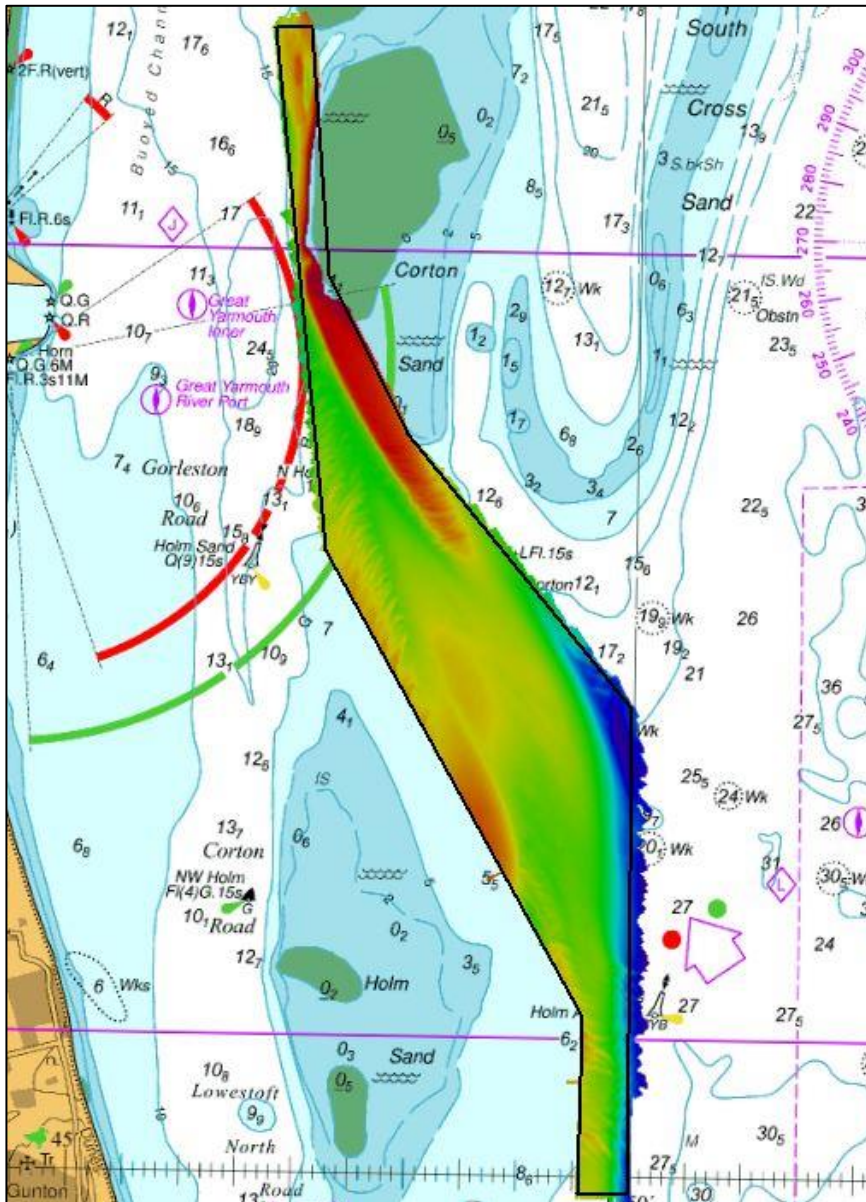




# UK Hydrographic Office

## EAST ANGLIA HOLM CHANNEL FOCUSED AREA (EA9A) 2018 ASSESSMENT

An assessment of the 2018 hydrographic survey of the area EA9a Holm Channel: 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

## **HOLM CHANNEL FOCUSED AREA (EA9A), 2018**

### **1. SUMMARY**

#### **Changes Detected**

- 1.1 Depths are shoaling significantly in the northern section of the survey, with some depths changing by up to 10m since 2017. Corton Sand appears to be migrating south-west in this region.
- 1.2 Depth is stable in Holm Channel, south-east of South Cornton buoy. However, shoaling of 1-2m can be seen in the narrow channel surrounding the buoy.
- 1.3 Shoaling can be found on the western edge with Holm Sand creeping north-west into Holm Channel.
- 1.4 Depths can be found to be shoaling in the south-east corner of the survey, with depths changing by 3-4m since 2017.

