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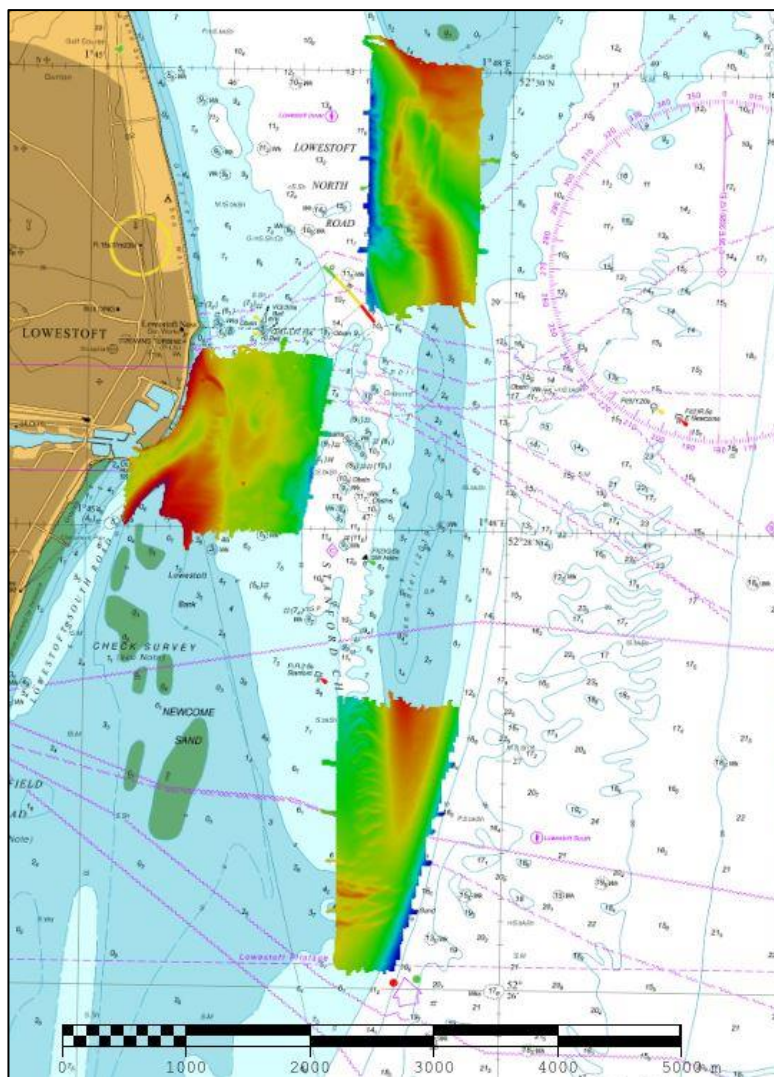
Maritime &
Coastguard
Agency

EAST ANGLIA

APPROACHES TO LOWESTOFT FOCUSED (EA10A, EA10B & EA10C)

2020 ASSESSMENT

An assessment of the 2020 hydrographic survey of the area EA10: 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

APPROACHES TO LOWESTOFT, 2020

1. SUMMARY

Changes Detected

- 1.1 EA10A and EA10B show some localised depth changes, but general depth hasn't changed.
- 1.2 The northern part of Lowestoft Bank in EA10B shows the 5m contour has encroached approx. 35m into the Lowestoft South Road channel opposite the harbour entrance.
- 1.3 The southern tip of Holm Sand in EA10C has moved up to 200m to the north.
- 1.4 Shoaling depths to the west of Holm Sand in EA10C is now the controlling depth at 3.7m.

Reasons for Continuing to Resurvey the Area

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

Recommendations

- 1.6 Given the location of the area in relation to Lowestoft Harbour EA10 focused areas should remain on the annual survey interval.
- 1.7 The current focused areas of EA10A, EA10B and EA10C adequately cover current areas of seabed change and allow to possible future change, so no current adjustments are required.

2. LOCATION

2.1 Survey interval at time of resurvey: 3 years full area, 1-year focused areas.

2.2 Area Covered – Full area: 14.71 km²

Focused area EA10a: 1.38 km²

Focused area EA10b: 1.68 km²

Focused area EA10c: 1.58 km²

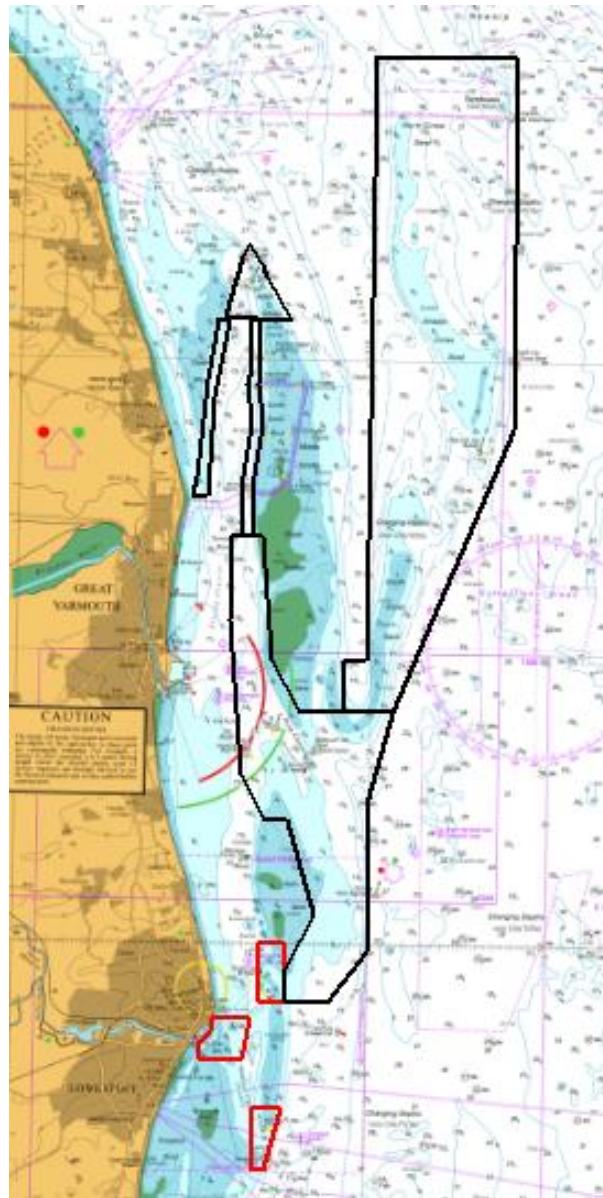


Figure 1: 2020 East Anglia Routine Resurvey areas overlaid on BA Chart 0106-0 and 1543-0 with area DS10 A, B & C in red

