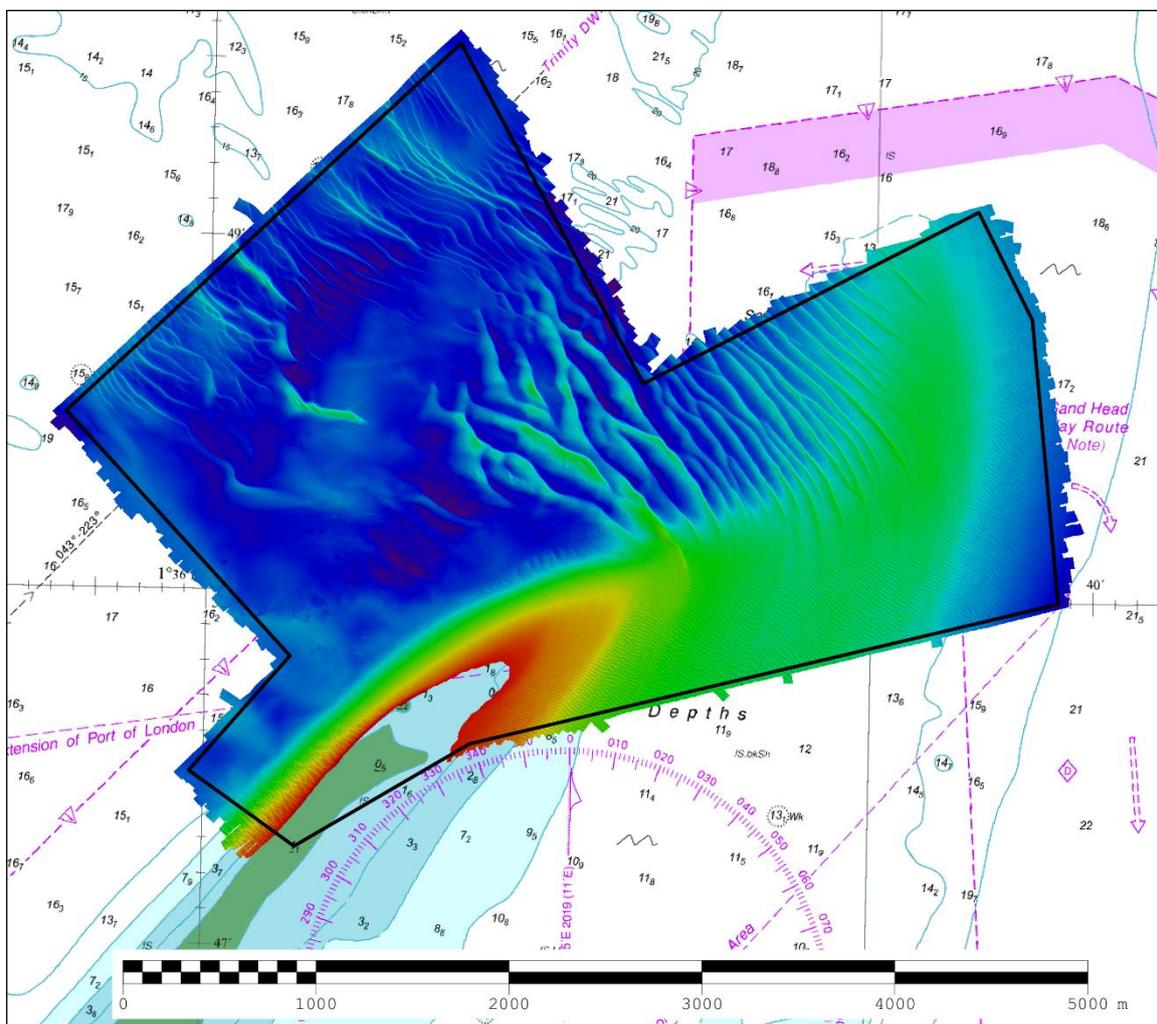




UK Hydrographic  
Office

## THAMES ESTUARY TRINITY DW & LONG SAND HEAD FOCUSSED (TE5A) 2019 ASSESSMENT

An assessment of the 2019 hydrographic survey of the area 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 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.

# TRINITY DW AND LONG SAND HEAD, 2019

## 1. SUMMARY

### Changes Detected

- 1.1 Migration of sand waves in the central part of the survey area with slight shoaling apparent on the eastern side of the area since 2018. The 10m contour at the NE end of Long Sand Head has migrated NE by approximately 50m – less than previous years.

### Reasons for Continuing to Resurvey the Area

- 1.2 Depths in the area have in general shoaled, given the shoaling around the DW route it is suggested to continue resurveying the area.

