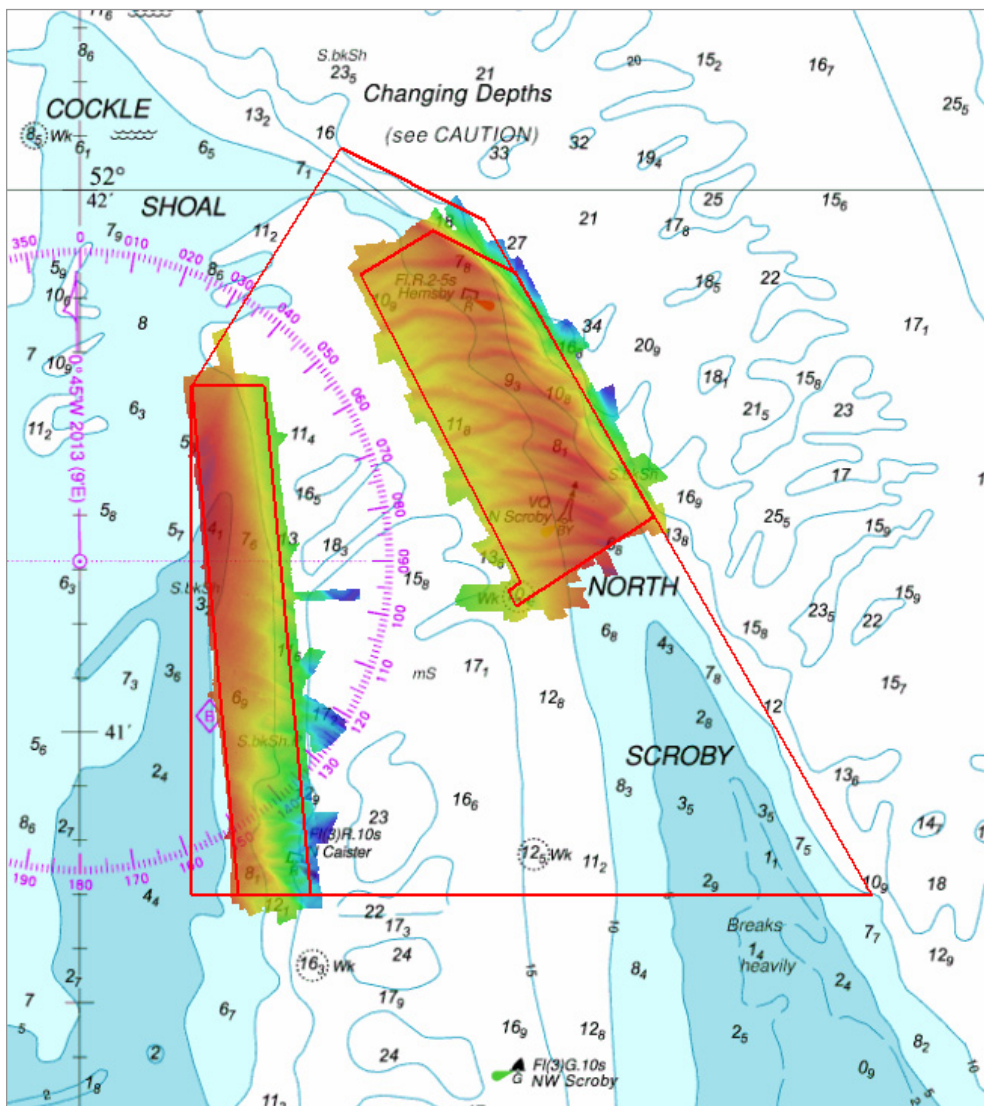




## EAST ANGLIA COCKLE SHOAL

SUMMARY ASSESSMENT ON THE ANALYSIS OF  
ROUTINE RESURVEY AREA EA3  
FROM THE 2013 SURVEY



## EAST ANGLIA

## COCKLE SHOAL

### Summary Assessment EA3/2013

A summary assessment of the 2013 hydrographic survey of the area: to monitor recent seabed movement; to identify any implications for shipping; and to make recommendations for future surveys.