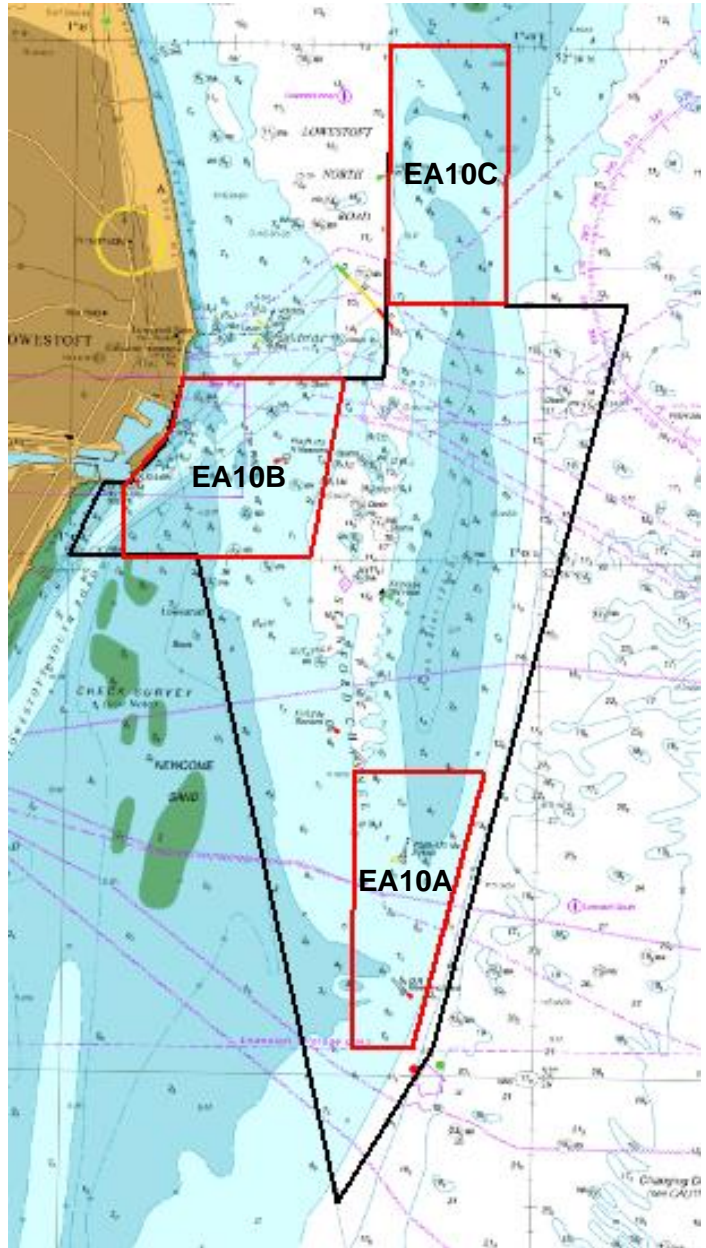


Figure 2: 2020 survey data overlaid on BA Chart 1535-0

3. REFERENCE SURVEY DETAIL

- 3.1 Previous full survey was conducted in September and October 2019 as part of HI1639 EA10 Approaches to Lowestoft.
- 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 was conducted in June 2020 as part of HI1688 EA10a, EA10b and EA10c Approaches to Lowestoft Focused.
- 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 Figure 3 shows the critical shoalest soundings in the areas of EA10C, EA10B and EA10C. The depths are similar to currently charted depths, with the most significant difference in EA10C where the critical sounding of 3.7m is approximately 0.4m shoaler than previously charted.
- 5.2 The difference plots in Figure 4, and in more detail for each area in Figures 5, 6 and 7 show that little change has been found in areas EA10A and EA10B, with minor changes in EA10C.
- 5.3 Area EA10A shows very little change since 2019, with the difference plot in Figure 5 showing only changes due to sand wave movement. There are localised depth differences of up to 2.0m as shown in Figure 8, but the general depths remain the same.
- 5.4 Area EA10B shows little change since 2019, the difference plot in Figure 6 and the contour plot in Figure 12 show the main change is the northern part of Lowestoft Bank where the 5m contour has encroached approximately 35m into the Lowestoft South Road channel opposite the harbour entrance.
- 5.5 Area EA10C has the biggest change since 2019, as seen in the difference plot in Figure 7 and the soundings plot in Figure 10 there has been shoaling of up to 3.3m and deepening of up to 4.0m. The contour plot in Figure 13 shows Holm Sand 5m contour receding north by up to 200m, and a shoaling of 2.3m further in Lowestoft North Road which is now the controlling depth in the area.

