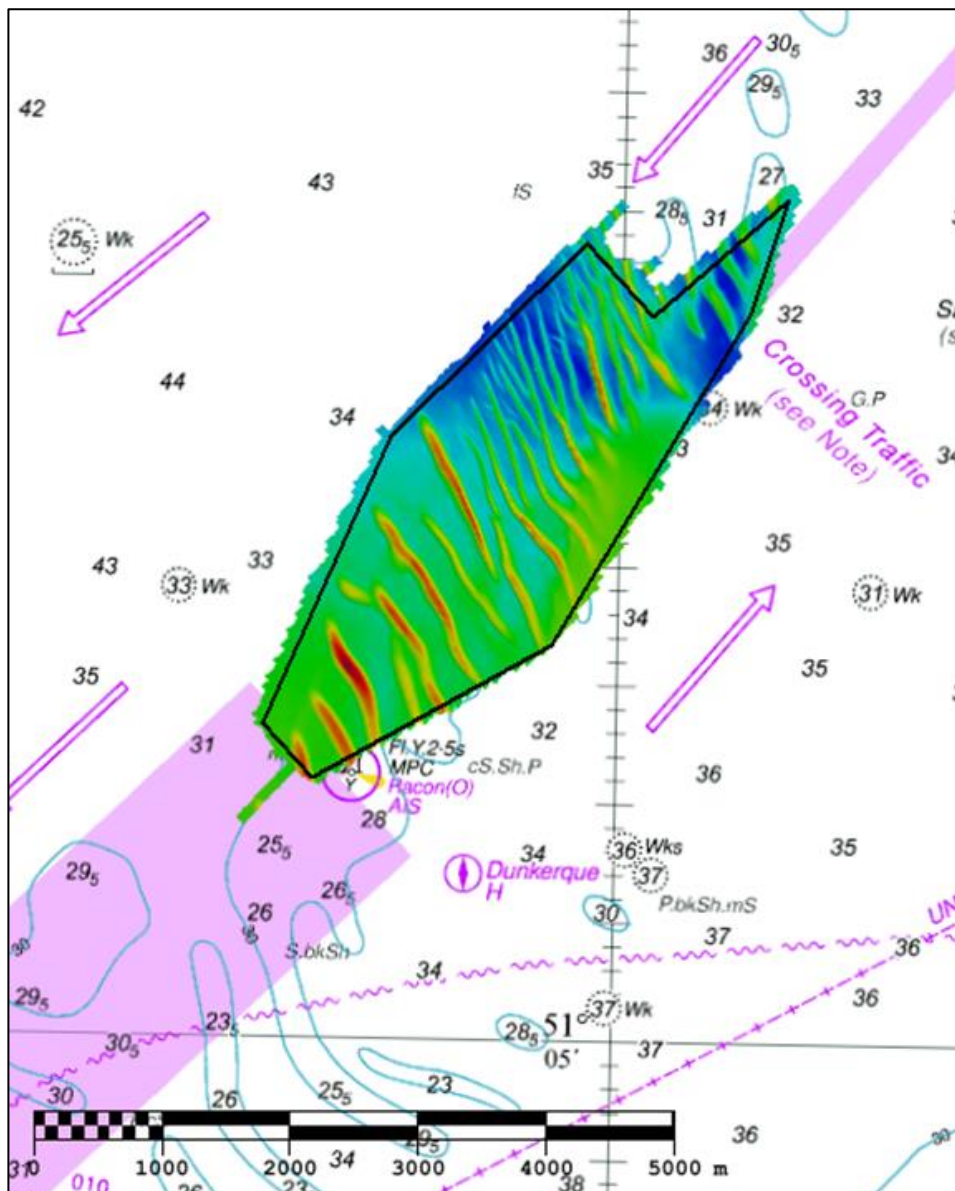




UK Hydrographic
Office

DOVER STRAIT DWR C4 TAIL OF THE FALLS 2019 ASSESSMENT

An assessment of the 2019 hydrographic survey of the area DWR C4 Tail of the Falls: to monitor recent seabed movement; to identify any implications for shipping; and to make recommendations for future surveys.



