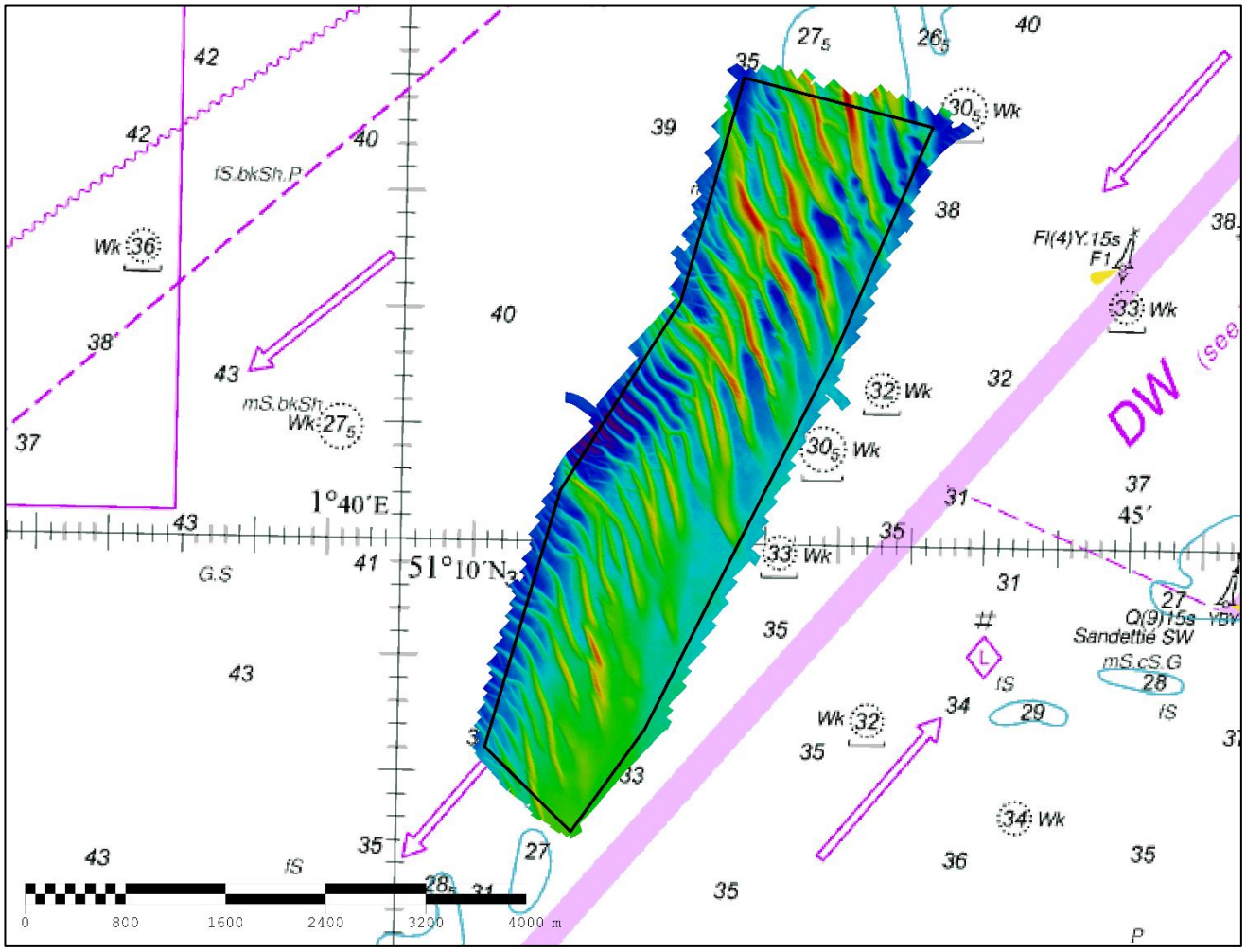
UK Hydrographic Office

DOVER STRAIT
TAIL OF THE FALLS (DWR C1)
2018 ASSESSMENT

An assessment of the 2018 hydrographic survey of the area DWR C1 Tail of the Falls: 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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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

TAIL OF THE FALLS (DWR C1) - 2018

1. SUMMARY

Changes Detected

1.1 The 2018 survey of DWR C1 has shown that shoaling continues with migration of sand waves on the eastern side of the survey area continuing towards the south from the north-east.

