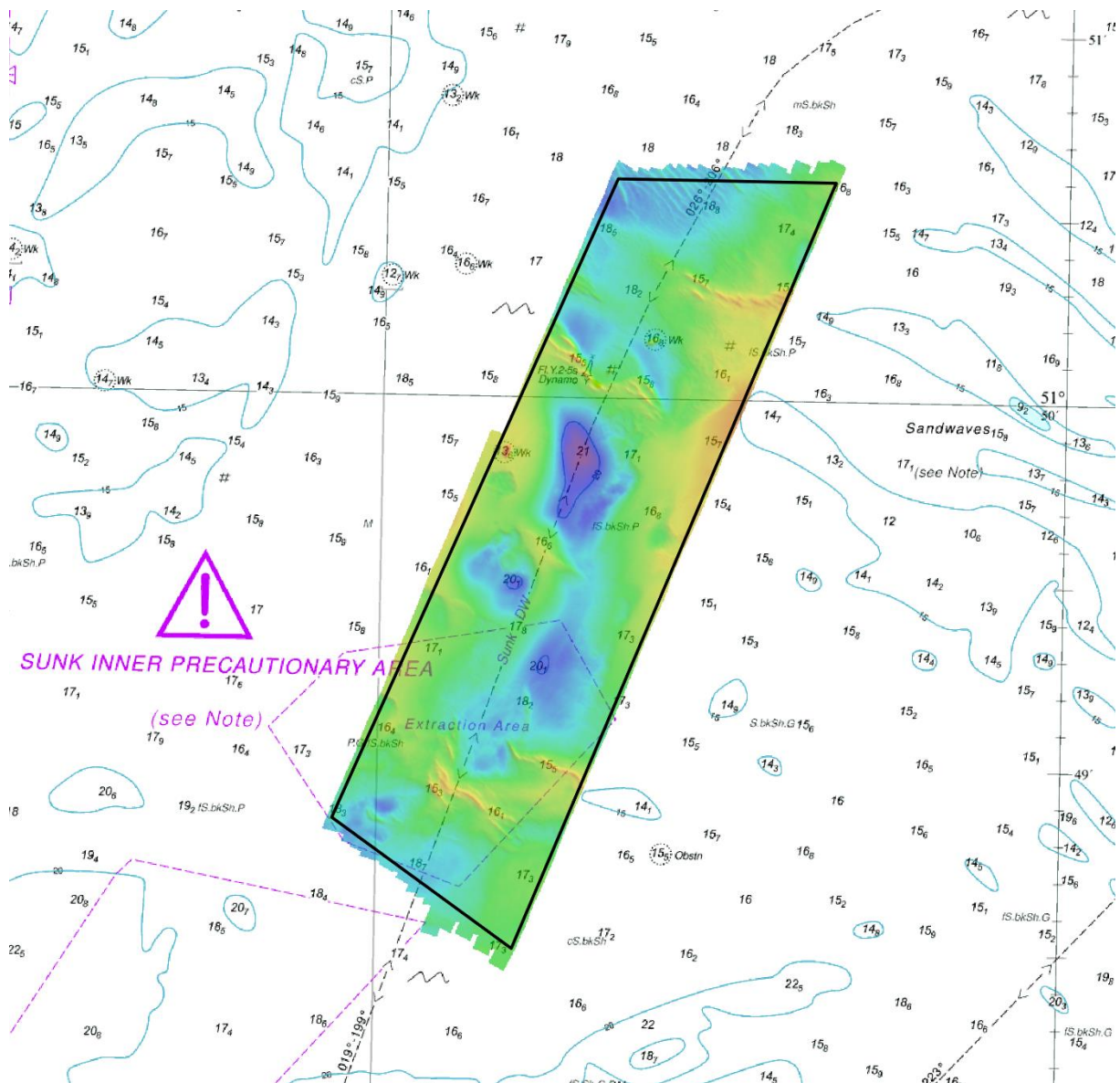




UK Hydrographic Office

THAMES ESTUARY SUNK DWR (TE5A) 2017 ASSESSMENT

An assessment of the 2017 hydrographic survey of the area Thames Estuary Sunk DWR (TE5A): 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).

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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.

SUNK DWR (TE5A), 2017

1. SUMMARY

Changes Detected

- 1.1 Depths along the Sunk DWR have mostly remained the same or similar throughout the survey area, with some small south-westerly sandwave movement.
- 1.2 A controlling depth close to Dynamo Buoy has shoaled by 0.6m to 14.9m since 2016.