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

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

#### **Recommendations**

- 1.6 Given the location of the area, the significant changes in sections of the survey area and the draught of vessels navigating the area, EA9a should remain on the annual survey interval.
- 1.7 Based on the changes on the seabed found on the western edge and south-east sections of the survey, the EA9a Focused Area survey should be extended in these areas to monitor changes and then assessed in the next annual focused survey.

### **2. LOCATION**

- 2.1 Survey interval at time of resurvey: The full EA9 area is surveyed every 3 years with an annual focused area covering EA9a.
- 2.2 Area Covered: 12.6 km<sup>2</sup>

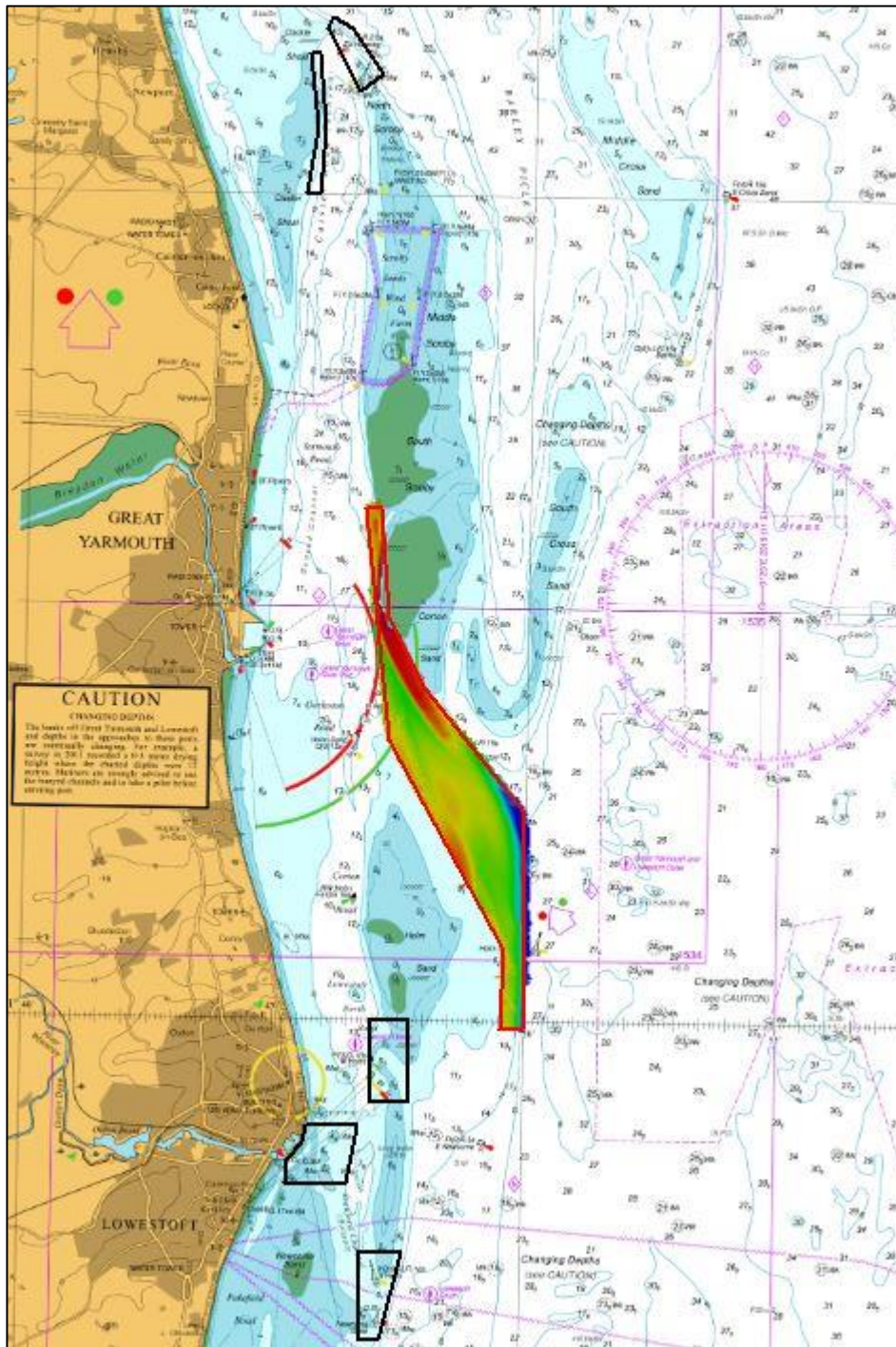


Figure 1: 2018 East Anglia Routine Resurvey areas overlaid on BA Chart 1543 with area EA9a in red



