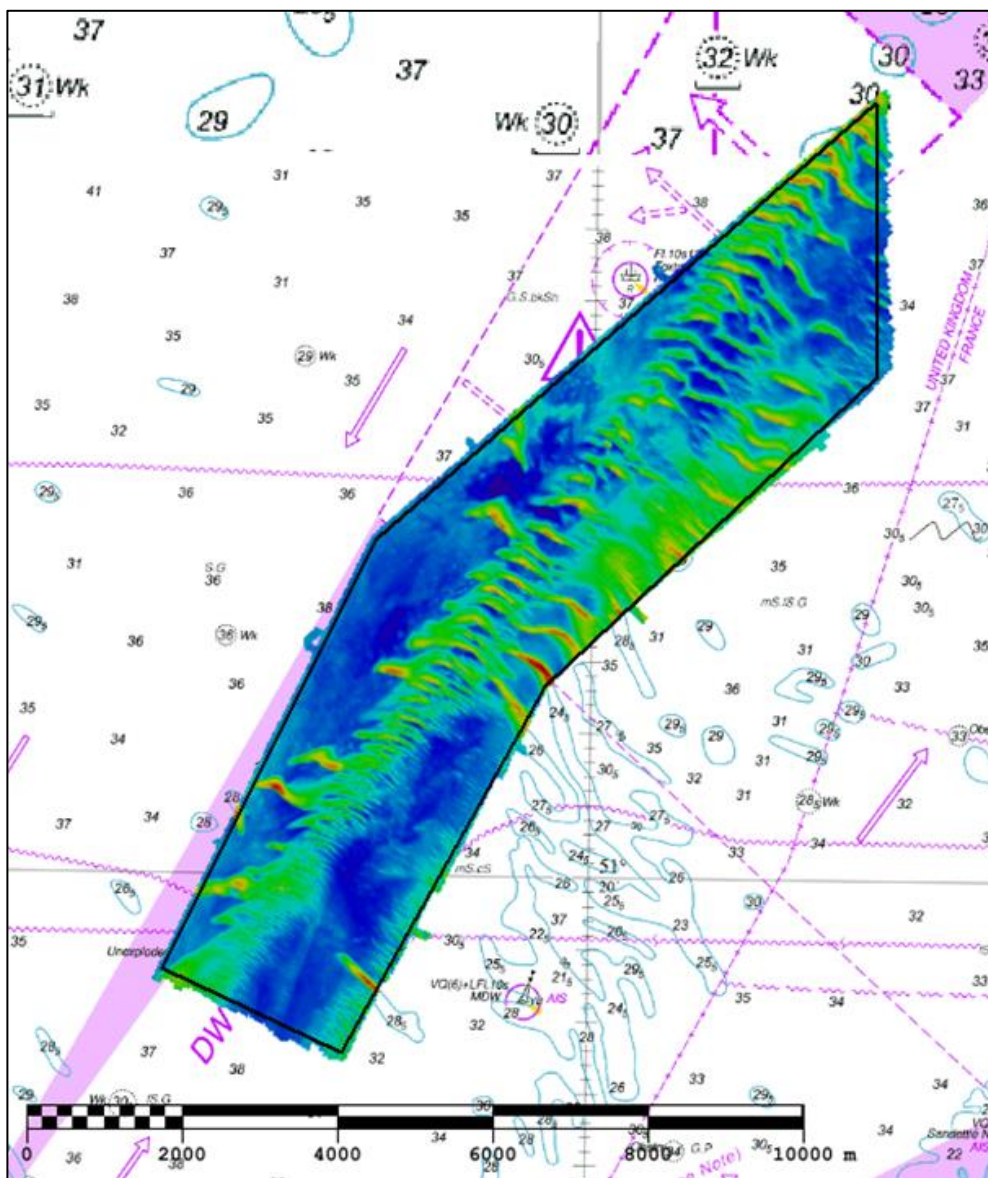




UK Hydrographic  
Office

## DOVER STRAIT DWR R NW SANDETTIE 2019 ASSESSMENT

An assessment of the 2019 hydrographic survey of the area DWR R NW Sandettie: 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).