CONTENTS

Notes	2
1. SUMMARY	1
2. LOCATION	1
3. REFERENCE SURVEY DETAIL	3
4. NEW SURVEY DETAIL	3
5. DESCRIPTION OF RECENT BATHYMETRIC CHANGE	4
6. RECOMMENDATIONS FOR FUTURE SURVEYS	7

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

DWR C4 TAIL OF THE FALLS, 2019

1. SUMMARY

Changes Detected

- 1.1 Since 2006/7, sandwaves have migrated northeast with changes in position of the sandwaves clearly visible in difference surfaces.
- 1.2 Sandwaves in the area are steadily migrating northeast. The controlling depth has increased from 22.5 to 24.3m since 2014.
- 1.3 The upper middle section of the survey area has seen less significant depth changes.

Reasons for Continuing to Resurvey the Area

- 1.4 Mobility of the sandwaves in the area means that depths are highly changeable in the DWR area. Continued surveying is required to monitor the changes.

Recommendations

- 1.5 Due to the obvious mobility of the sandwaves within the area, it is recommended that the survey interval be shortened from 12 year to 6 years.
- 1.6 Survey area is sufficient, as most changes are occurring within the survey limits (or are within the DWR C2 area to the north).

2. LOCATION

- 2.1 Survey interval at time of resurvey: 12 years
- 2.2 Area Covered: 7.17 km²

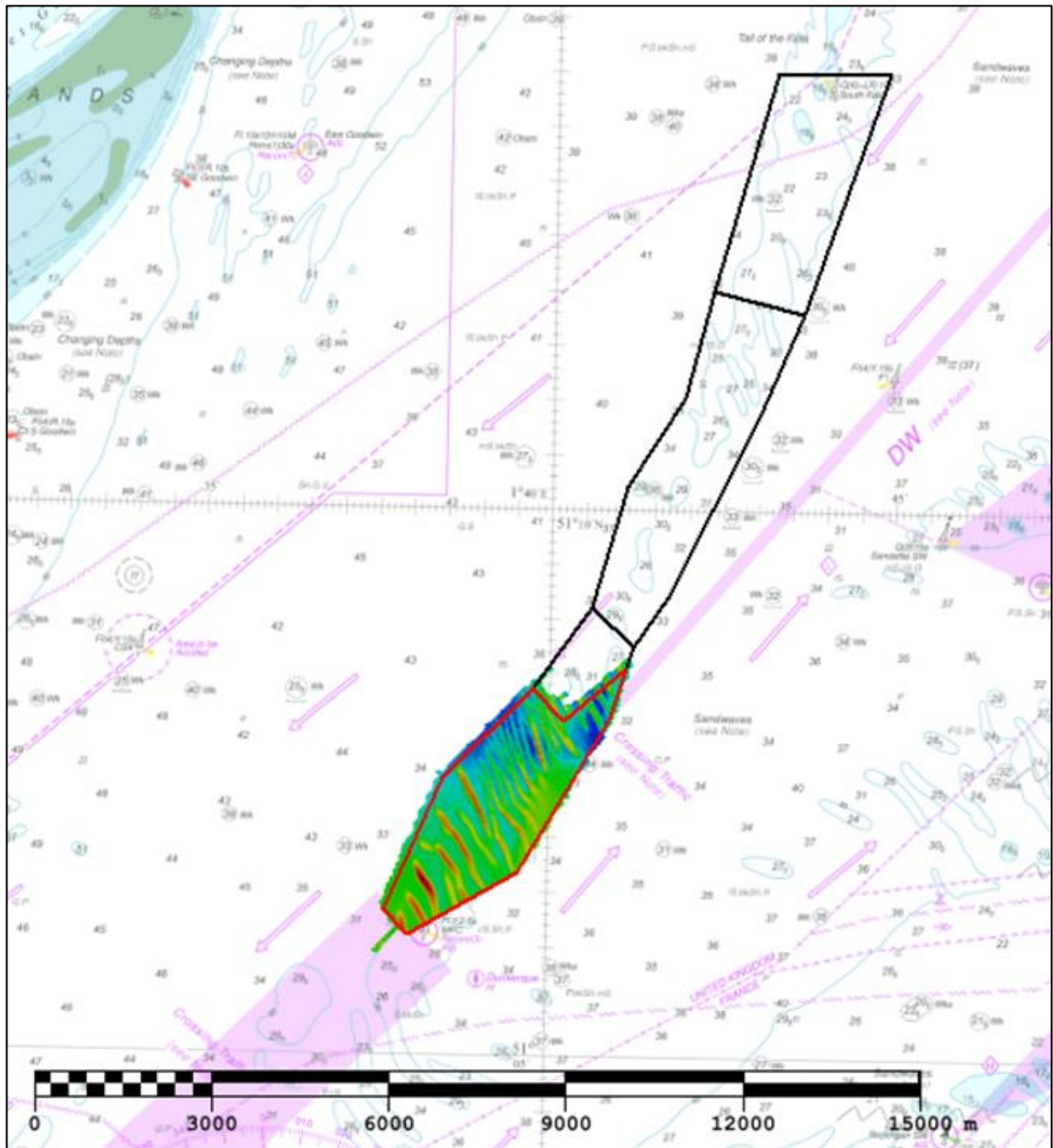


Figure 1: 2019 Dover Strait Routine Resurvey areas overlaid on BA Chart 0323-0 with area DWR C4 Tail of the Falls shown in red.