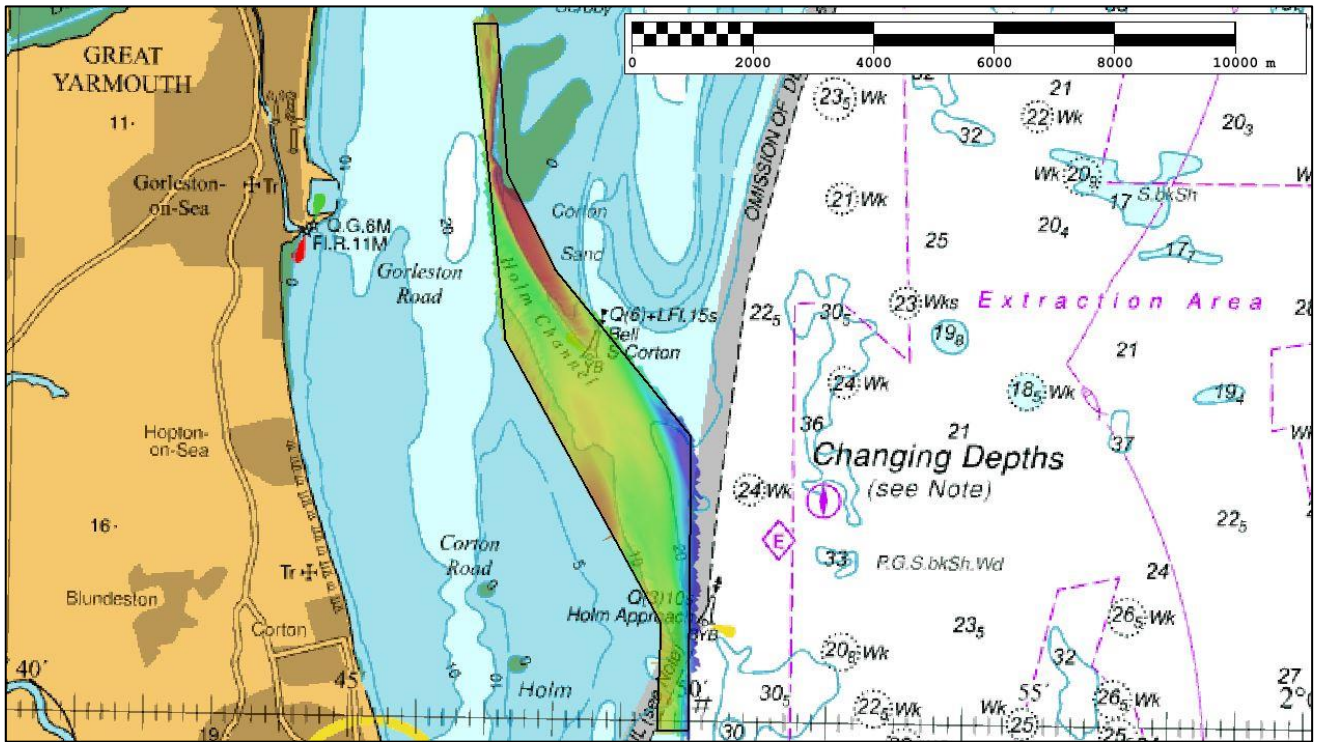


Figure 2: 2018 survey data overlaid on BA Chart 1504

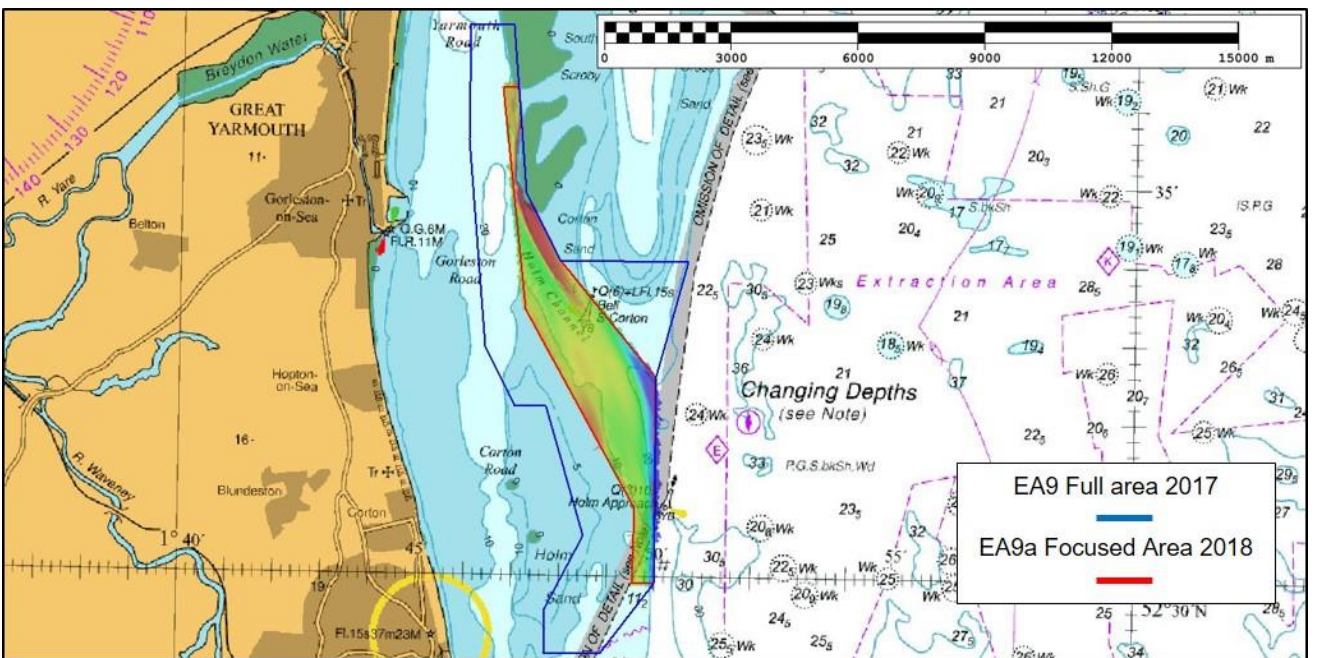


Figure 3: 2018 focused area in red and 2017 full area survey overlaid on BA Chart 1504

### 3. REFERENCE SURVEY DETAIL

- 3.1 The previous full survey was conducted as part of the 2017 Routine Resurvey Programme between July and November 2017 as part of HI1545. The previous focused survey was conducted as part of the 2016 Routine Resurvey Programme between September and November 2016 as part of HI1521.
- 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. COMPARISON SURVEY DETAIL

- 4.1 The latest focused survey as part of the 2018 Routine Resurvey Programme was conducted in October 2018 as part of HI1610.
- 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 Based on the information analysed, Corton Sand is showing movement south-west in the northern section of the survey. There is some significant shoaling in that region, with some depths shoaling by up to 10 metres since the 2017 survey.
- 5.2 The difference surface in Figure 4 shows some shoaling around banks either side of Holm Channel by 2-3 metres in places.
- 5.3 There is some depth stability in Holm channel, south-east of South Corton buoy, with little change since the 2017 survey, as seen in Figure 4. However, nearby to the location of South Corton buoy in the narrow section of Holm Channel, depths have shoaled by approximately 1-2 metres. As seen in Figures 6 and 7.
- 5.4 Some deepening can be found in the south-west section of the survey with depths changing by 3-4 metres.
- 5.5 Shoaling can be seen in the south-east section of the survey, with depths changing by 3-4 metres in some places.
- 5.6 The depth plots in Figures 6 and 7 show that the least depth in the 2018 survey is 0.9 meters located approximately 340m east of South-West Scroby buoy in the northern section of the survey.