### Recommendations

- 1.3 Given the shoaling occurring in the proximity of the deep-water route it is recommended to maintain the 1-year survey interval as depths are close to the draught of vessels transiting the area.
- 1.4 The survey area should currently remain unchanged. The full TE5A survey area has recently been extended to include the area to the NE which is currently not surveyed. The inclusion of this area for the full area is sufficient to not require any changes to TE5A focussed area.

## 2. LOCATION

- 2.1 Survey interval at time of resurvey: 1 years
- 2.2 Area Covered: 11.92 km<sup>2</sup>

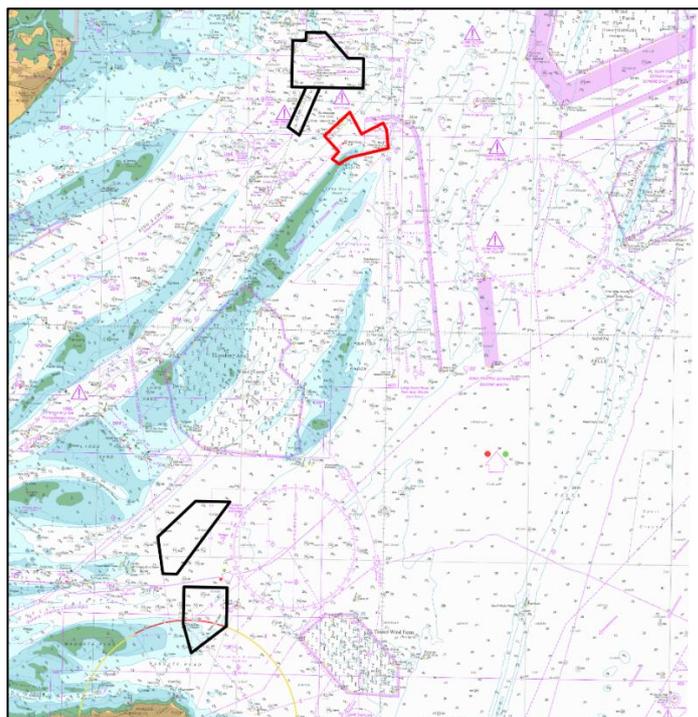


Figure 1: 2019 Thames Estuary Routine Resurvey areas overlaid on BA Chart 1183 with area TE5A Trinity DW and Long Sand Head in red