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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 R NW SANDETTIE, 2019**

### **1. SUMMARY**

#### **Changes Detected**

- 1.1 The least depth at the edge of the survey is -0.6m shoaler than both the 2007 and 2013 surveyed depths.
- 1.2 Sandwaves have migrated south-west, with larger features moving 150-200m, and smaller sandwaves moving ~20m. Outside of sandwave areas, the seafloor has remained stable.

#### **Reasons for Continuing to Resurvey the Area**

- 1.3 Survey area covers a major shipping route in the Dover Strait. The seafloor has mobile sand wave features which should be monitored for continued safety of maritime traffic. Continued resurveying is therefore necessary.

#### **Recommendations**

- 1.4 Sand waves have not migrated a great distance in this time. Therefore, DWR R NW Sandettie Full Area can remain on 12-year survey interval.
- 1.5 Major sand wave features and least and controlling depths are monitored within the 6-year focus surveys and have remained inside the full survey area since 2007. Full survey area is therefore sufficient.

### **2. LOCATION**

- 2.1 Survey interval at time of resurvey: 12 years (6 years focused).
- 2.2 Area Covered: 38.2 km<sup>2</sup>

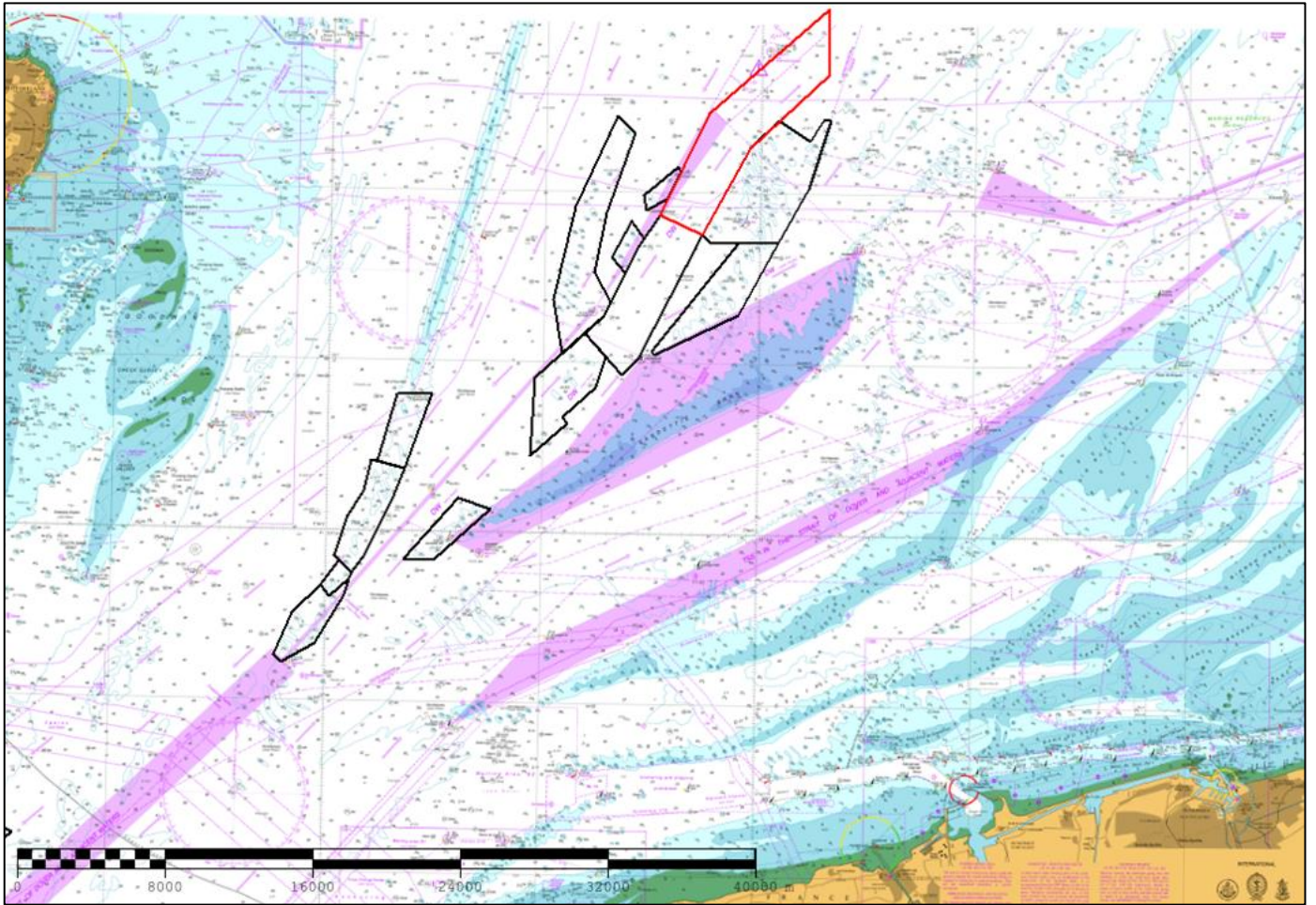


Figure 1: 2019 Dover Strait Routine Resurvey areas overlaid on BA Chart 0323-0 with area DWR R NW Sandettie in red.