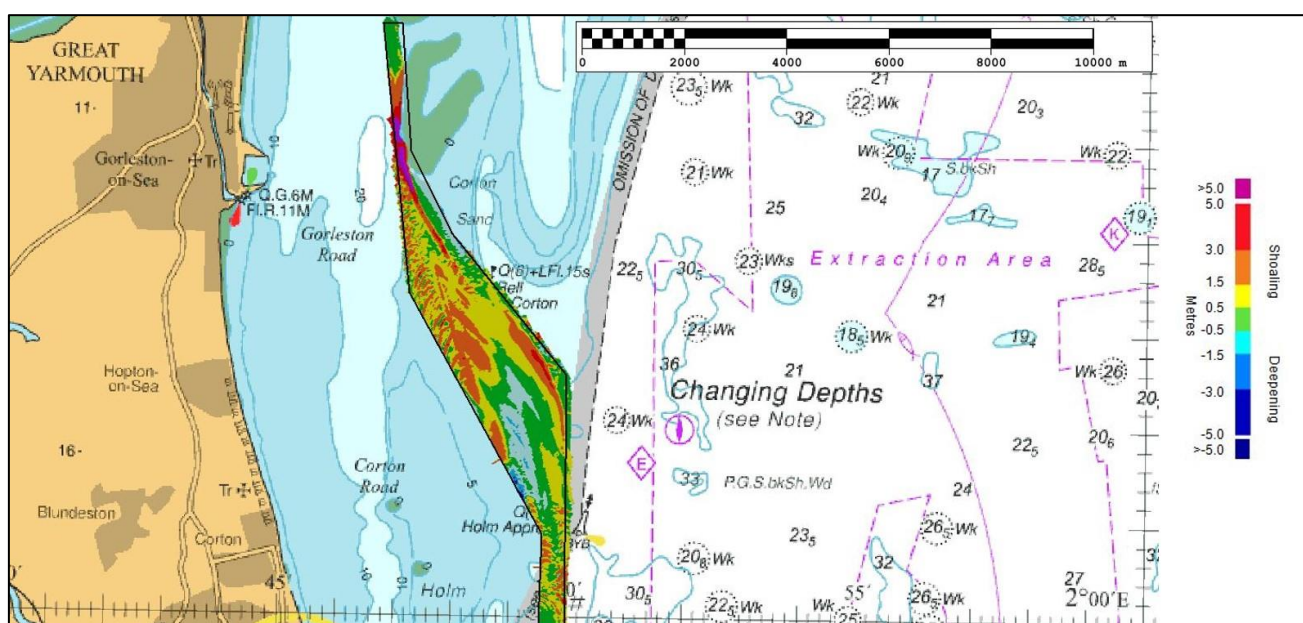


Figure 4: Difference surface showing bathymetric changes between the 2018 and 2017 surveys overlaid on BA Chart 1504

