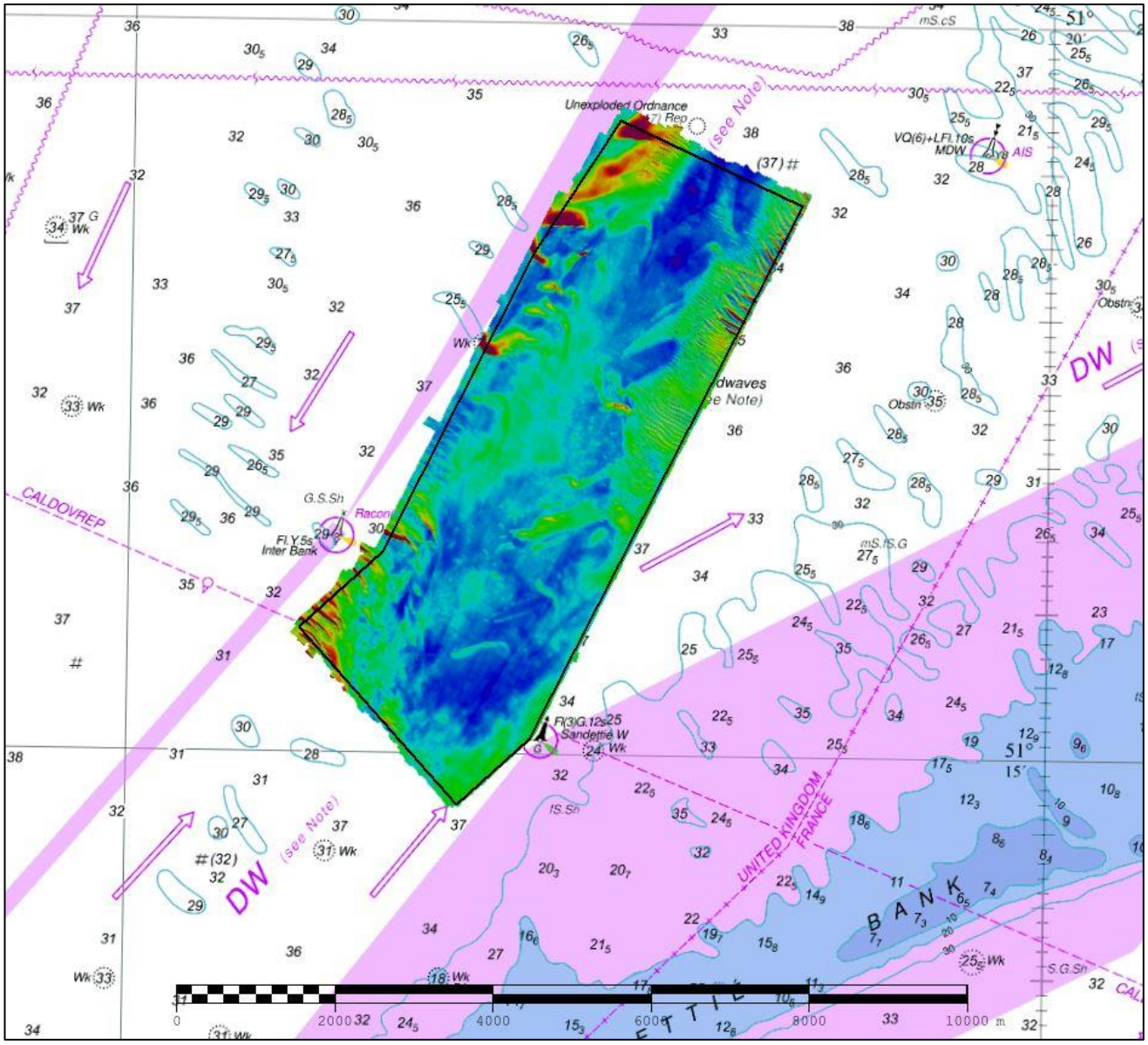
UK Hydrographic Office

DOVER STRAIT
DEEP WATER ROUTE S
2019 ASSESSMENT

An assessment of the 2019 hydrographic survey of the area DWR S: 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.