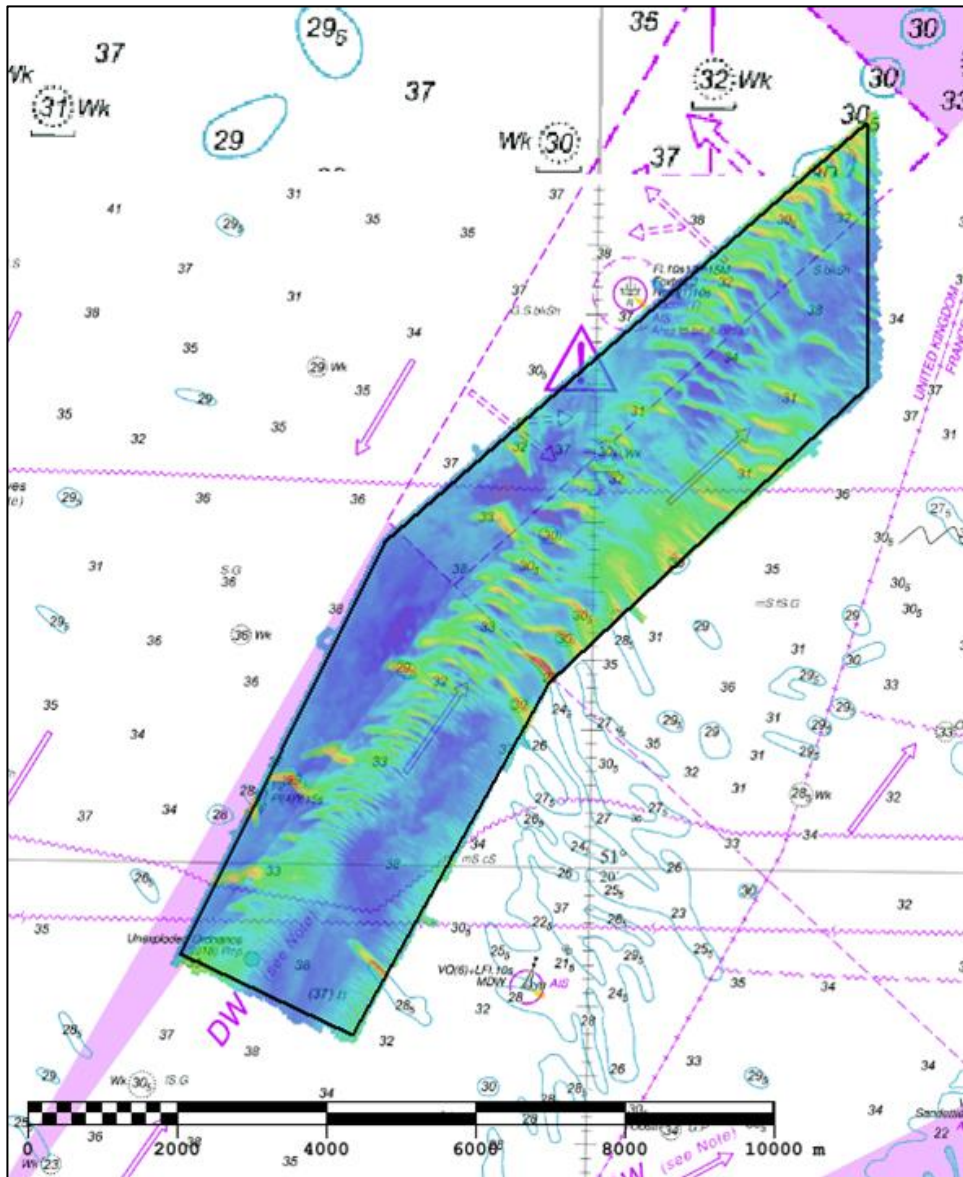


Figure 2: 2019 survey data overlaid on BA Charts 0323-0 and 2449-0.

### 3. REFERENCE SURVEY DETAIL

- 3.1 The previous full survey was conducted as part of the 2007 Routine Resurvey Programme between September 2006 and July 2007 as part of HI1159. The previous focused surveys (R1, R2, R3) were conducted as part of the 2013 Routine Resurvey Programme between November and December 2013.
- 3.2 The Report of Surveys 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 full survey as part of the 2019 Routine Resurvey Programme was conducted between May and October 2019 as part of HI1656.
- 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 in the area is 27.8m on the shallow sand wave at the eastern edge of the survey limit. This is -0.6m shoaler than both the 2007 and 2013 surveys, and -0.2m shoaler than currently charted.
- 5.2 The difference surfaces in Figures 4 and 5 shows that there has been gradual sandwave migration in a south-west direction over the last 12 years. Outside of the sandwave areas, the seafloor has overall remained stable.
- 5.3 Figure 7 is a colour-banded depth plot, with changes since the full survey in 2007 labelled. Several larger sandwaves show high depth changes as the sand waves have changed position by 150-200m south-west. Remaining changes are lower as the movement of the seafloor has been a smaller scale of 40m south-west.