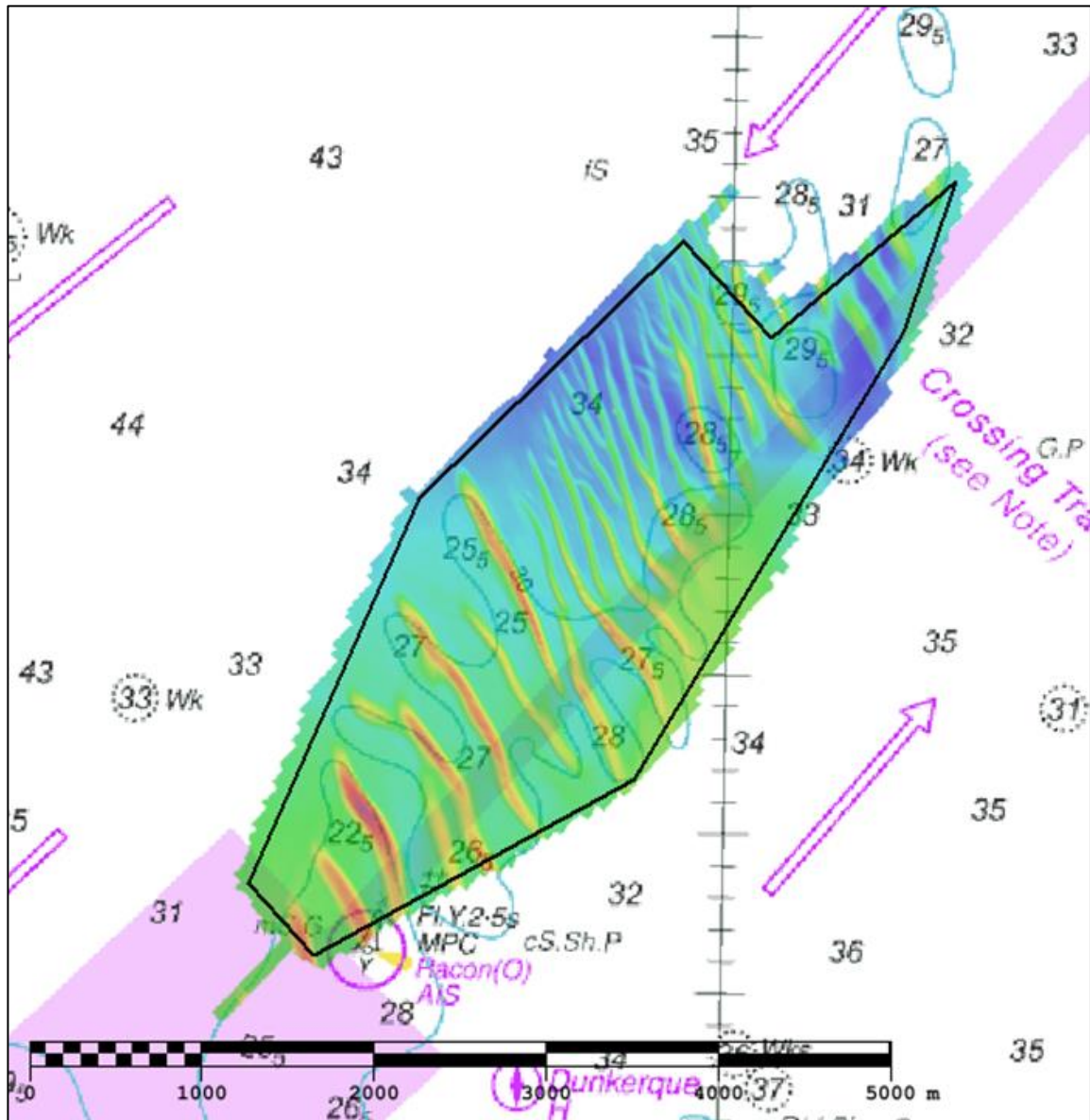


Figure 2: 2019 DWR C4 survey data overlaid on BA Chart 0323-0.

3. REFERENCE SURVEY DETAIL

- 3.1 The previous survey for the area DWR C4 was conducted as part of the 2006 HI1159 survey between September 2006 and July 2007. Data from a non-CHP survey from April to May 2014 has also been used for comparison. This survey was part of Environmental Monitoring for the proposed Marine Conservation Zone in the area.
- 3.2 The Report of Survey for these surveys are 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 focused survey as part of the 2019 Routine Resurvey Programme was conducted between July and October 2019 as part of HI1652.
- 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 surface in Figure 3 shows a significant sandwave migration northeast since the survey in 2006/07. The largest sandwaves are seen in the southwestern section of the survey area. Distinct differences can be seen in the position of the largest sand wave features.
- 5.2 The difference surfaces in Figures 3 and 4 shows that sandwaves in the area have also migrated steadily in a northeast direction since 2014.
- 5.3 Significant depth changes can be seen in the southwest and northeast sandwave areas.
- 5.4 Figures 5 and 6 are colour-banded depth plots which indicate depth changes since the 2006/7 and 2014 surveys respectively. Depth labels show that migration of sandwaves has caused moderate changes in depth in the areas of sandwaves.

