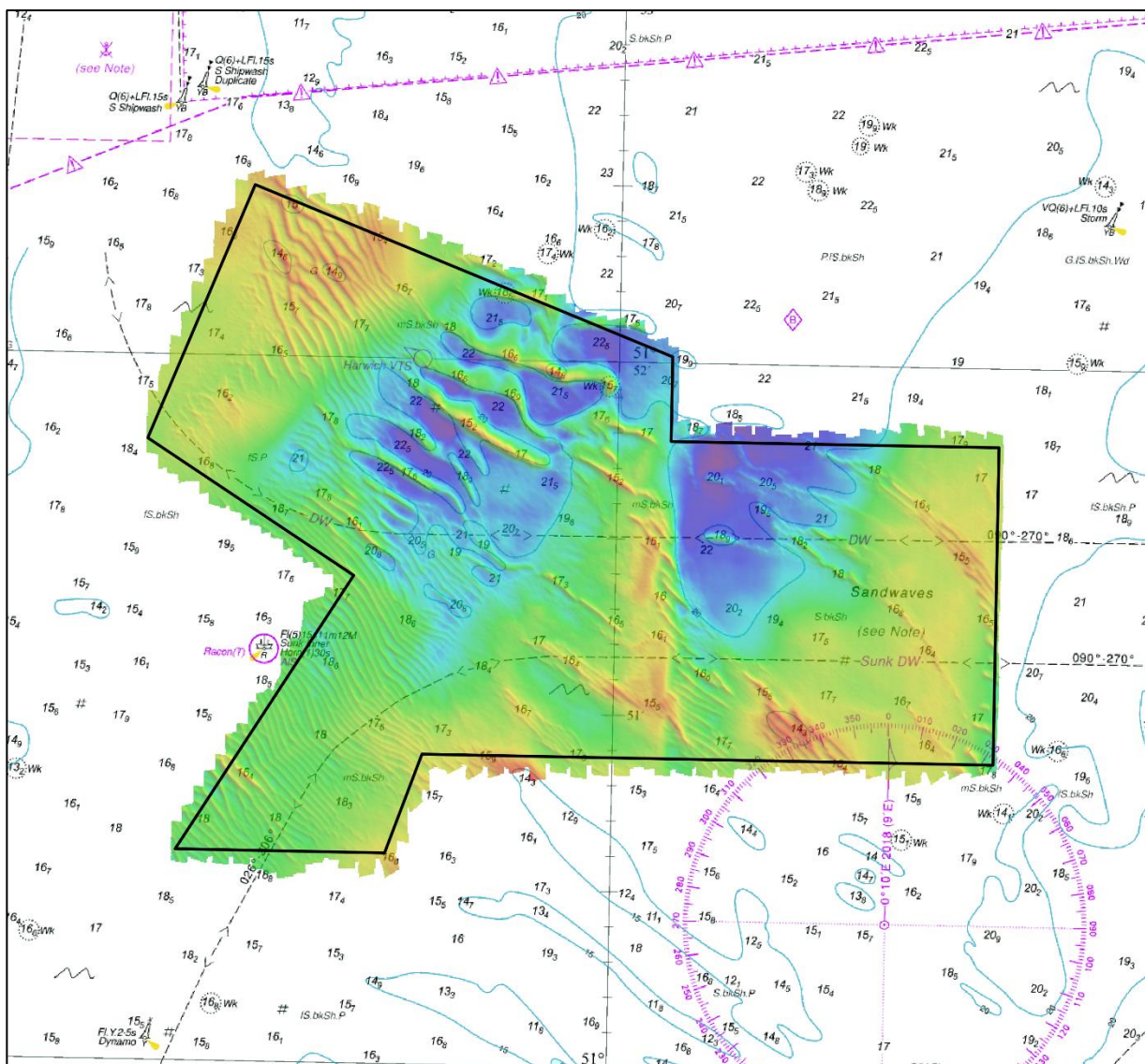




UK Hydrographic Office

THAMES ESTUARY SUNK (TE3A) 2017 ASSESSMENT

An assessment of the 2017 hydrographic survey of the area Sunk TE3A: 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 Department for Transport (including the MCA) and the Ministry of Defence (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 local chart datum, defined using the UKHO VORF Model.

THAMES EASTUARY, TE3A, 2017

1. SUMMARY

Changes Detected

- 1.1 Sandwaves have moved in a southwest direction since 2016, which is consistent with historical bedform movement. Depths have not changed significantly and controlling depths have generally deepened.

