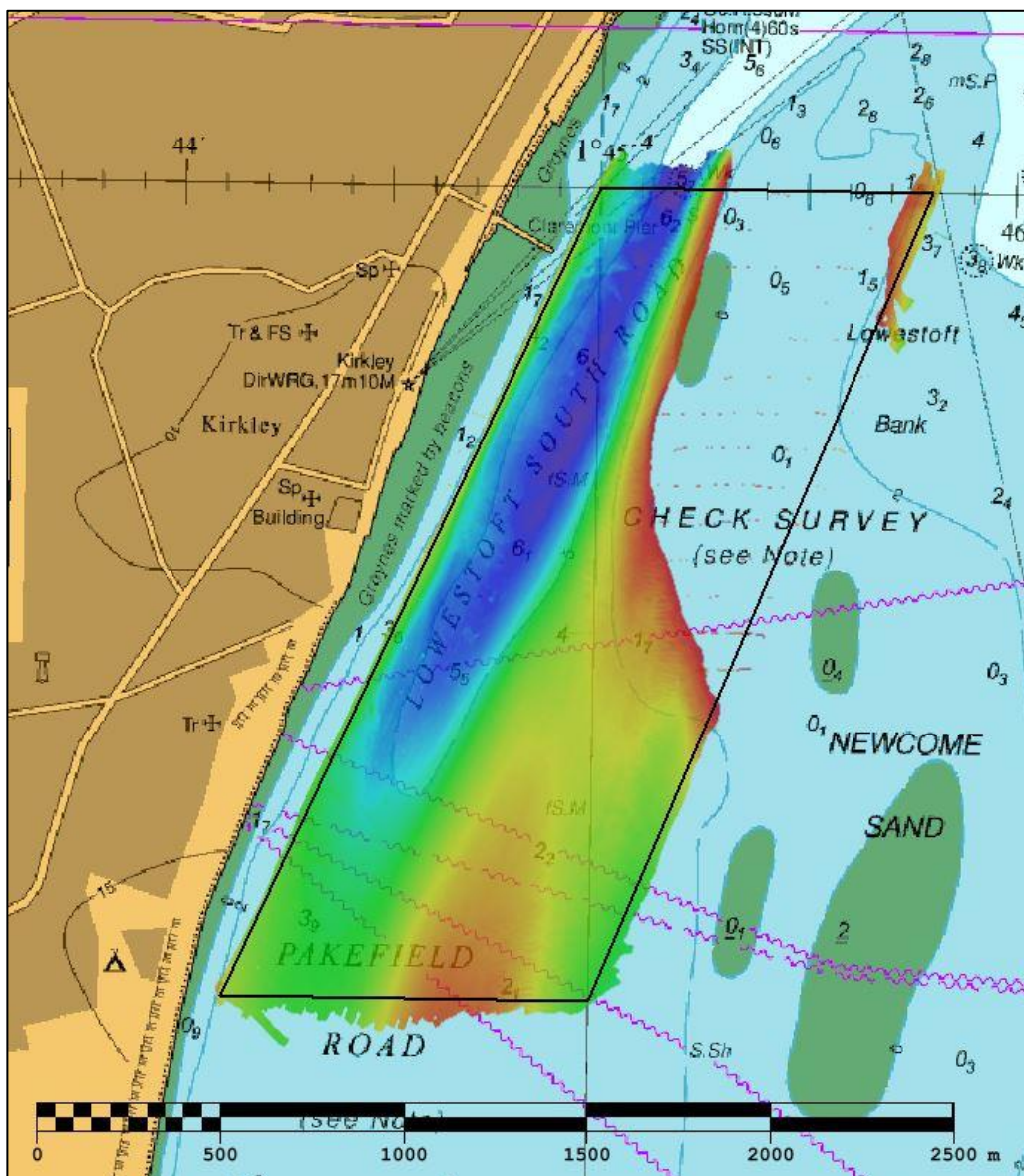




UK Hydrographic  
Office

## EAST ANGLIA PAKEFIELD ROAD FOCUSED (EA12A) 2019 ASSESSMENT

An assessment of the 2019 hydrographic survey of the area Pakefield Road Focused EA12A: to monitor recent seabed movement; to identify any implications for shipping; and to make recommendations for future surveys.



