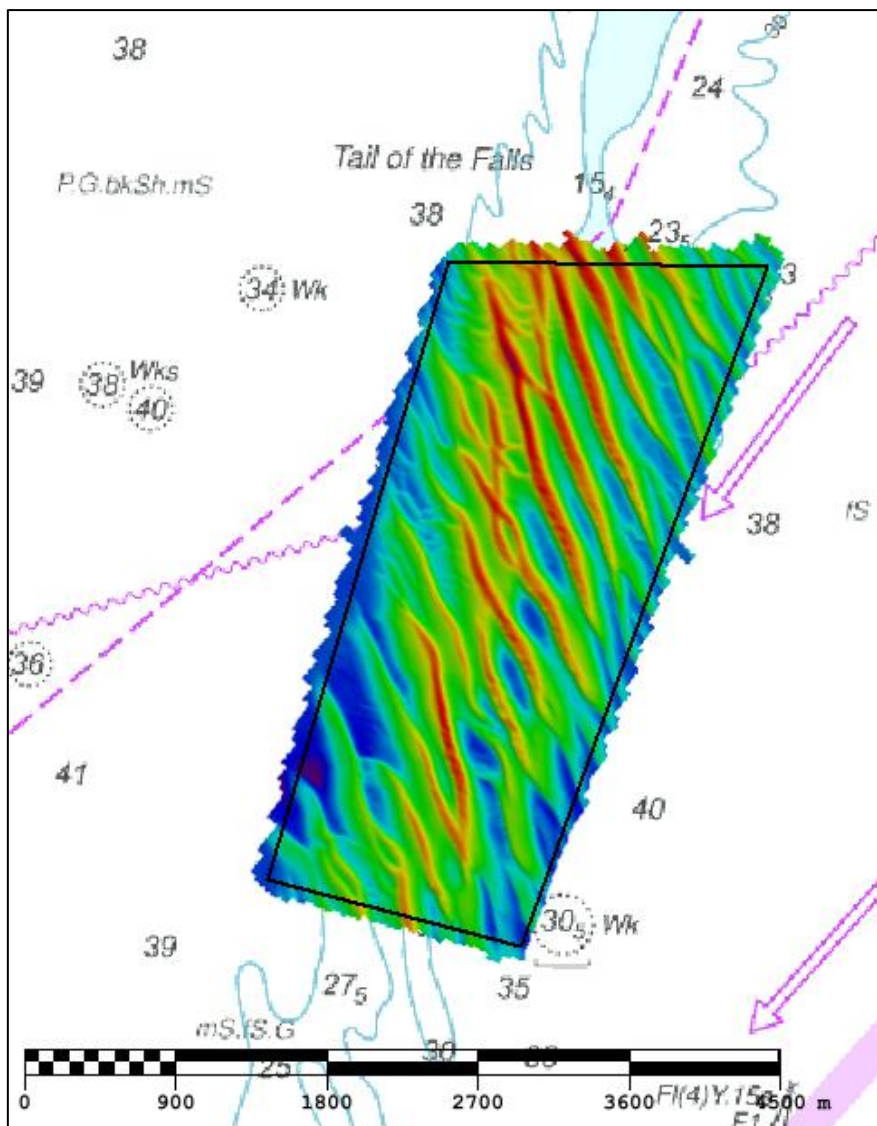




UK Hydrographic
Office

DOVER STRAIT
DWR C3 TAIL OF THE FALLS
2019 ASSESSMENT



An assessment of the 2019 hydrographic survey of the area DWR C3 Tail of the Falls: 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).

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

DWR C3 TAIL OF THE FALLS, 2019

1. SUMMARY

Changes Detected

- 1.1 Significant depth changes seen since 2012 and 2015 surveys as sand waves migrate northeast.
- 1.2 The controlling depth in the area, found in the northern end of the block, has increased from 18.8m to 19.0m, but the location of the least depth is now around 800m further south.

Reasons for Continuing to Resurvey the Area

- 1.3 Mobility of the sand waves in the area is significant and therefore depths are highly changeable in the DWR C3 area. Continued surveying is required to monitor the changes.

Recommendations

- 1.4 The 3-year survey interval has recently been updated to annual surveys. This is still appropriate to allow for closer monitoring of the dynamic seabed at this key point in the DWR.
- 1.5 It is suggested that the survey limits for DWR C3 be extended north-east to track the migration of the sand waves in the channel.