Reasons for Continuing to Resurvey the Area

- 1.2 Depth values in the area remain close to the draught of large vessels transiting the area along and in close proximity to charted Deep Water Routes. Southwesterly sandwave movement may encroach on Deep Water Routes so depths will continue to require monitoring.

Recommendations

- 1.3 The 1 year focused survey interval and limits should be retained.

2. LOCATION

- 2.1 Survey interval at time of resurvey: 1 year
- 2.2 Area Covered: 9.14 km²

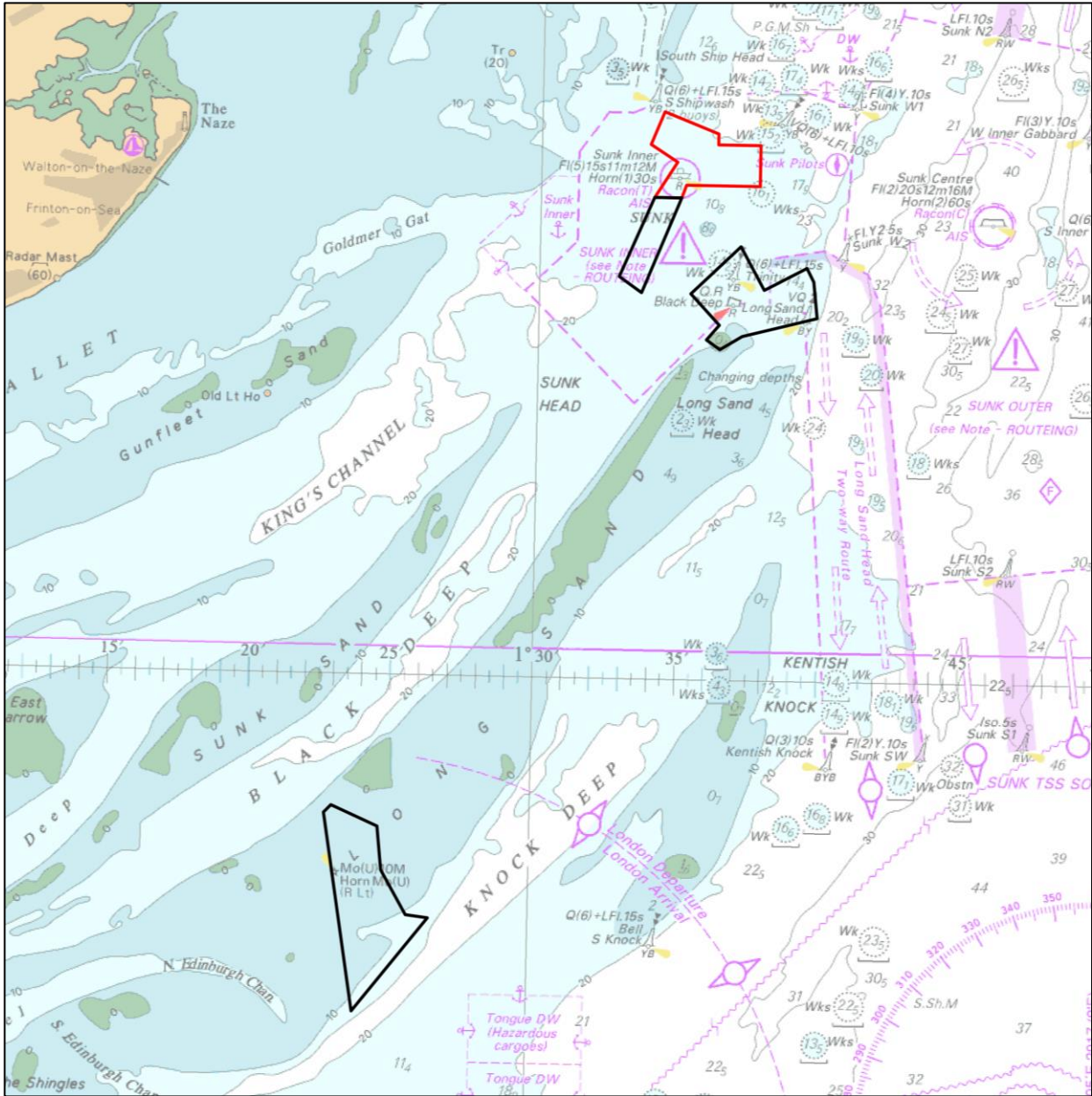


Figure 1 – 2017 Thames Estuary RRS areas overlaid on BA Chart 1406 with TE3A Sunk Focused in Red