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 S - 2019

1. SUMMARY

Changes Detected

1.1 Sandwaves in the north-west, north-east and south-west regions have migrated south-westerly.

1.2 Limited mobility within much of the rest of the survey area.

1.3 No change to the 31.0m controlling depth over the wreck to the north-west of the survey.

Reasons for Continuing to Resurvey the Area

1.4 This area remains an important stretch of the Dover Strait Deep-Water Route, used by many deep draught vessels therefore requires continued monitoring through resurveys.

Recommendations

1.5 Given the location of the area in relation to the DWR and the draught of vessels navigating the area, DWR S should remain on the 12-year survey interval.

1.6 The area should be reduced to remove the stable flat region to the south-east but be extended slightly in the north-east to take in to account more of the charted sandwave field in that region.

2. LOCATION

2.1 Survey interval at time of resurvey: 12 years

2.2 Area Covered: 24.73 km^2

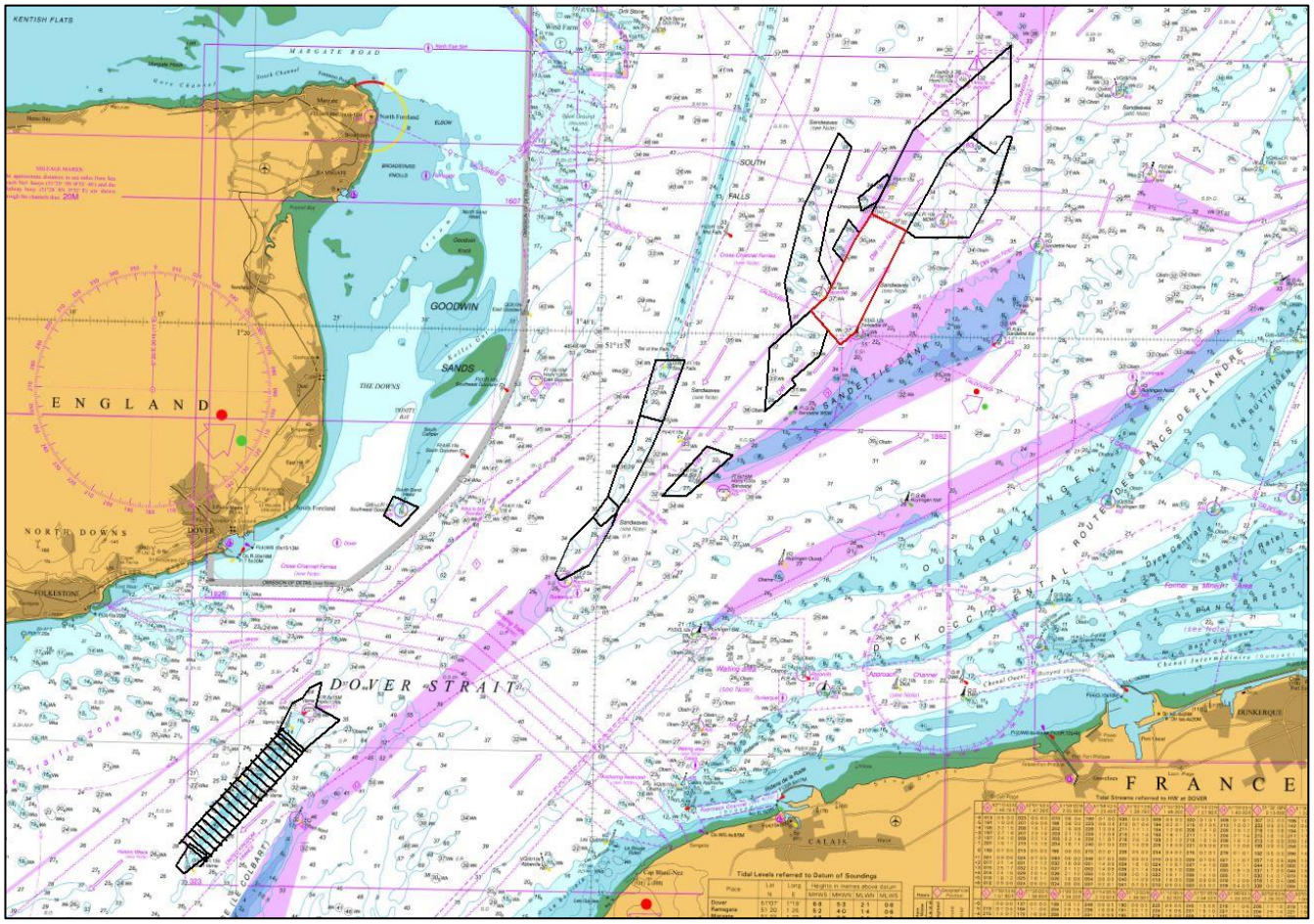

Figure 1: 2019 Dover Strait Routine Resurvey areas overlaid on BA Chart 1610-0 with area DWR S in red