## CONTENTS

Notes	2
1. SUMMARY	1
2. LOCATION	1
3. REFERENCE SURVEY DETAIL	3
4. NEW SURVEY DETAIL	3
5. DESCRIPTION OF RECENT BATHYMETRIC CHANGE	4
6. RECOMMENDATIONS FOR FUTURE SURVEYS	7

### 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).

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 Chart Datum, defined using the UKHO VORF Model

## **EA12A PAKEFIELD ROAD FOCUSED, 2019**

### **1. SUMMARY**

#### **Changes Detected**

- 1.1 Depths are stable in much of the focused area. Westward movement of the western edge of Lowestoft Bank can be seen since the 2015 focused area survey. This is most pronounced with shoaling of a small area to the north of the area, with changes of 2.6m seen since the previous 2015 survey.

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

- 1.2 Depths in the area remain potentially hazardous and changeable to vessels navigating the area and therefore require continued monitoring through resurveys.

#### **Recommendations**

- 1.3 Given the previous and current changeability of the area, EA12a should remain on the current survey interval.
- 1.4 The current survey area limits should remain the same for the focused area survey.

### **2. LOCATION**

- 2.1 Survey interval at time of resurvey: 5 years for the EA12a focused survey, 10 years for the full EA12 survey.
- 2.2 Area Covered: 1.70 km<sup>2</sup>