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## COCKLE SHOAL, 2013

### 1 Introduction

- 1.1 The full area of EA3 is re-surveyed every 3 years; within that area there are two focused areas which are surveyed annually (as shown on the front of this report). These focused areas concentrate on the areas of greatest concern, taking into account sediment mobility, depth of water and draught of shipping using the areas.
- 1.2 This summary report looks at the latest focused survey of EA3 and compares it against the previous survey. For more details on the area, including long-term changes, the more detailed report on the last full 3-year survey (conducted in 2011) should be consulted.

### 2 Description of the Areas

- 2.1 The eastern area (Area A) covers the buoyed entrance into Caister Road, which forms the controlling depth for vessels using the route; the entrance has gradually increased in depth over an extended period, but this increase in depth has slowed in recent years. The western area (Area B) covers the eastern limit of Caister Shoal, which in the northern part of this focused area has migrated eastwards over the same period.
- 2.2 Vessels generally approach the buoyed entrance from the north and northeast, much of it passing close to the south of Hemsby buoy. Vessels drawing up to 7.8 metres are understood to use Caister Road, although most draw less than 6 metres. A small number of fishing, windfarm support and leisure craft, mainly drawing 2.0 metres or less, track across Cockerle Shoal to the west of the buoyed entrance where depths in excess of 5 metres are available.

### 3 Survey Data

- 3.1 The 2012 survey was conducted from 20 September to 16 October. The 2013 survey was conducted on 19 September and 9 October. Good weather conditions were generally experienced during both surveys. In both surveys, the Vertical Offshore Reference Frame (VORF) and GPS heighting were used to reduce depths to Chart Datum.

### 4 Changes since the 2012 Survey

- 4.1 The surface difference plot at [Annex A](#) shows the changes in depth that have occurred since last surveyed.

#### ***North Scroby (Area A)***

- 4.2 The focused area monitors the eastward migration of the bank. The bank shows less change than in recent years and remains in broadly the same position. This is shown in the contour comparison at [Annex B](#).
- 4.3 Northwest of North Scroby buoy, the minimum depth increased notably from 2004 to 2009, but has remained relatively stable in the last three surveys, as shown in figure 1.

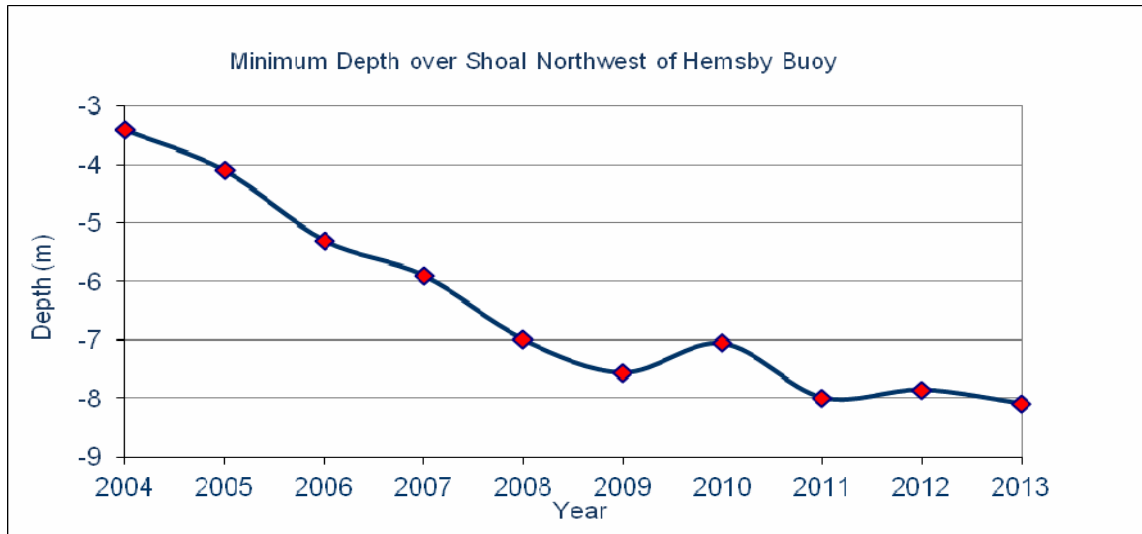


Figure 1: Change in minimum depth close northwest of Hemsby Buoy

4.4 A sounding plot produced from the 2012 surveys is at [Annex C](#).

**Caister Shoal (Area B)**

4.5 The focused area monitors the eastward migration of the bank. Similar to North Scroby, the bank shows less change than in recent years. While depths changes have occurred, the position of the 10 metre contour remains in broadly the same position.