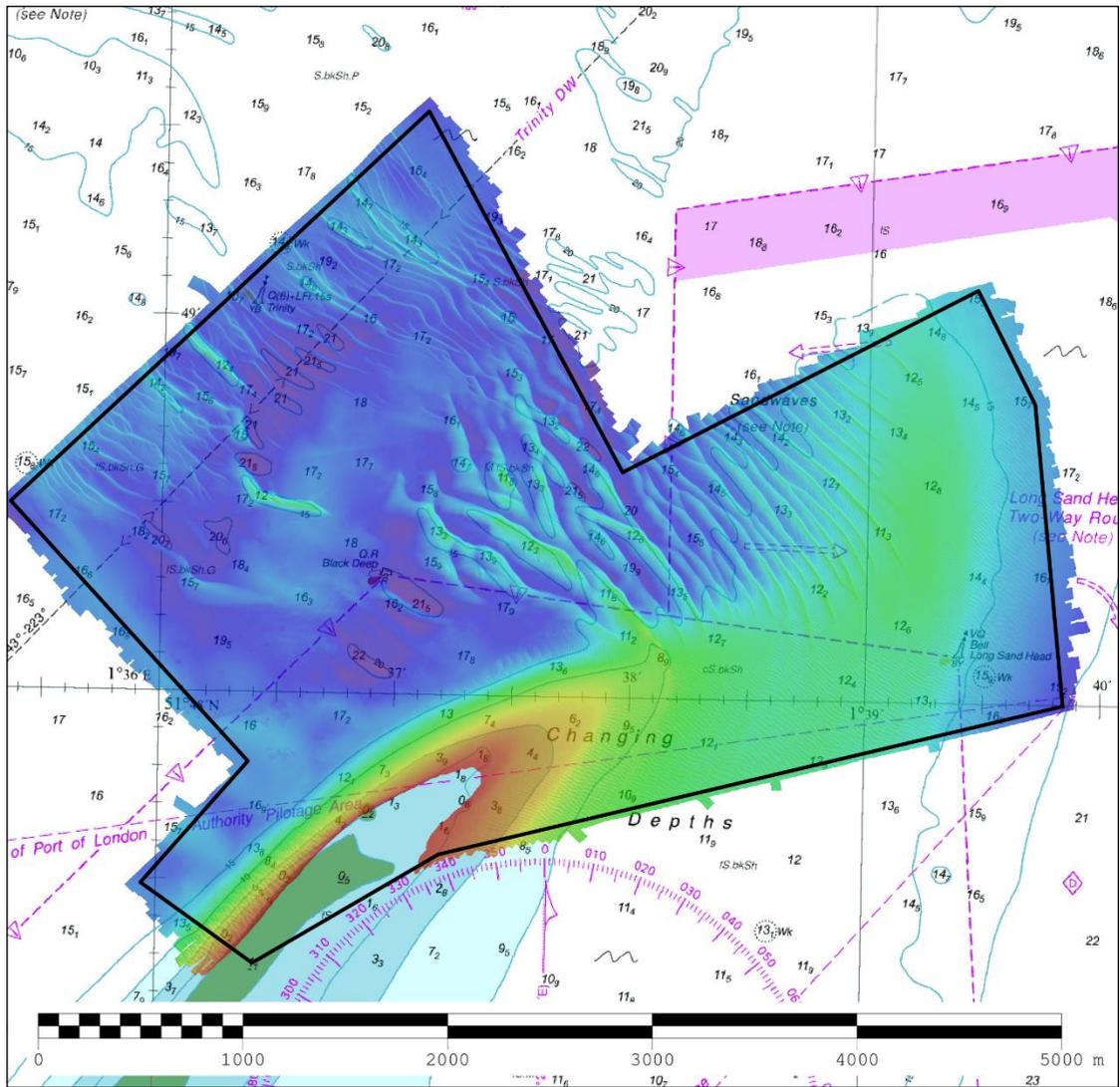


Figure 2: 2019 survey data overlaid on BA Chart 2692

### 3. REFERENCE SURVEY DETAIL

3.1 HI1615 TE5A Long Sand Head Full.

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. NEW SURVEY DETAIL

4.1 HI1643 TE5A Trinity DW and Long Sand Head.

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 that the sand wave migration has been consistent with previous years, migrating in a north eastward direction. The rate of migration appears to be somewhat consistent across the survey area, with waves migrating NE by approximately 20-30m since 2018.
- 5.2 The depth plot in Figure 4 shows that the controlling depth around the Trinity DW route in the 2019 survey is 12.0 meters, which has shoaled slightly from 12.4m in 2018.
- 5.3 Figure 5 shows that the 10m contour at the NE end of Long Sand Head has migrated NE by approximately 50m. This migration appears to have slowed somewhat since previous years; for example between 2016 and 2017 migration was 145m NE.