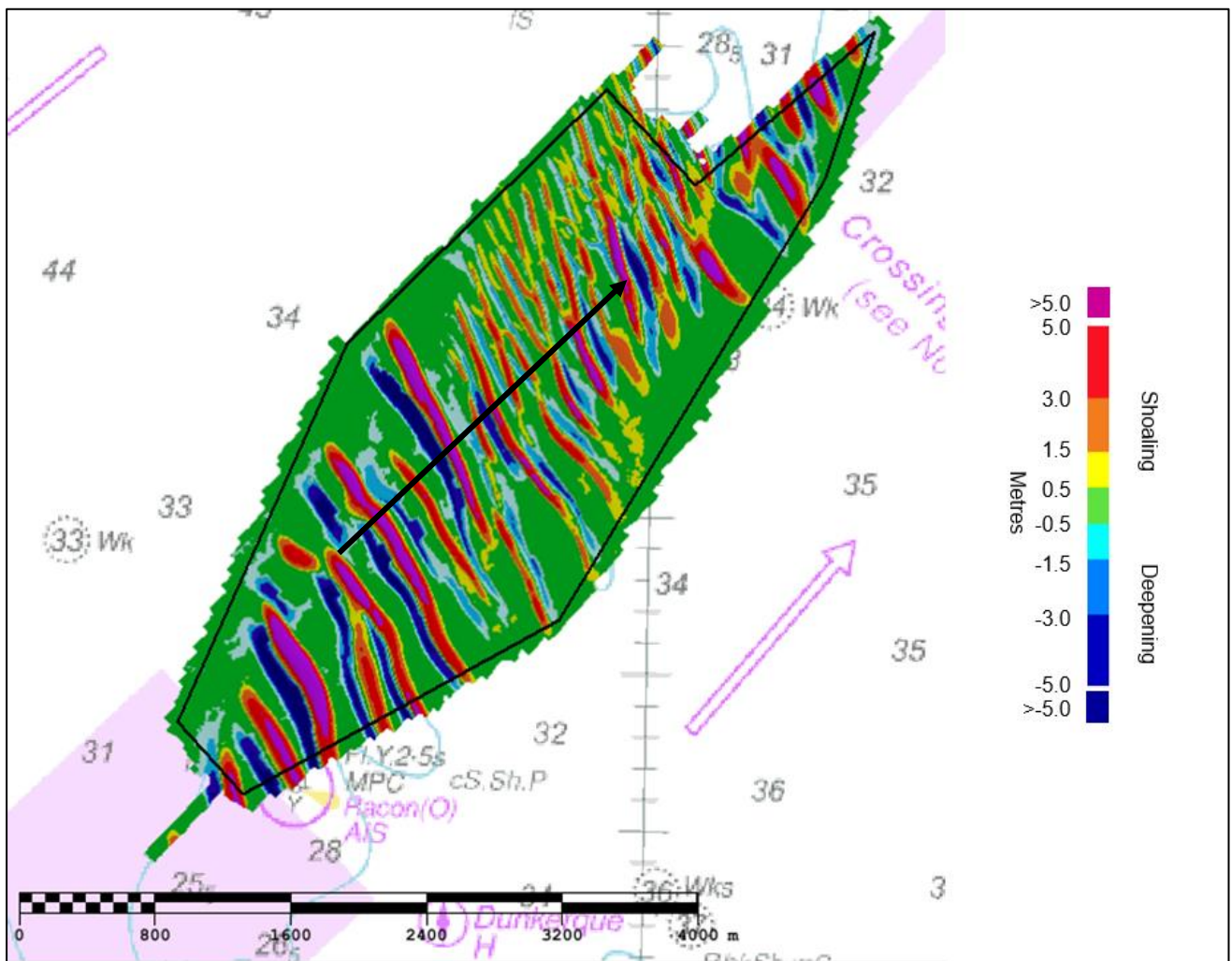


Figure 3: Difference surface showing bathymetric changes between 2006/7 and 2019 surveys overlaid on BA Chart 0323-0 (Black arrow represents sandwave migration since 2006/7 survey).