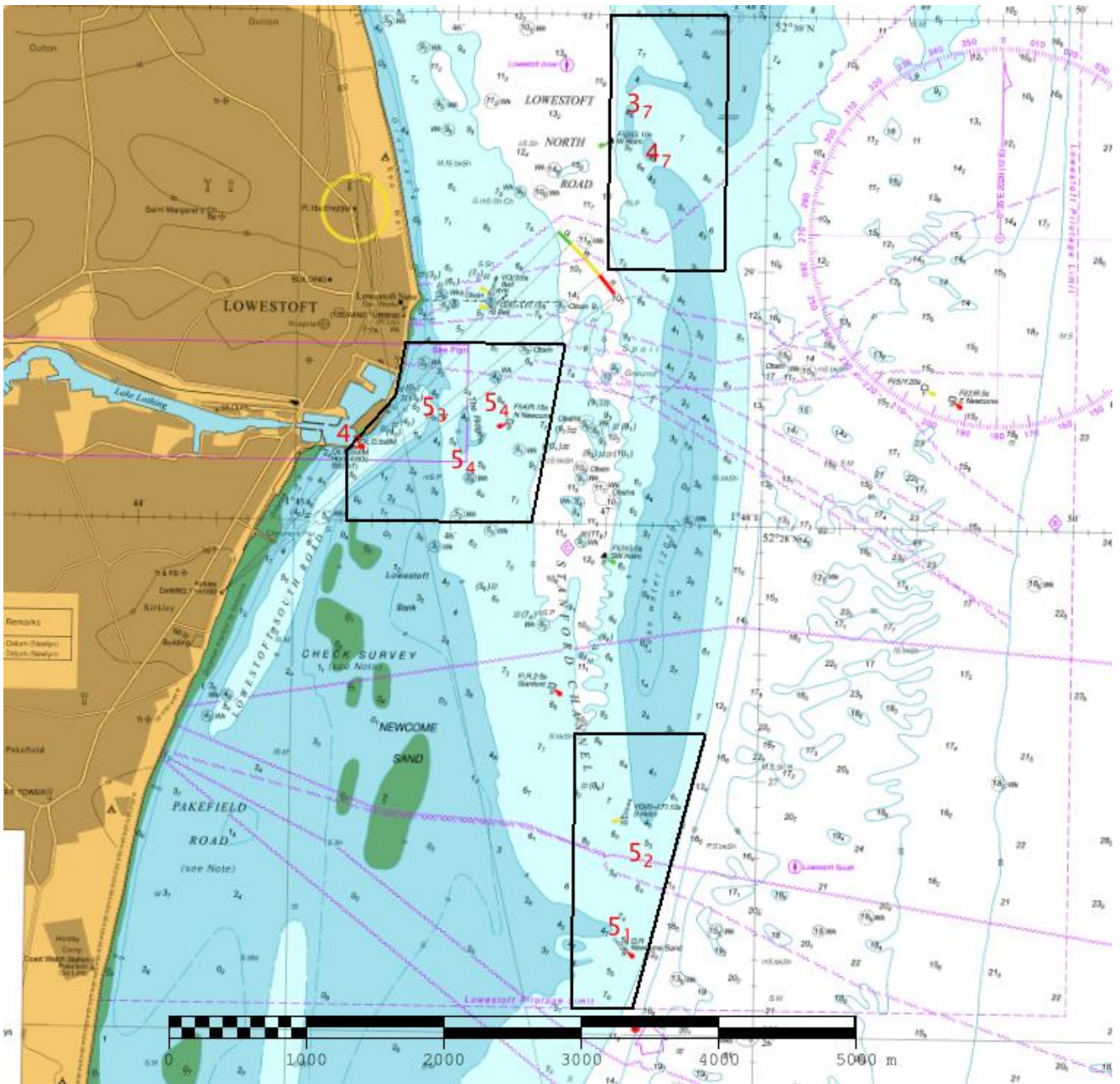


Figure 3: Critical soundings from 2020 survey overlaid on BA Chart 1535-0

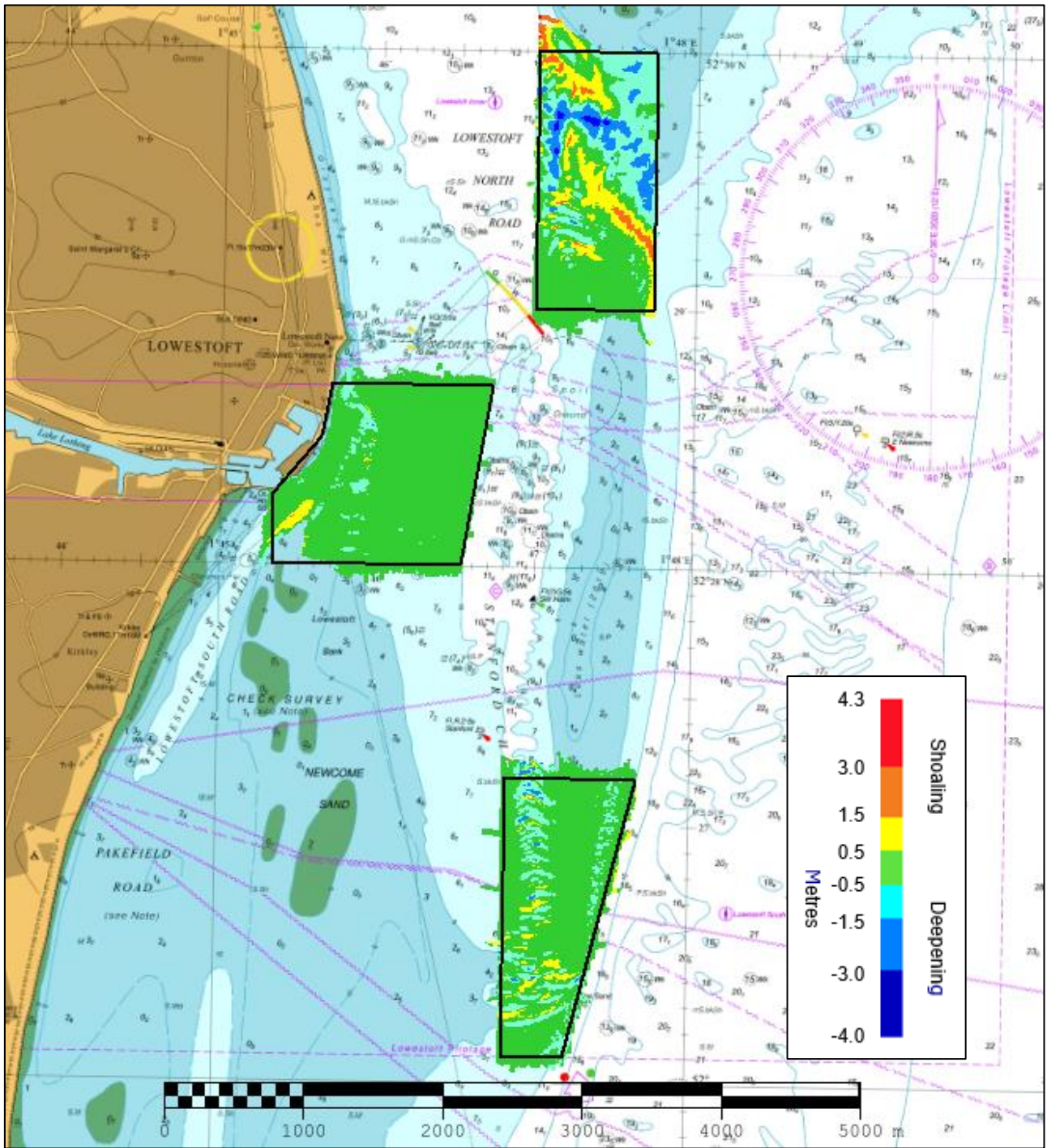


Figure 4: Difference surface showing bathymetric changes between the 2019 and 2020 surveys overlaid on BA Chart 1535-0