2. LOCATION

- 2.1 Survey interval at time of resurvey: 3 years – already agreed to change to 1 year from this point onwards.
- 2.2 Area Covered: 6.87 km²

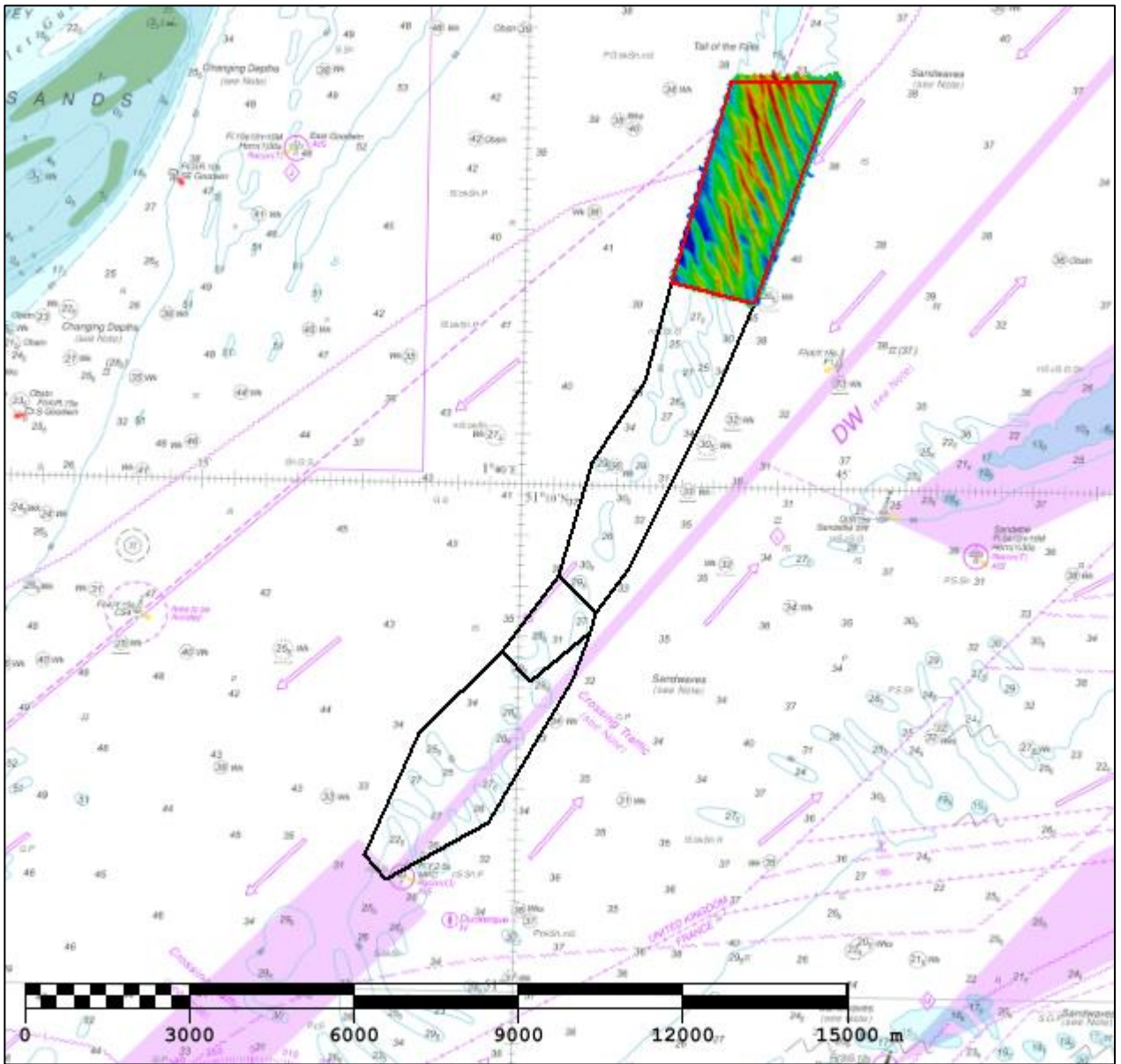


Figure 1: 2019 Dover Strait Routine Resurvey areas overlaid on BA Chart 0323-0 with area DWR C3 Tail of the Falls shown in red.