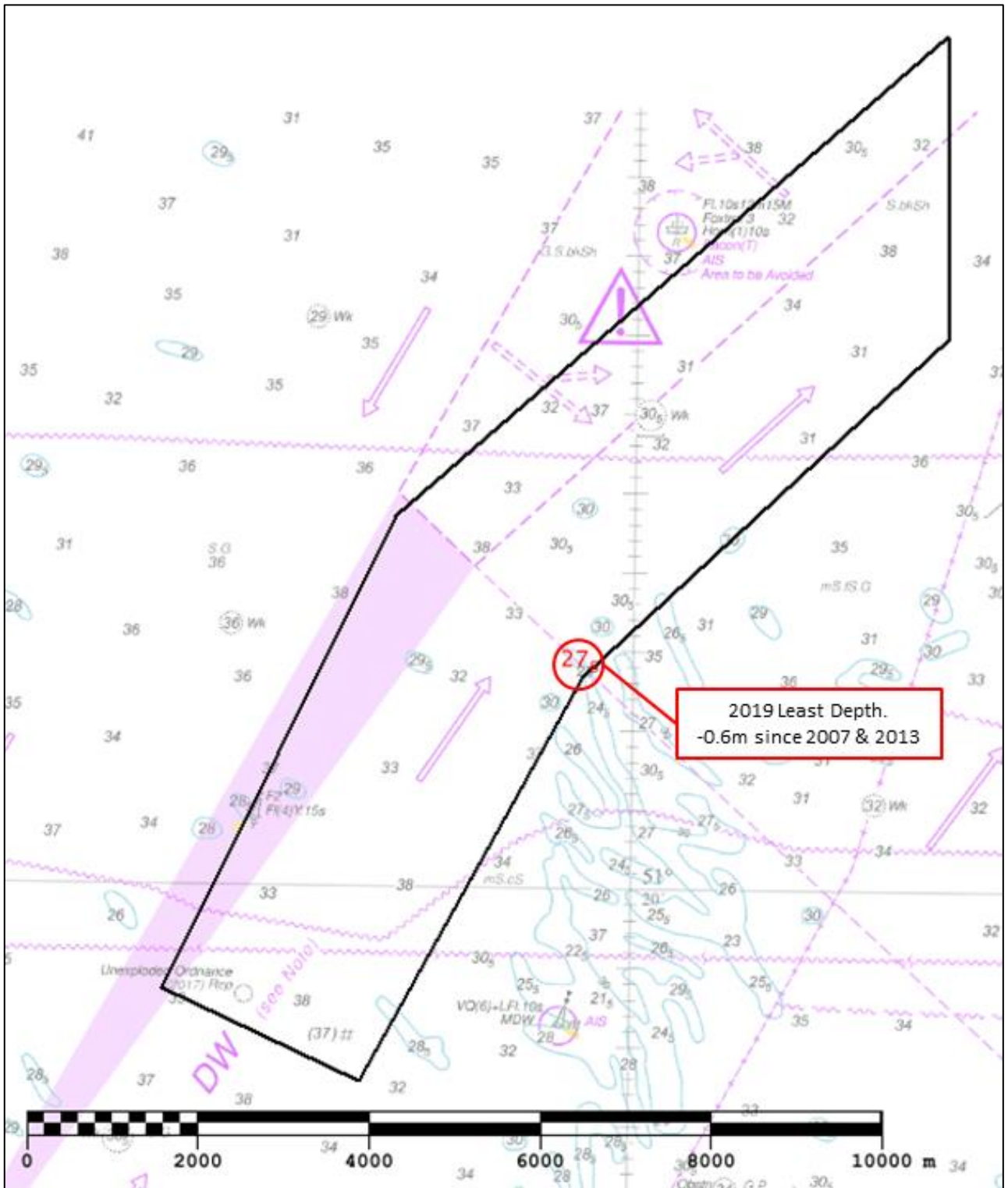


Figure 3: Least Depth Diagram with depth change since the 2007 and 2013 surveys. Positive values (+) represent deepening. Negative values (-) represent shoaling.