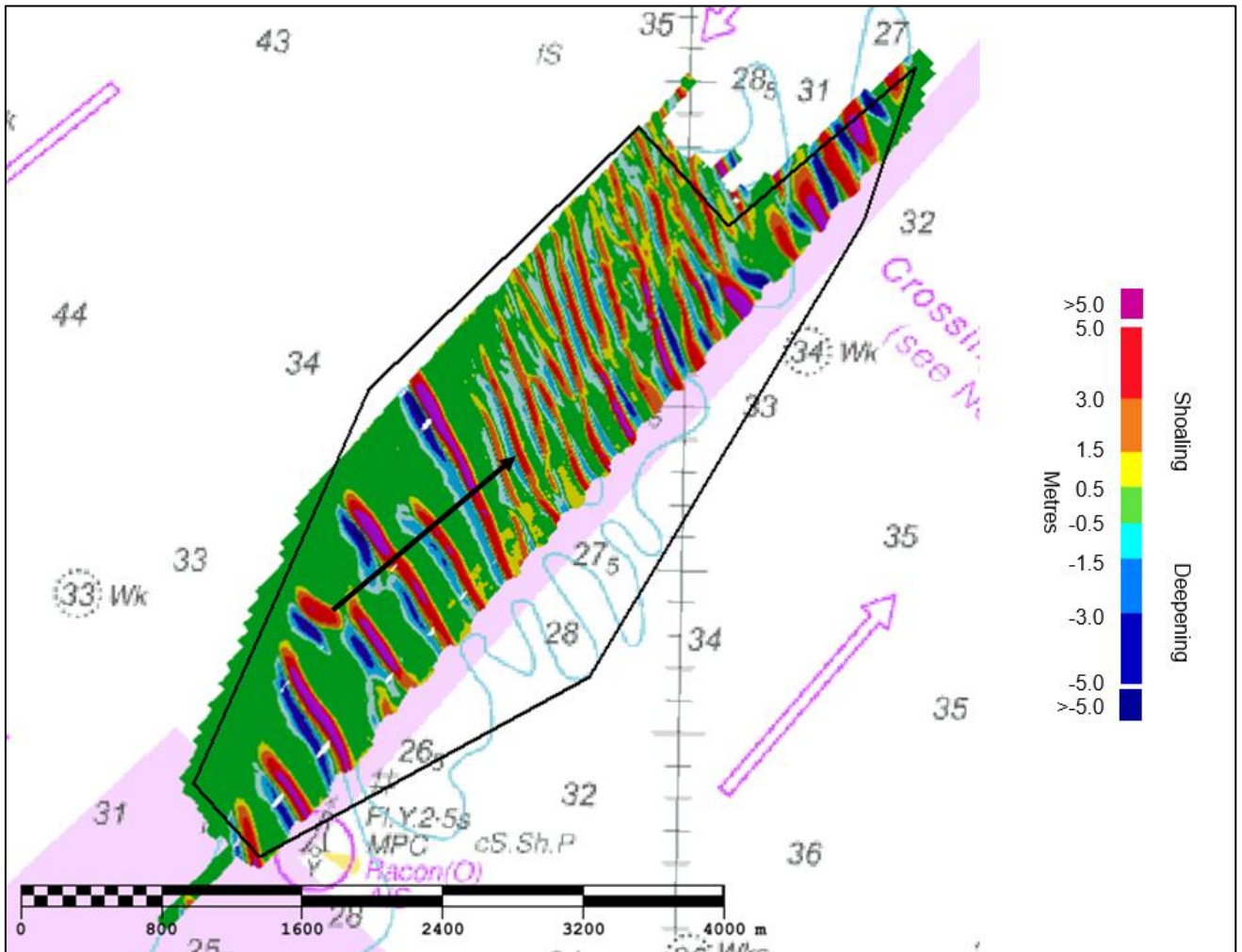


Figure 4: Difference surface showing bathymetric changes between 2014 and 2019 surveys overlaid on BA Chart 0323-0 (Black arrow represents sandwave migration since 2014 survey).

