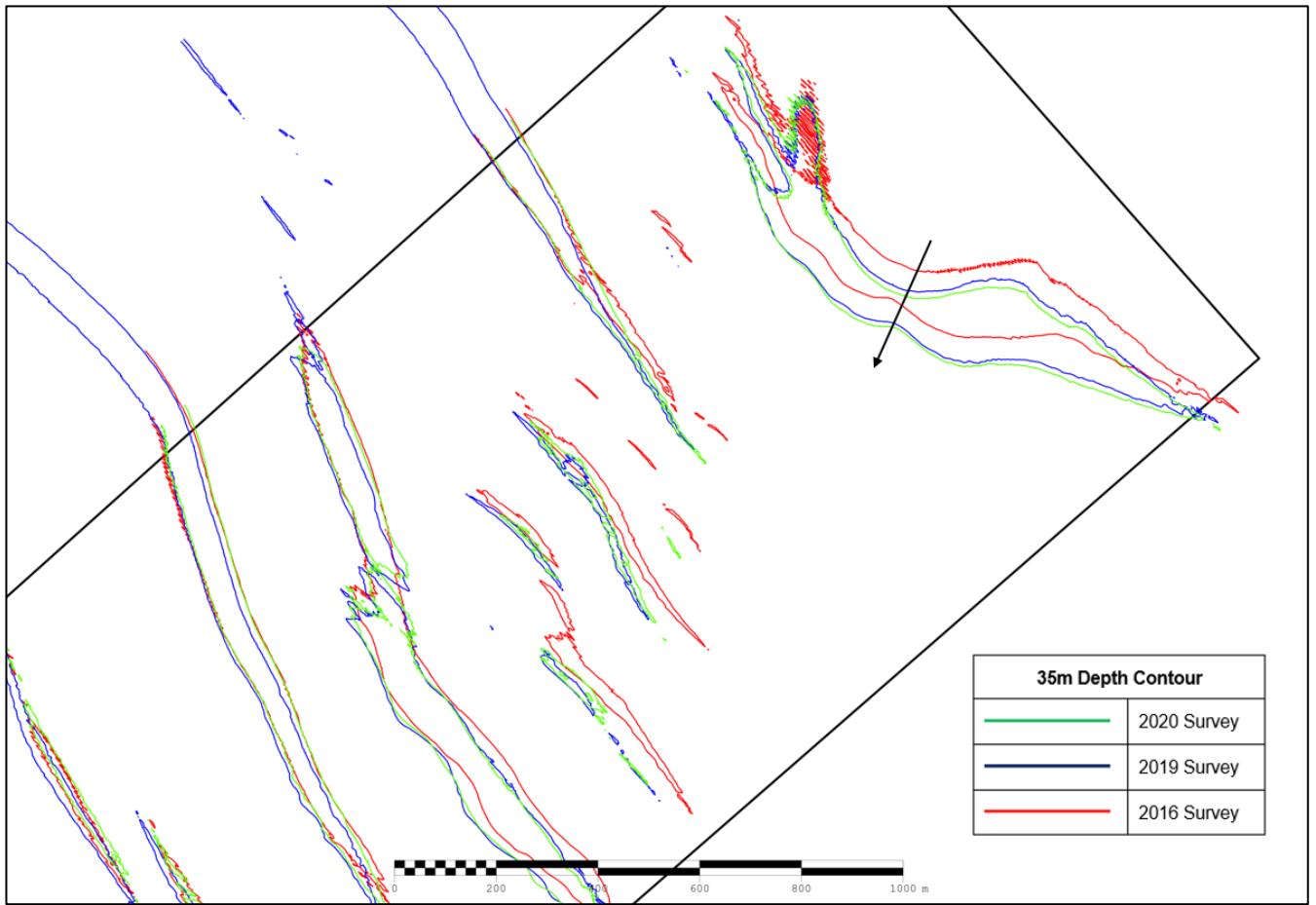


Figure 5: Difference surface showing bathymetric changes between the 2020 focused and 2016 focused surveys overlaid on BA Chart 0323_0 (Black arrows represent sandwave migration since 2016 survey)



Figures 6 and 7: Contour plot showing changes in the 35m contours for the north (top) and south (bottom) of the DWR T area between 2020 (green), 2019 (blue) and 2016 (red). Black arrow represents the sandwave migration.