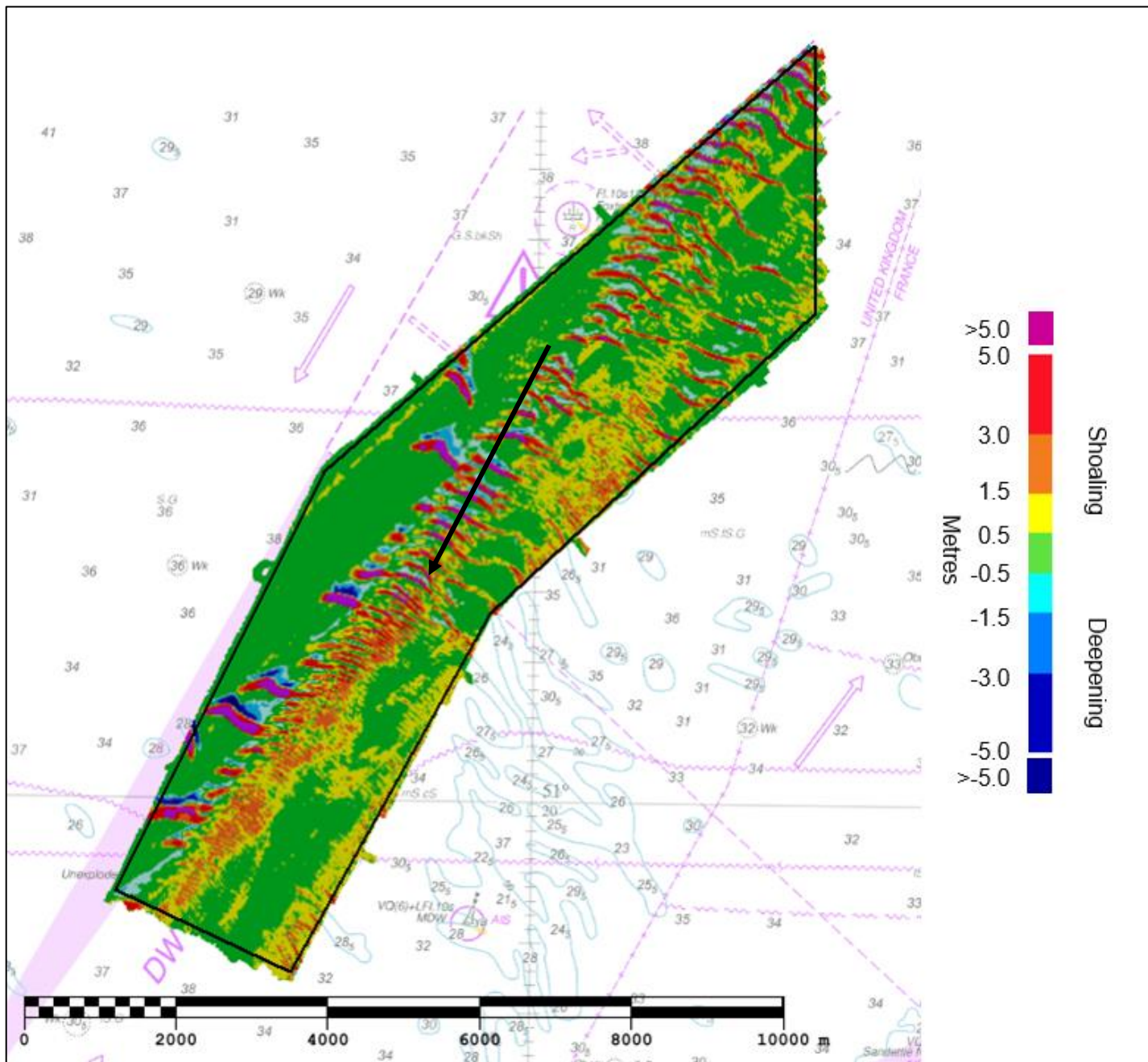


Figure 5: Difference surface showing bathymetric changes between the 2019 and 2007 surveys overlaid on BA Chart 0323-0 (Black arrows represent sand wave migration since 2007 survey).



