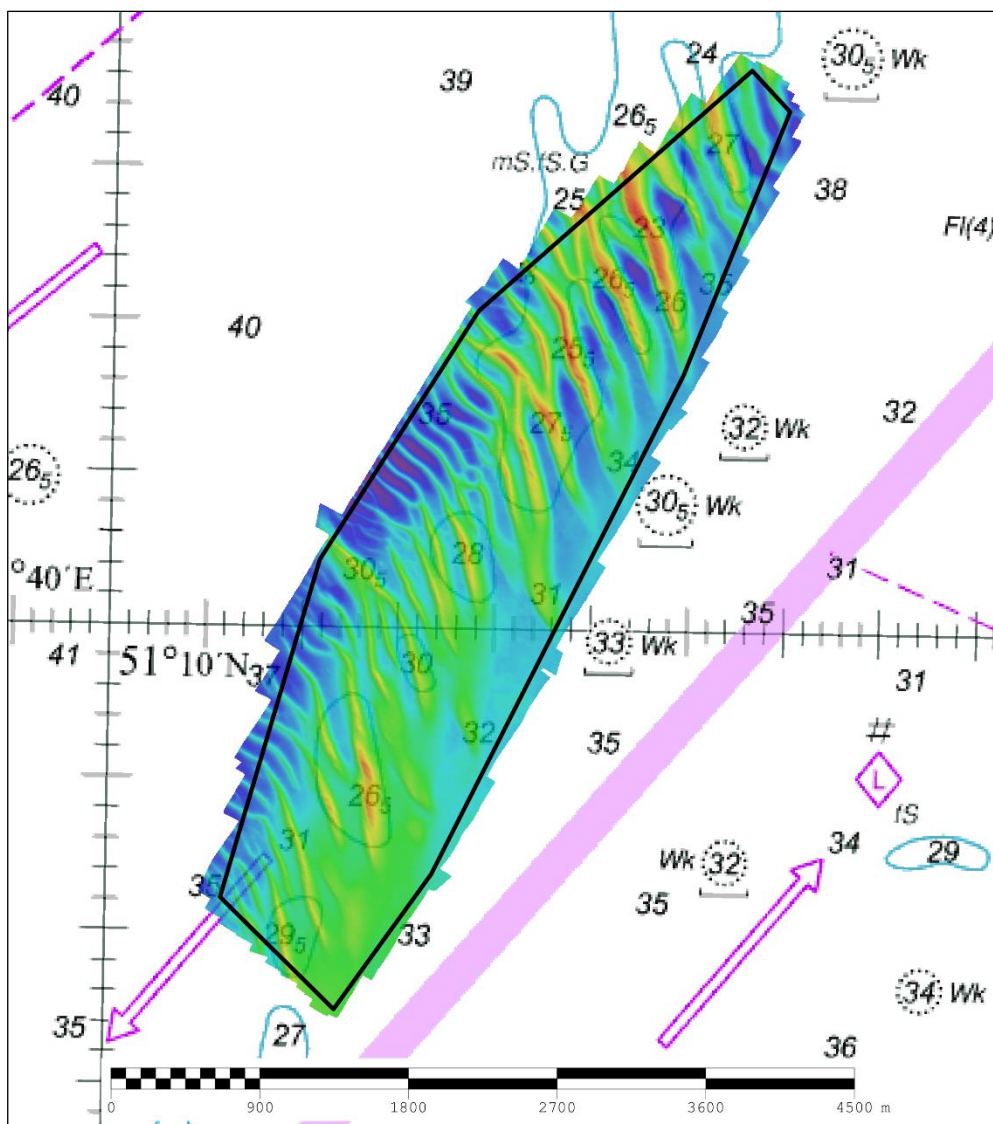




UK Hydrographic
Office

DOVER STRAIT TAIL OF THE FALLS (C1) ASSESSMENT DWR C1/2017

An assessment of the 2017 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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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 Department for Transport (including the MCA) and the Ministry of Defence (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 local chart datum, defined using the UKHO VORF Model.

DWR C1 – TAIL OF THE FALLS - 2017

1. SUMMARY

Changes Detected

- 1.1 During the 2016-2017 survey period, the controlling depth in the area has increased by approximately 0.8 metres, from 23.7 metres in 2016 to 24.5 metres in 2017. The bathymetry data also indicates a change in direction of sandwave migration in the centre of the survey area, accompanied by a change in migration rate. Along the western limits of the area, migration has slowed, whereas along the central and eastern regions, migration has accelerated.
- 1.2 Depths along sandwaves in the centre and west of the area have generally remained constant with minor shoaling along isolated sandwaves. Along the east and the north of the areas, depths along sandwaves have generally increased.

Reasons for Continuing to Resurvey the Area

- 1.3 Depths in the area remain mobile and can be potentially hazardous vessel navigating the area and therefore require continued monitoring through annual resurveys.