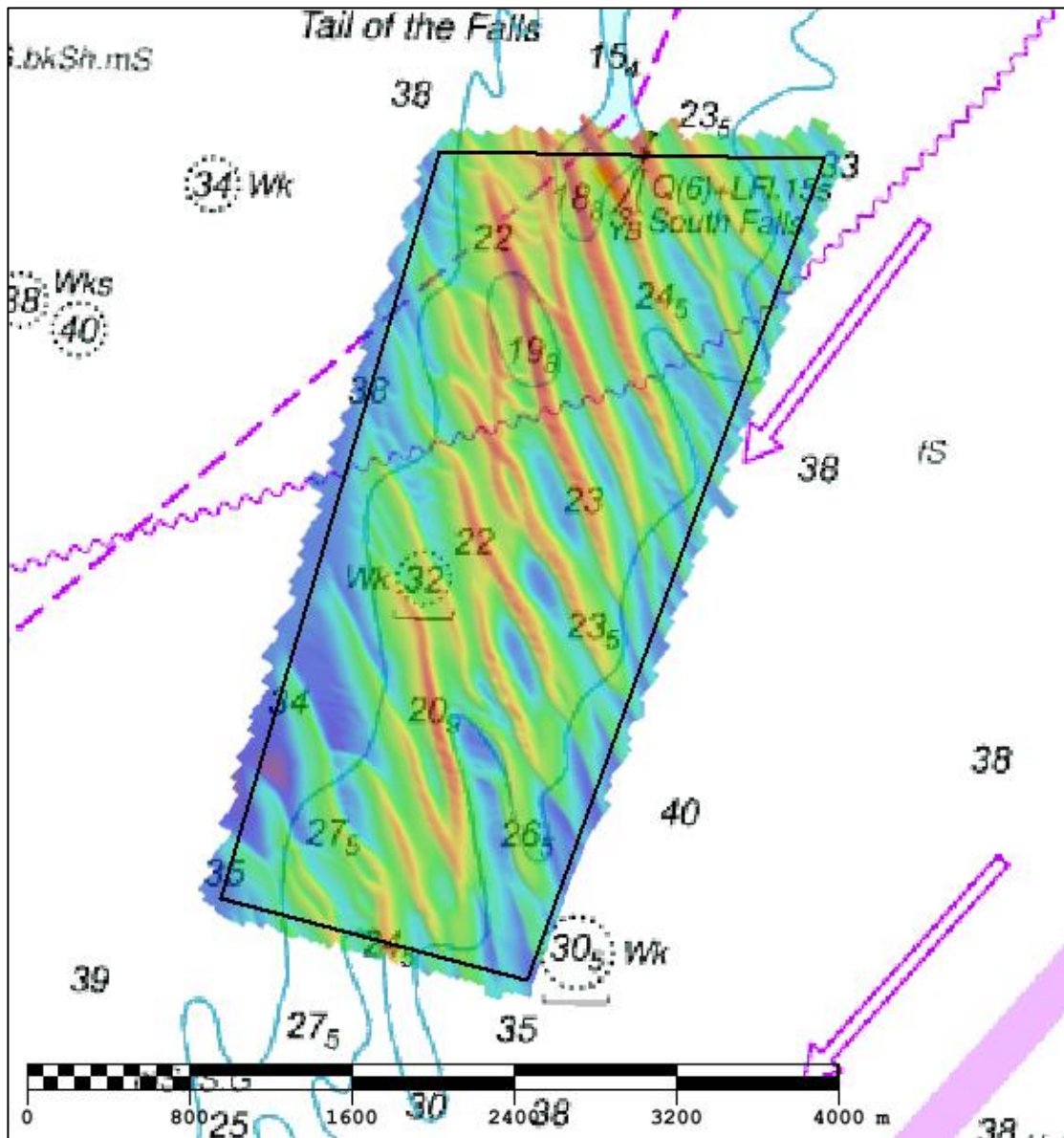


Figure 2: 2019 DWR C3 survey data overlaid on BA Chart 0323-0

3. REFERENCE SURVEY DETAIL

- 3.1 The previous survey (DWR C3) was conducted as part of the 2015 Routine Resurvey Programme in August 2015 as part of HI1484. Another survey was conducted in 2012 as part of HI1399.
- 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 as part of the 2019 Routine Resurvey Programme was conducted between July and October 2019 as part of HI1651.
- 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 surfaces in Figures 3 and 4 show significant sandwave migration across much of the survey area. This is due to the migration of the sand waves in a northeast direction, indicated by the black arrow in Fig.3.
- 5.2 The controlling depth in the area, found in the northern end of the block, has increased from 18.8m to 19.0m, but the location of the least depth is now around 800m further south.
- 5.3 Figure 5 is a colour-banded depth plot which indicates depth changes since 2015. Sand waves can be seen clearly with the colour coded depths, and depth labels show that migration of sand waves has caused large changes in depth.