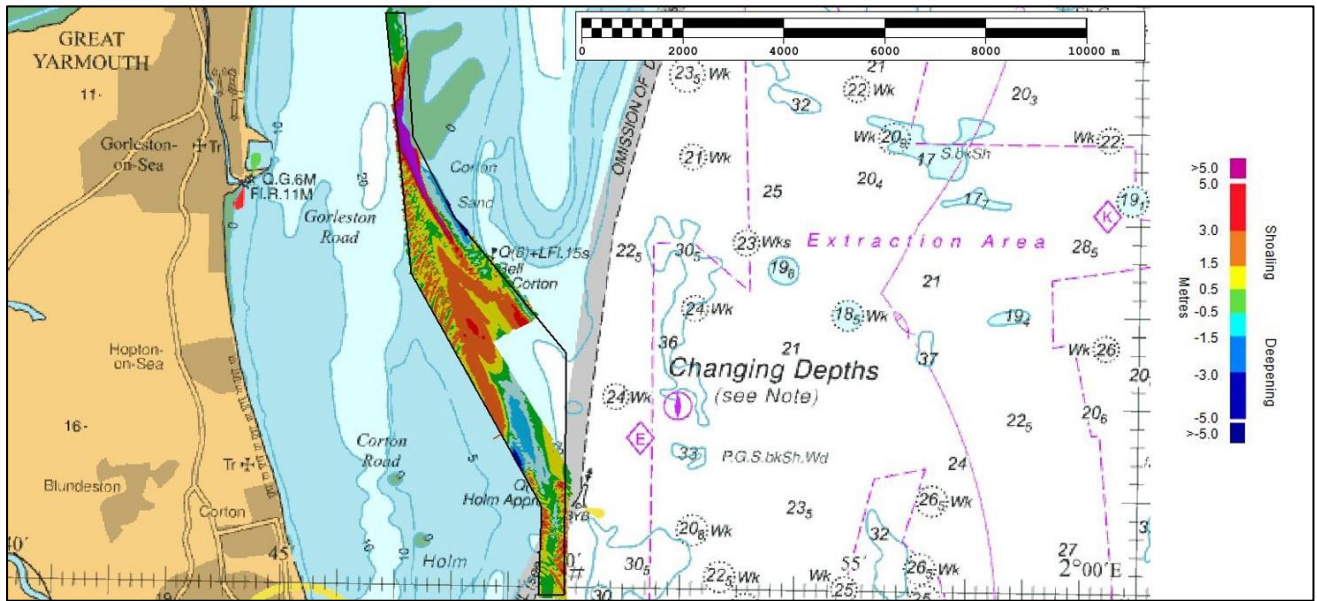


Figure 5: Difference surface showing bathymetric changes between the 2018 and 2016 surveys overlaid on BA Chart 1504