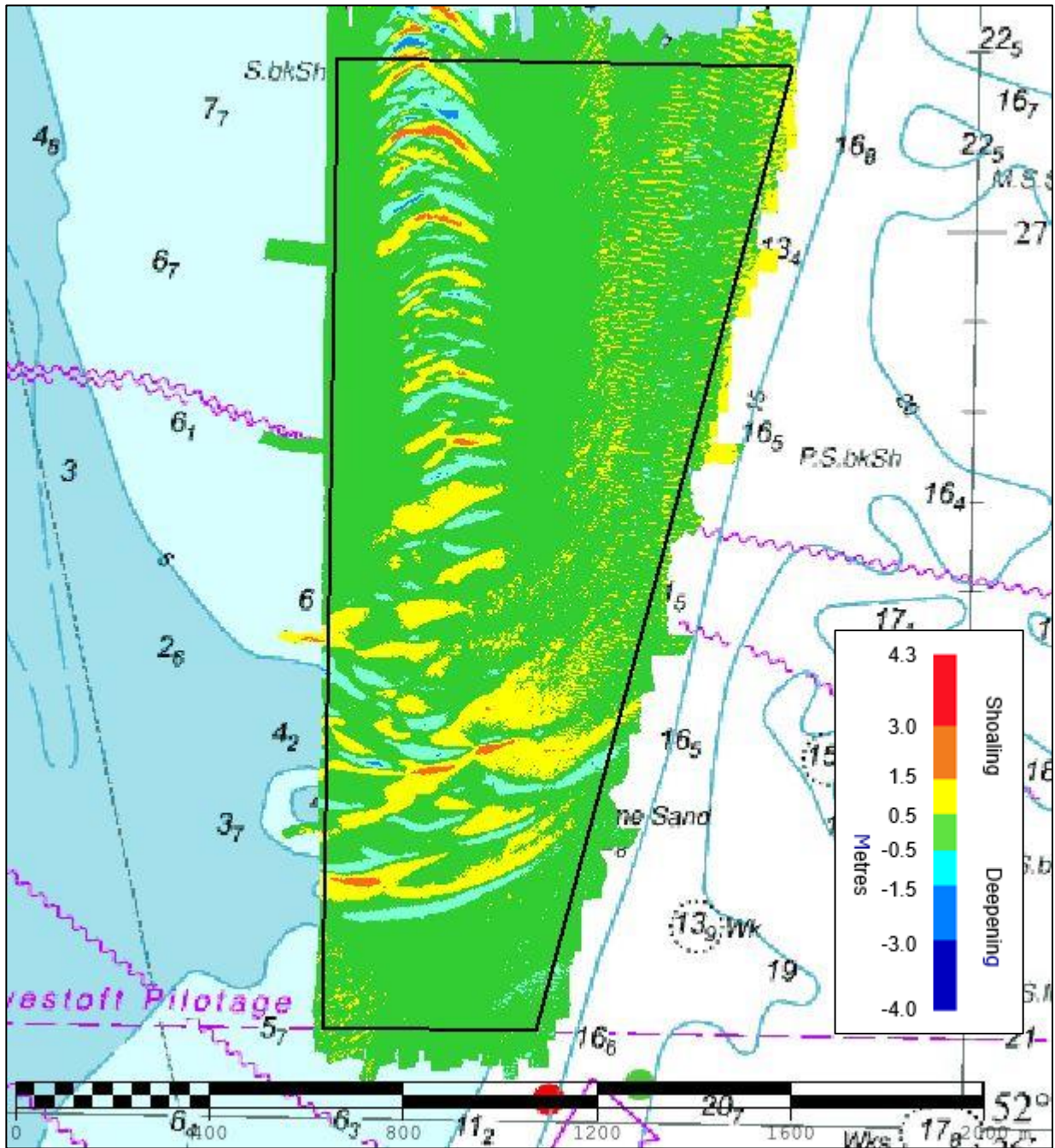


Figure 5: Difference surface of area EA10A showing bathymetric changes between the 2019 and 2020 surveys overlaid on BA Chart 1535-0

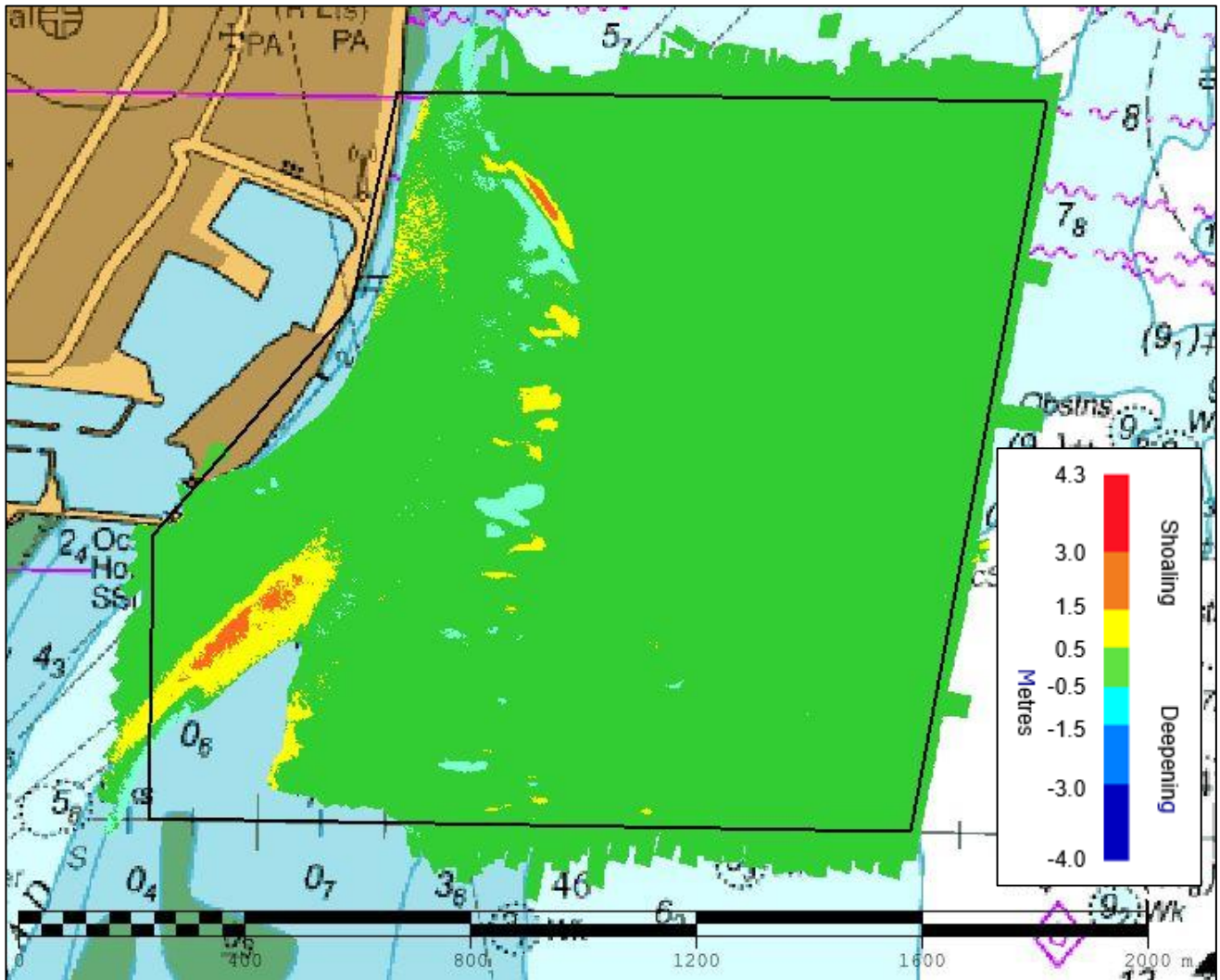


Figure 6: Difference surface of area EA10B showing bathymetric changes between the 2019 and 2020 surveys overlaid on BA Chart 1535-0