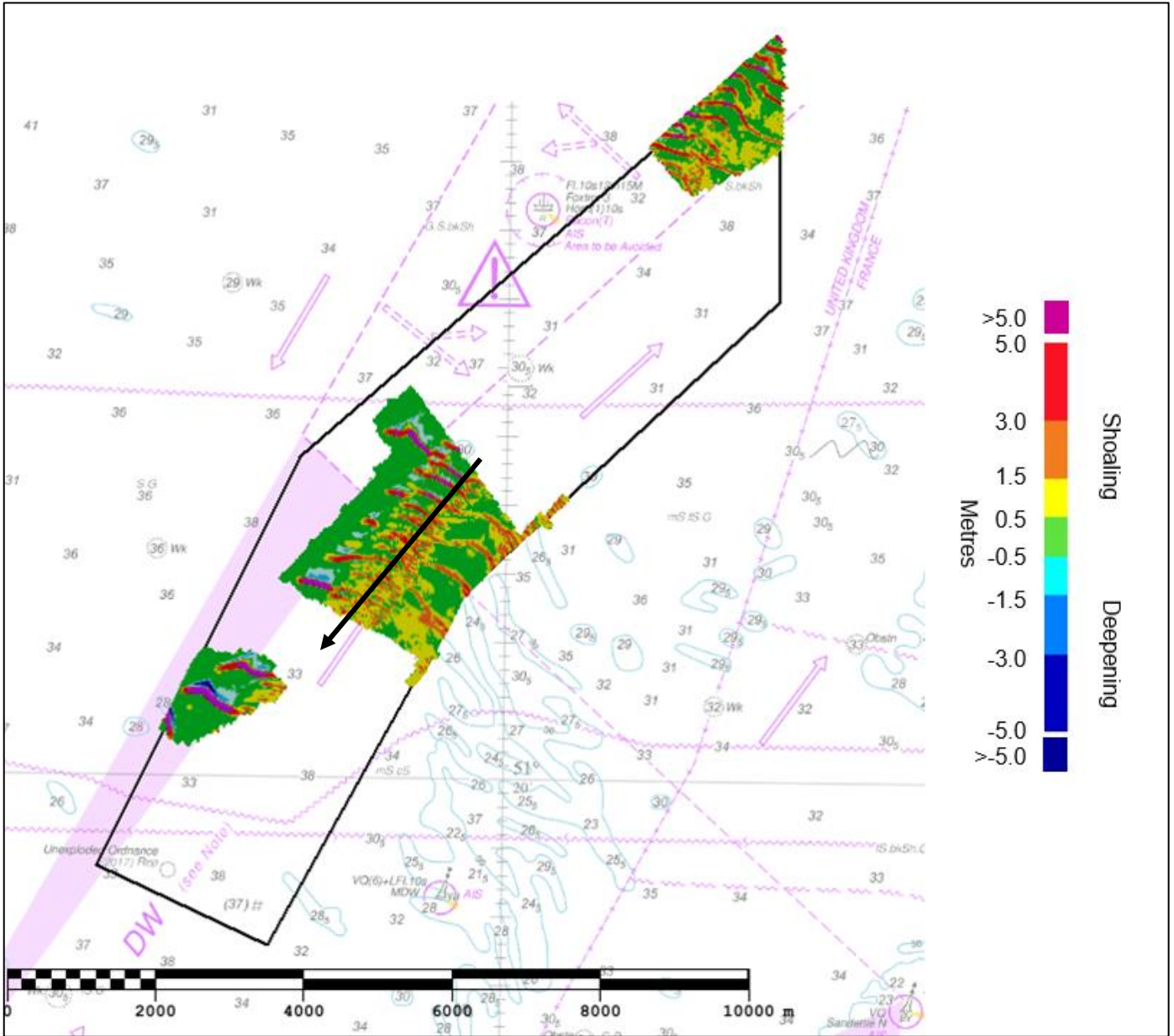


Figure 6: Difference surface showing bathymetric changes between the 2019 and 2013 focused surveys overlaid on BA Chart 0323-0 (Black arrows represent sand wave migration since 2013 surveys).