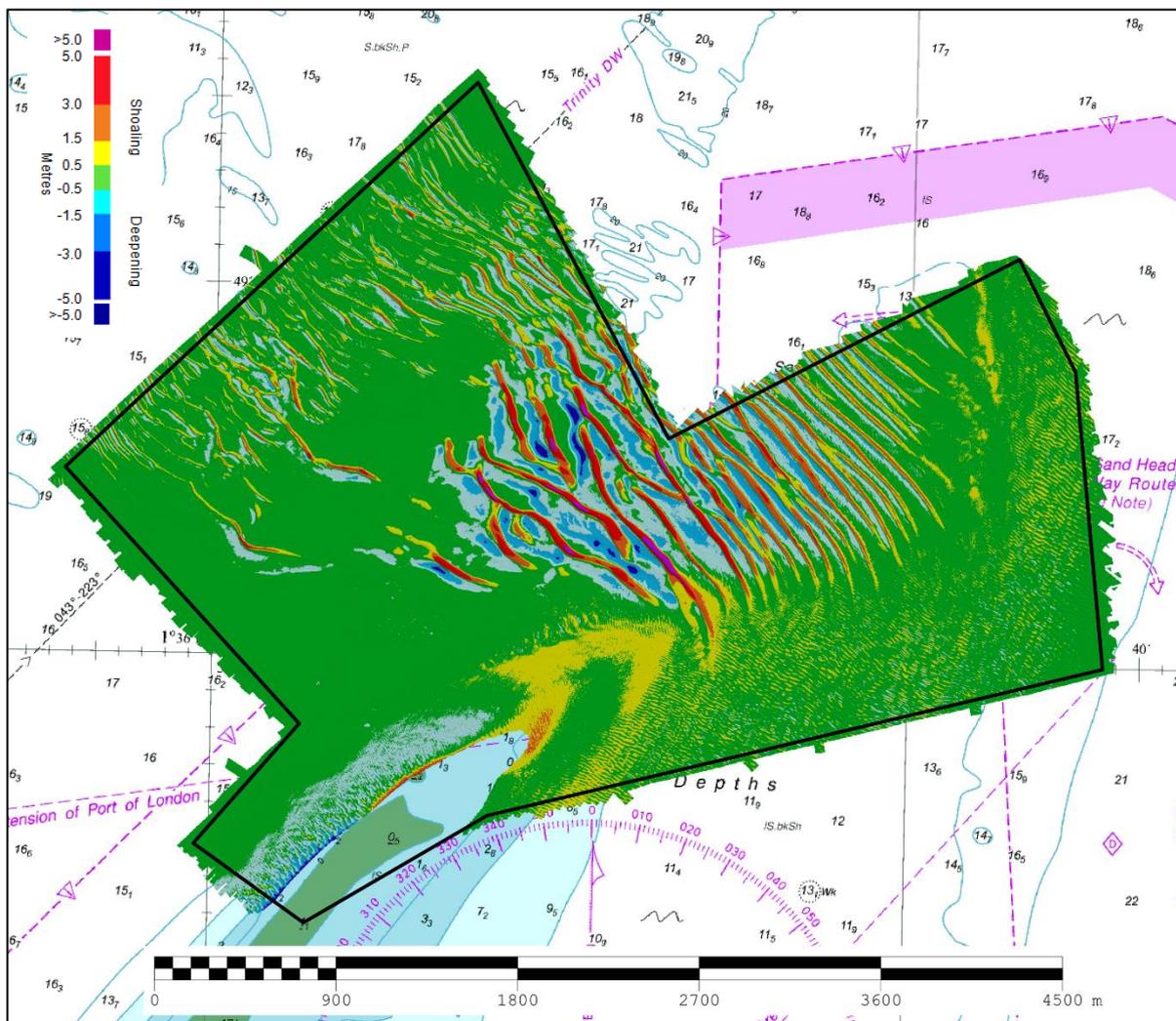


Figure 3: Difference surface showing bathymetric changes between the 2019 and 2018 surveys overlaid on BA Chart 2692