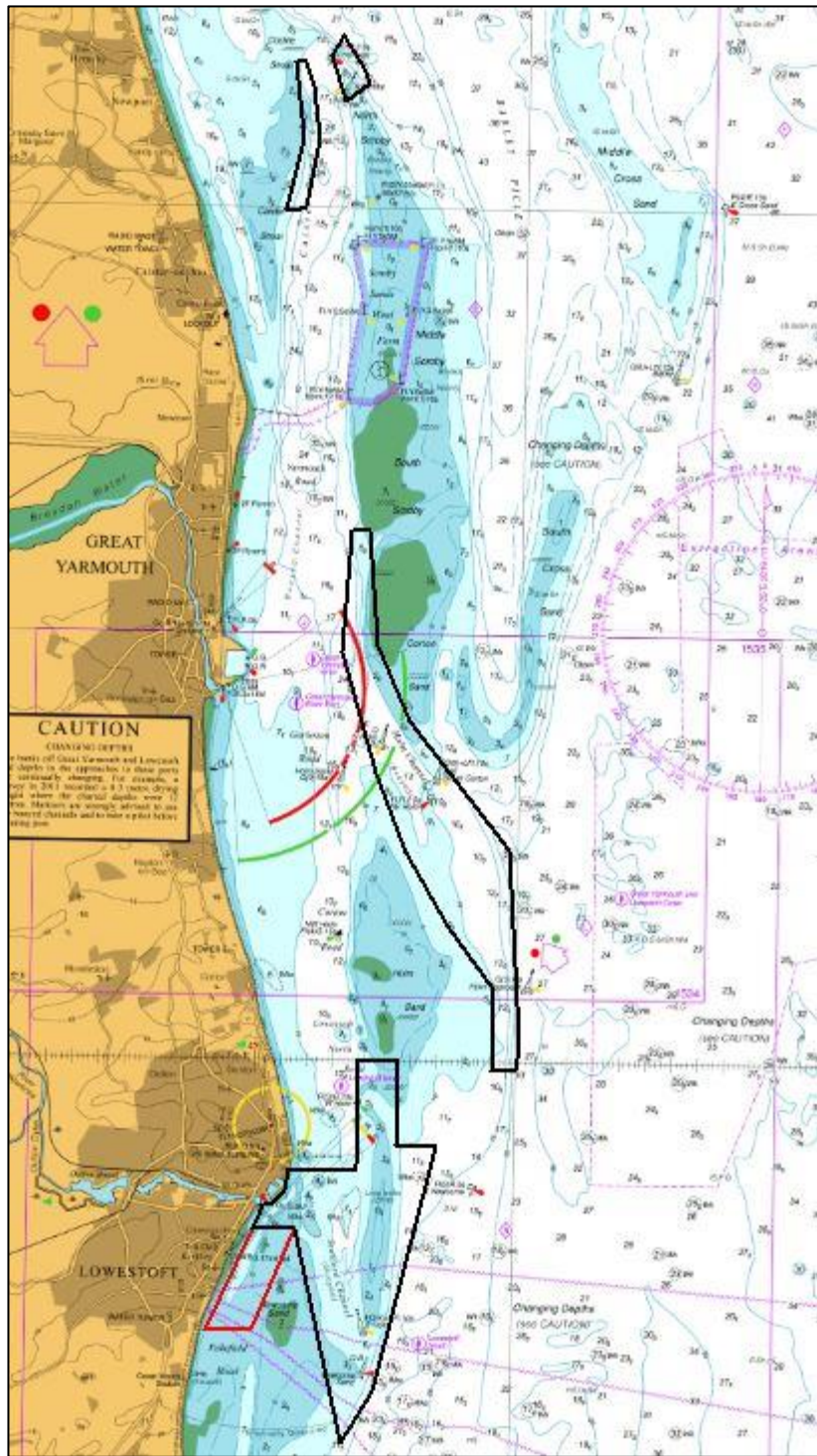


Figure 1: 2019 East Anglia Routine Resurvey areas overlaid on BA Chart 1543 with area EA12a in red

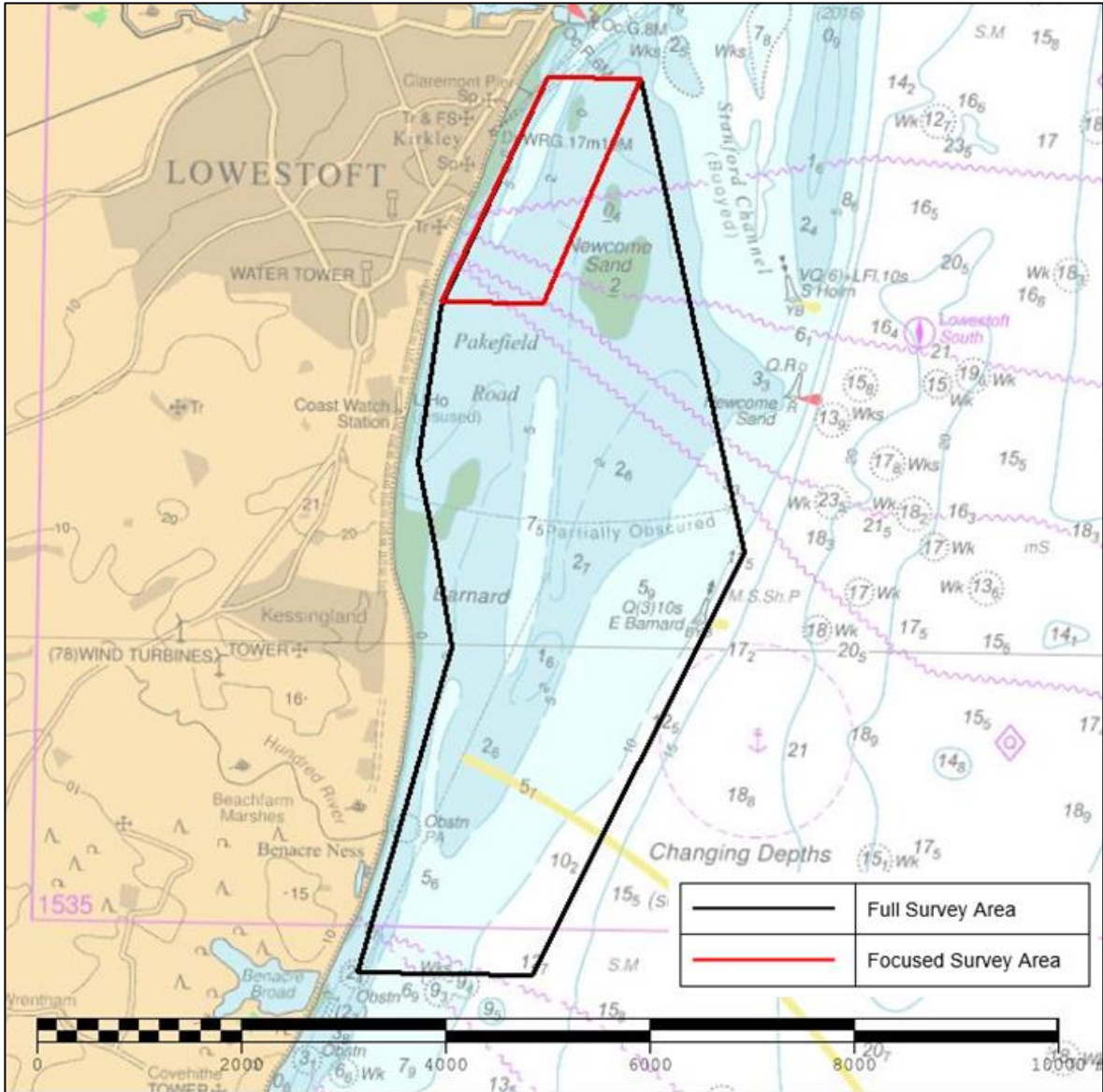


Figure 2: Full and Focused survey areas overlaid on BA Chart 1543 with focused area EA12a in red