Reasons for Continuing to Resurvey the Area

- 1.3 Depths in the area remain hazardous and changeable to deep draught vessels navigating the area and therefore require continued monitoring through annual resurveys.

Recommendations

- 1.4 Given the location of the area in relation to the DWR and vessels with large draughts navigating the area, TE5A Sunk DWR should remain on the annual survey interval.
- 1.5 The limits should be retained to ensure the location of sandwaves and controlling depths are included in the survey area and depths over these areas are adequately charted.

2. LOCATION

- 2.1 Survey interval at time of resurvey: 1 year (Focused Area)
- 2.2 Area Covered: 4.08 km²

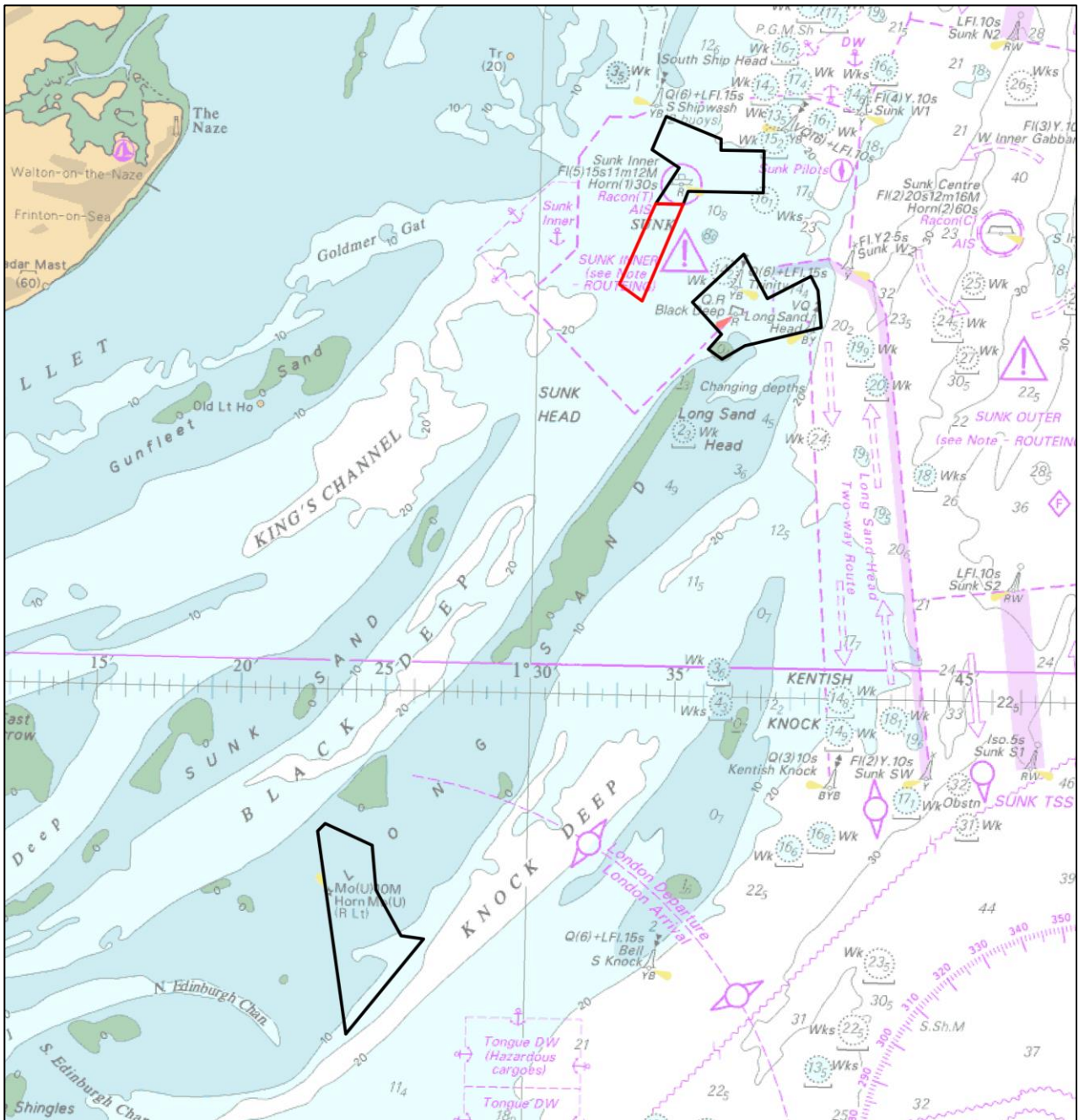


Figure 1 – 2017 Thames Estuary RRS areas overlaid on BA Chart 1406 with TE5A Sunk DWR in Red