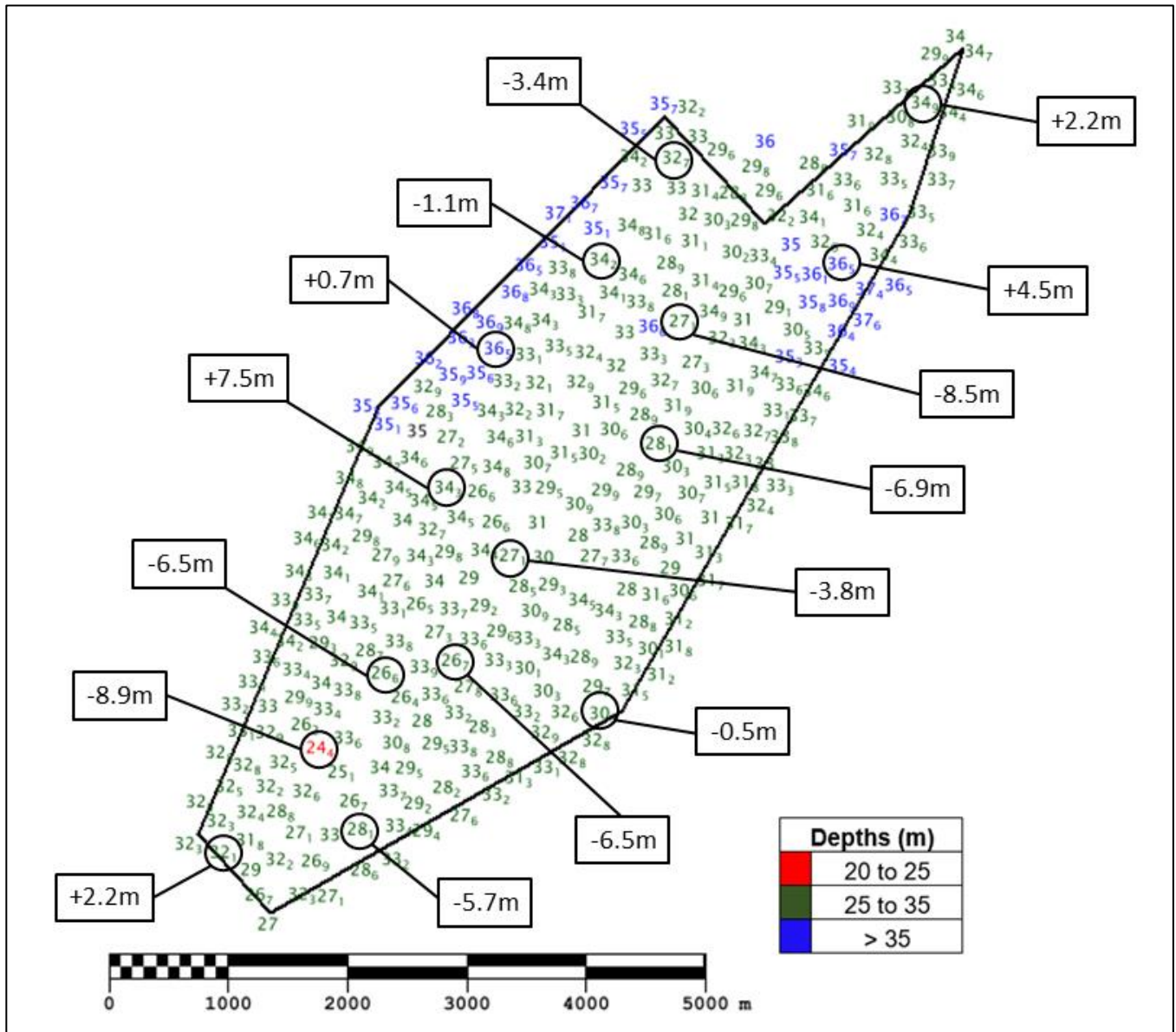


Figure 5: Colour banded depth plot from the 2019 survey with selected depth changes since the 2006/07 survey. Positive values (+) represent deepening. Negative values (-) represent shoaling.