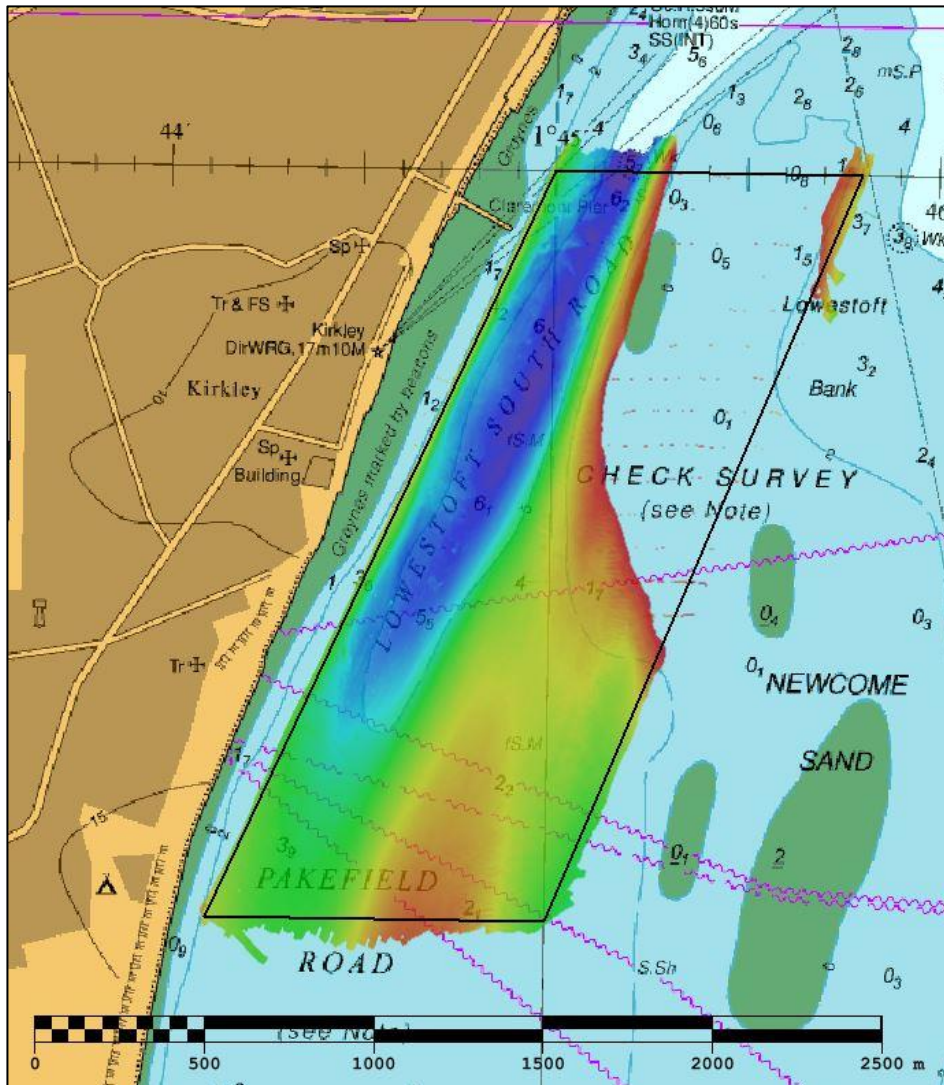


Figure 3: 2019 survey data overlaid on BA Chart 1535

### 3. REFERENCE SURVEY DETAIL

- 3.1 The previous full survey (EA12 Pakefield Road) was conducted within the 2014 Routine Resurvey Programme between the dates of July and September 2014 as part of HI1458. The previous focused area survey was conducted as part of the 2015 Routine Resurvey Programme between the dates of September and December 2015 as part of HI1482.
- 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 The latest focused survey within the 2019 Routine Resurvey Programme was conducted in October 2019 as part of HI1640.
- 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 plot in Figure 4 shows that the least depth in the 2019 survey is 0.9 meters, located on the western side of the Lowestoft Bank.