1.2 There is evidence that sandwaves on the western side of the survey area are migrating to the north-east.

1.3 Overall there has been no significant shoaling across the whole area.

Reasons for Continuing to Resurvey the Area

1.4 Depths in the area remain changeable and remain hazardous to deep draught vessels navigating the area.

Recommendations

1.5 Given the location of the area in relation to the DWR, the draught of vessels navigating the area, the shoaling evidenced annually and the migration of sand waves, DWR C1 should remain on the annual survey interval.

1.6 Extend the western edge of C1 by 320m due to evident shoaling confirm minimum depths over sandwaves.

2. LOCATION

2.1 Survey interval at time of resurvey: Annual

2.2 Area Covered: 8.06 km^2

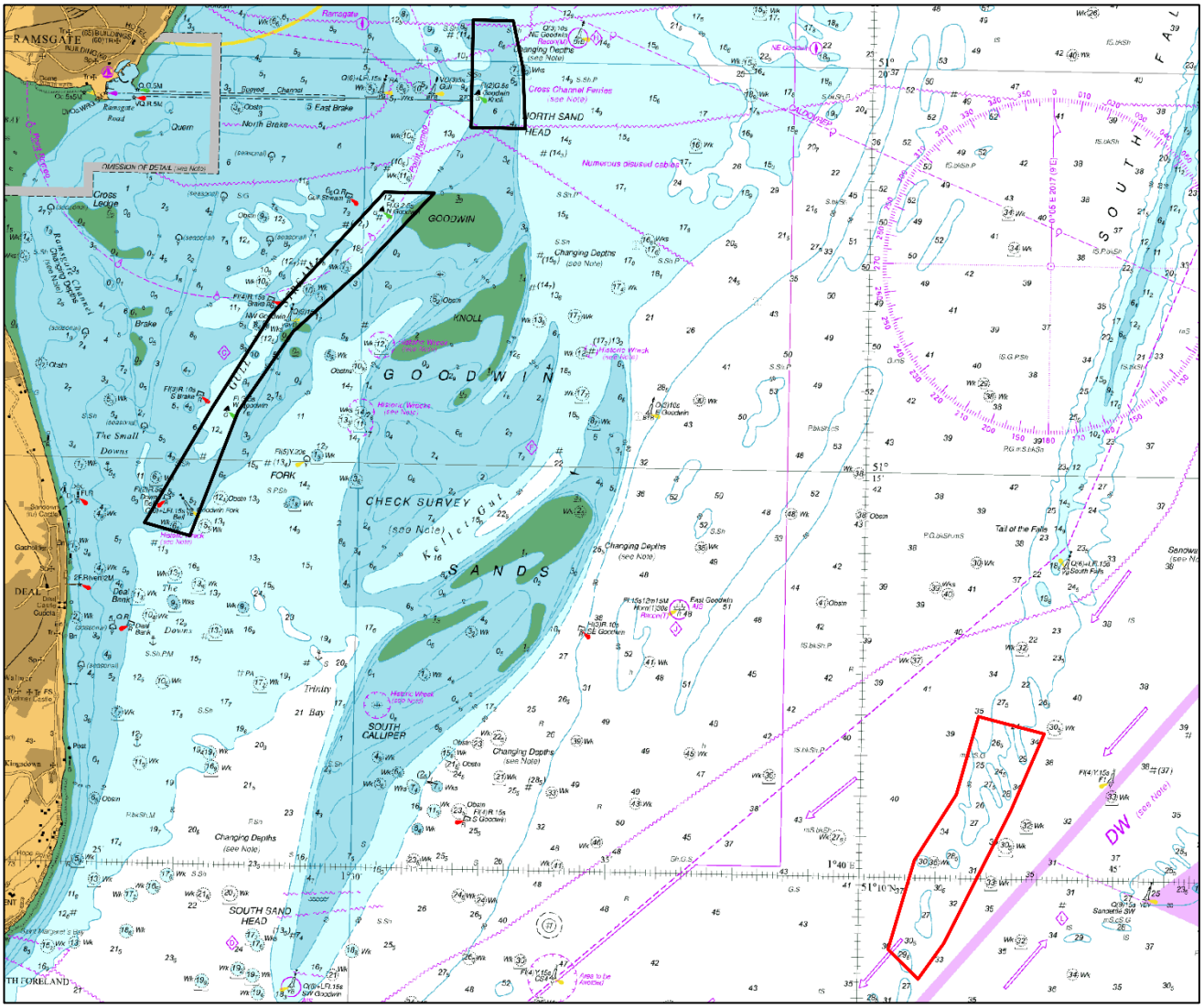


Figure 1 – Areas covered under the 2018 Dover Strait Routine Resurvey overlaid on BA Chart 0323-0 with DWR C1 in Red