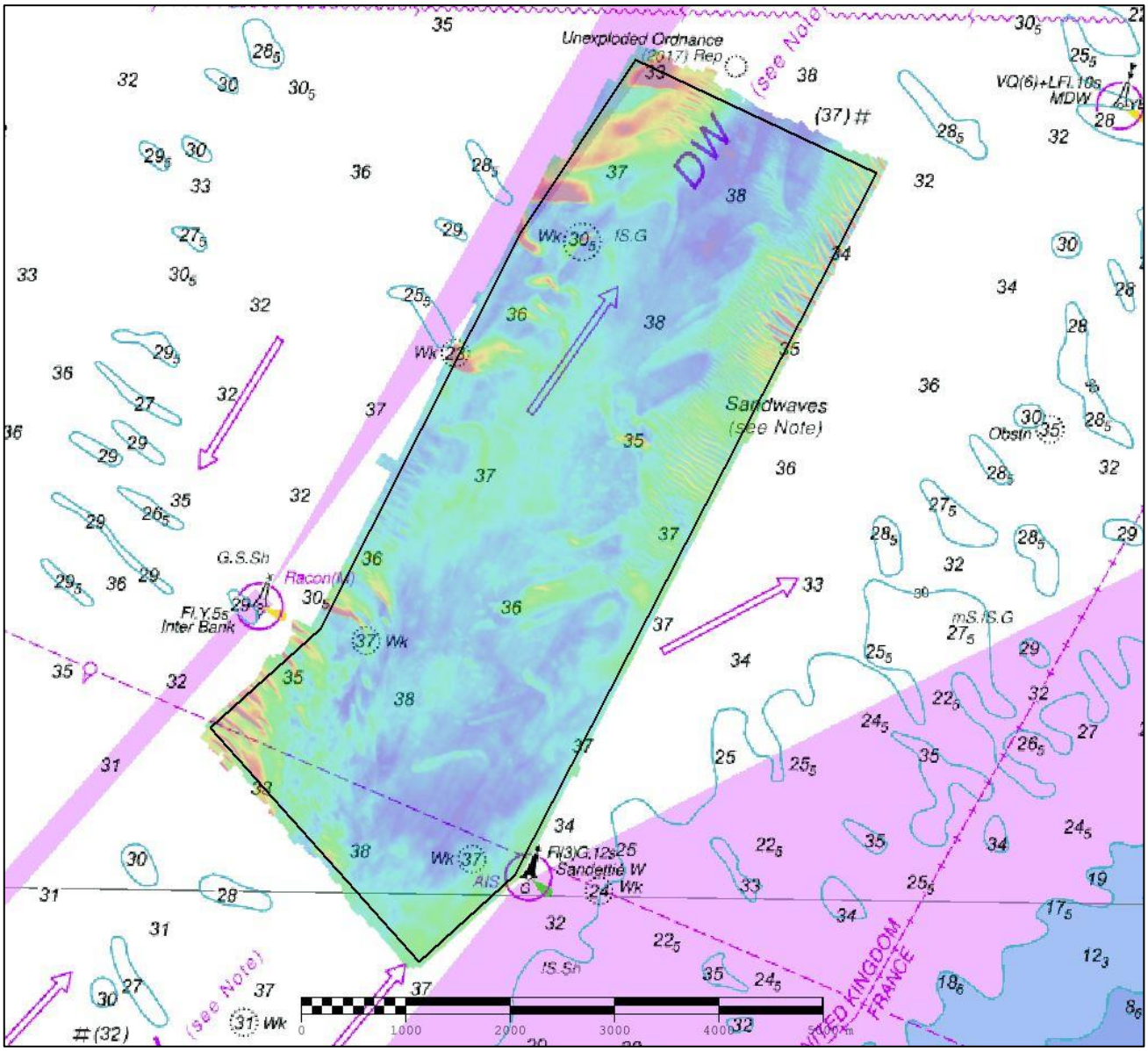

Figure 2: 2019 DWR S survey data overlaid on BA Chart 0323-0

3. REFERENCE SURVEY DETAIL

3.1 The previous survey was conducted between September 2006 to July 2007 as part of HI1159.

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 as part of the 2019 Routine Resurvey Programme was conducted between June and October 2019 as part of HI1657.

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 difference plot in Figure 3 shows a south-westwards migration of sandwaves in the north-west, north-east and south-west regions but an overall stability of the seafloor in the majority of the DWR S survey area, including the south-east region.

5.2 The depth plot in Figure 4 shows that the least depth in the 2019 survey is 23.8m over a wreck, which was 23.5m in the 2007 survey. However, this wreck (51.296585N, 1.897033E) is just outside of the HI survey limit and has been surveyed as part of HI1659 DWR A.

5.3 The depth plot in Figure 4 shows that the controlling depth (and least depth within the HI survey limits) in the 2019 survey is 31.0m over a wreck (51.306596N, 1.914640E) which has not changed since the 2007 survey.

5.4 The largest differences within the survey area shown in Figure 3 show a difference of -6.1m in the north-west and -6.4m in the south-west associated with migrating sandwaves. On the south-west border of the HI, sand wave migration has led to -3.6m and +5.1m changes in the area.