- 5.2 The difference surface in Figure 5 shows some shoaling of the central area where Lowestoft Bank has migrated west into Lowestoft South Channel since the 2015 survey. At the northern end of the area the bank migration is more pronounced. Much of the rest of the survey has seen stability in the seabed since the previous focused survey in 2015.
- 5.3 The most significant depth changes since 2015 seen in Figure 6 is -2.6m seen in the north of the survey area, and +1.7m seen just south near to the 2m contour.
- 5.4 Figure 7 shows the eastward movement in the 2m contour off the Lowestoft Bank, and the westward movement of the 5m contour.

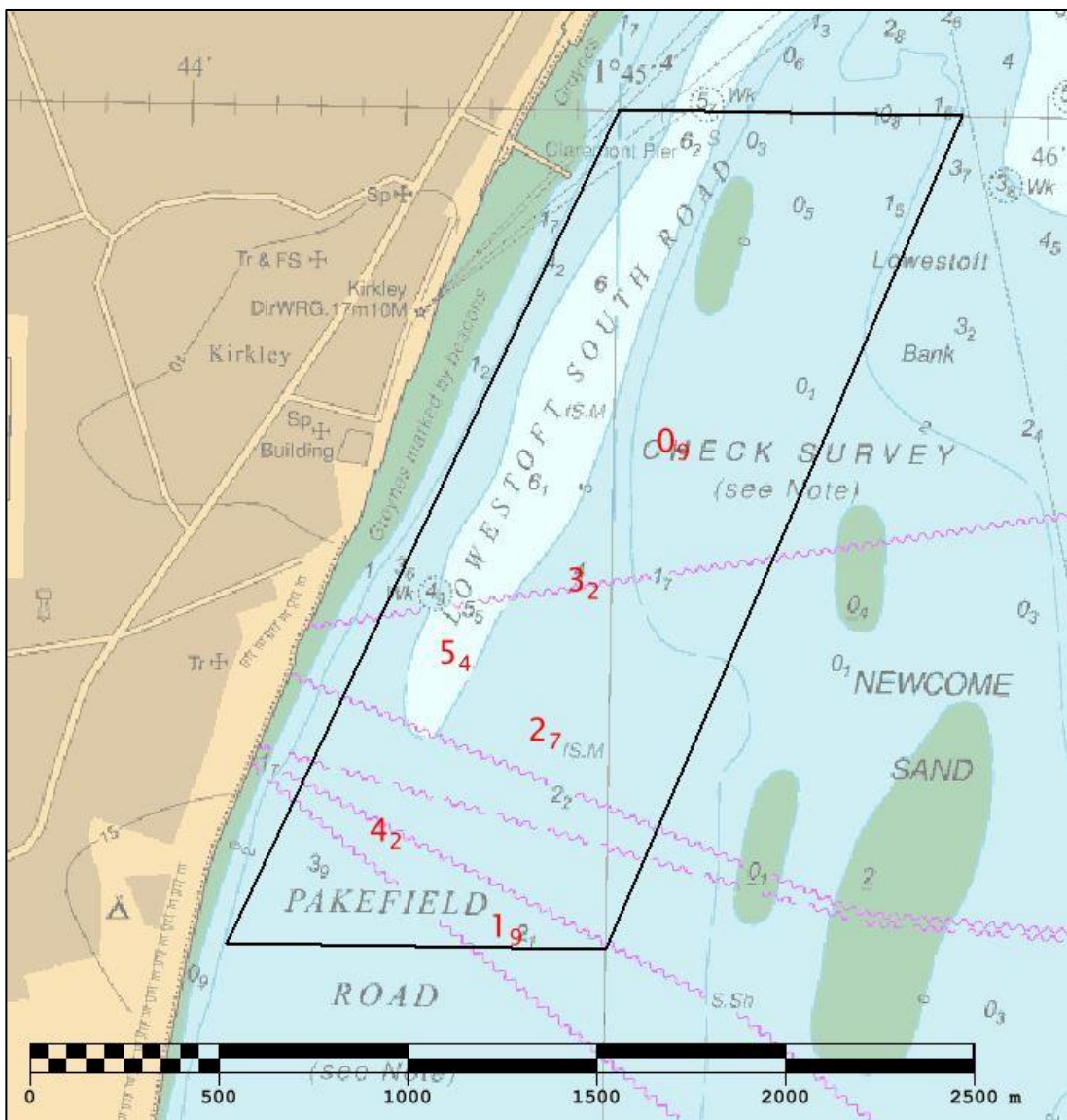


Figure 4: Depth diagram with least and controlling depths from 2019 survey shown in red. Overlaid on BA 1535.