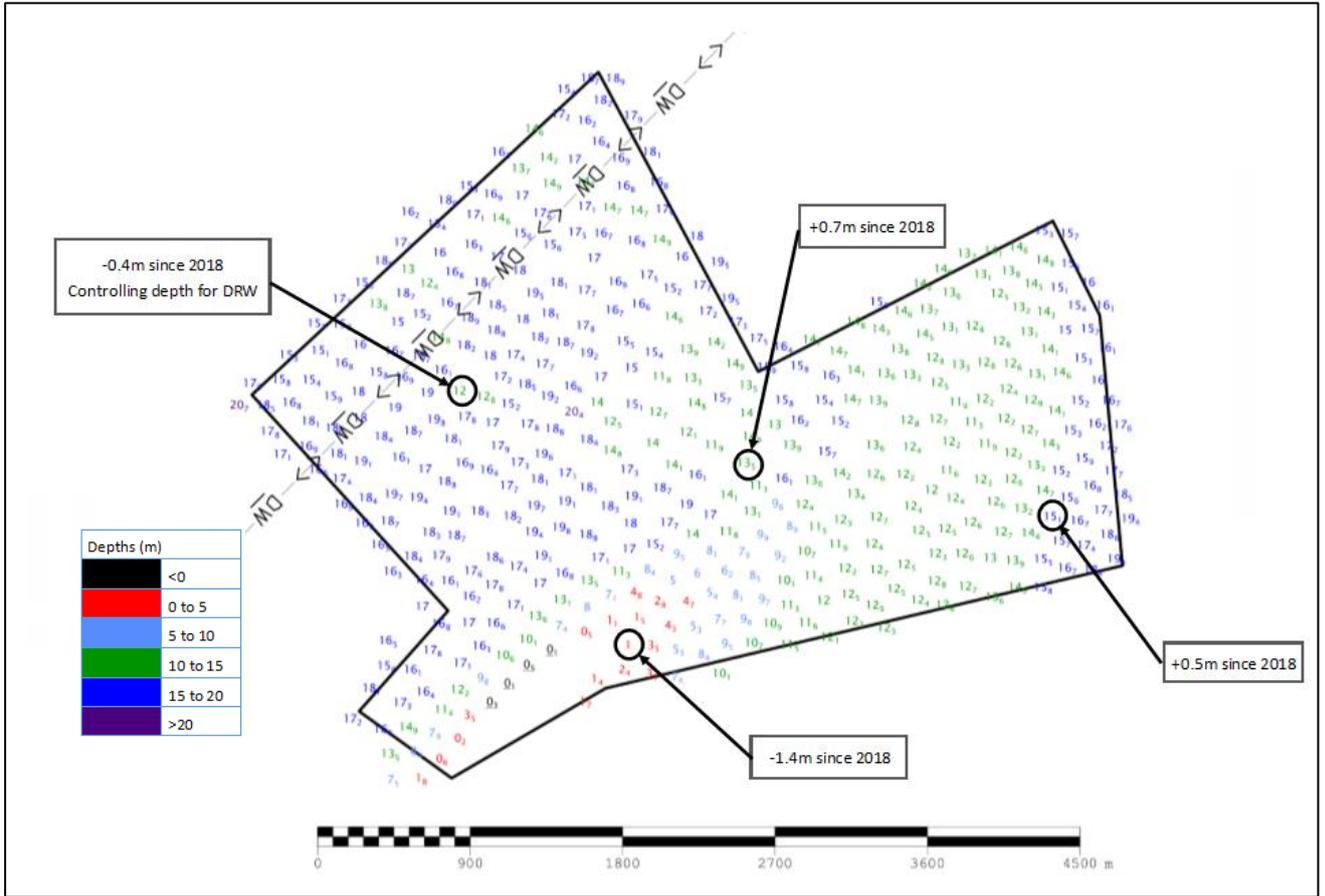


Figure 4: Colour banded depth plot from the 2019 survey with selected depth changes since the 2018 survey. Positive values (+) represent deepening. Negative values (-) represent shoaling.

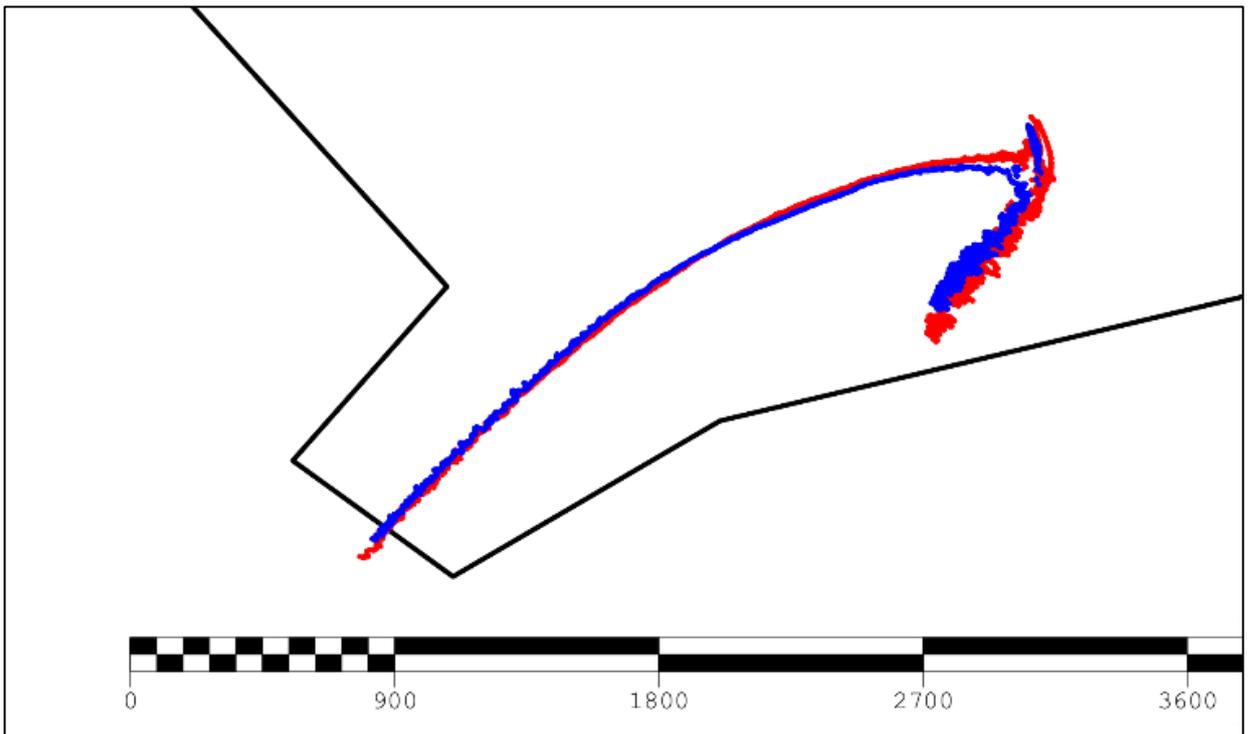


Figure 5: 10m contour at the NE end of Long Sand Head. 2019 10m contour shown in red and 2018 10m contour shown in blue.