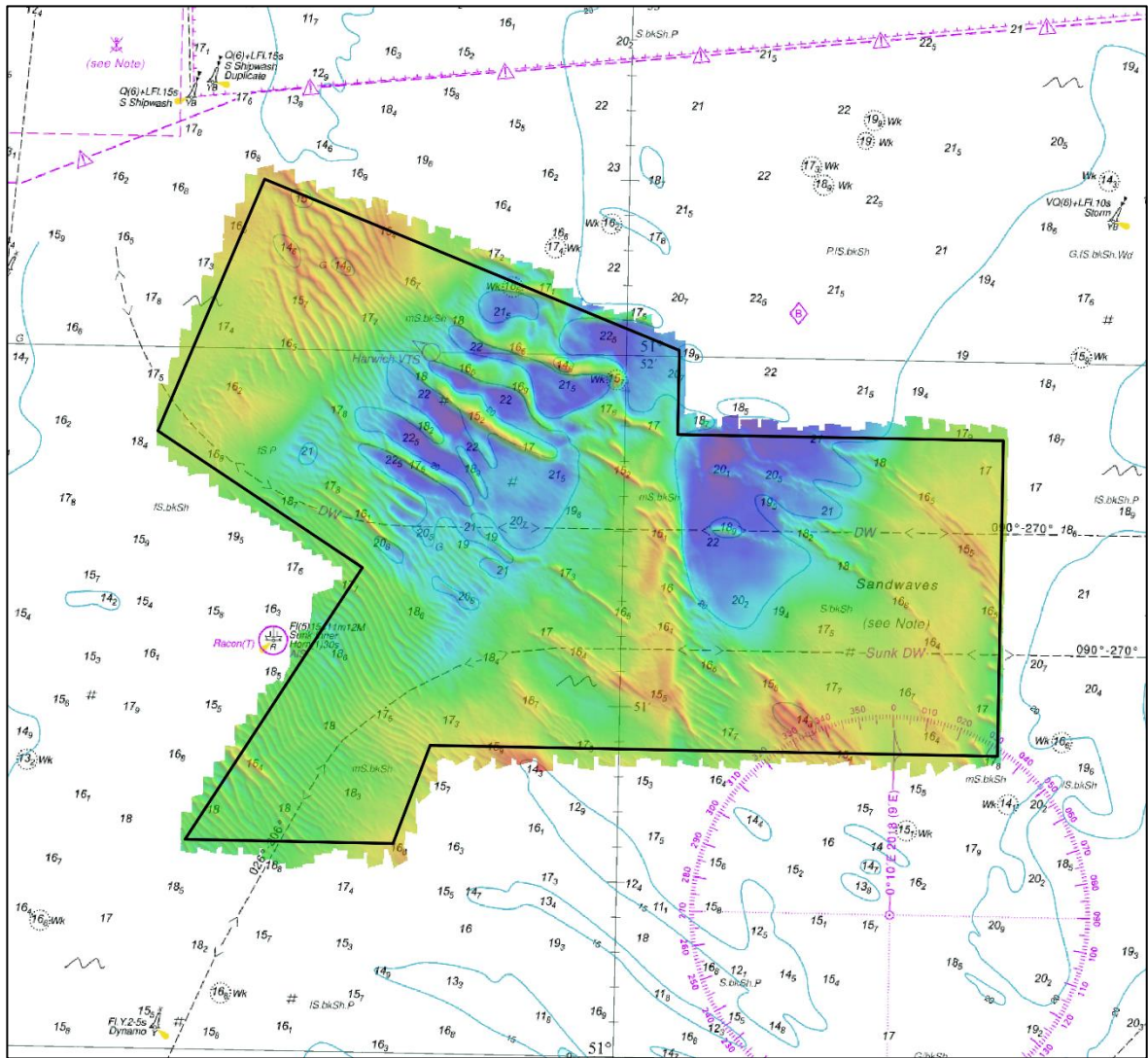


Figure 2 – 2017 survey data sun-illuminated view overlaid on BA Chart 2692

3. REFERENCE SURVEY DETAIL

- 3.1 HI 1522 TE3A was surveyed in August and October 2016.
- 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 INSPIRE portal and MEDIN Bathymetry Data Archive Centre.

4. COMPARISON SURVEY DETAIL

- 4.1 HI 1546 TE3A was surveyed in July 2017.
- 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 INSPIRE portal and MEDIN Bathymetry Data Archive Centre.