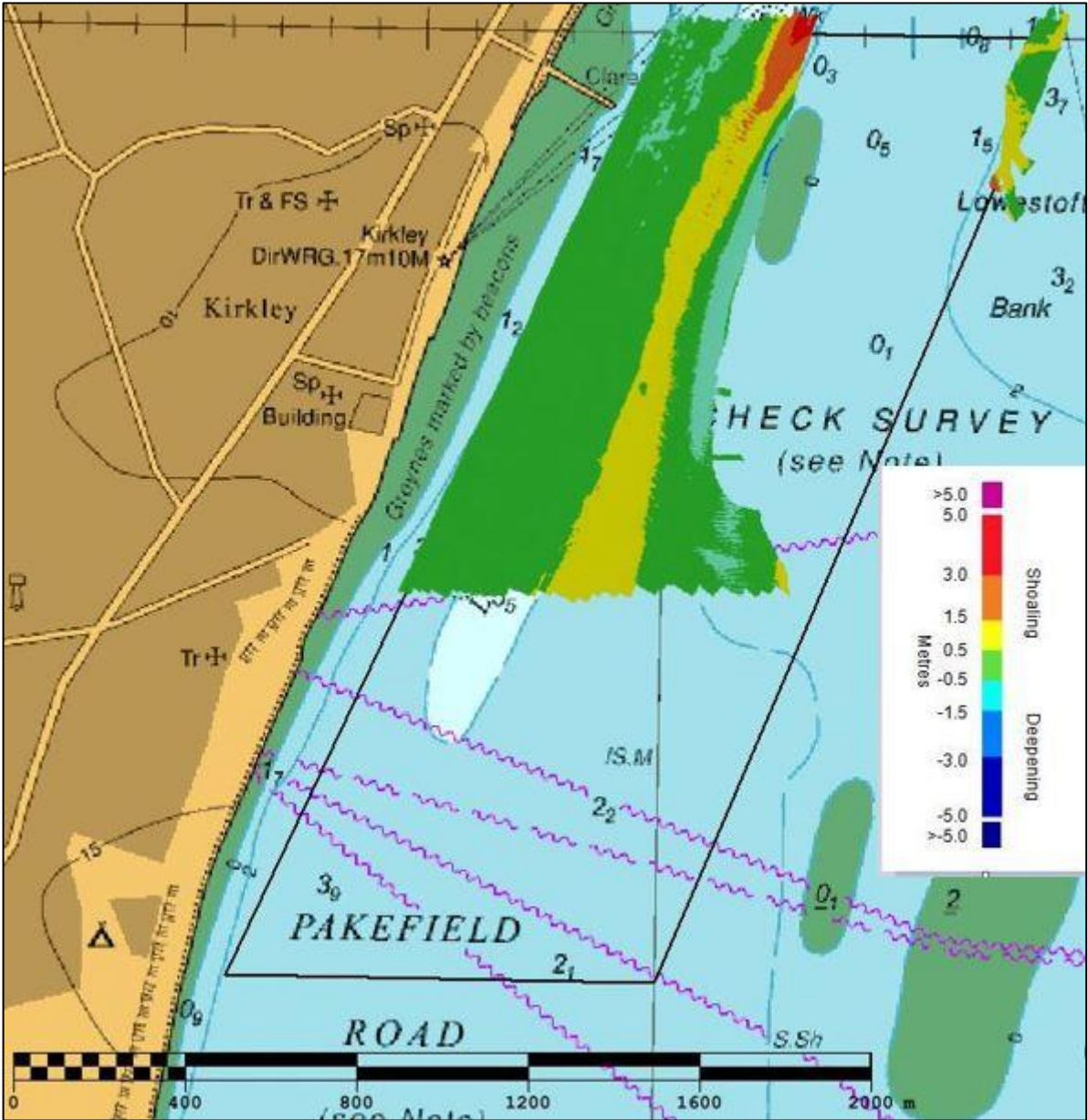


Figure 5: Difference surface showing bathymetric changes between the 2015 and 2019 surveys overlaid on BA Chart 1535