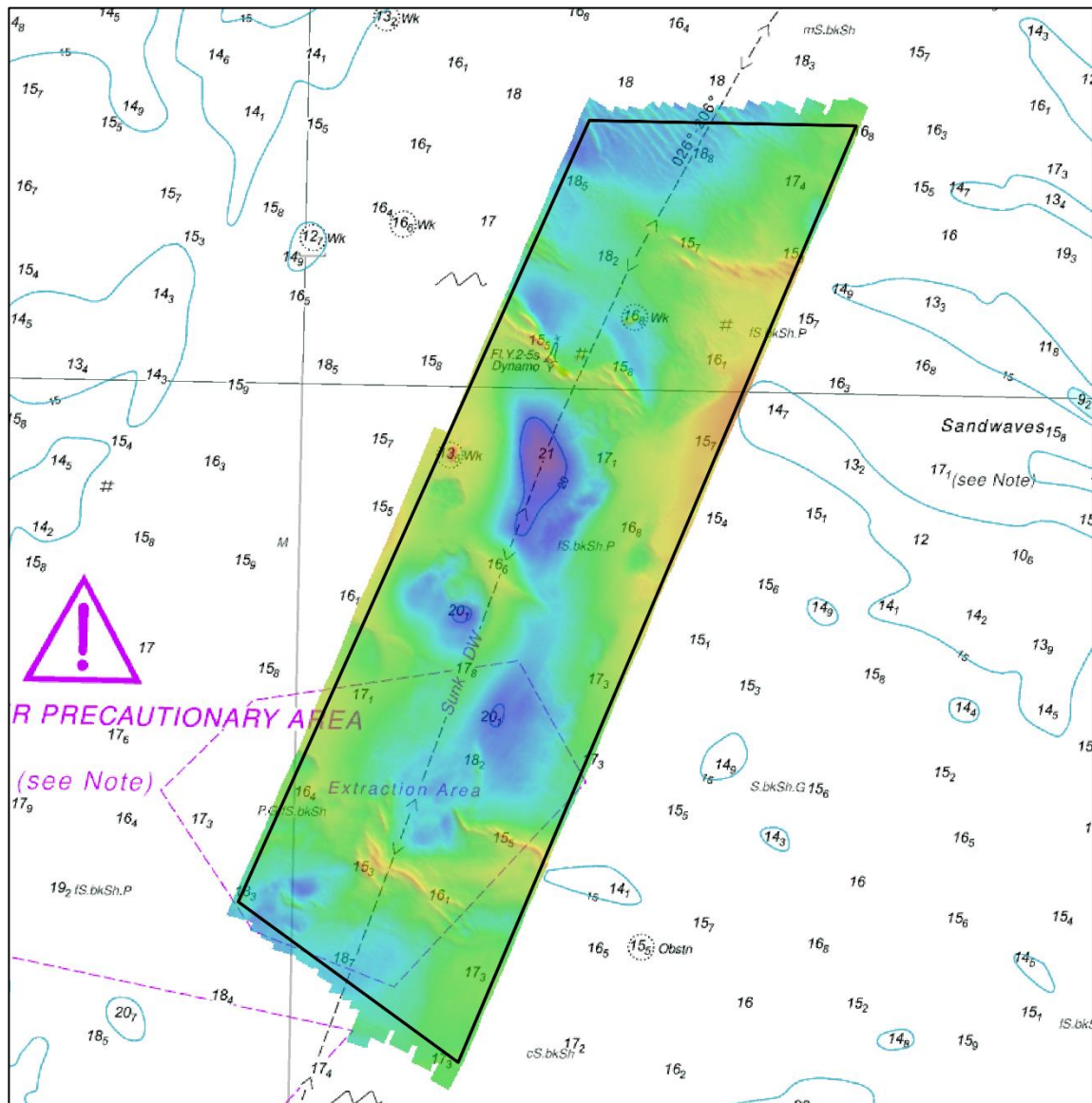


Figure 2 – 2017 survey data sun-illuminated view overlaid on BA Chart 2692

3. REFERENCE SURVEY DETAIL

3.1 HI 1522 TE5A was surveyed in August and September 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 TE5A Sunk 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 There are small patches of ripples and sandwaves along Sunk DWR. Depths along the route have generally stayed the same, or in places depths have slightly deepened or shoaled by 0.1 to 0.2 metres since 2016.
- 5.2 The difference surface in Figure 3 shows that there has been little change in sediment movement since 2016 along the Sunk DWR. Any sandwave movement has been in a south-westerly direction.
- 5.3 Figure 4 shows that the controlling depth in the 2017 survey is 13.7 metres over a charted wreck approximately 350 metres east of the charted Deep Water Route track line. This has deepened by 0.1m since 2016. The largest significant change in depth is the 14.9m depth located next to Dynamo Buoy, which has shoaled by 0.6m since 2016. Depths along the main charted DWR have remained steady.