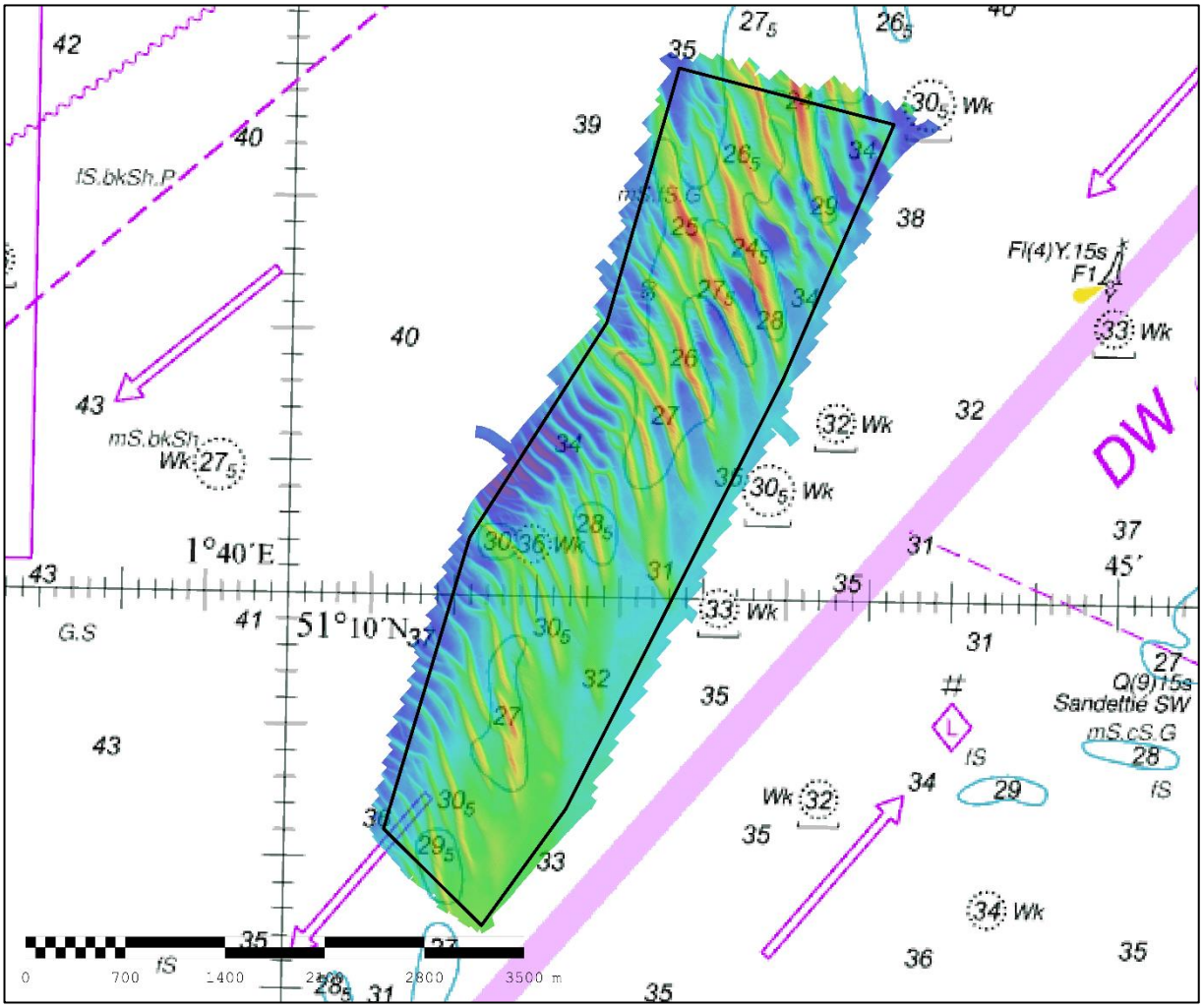


Figure 2 – 2018 DWR C1 survey data sun-illuminated view overlaid on BA Chart 0323-0

3. REFERENCE SURVEY DETAIL

3.1 The previous survey conducted as part of the 2017 Routine Resurvey Programme was conducted between May and July 2017 as part of HI1547.

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. COMPARISON SURVEY DETAIL

4.1 The latest survey as part of the 2018 Routine Resurvey Programme was conducted in January 2019 as part of HI1619.

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 least depth remains at 24.5m. However, it was noted that the least depth of the survey is now approximately 1km NE of the shoalest point found in the 2017 survey – in the areas covered by the survey extension agreed after the 2017 survey.

5.2 The difference plot (Figure 4) shows that the sand waves on the eastern side of the area are continuing to migrate southwards from the north-east of the survey area. Contours have shown that the maximum rate of movement was found to be approximately 30m. Sandwaves on the western side of the survey area are migrating to the north-east.

5.3 In addition, towards the west across there has been some migration has occurred to the north at a rate of approximately 15-25m.

5.4 There has been shoaling on the western edge of the DWR C1 area.

5.5 The difference plot (Figure 4) and the depth plot (Figure 5) show that the eastern areas, in particular the south-eastern corner show little change and depths are consistent.