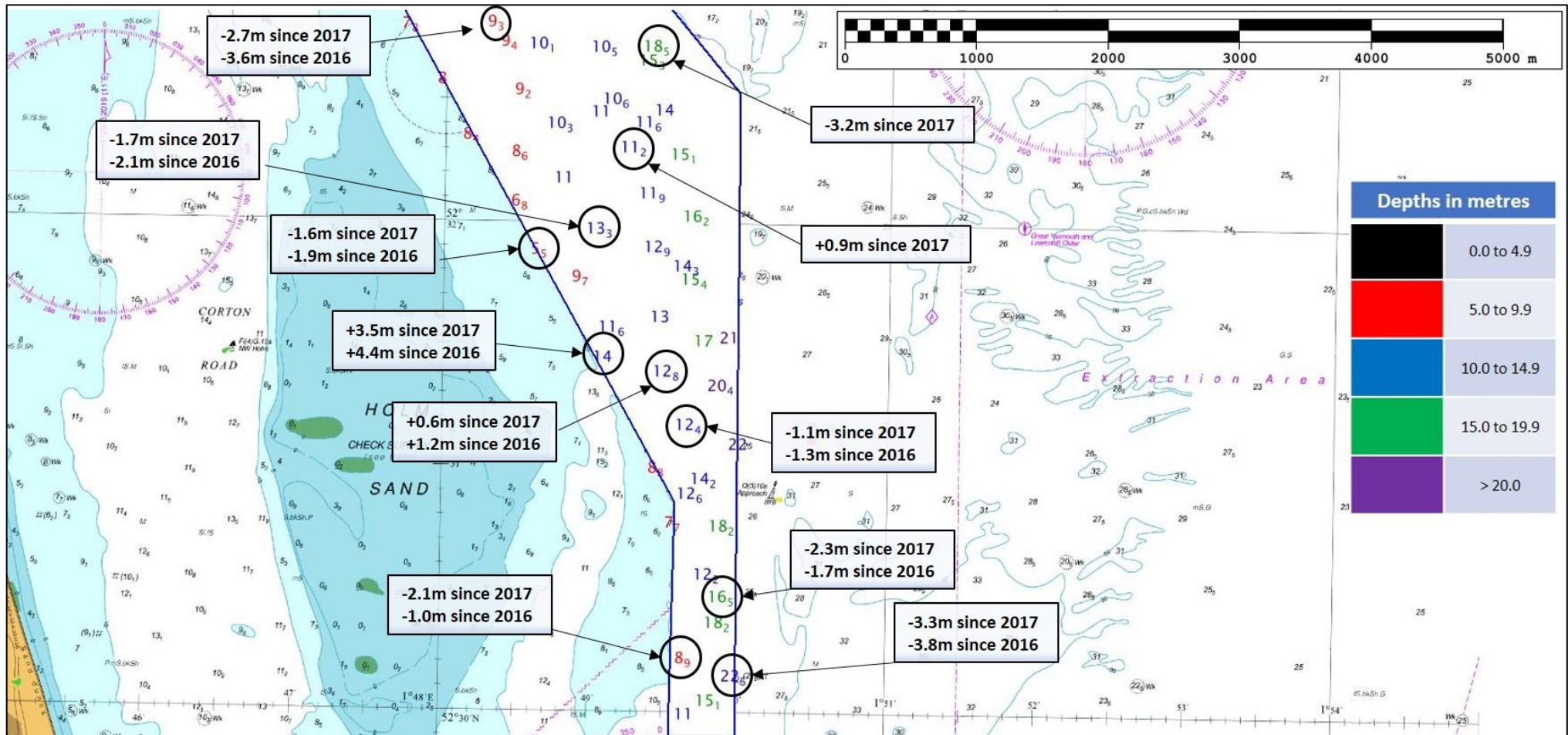


Figure 6: Colour banded depth plot of the southern section of the 2018 survey with selected depth changes since the 2017 and 2016 surveys overlaid on BA1534 and BA1535. Positive values (+) represent deepening. Negative values (-) represent shoaling.



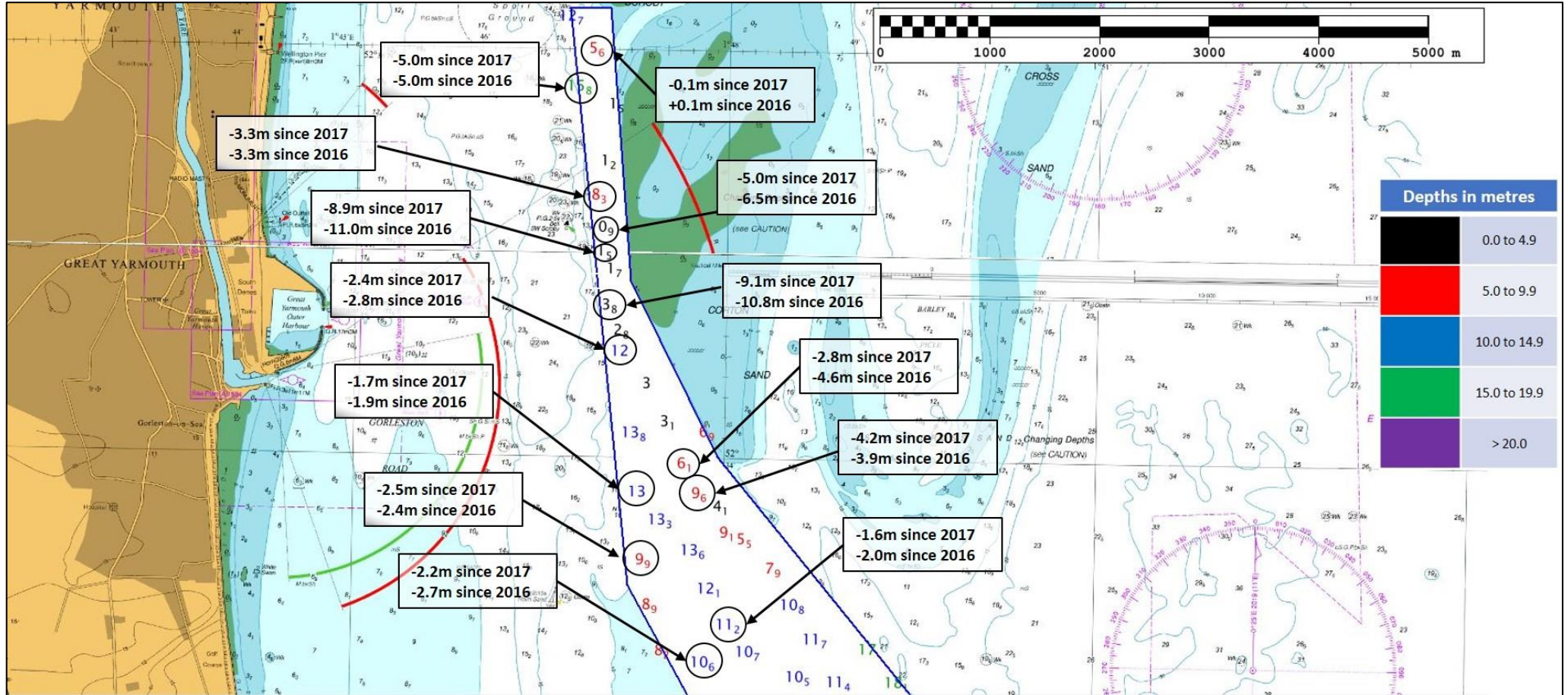


Figure 7: Colour banded depth plot of the northern section of the 2018 survey with selected depth changes since the 2017 and 2016 surveys overlaid on BA1534 and BA1535. Positive values (+) represent deepening. Negative values (-) represent shoaling.