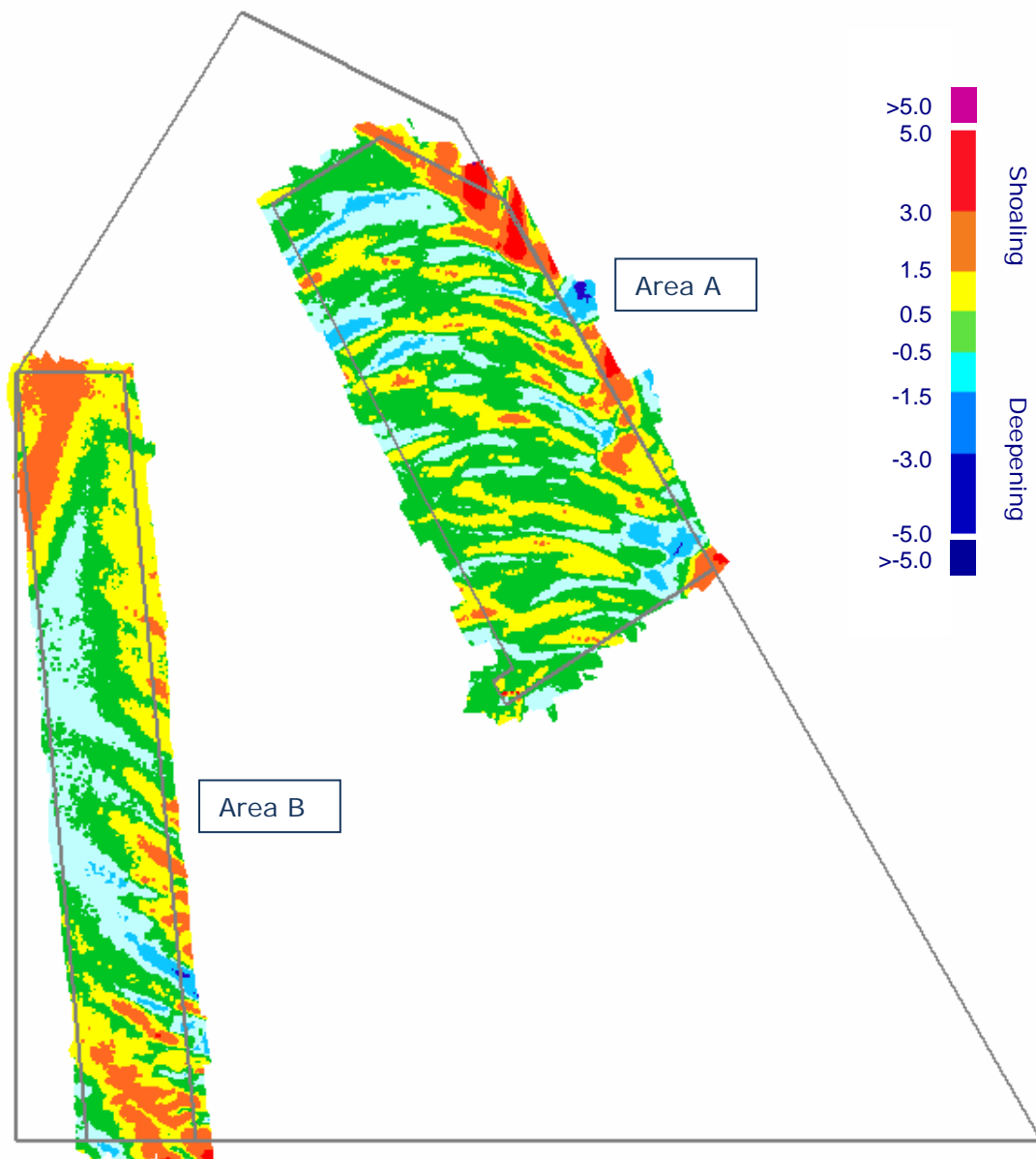
**5 Implications for Shipping**

5.1 The buoyed entrance to Caister Road continues to provide relatively deep water for vessels entering the channel, with a minimum depth of 8.1 metres between Hemsby and North Scroby buoys.