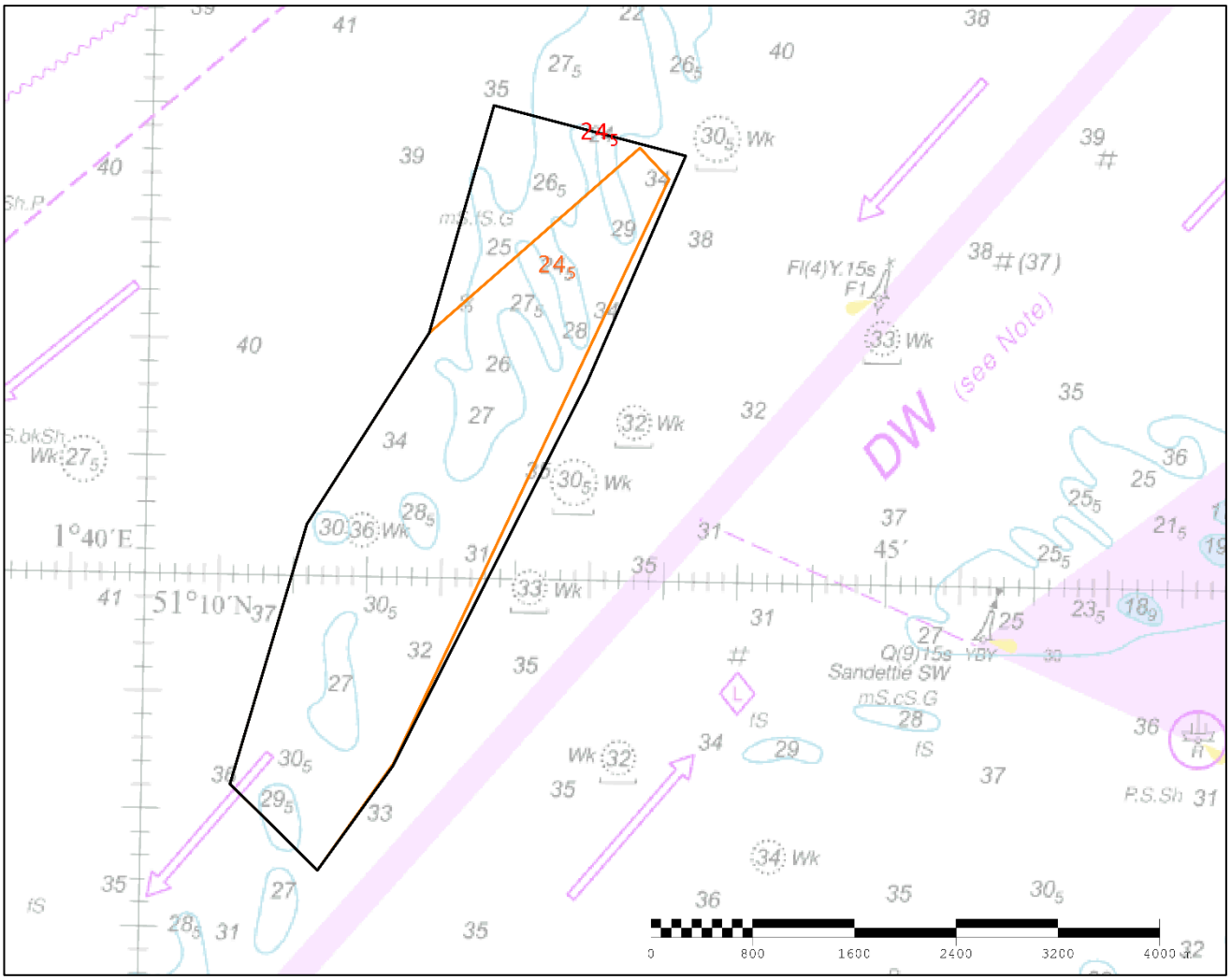


Figure 3 – Least Depth Diagram with 2018 Least Depth in Red and 2017 Least Depth in Orange (2018 Survey Limits in Black, 2017 Survey Limits in Orange)