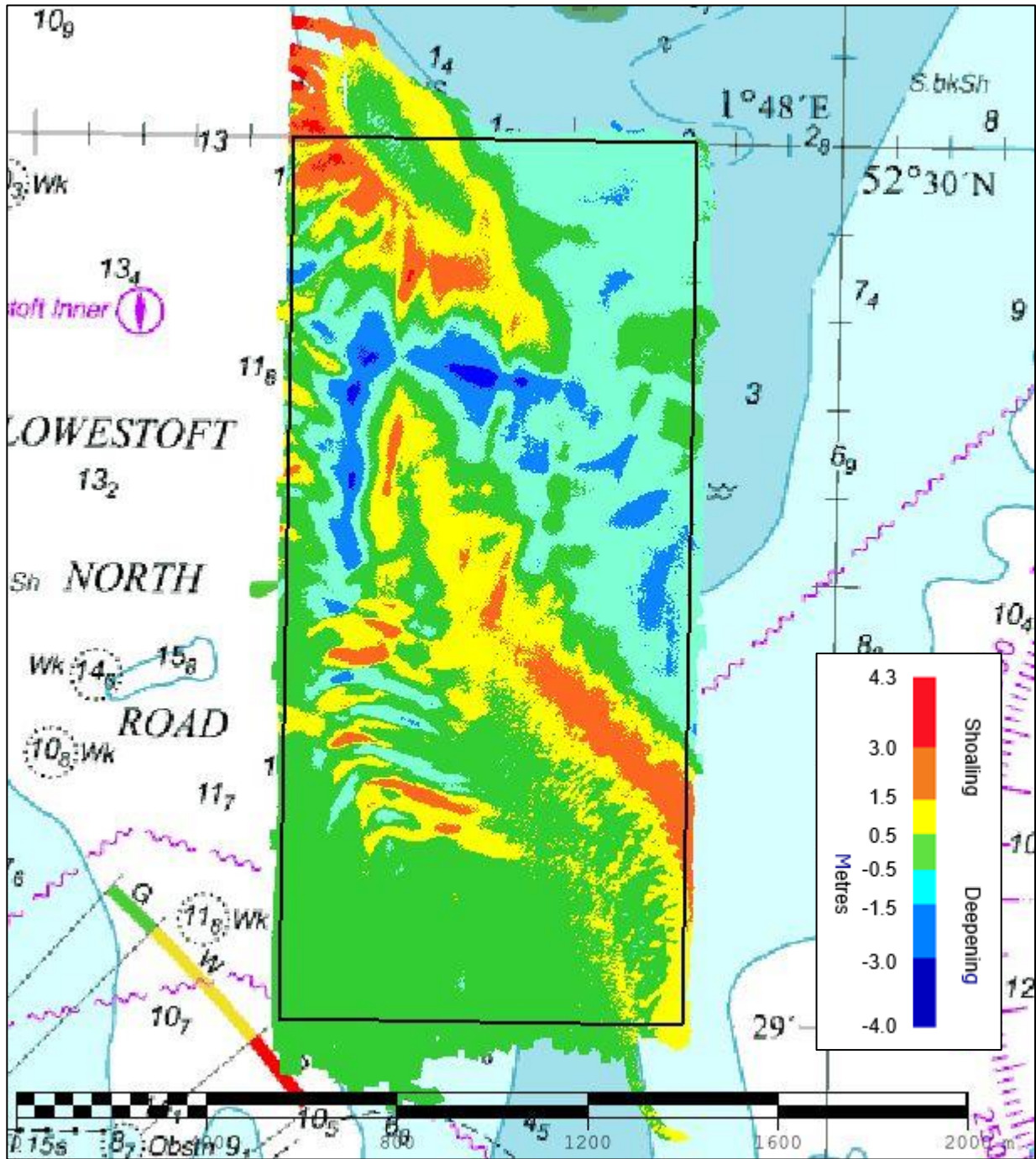


Figure 7: Difference surface of area EA10C showing bathymetric changes between the 2019 and 2020 surveys overlaid on BA Chart 1535-0

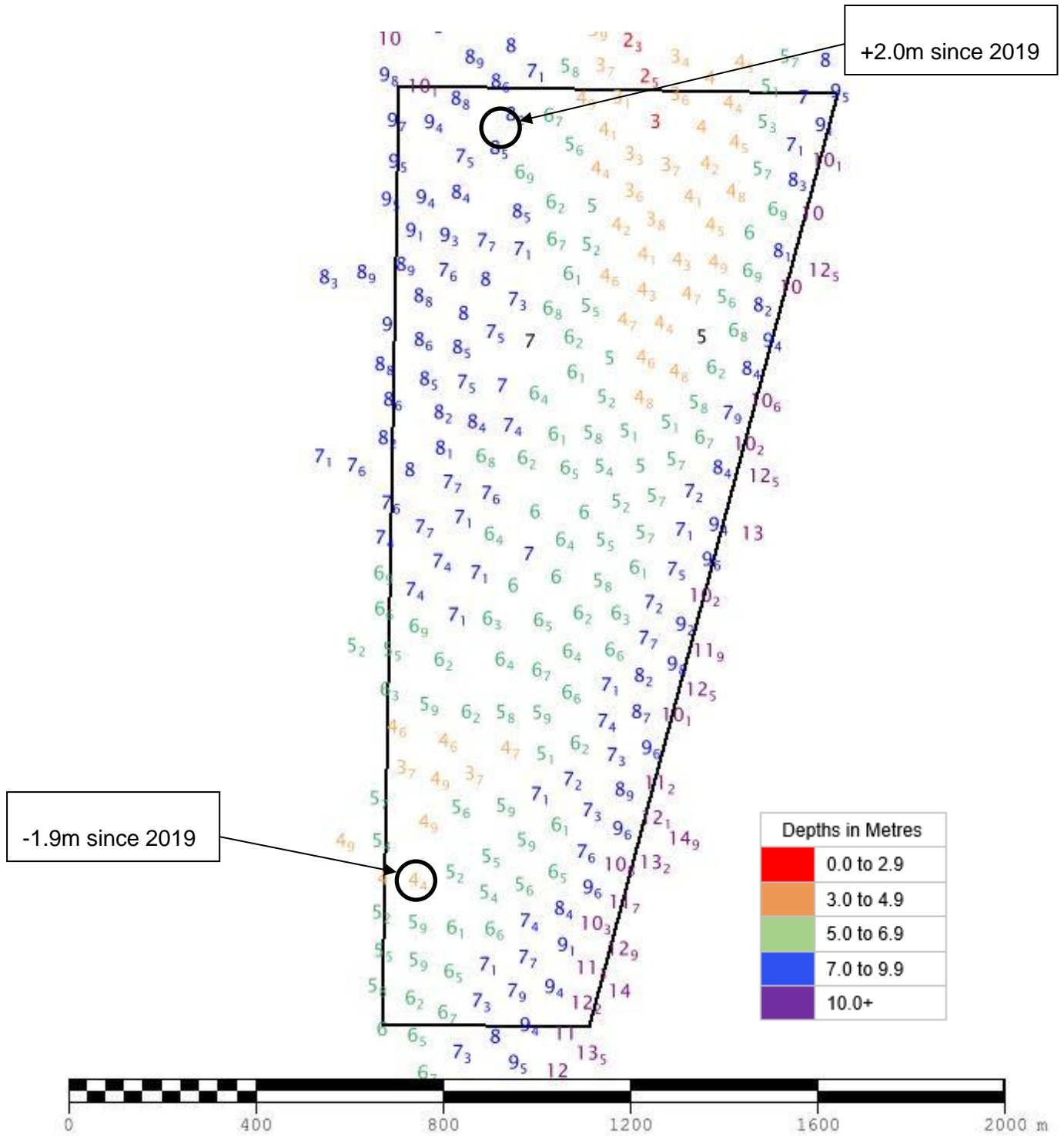


Figure 8: Colour banded depth plot of area from the 2020 EA10A area survey with selected depth changes since the 2019 survey. Positive values (+) represent deepening. Negative values (-) represent shoaling.