## 6. RECOMMENDATIONS FOR FUTURE SURVEYS

### Survey Interval

6.1 Given the location of the area and the mobility and changes in the seabed, the focused survey EA9a should remain on the annual survey interval and the full survey EA9 should remain at 3 years.

### Survey Area

6.2 Due to continued shoaling and bank migration, with some depths changing by 10m in a 12-month period, it is suggested to slightly increase the survey area westwards along with a minor adjustment in the south-east corner where some shoaling is occurring.

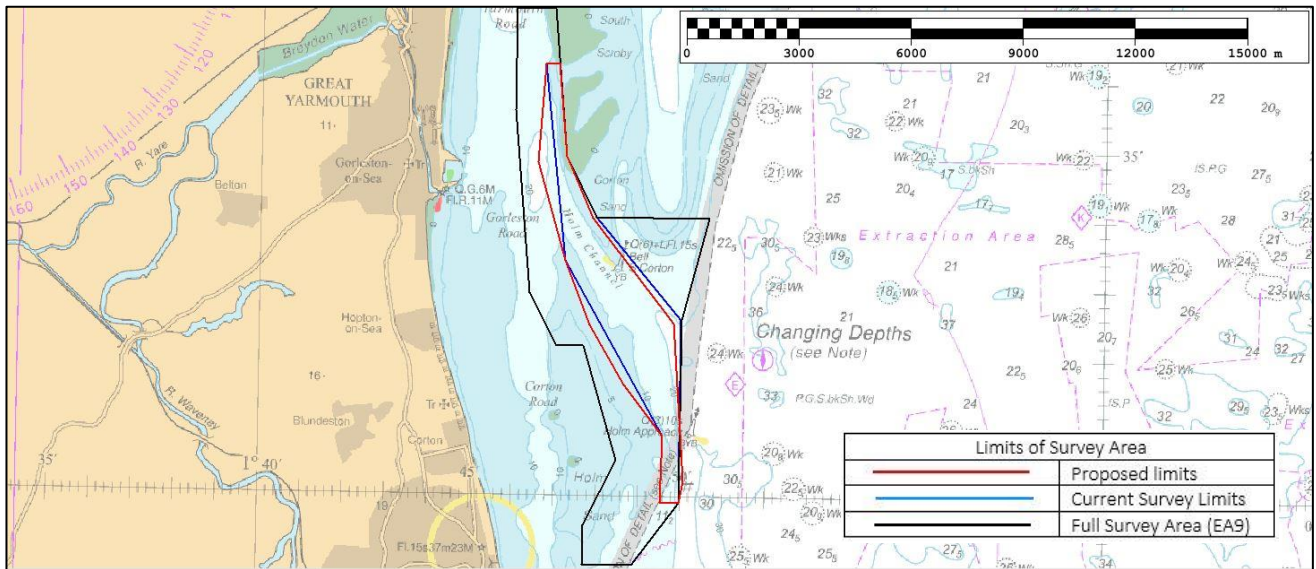


Figure 8: Recommended changes to survey limits of area EA9a

The coordinates of the recommended adjusted survey area limits for the annual focused area EA9a are shown below:

EA9a total area: 12.97 km<sup>2</sup>

|   |           |          |
|---|-----------|----------|
| A | 52.58108N | 1.78700E |
| B | 52.56647N | 1.79774E |
| C | 52.54130N | 1.83015E |
| D | 52.50340N | 1.83484E |
| E | 52.49833N | 1.83333E |
| F | 52.49833N | 1.82583E |
| G | 52.51427N | 1.82624E |
| H | 52.52654N | 1.81082E |
| I | 52.54068N | 1.79702E |
| J | 52.55616N | 1.78720E |
| K | 52.57967N | 1.77587E |
| L | 52.60330N | 1.77834E |
| M | 52.60343N | 1.78374E |