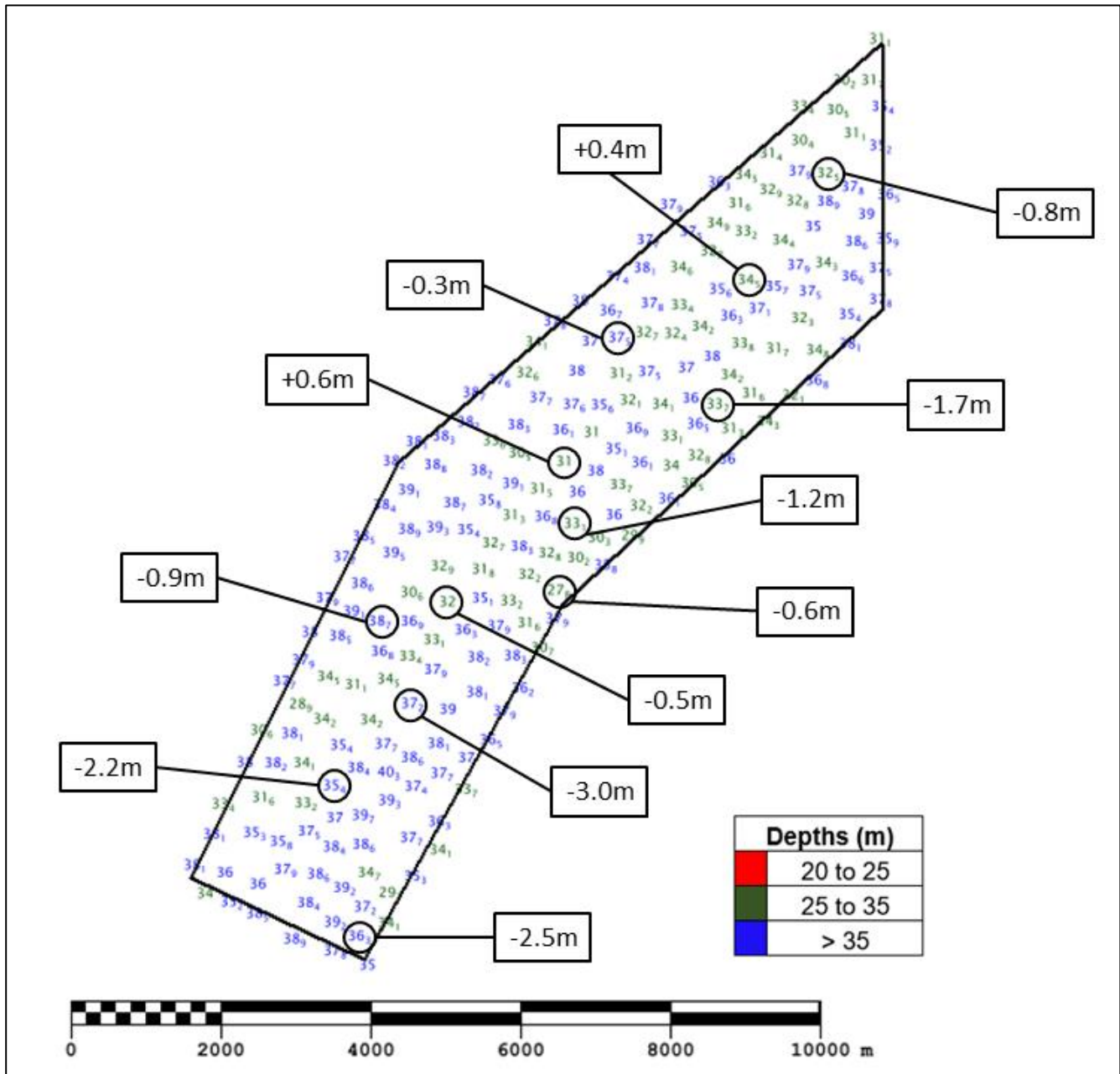


Figure 7: Colour banded depth plot from the 2019 survey with selected depth changes since the 2007 survey. Positive values (+) represent deepening. Negative values (-) represent shoaling.

## 6. RECOMMENDATIONS FOR FUTURE SURVEYS

### Survey Interval

6.1 Major sandwaves have not migrated far since the last survey in 2007, and the least depth is unchanged. Therefore, DWR R NW Sandtette Full Area can remain on the 12-year survey interval with the 6-year focused surveys.

### Survey Area

6.2 Least depth, as well as the main sandwave features are within the main survey boundaries and are surveyed during the 6-year focused surveys. As they are unlikely to shift outside the limit in the next 12 years. The full survey area is therefore satisfactory to monitor these features.