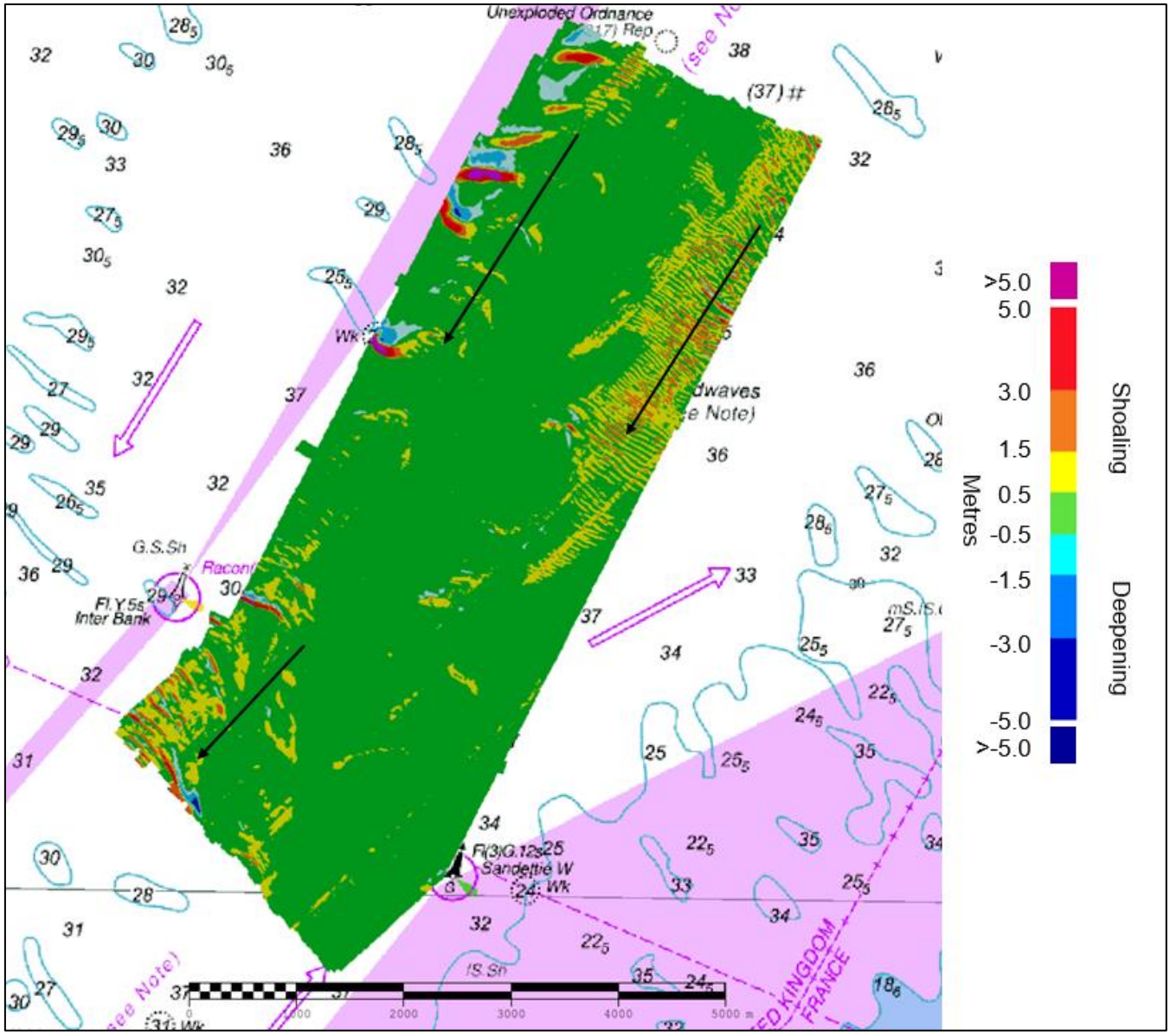

Figure 3: Difference surface showing bathymetric changes between the 2019 and 2007 surveys overlaid on BA Chart 0323 (Black arrows represent sandwave migration since 2007 survey)