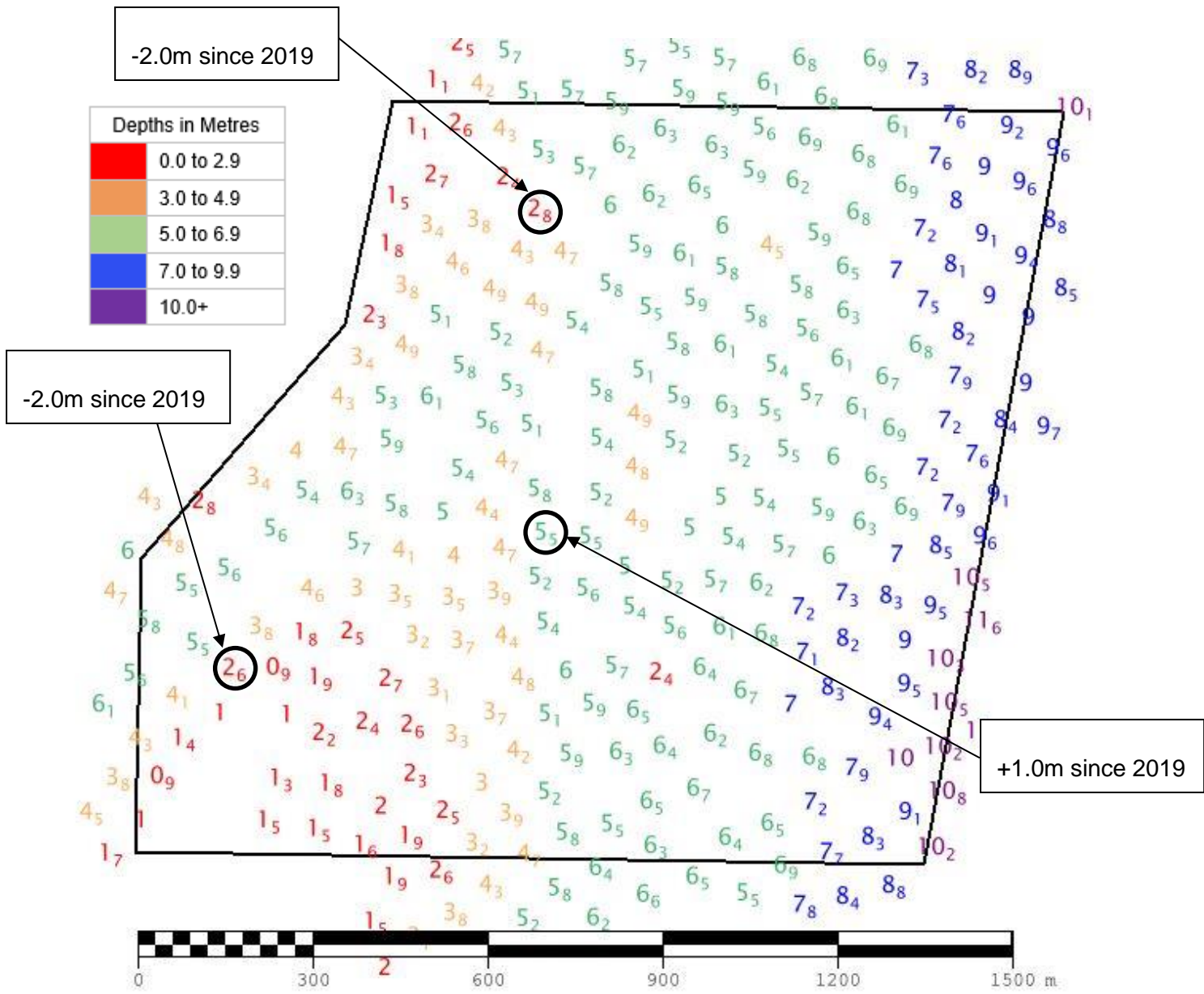


Figure 9: Colour banded depth plot from the 2020 EA10B area survey with selected depth changes since the 2019 survey. Positive values (+) represent deepening. Negative values (-) represent shoaling.