Recommendations

- 1.4 Given the location of the area in relation to the DWR and the draught of vessels navigating the area, C1 should remain on the annual survey interval.
- 1.5 The incorporation of the southern limit of C3 into the C1 annual survey should remain, to improve monitoring of the main sandwave which extends beyond the current North-West limit of the area.

2. LOCATION

- 2.1 DWR C1 lies in the Southwest bound lane of the Dover Strait Traffic Separation Scheme (TSS) and covers part of a Deep Draught Route (DDR), which comprises of a recommended track and a safety corridor extending 0.5 nautical miles either side of the track.
- 2.2 The area covers a section of large sandwaves that extend South-Westwards from Tail of the Falls. These sandwaves dominate the area and run in a broad swathe from the North-East corner of DWR C1 to the southern border, with the largest sandwaves up to 15 metres in height. Depths in the area range from 24.5 metres to 43.4 metres.
- 2.3 Survey interval at time of resurvey: annual.
- 2.4 Area Covered: 1.99 km².

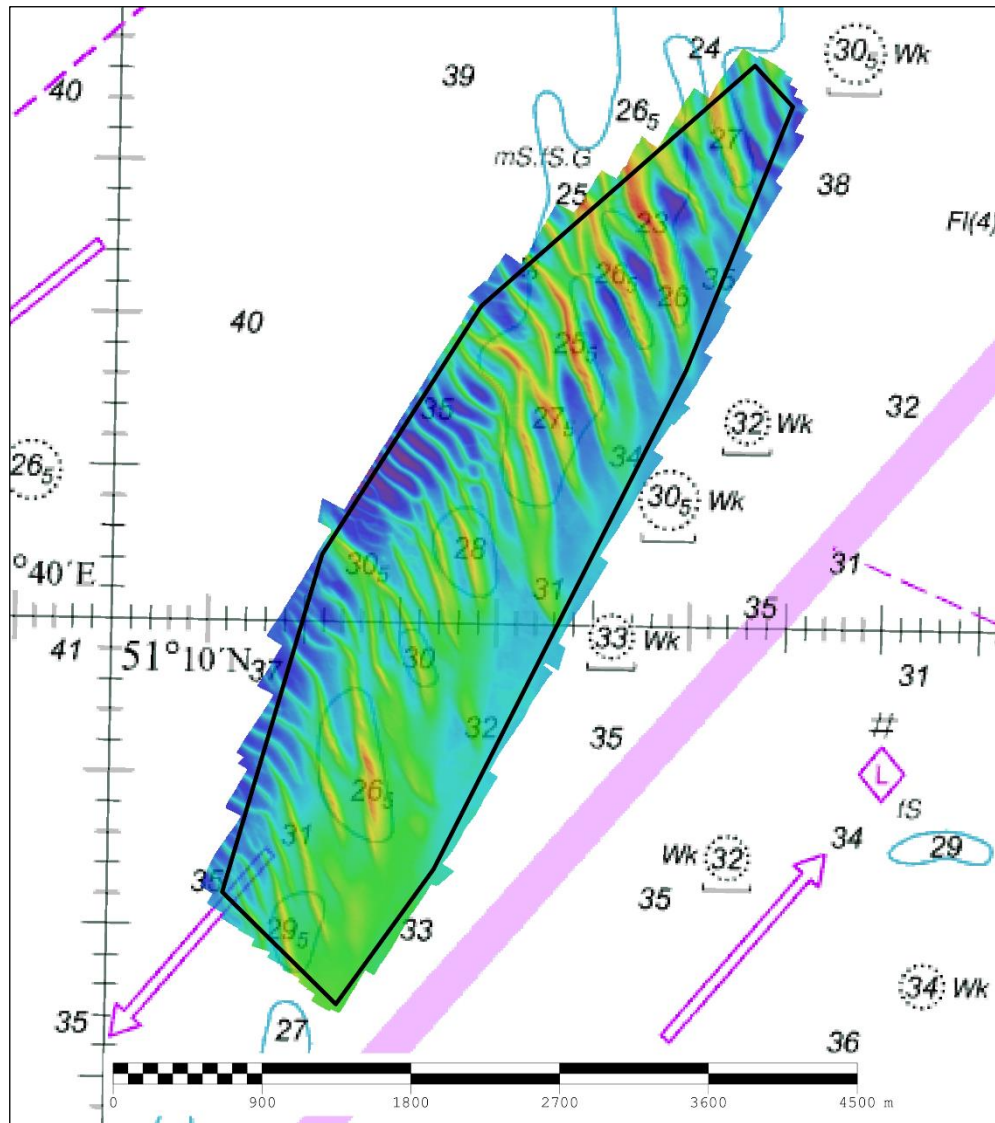


Figure 1 – 2016 survey data sun-illuminated view overlaid on BA Chart 323

3. REFERENCE SURVEY DETAIL

- 3.1 Previous survey conducted in July 2016 as part of HI 1523.
- 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 INSPIRE portal and MEDIN Bathymetry Data Archive Centre.