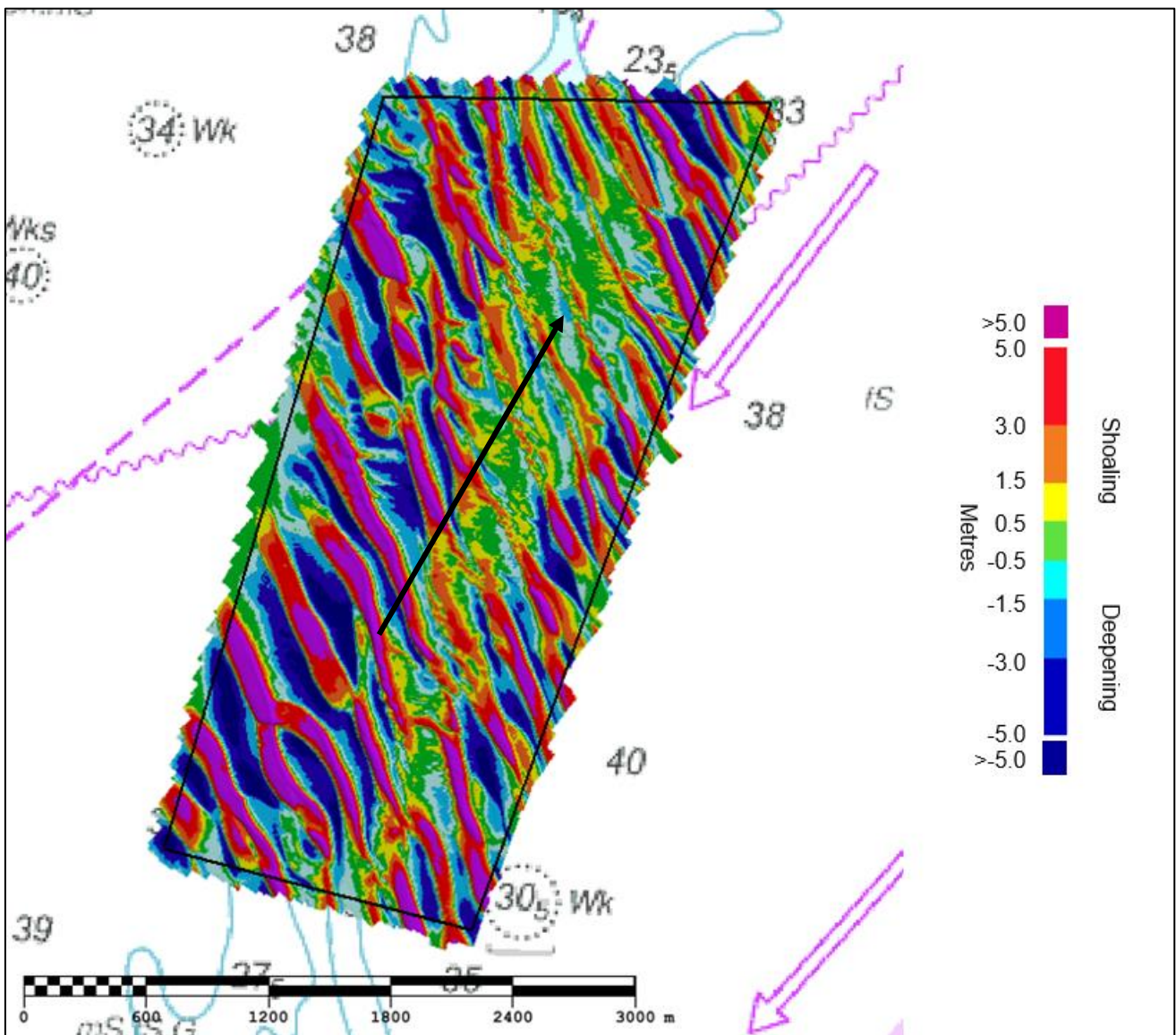


Figure 3: Difference surface showing bathymetric changes between the 2019 and 2012 surveys overlaid on BA Chart 0323-0 (Black arrow represents sand wave migration since 2012 survey).