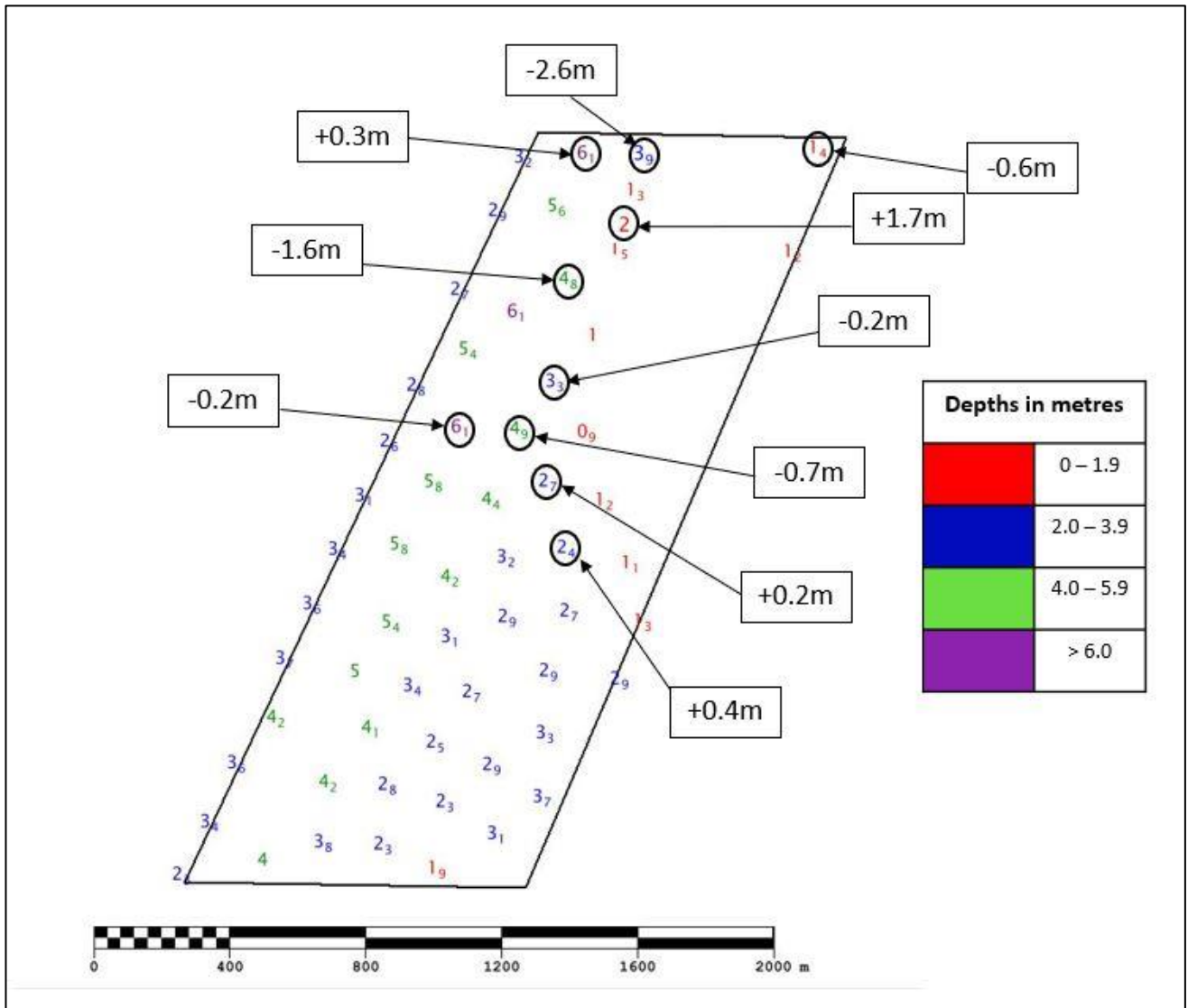


Figure 6: Colour banded depth plot from the 2019 survey with selected depth changes since the 2015 survey. Positive values (+) represent deepening. Negative values (-) represent shoaling.