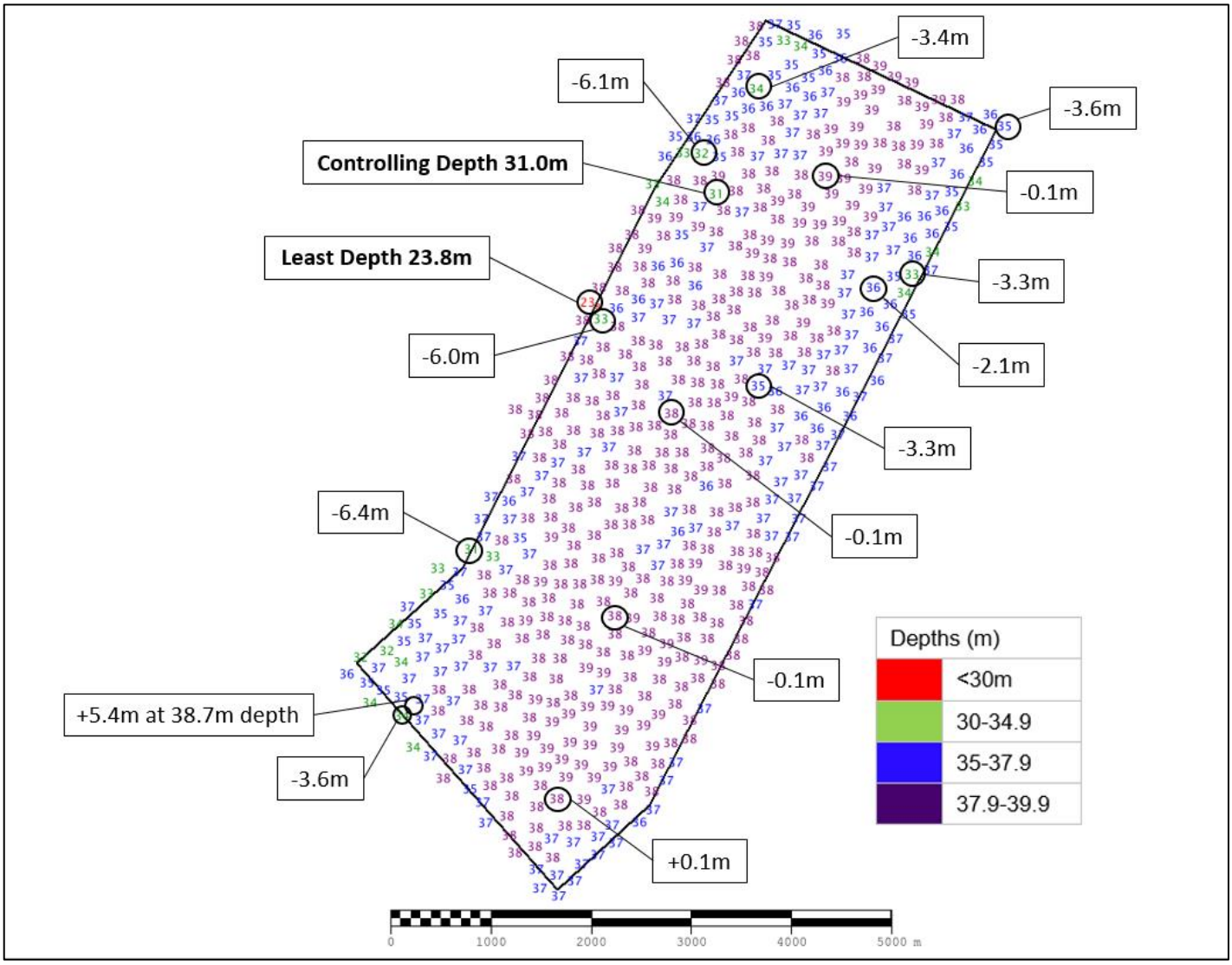

Figure 4: Colour banded depth plot from the 2019 survey with selected depth changes since the 2007 survey. Positive values (+) represent deepening. Negative values (-) represent shoaling.

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 shoalest depth over the wreck in the northwest of the survey area has not changed since the last survey but the sandwaves in the north west, north-east and south-west are migrating south-westerly so would recommend keeping the DWR S on the 12-year interval.

Survey Area

6.2 The 2017 Desk Study states the flat section within the south-east of the area has seen no change since 1998. The 2019 survey also shows little to no change in this area so, as suggested in the desk study, the stable flat south-east section of the DWR area could be reduced (and link up to the corner of the adjacent DWR T area in the south). To take in to account more of the region of sand waves in the north-east, the survey area could be extended slightly to join up with the corner of the DWR B2 North West Sandettie limits.