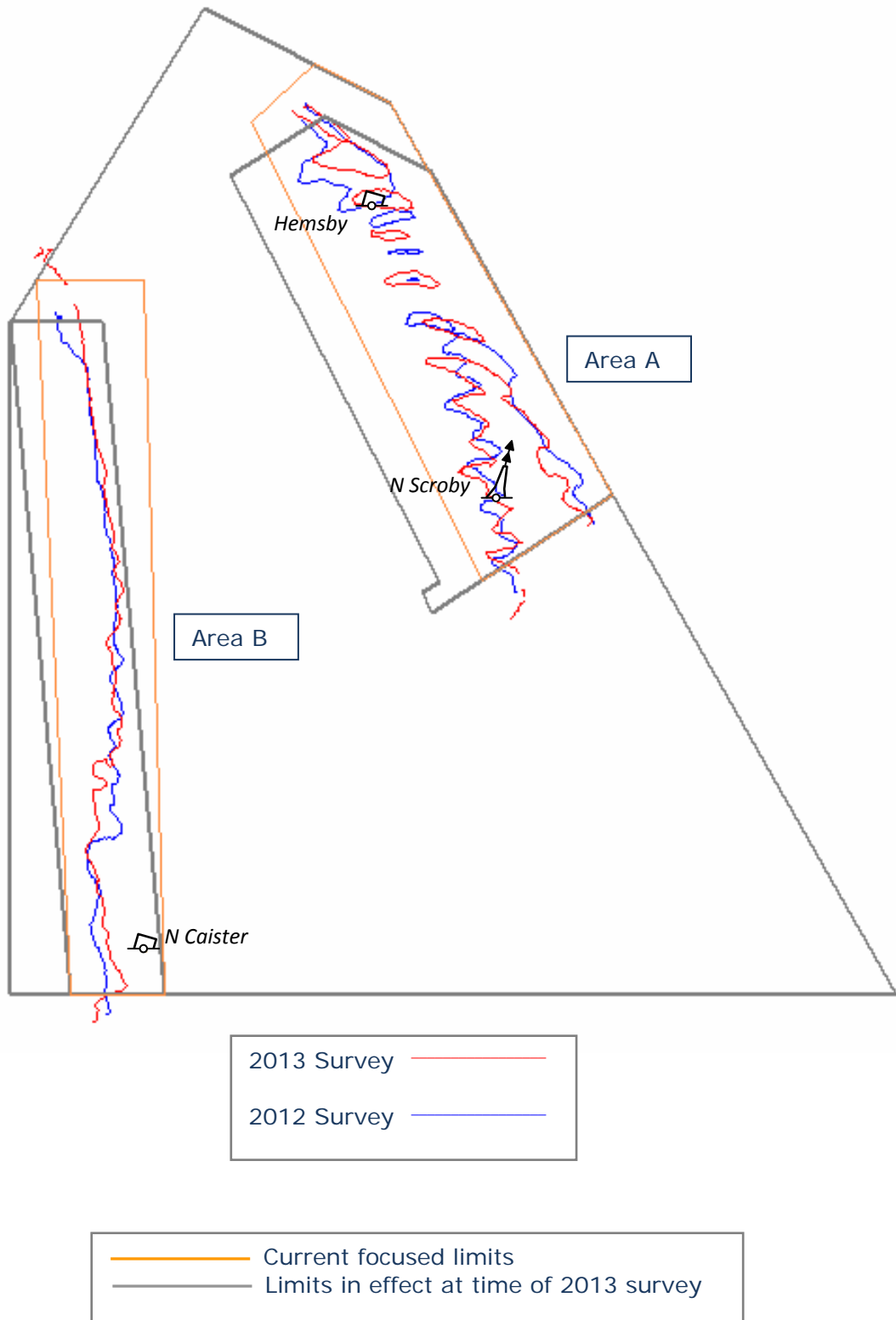
**6 Recommendations**

6.1 The current annual focused limits, as shown in Annex B, adequately cover the two areas and should be retained, along with the annual survey interval. The need for continued annual surveying should be kept under review and longer term changes assessed in the report on the 2014 full survey of area EA3.

SURFACE DIFFERENCE LAYER SHOWING BATHYMETRIC CHANGES  
BETWEEN THE 2012 AND 2013 SURVEYS



COMPOSITE DIAGRAM OF THE 10 METRE CONTOUR  
FROM THE 2012 AND 2013 SURVEYS



SELECTED DEPTHS FROM THE 2013 SURVEY