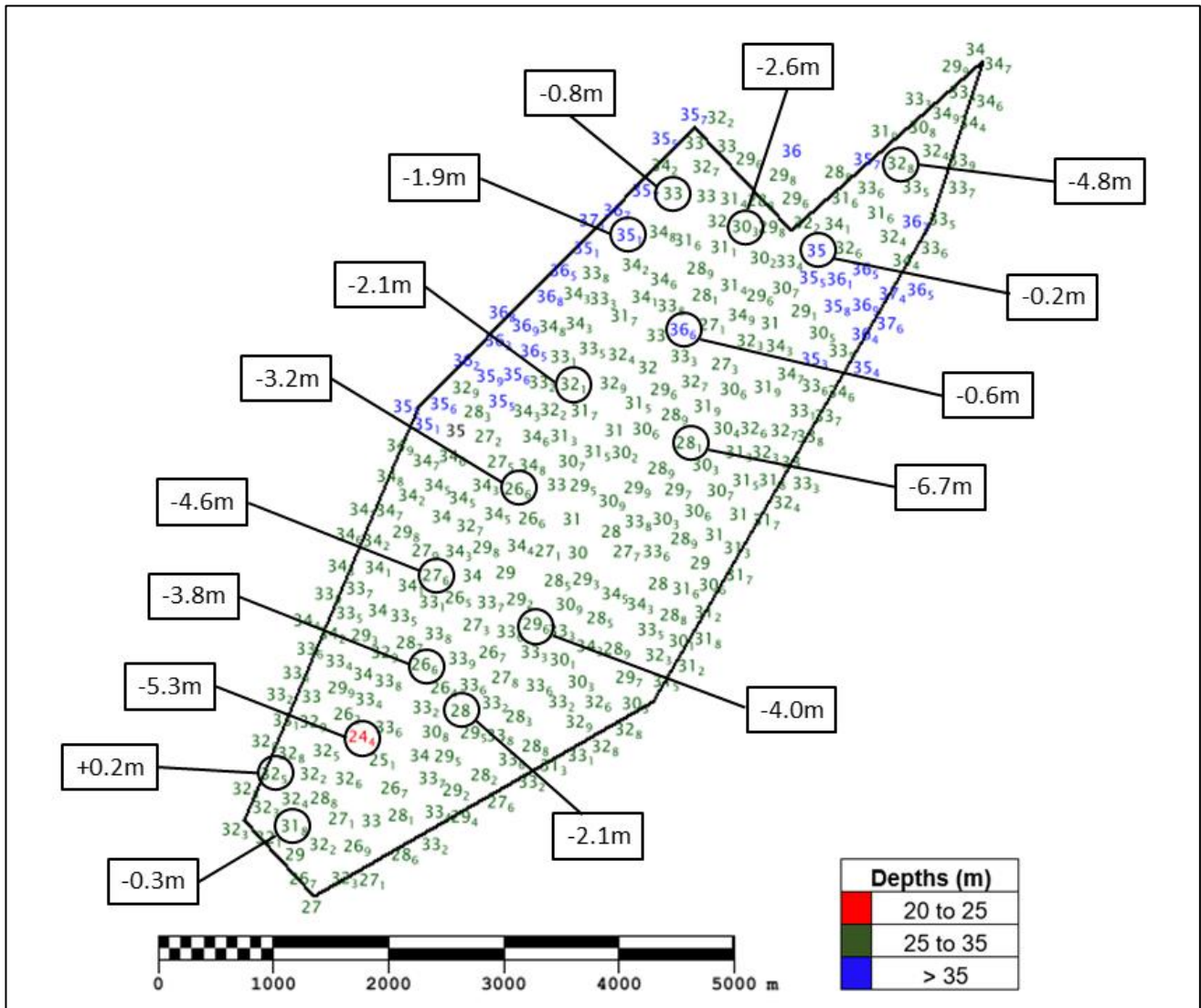


Figure 6: Colour banded depth plot from the 2019 survey with selected depth changes since the 2014 survey. Positive values (+) represent deepening. Negative values (-) represent shoaling.

6. RECOMMENDATIONS FOR FUTURE SURVEYS

Survey Interval

6.1 Due to the obvious mobility of the sandwaves within the area, it is recommended that the survey interval be shortened from 12 year to 6 years. This will allow closer monitoring of the seabed mobility in the critical DWR channel.

Survey Area

6.2 As the larger sandwaves in the southwest section of the survey area are moving gradually northeast, and the migration of the northeast sandwaves will be encompassed in survey area DWR C2, the current C4 survey limits are sufficient to track significant changes.