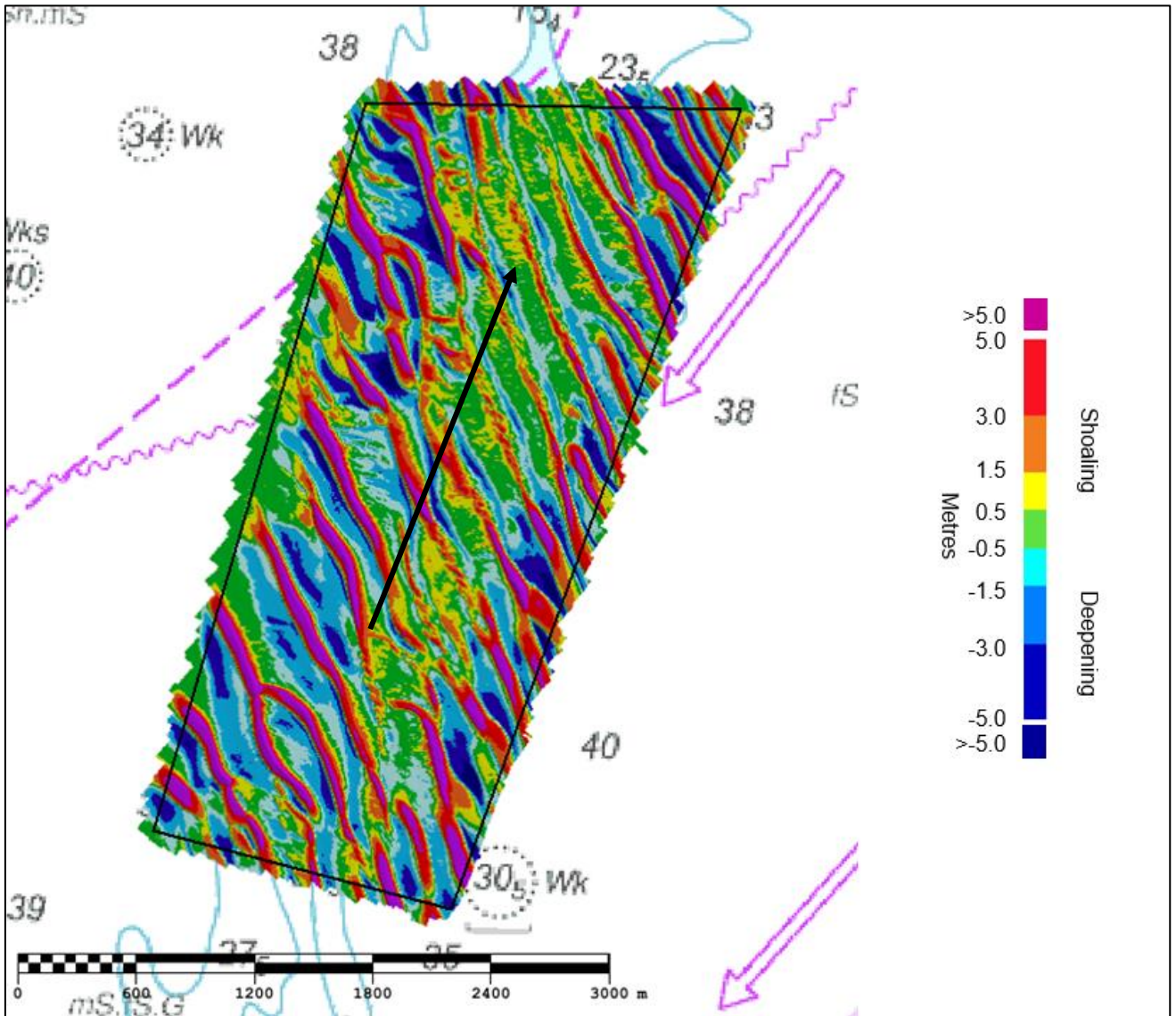


Figure 4: Difference surface showing bathymetric changes between the 2019 and 2015 surveys overlaid on BA Chart 0323-0 (Black arrow represents sand wave migration since 2015 survey).