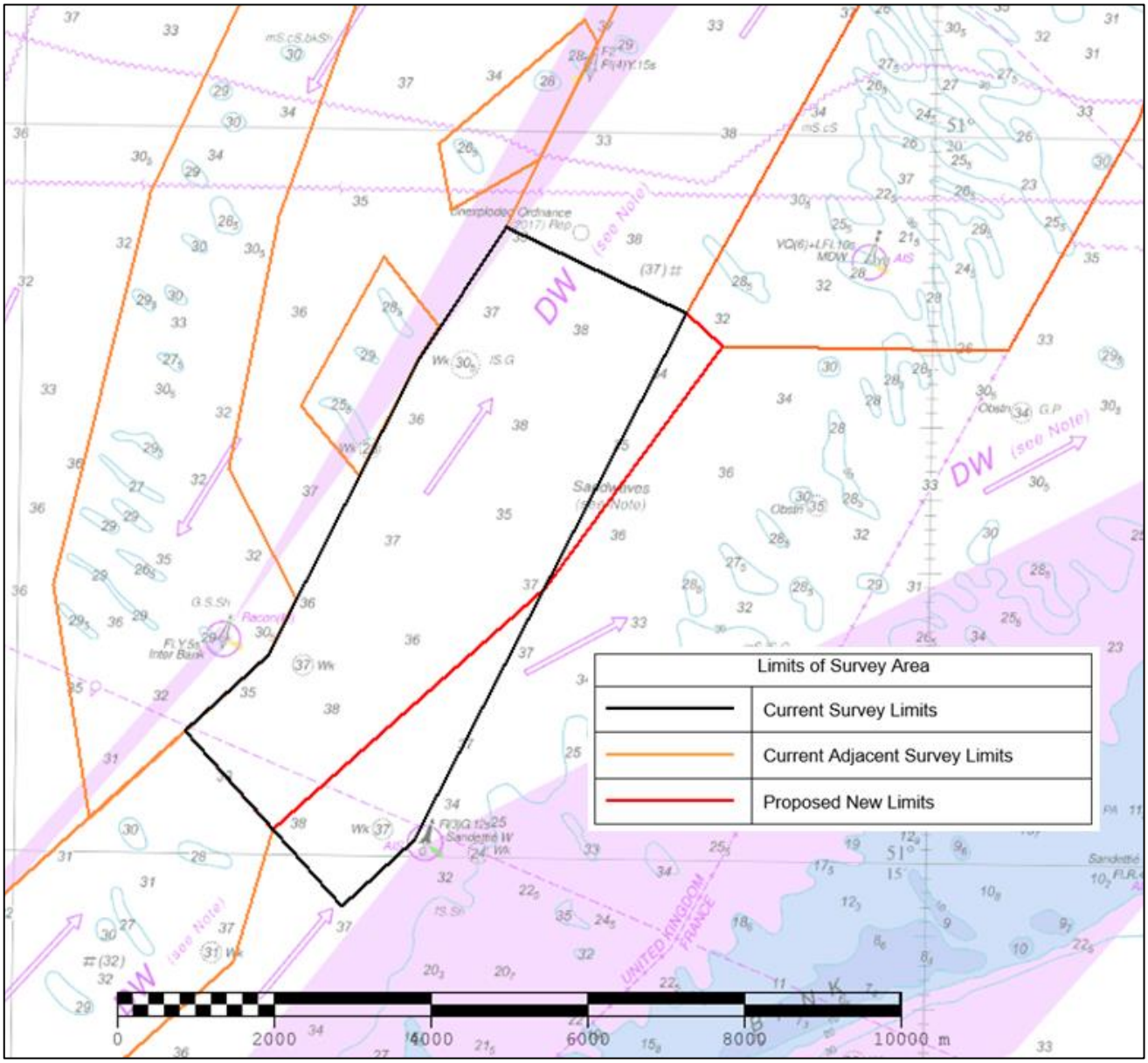

Figure 5: Recommended changes to survey limits of area DWR S

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

DWR S total area: 20.17 km^2

A	51.264000	1.864330
B	51.272670	1.879330
C	51.307170	1.906170
D	51.322170	1.621501
E	51.312670	1.954830
H	51.308830	1.961674
I	51.280998	1.929740
J	51.252807	1.880659