5. DESCRIPTION OF RECENT BATHYMETRIC CHANGE

- 5.1 The difference surface in Figure 3 indicates that between 2016 and 2017 bedforms have moved in a consistent direction to the southwest towards Harwich Deep Water Route. This is consistent with historical bedform movement between 2015 and 2016.
- 5.2 Figure 4 highlights controlling depths within the 2017 survey area that are in close proximity to the two Deep Water Routes. Depths have generally not changed significantly across the survey area since 2016. Controlling depths in close proximity to the Deep Water Routes have generally deepened since 2016.

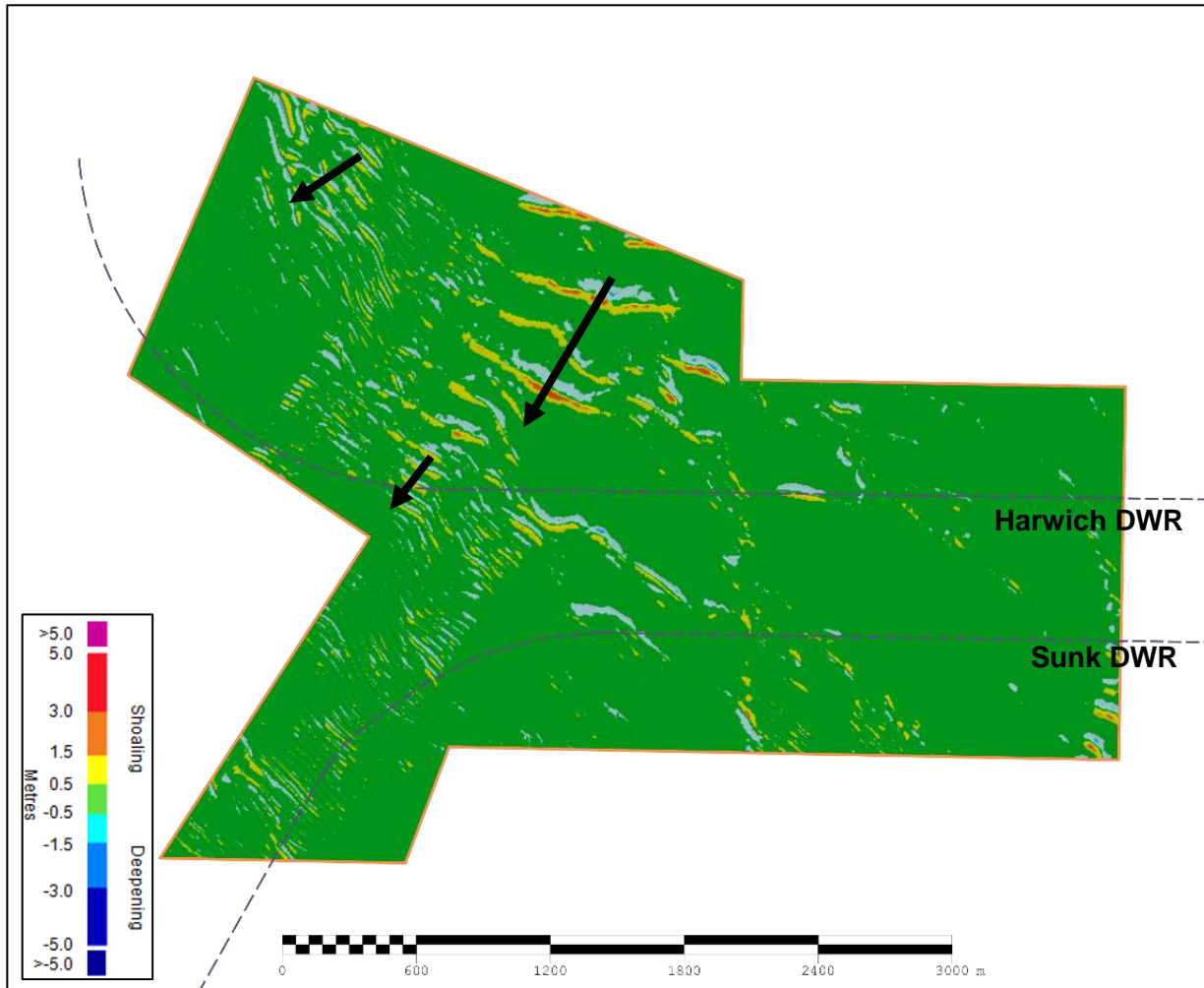
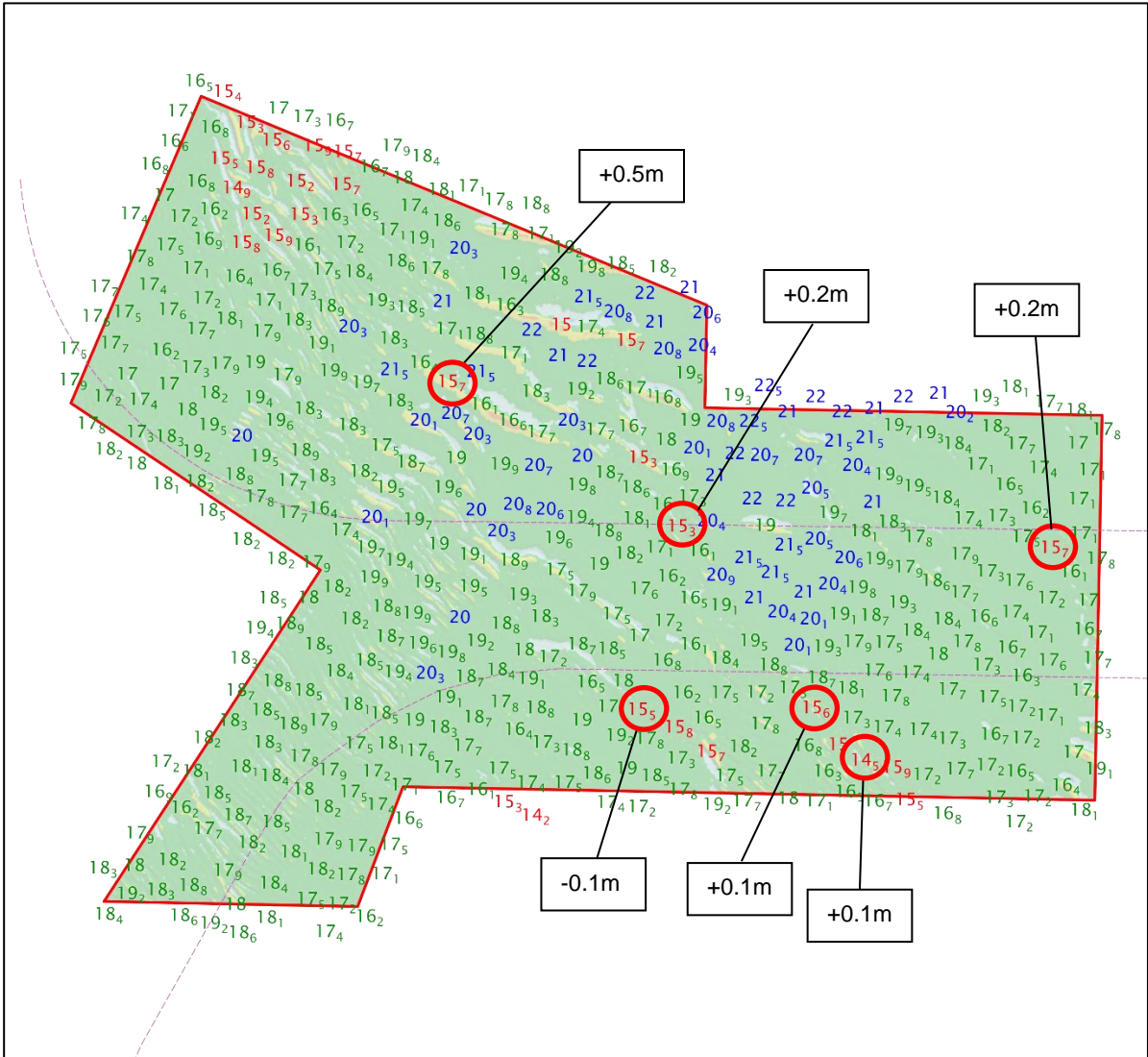


Figure 3: Difference plot 2016 vs 2017 survey



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

Figure 4: Colour-banded depth plot of 2017 survey data with selected depth changes of controlling depths since the 2016 survey

6. RECOMMENDATIONS FOR FUTURE SURVEYS

Survey Interval

- 6.1 There is stability over the majority of the survey area, however there is continuous southwest sandwave migration which may encroach on the charted DWR. Therefore, the full 2-year frequency (with focused survey in the intervening year) should be retained.

Survey Area

- 6.2 The full and focused survey limits should be retained to ensure the location and depth of sandwaves are adequately charted.