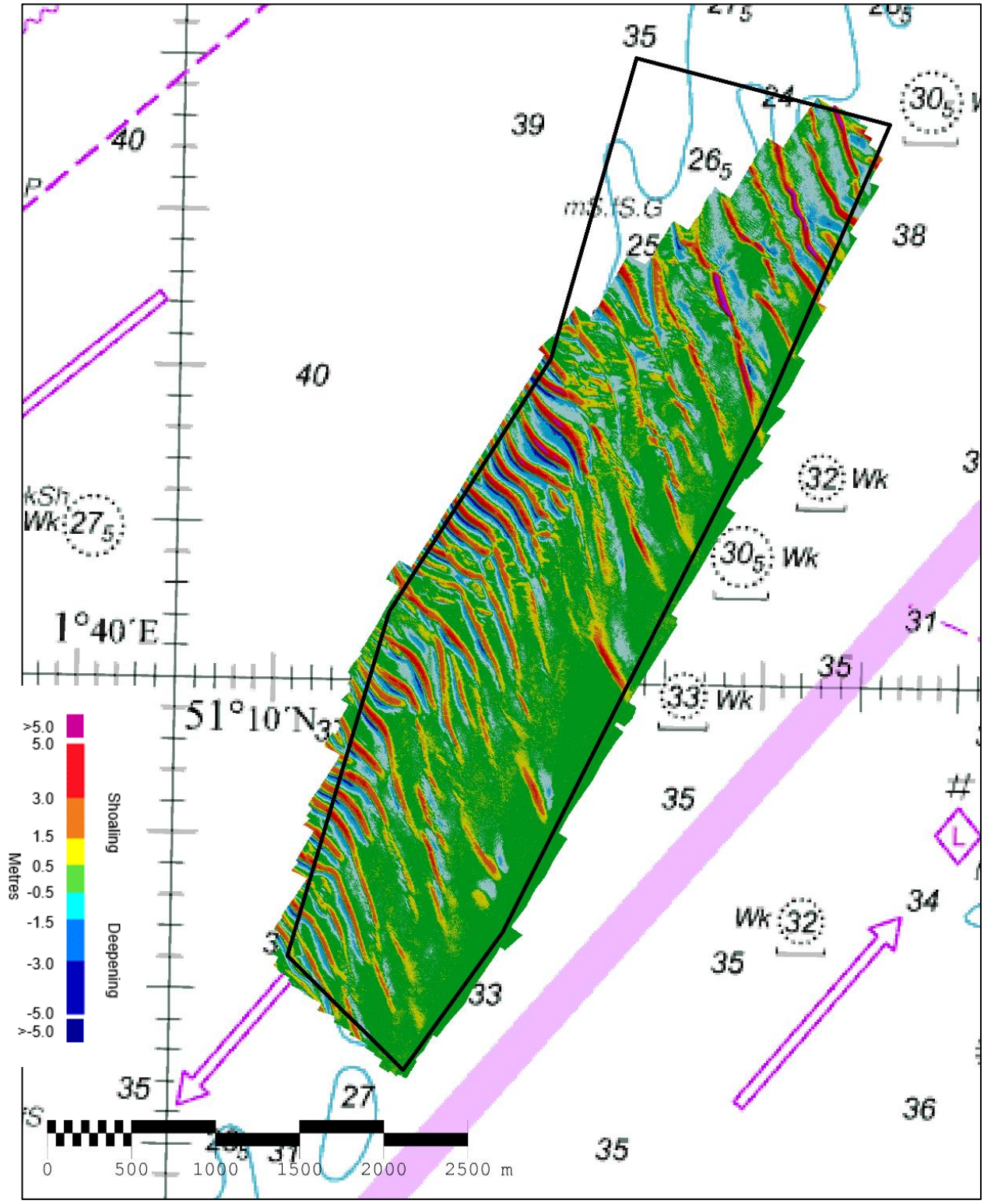