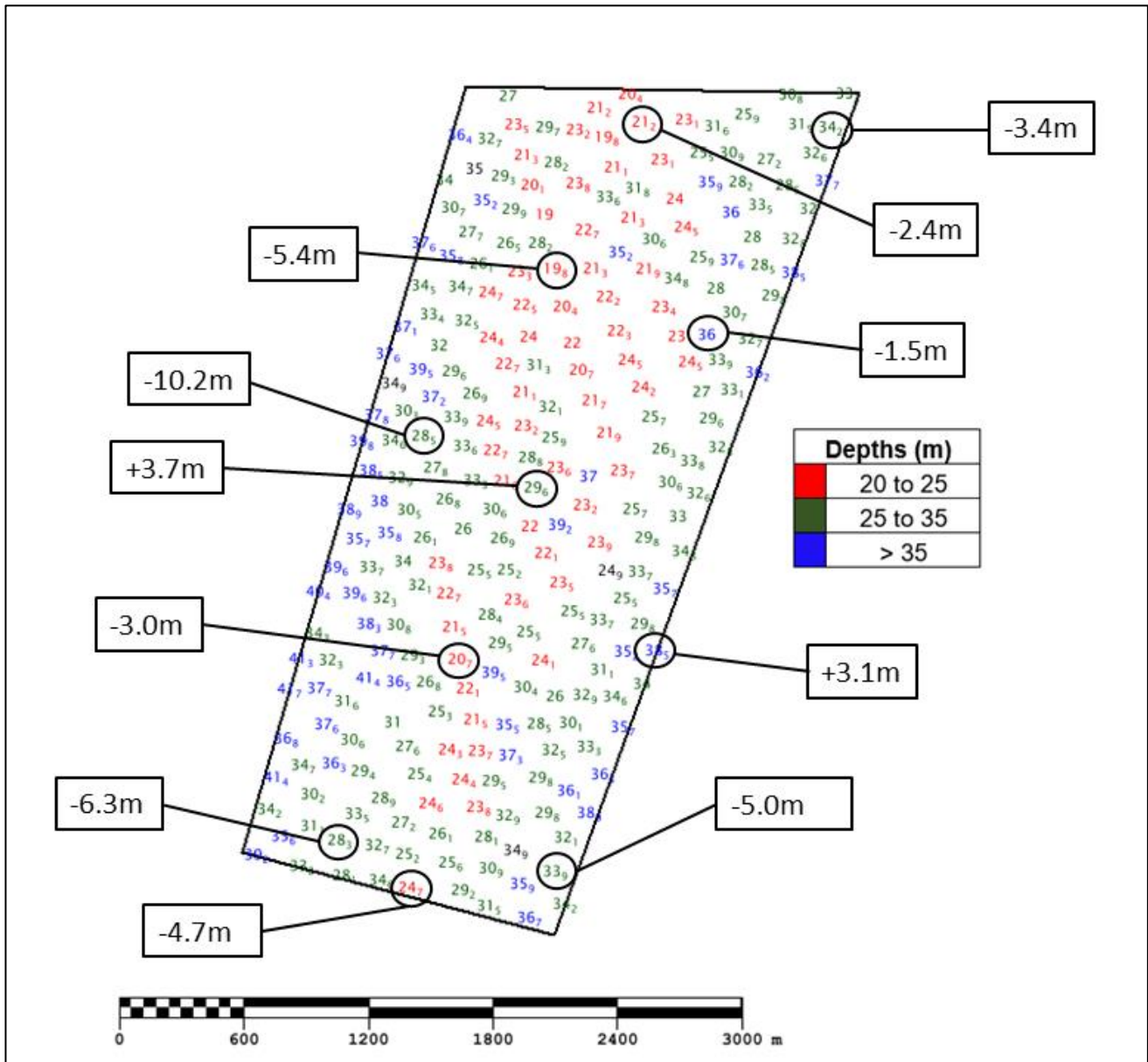


Figure 5: Colour banded depth plot from the 2019 survey with selected depth changes since the 2015 survey. Positive values (+) represent deepening. Negative values (-) represent shoaling.

6. RECOMMENDATIONS FOR FUTURE SURVEYS

Survey Interval

6.1 The significant amount of change due to sand wave migration indicates that this is an important area to monitor. The 3-year survey interval has recently been increased to annual surveys. This is appropriate to allow for closer monitoring of the dynamic seabed.