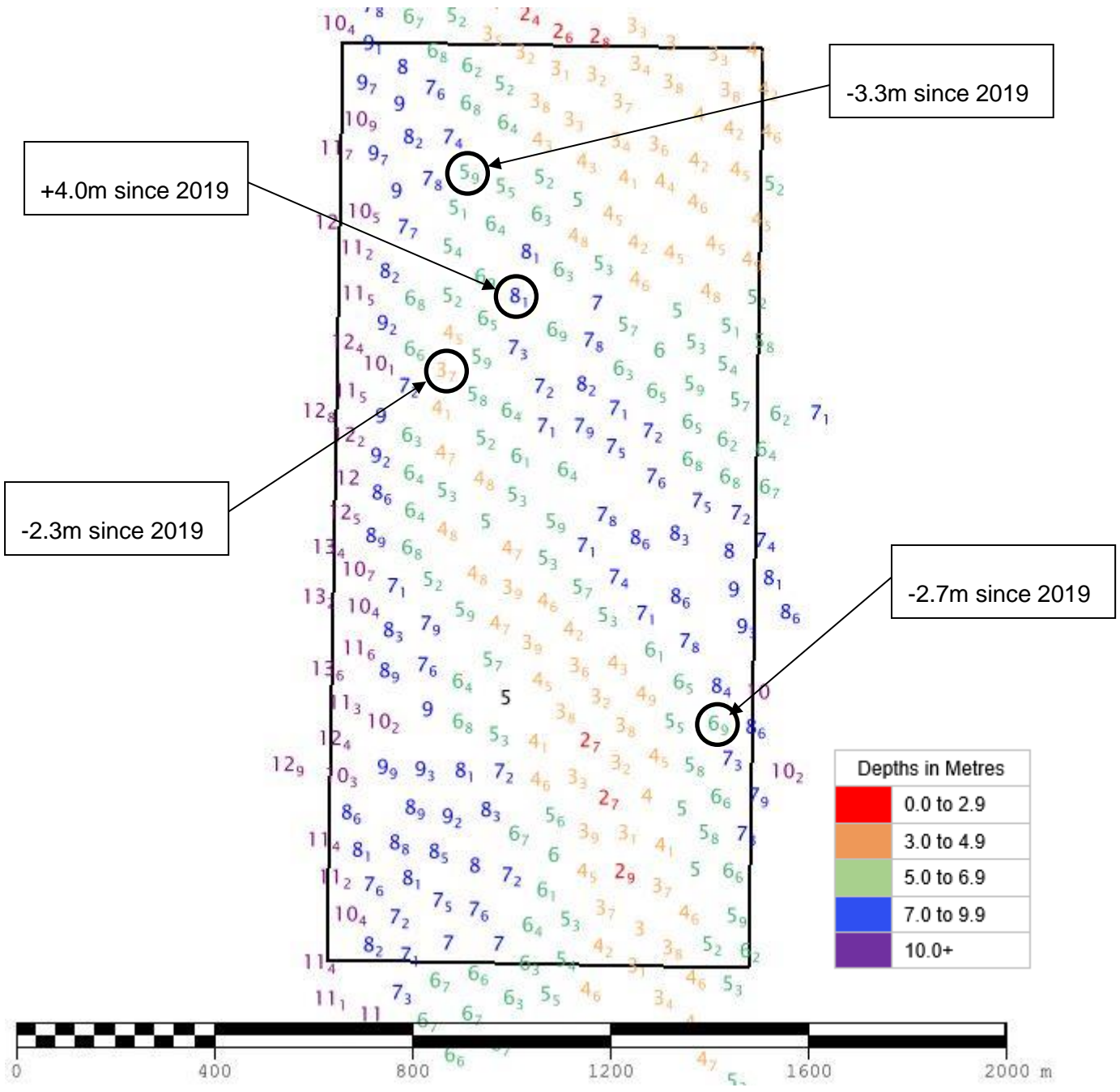


Figure 10: Colour banded depth plot from the 2020 EA10C area survey with selected depth changes since the 2019 survey. Positive values (+) represent deepening. Negative values (-) represent shoaling.

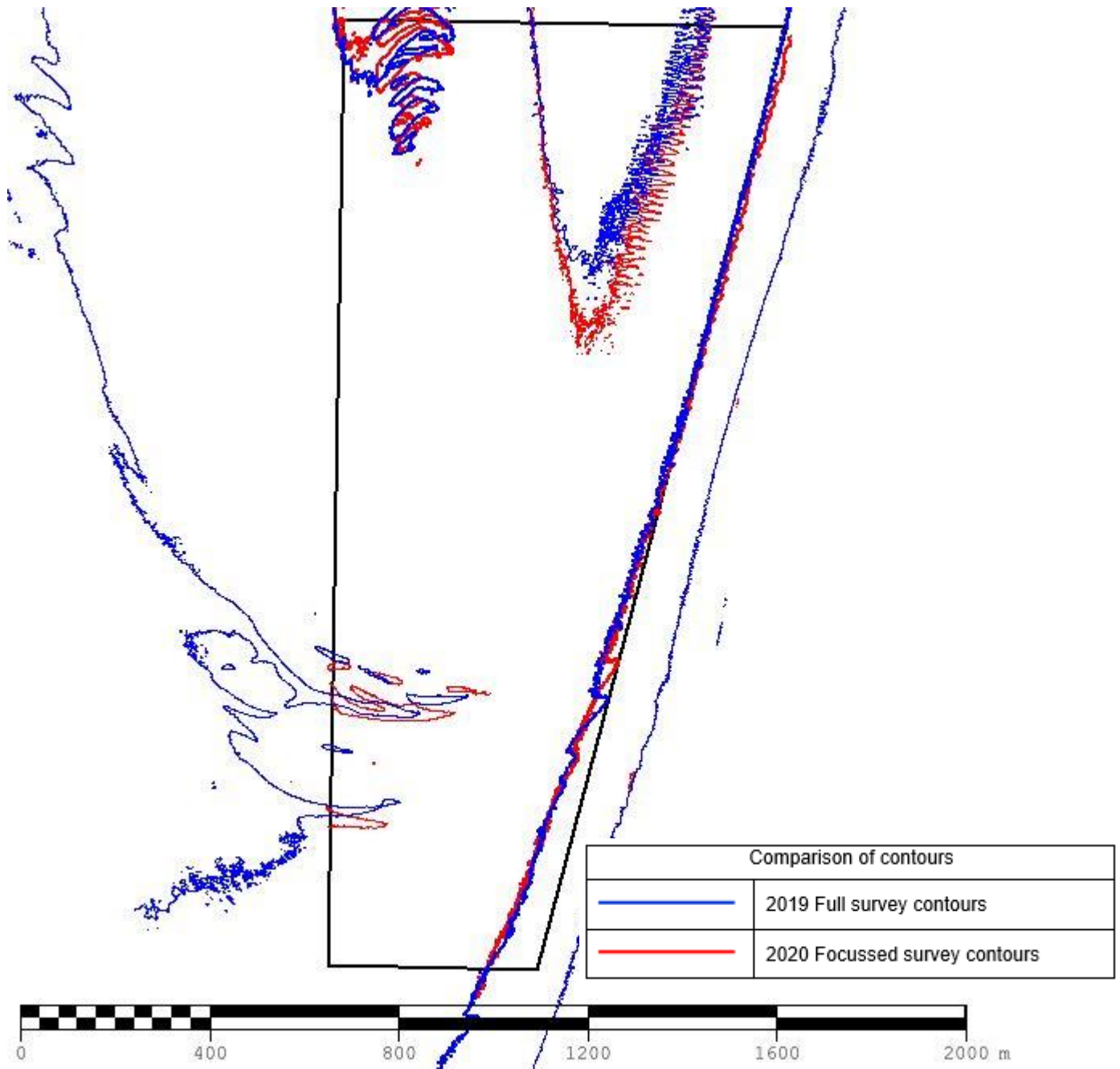


Figure 11: 5m and 10m chart contours from the 2019 and 2020 surveys in area EA10A