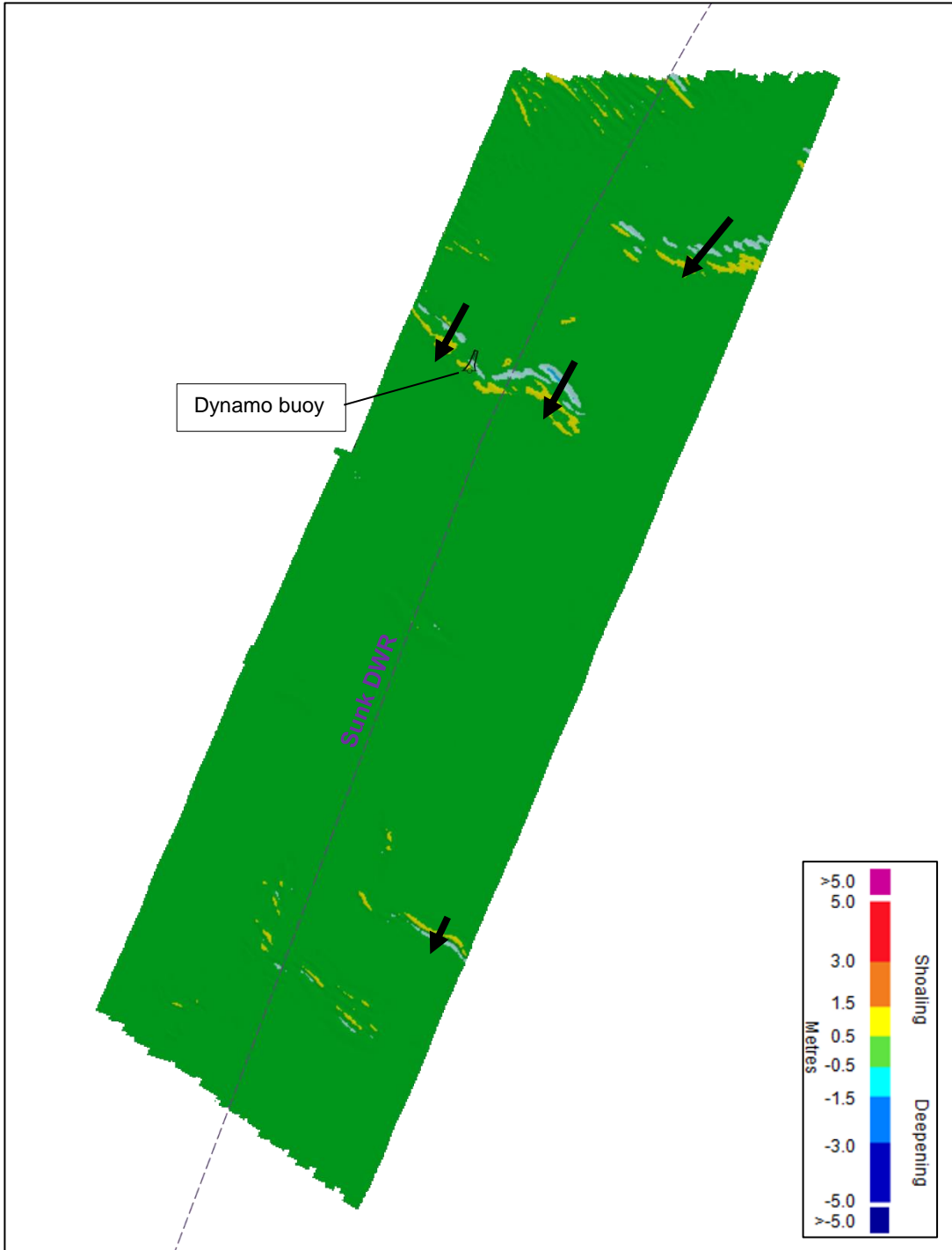
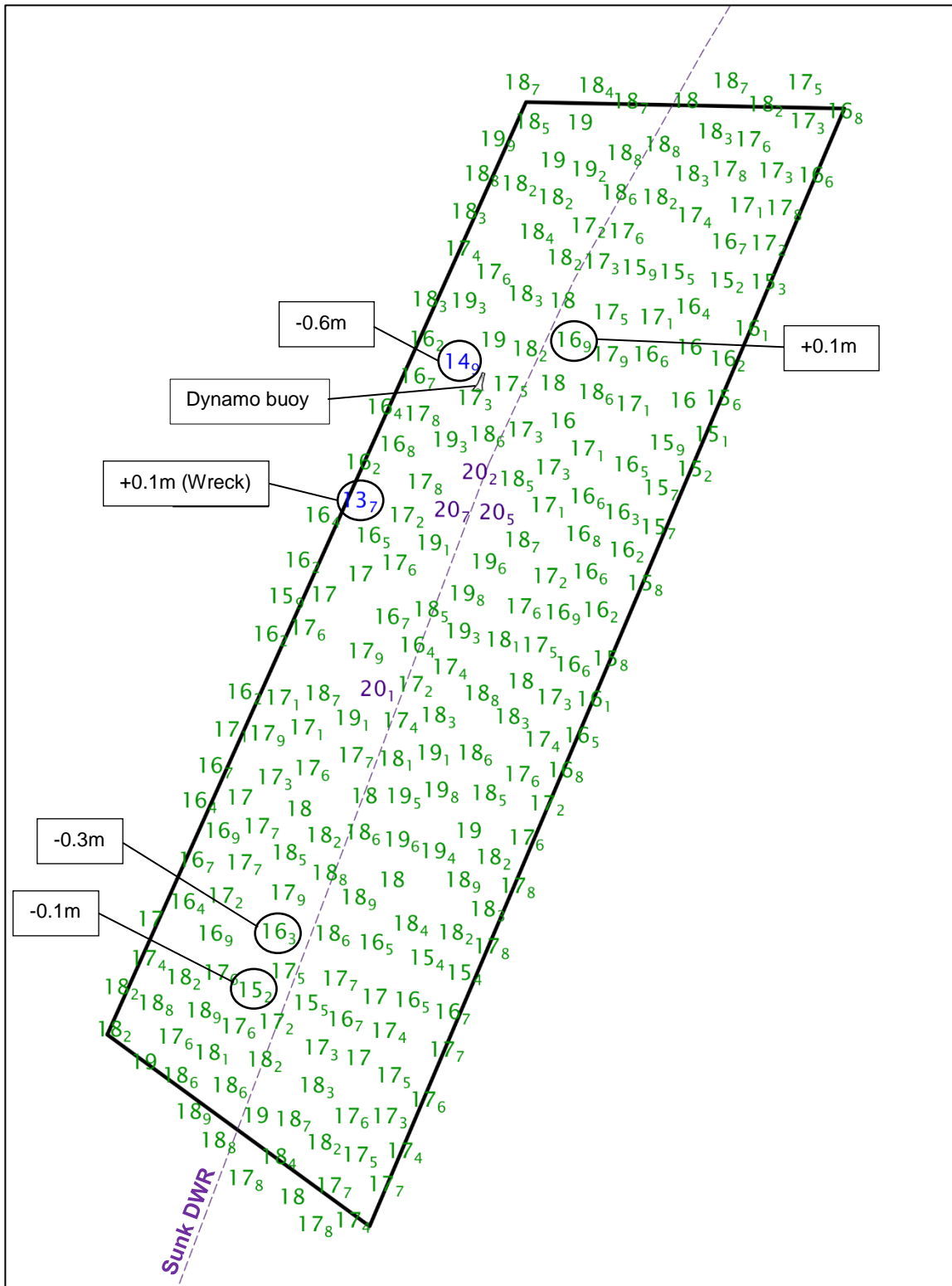


Figure 3 – Difference plot 2016 vs 2017 survey



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

Figure 4 – Colour Banded Depth Plot from the 2017 Survey with selected depth changes since the 2016 survey

6. RECOMMENDATIONS FOR FUTURE SURVEYS

Survey Interval

- 6.1 Given the location of the area in relation to the DWR and vessels with large draughts navigating the area, TE5A Sunk DWR should remain on the annual survey interval.

Survey Area

- 6.2 The focused survey limits should be retained to ensure the location of sandwaves and controlling depths are included in the survey area and that depths over these are adequately charted.