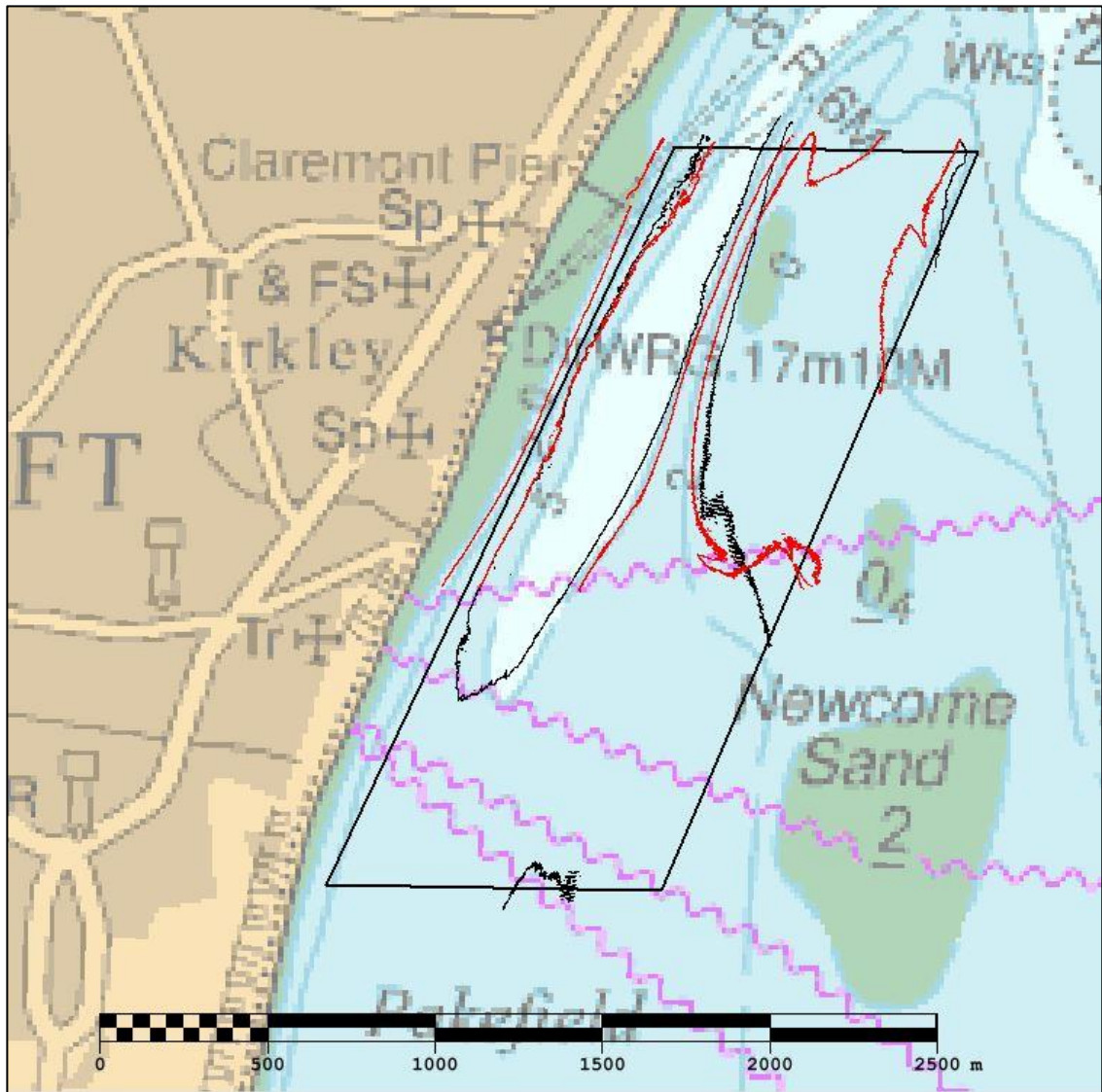


Figure 7: Image of the changes in the contours between the 2015 focused survey (contours in red) and the 2019 focused survey (contours in black)

## 6. RECOMMENDATIONS FOR FUTURE SURVEYS

### Survey Interval

- 6.1 Given the location of the area and the mobility of the shoal areas on the seabed, EA12a should remain on a 5 year survey interval.

### Survey Area

- 6.2 Based on the current survey area limits, and the seabed mobility observed since the previous routine resurvey, EA12a should remain on the current survey limit.