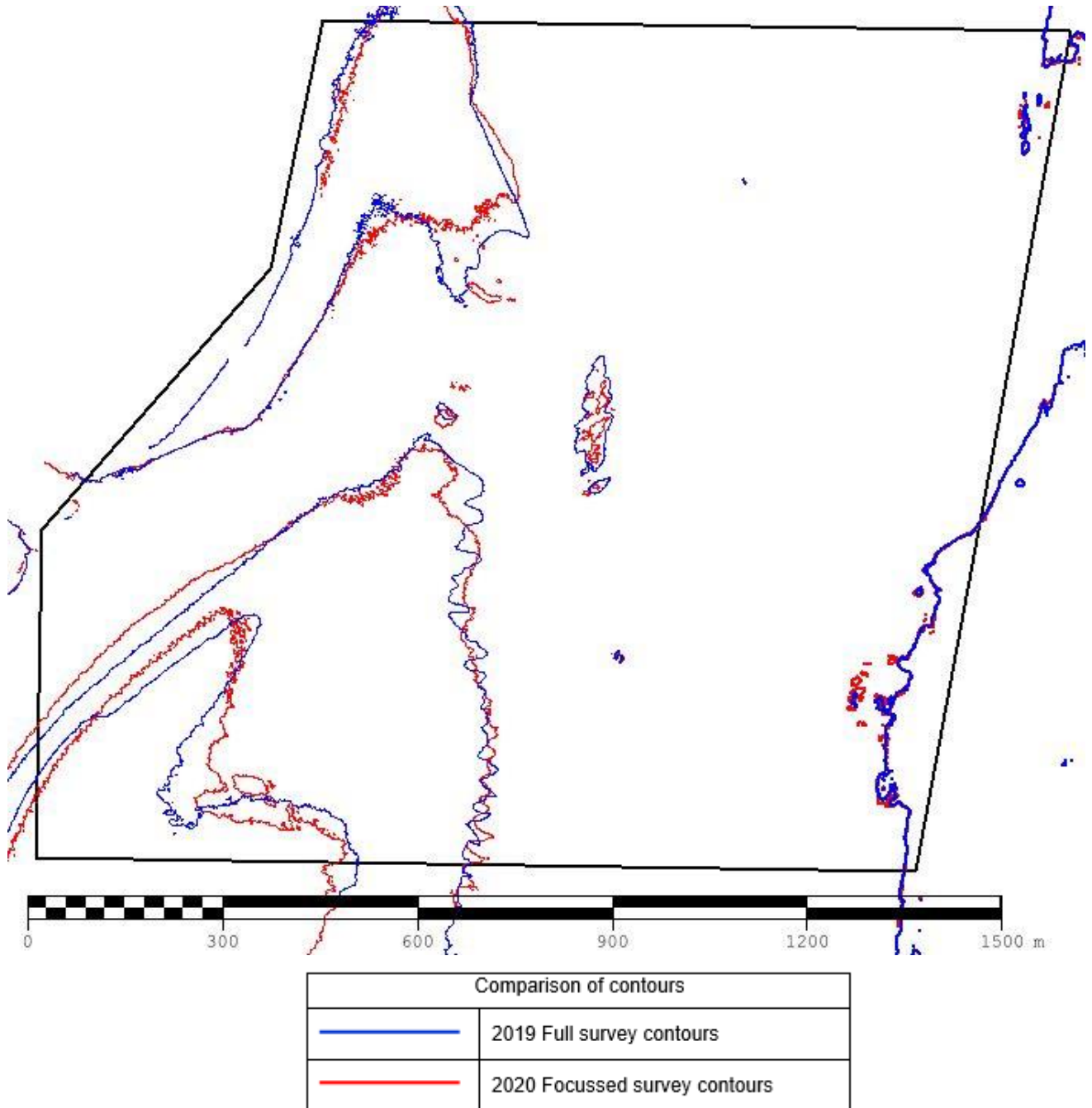


Figure 12: 2m, 5m and 10m chart contours from the 2019 and 2020 surveys in area EA10B

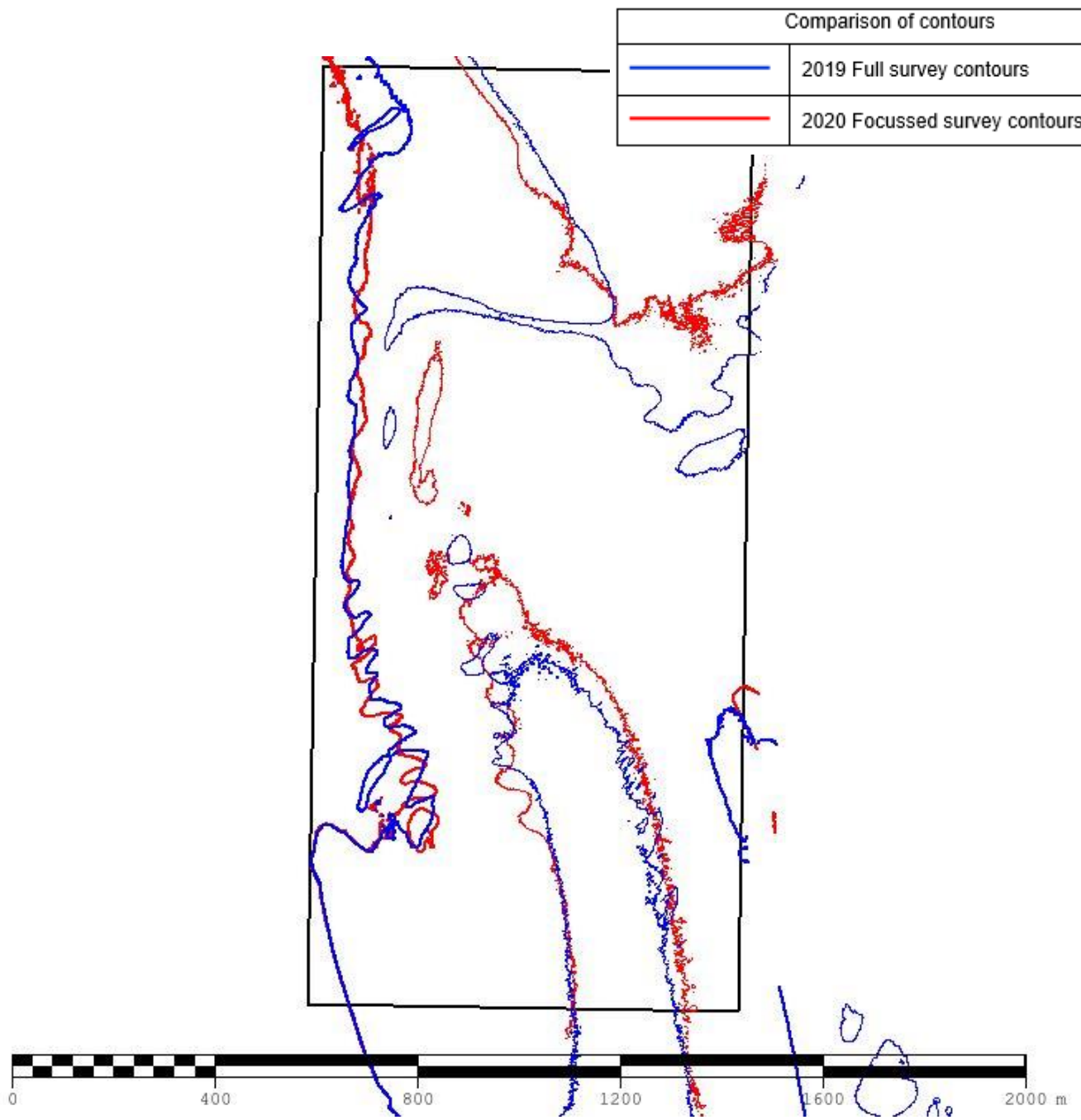


Figure 13: 5m and 10m chart contours from the 2019 and 2020 surveys in area EA10C

6. RECOMMENDATIONS FOR FUTURE SURVEYS

Survey Interval

- 6.1 Depth in the area remain changeable and hazardous to vessels navigating the area and therefore require continued monitoring through annual resurveys.
- 6.2 Given the location of the areas in relation to Lowestoft Harbour EA10 focused areas should remain on the annual survey interval.

Survey Area

- 6.3 The current focused areas of EA10A, EA10B and EA10C adequately cover current areas of seabed change and allow to possible future change, so no current adjustments are required.