Survey Area

6.2 It is suggested that the survey limits for DWR C3 be extended north-east to track the migration of the sand waves as the move into the DWR channel.

Recommended new limits and existing limits are shown in Figure 6 below:

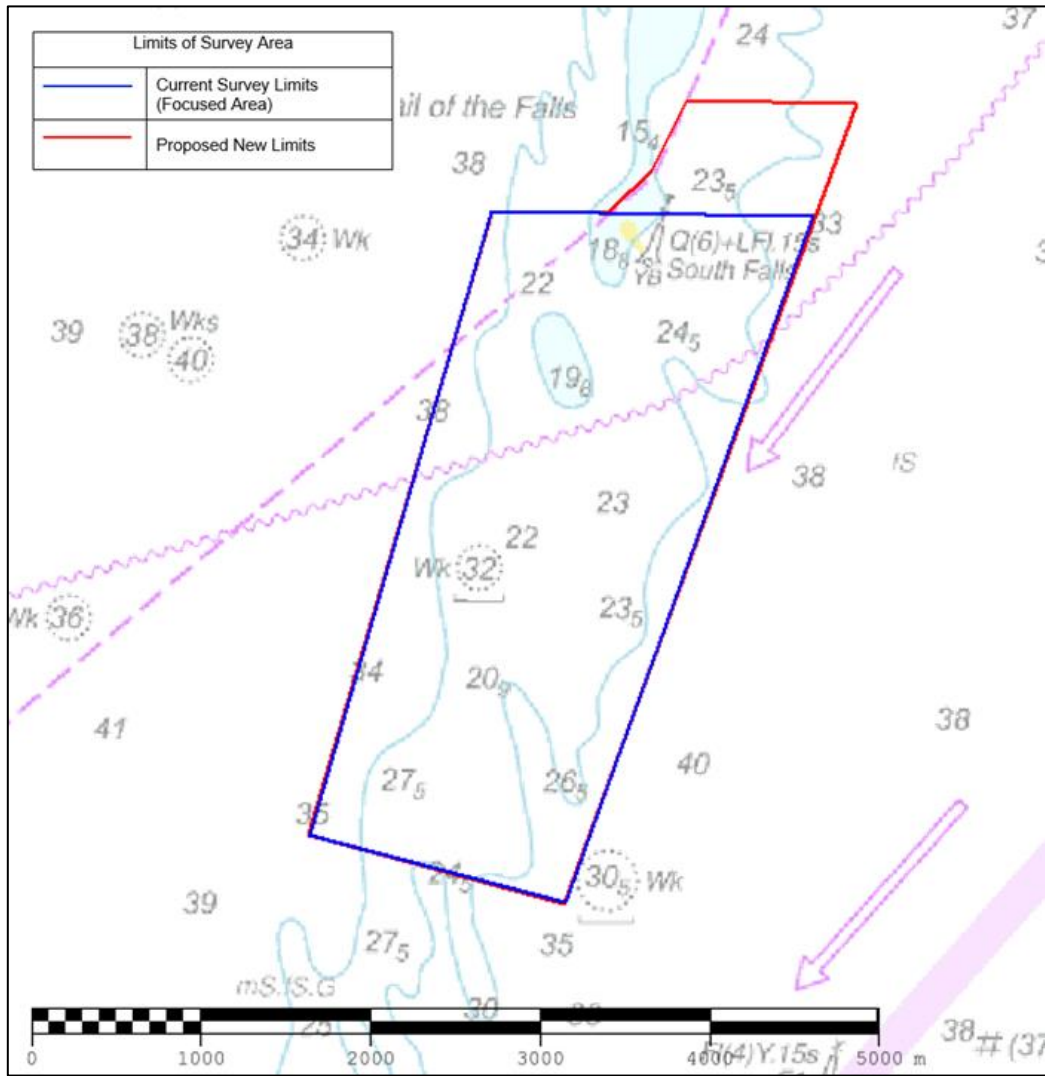


Figure 6: Recommended changes to survey limits of area DWR C3.

The coordinates of the recommended adjusted survey area limits for the annual focused area DWR C3 are shown below:

DWR C3 new total area: 7.63 km²

A	51.200076	1.704844
B	51.196584	1.726526
C	51.238526	1.750076
D	51.239329	1.735786
E	51.235642	1.732829
F	51.233458	1.729469
G	51.233235	1.719394