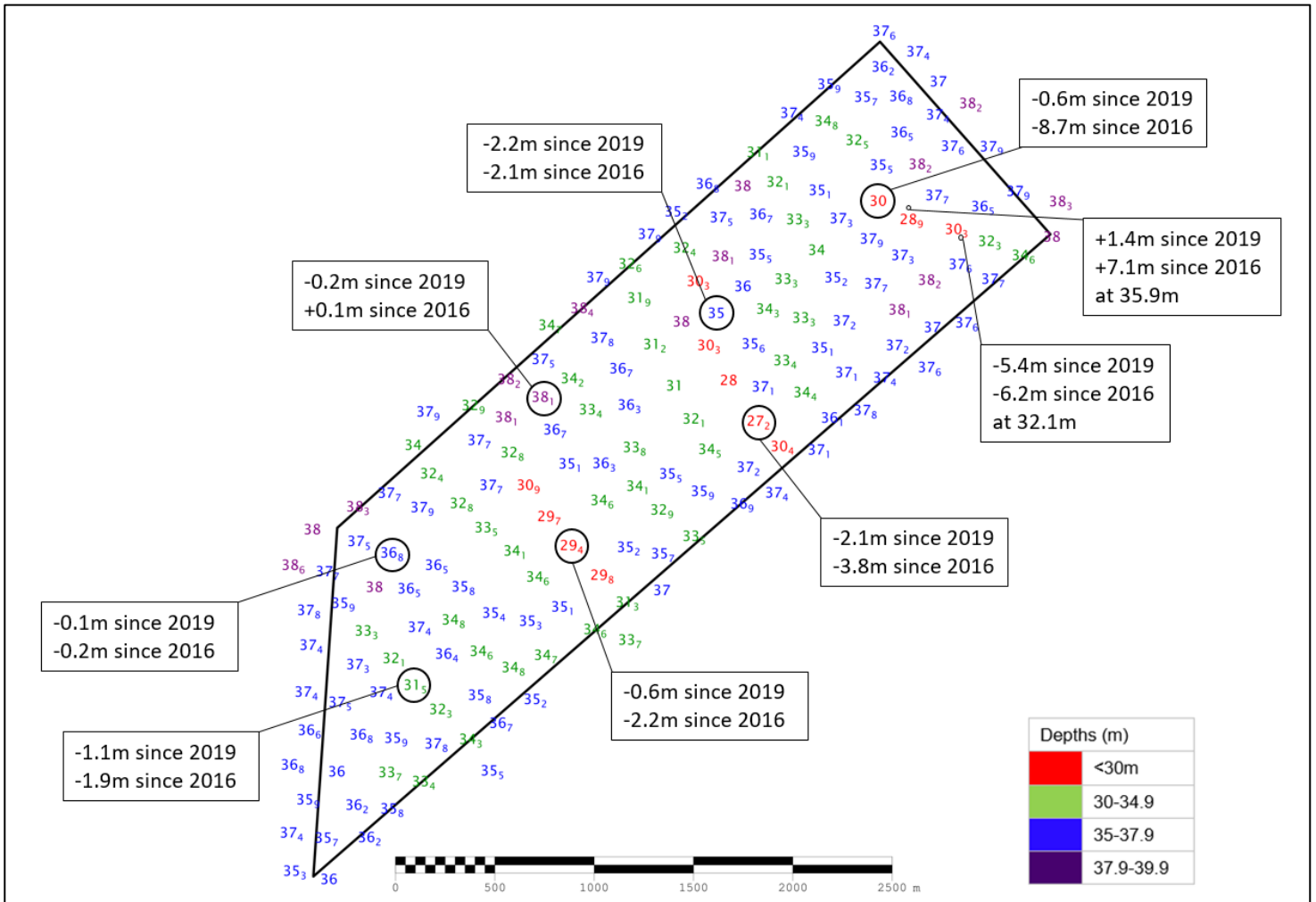


Figure 8: Colour banded depth plot from the 2020 survey with selected depth changes since the 2019 and 2016 surveys. Positive values (+) represent deepening. Negative values (-) represent shoaling.

6. RECOMMENDATIONS FOR FUTURE SURVEYS

Survey Interval

6.1 This area remains an important stretch of the Dover Strait Deep-Water Route, used by many deep draught vessels. The controlling depth has remained within the main survey boundaries since the previous surveys and the area is subject to sandwave migration. Given the location of the area and the mobility and changes in the seabed, the focused survey DWR T should remain on the 3-year survey interval and the full survey should remain at 6 years.

Survey Area

6.2 The controlling depth as well as the main sandwave features are within the main survey boundaries and within the confines of the focused area survey limits. The full survey area is therefore satisfactory to monitor these features.