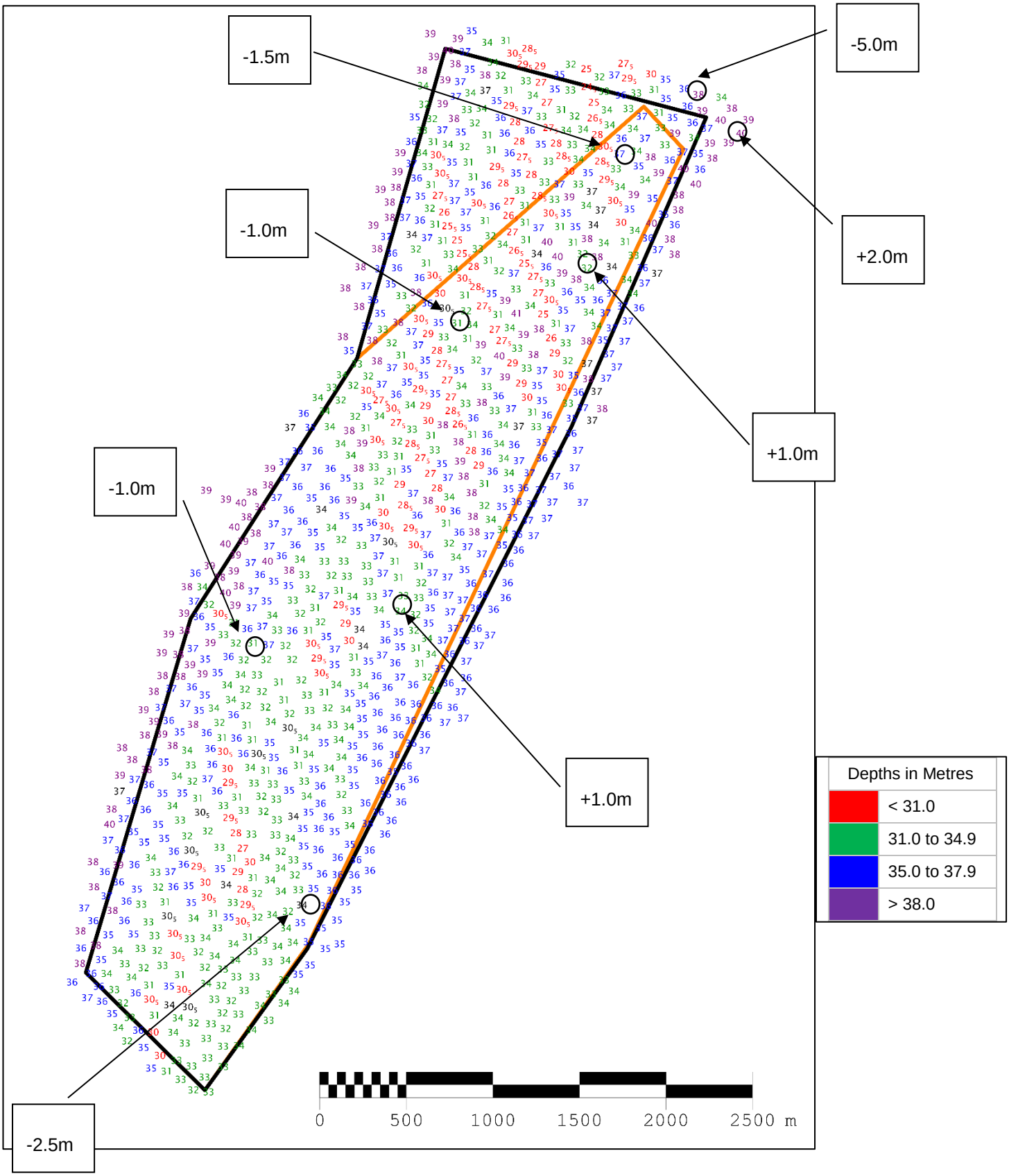


Figure 4 – Difference Plot 2018 vs 2017 overlaid on BA Chart 0323-0



Positive values (+) represent deepening. Negative values (-) represent seabed depths becoming shallower

Figure 5 – Colour Banded Depth Plot from the 2018 Survey with selected depth changes since the 2017 Survey (2018 Survey Limits in Black, 2017 Survey Limits in Orange)

6. RECOMMENDATIONS FOR FUTURE SURVEYS

Survey Interval

6.1 Given the location of the area in relation to the DWR, the draught of vessels navigating the area, the shoaling evidenced annually and the continued migration of sand waves, DWR C1 should remain on the annual survey interval.

Survey Area

6.2 Due to evident shoaling on the western edge of C1 the western limit should be extended by 320m to confirm minimum depths over sandwaves as shown in Figure 6.

6.3 As the 2018 survey is the first to have been conducted since the changes introduced after the 2017 survey and due to the continued evidence of migration of sand waves from the north-east with evidence of some northwards migration it is recommended that the northern limits of DWR C1 should remain the same for the time being.

6.4 Consideration has been made to extend C1 into C3. Following the 2019 surveys of C1 and C3 there will be a better picture of the northward migration of the sand waves and a more informed decision can be made on the need to extend the annual C1 into C3.

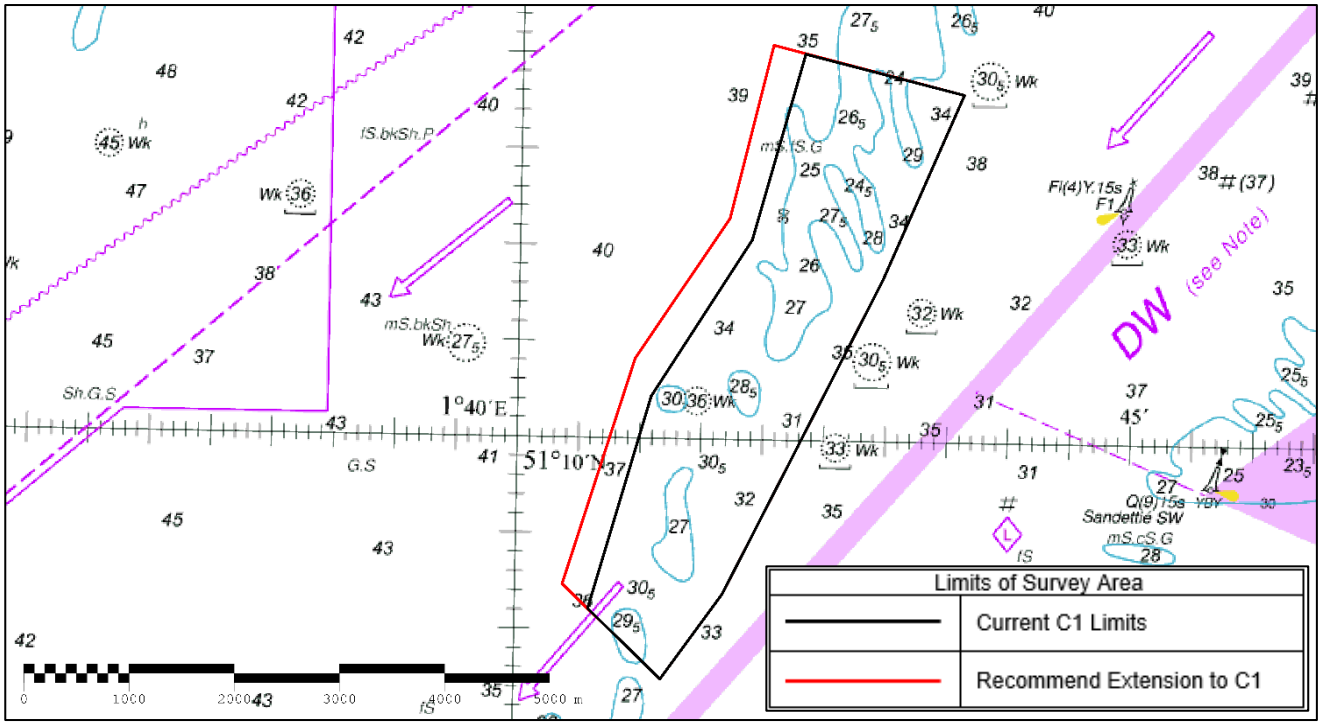


Figure 6 – New Recommend C1 Limits with Extended Western Edge overlaid on BA Chart 0323-0

Table 1 – Coordinates for New Recommend C1 Limits

	Latitude	Longitude
1	51-12.044N	001-42.039E
2	51-11.800N	001-43.600E
3	51-10.829N	001-42.959E
4	51-09.187N	001-41.695E
5	51-08.740N	001-41.200E
6	51-09.226N	001-40.389E
7	51-10.405N	001-40.952E
8	51-11.139N	001-41.705E
9	51-12.044N	001-42.039E