4. COMPARISON SURVEY DETAIL

- 4.1 Latest survey conducted in May 2017 as part of HI 1547.
- 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 INSPIRE portal and MEDIN Bathymetry Data Archive Centre.

5. DESCRIPTION OF RECENT BATHYMETRIC CHANGE

5.1 The difference plot in Figure 2 shows a southward migration of sandwaves across the centre and north-east of survey area. The data also highlights a change in location and direction of the migration compared to the 2016 reporting period, as in the centre of the area, sandwaves have migrated southwards between 2016 and 2017, compared to a northward migration between 2015 and 2016. The maximum rate of movement is approximately 50 metres.

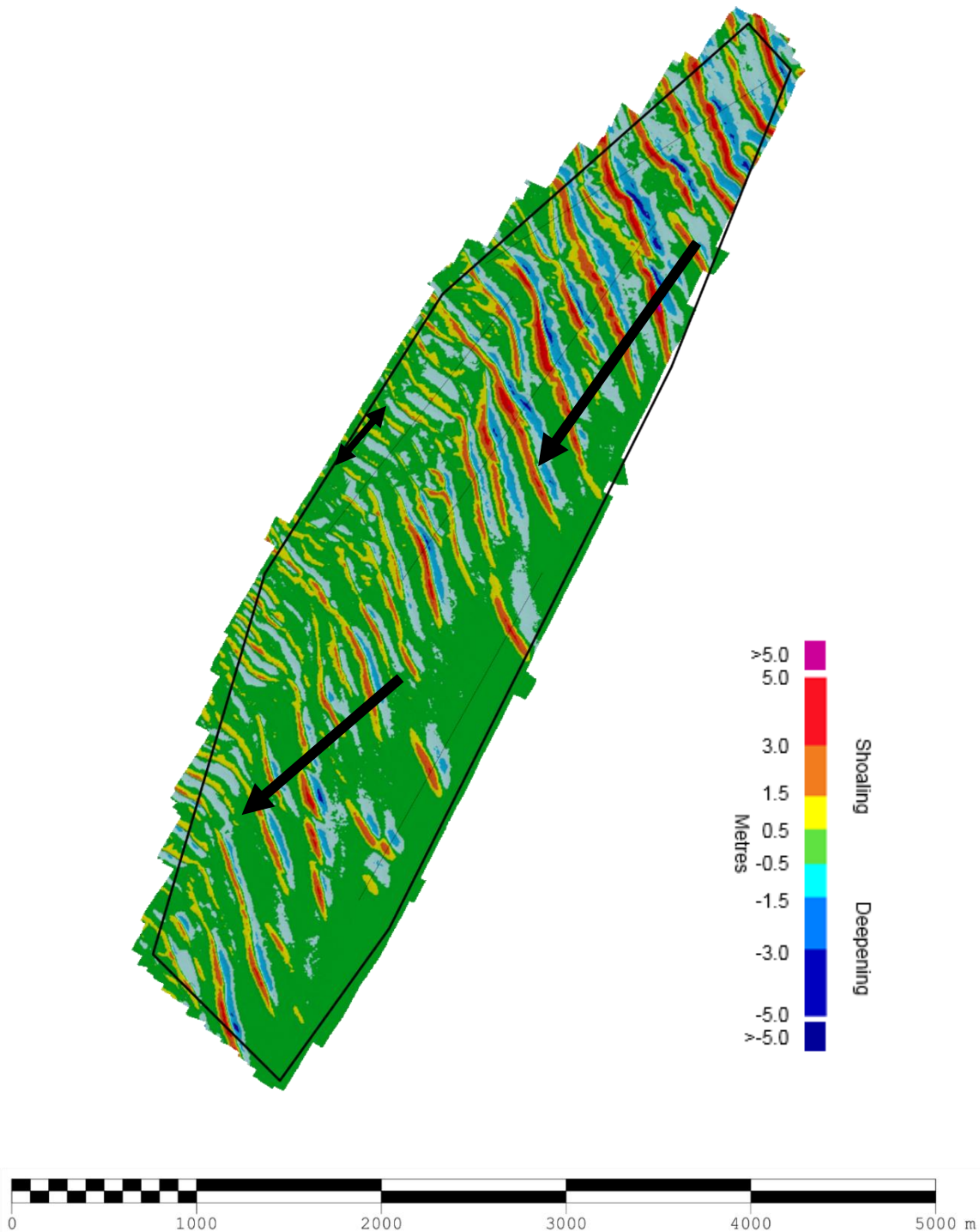


Figure 2 – Difference Plot showing Bathymetric Changes between the 2016 and 2017 Surveys

5.2 The controlling depth in the 2017 survey is 24.5 meters, located along the main sandwave in the north of the area. This compares to 23.6 metres in the 2016 survey, along the same sandwave. In the north of the survey area, depths have generally increased along sandwaves; compared with the South, where depths along sandwaves have generally decreased.

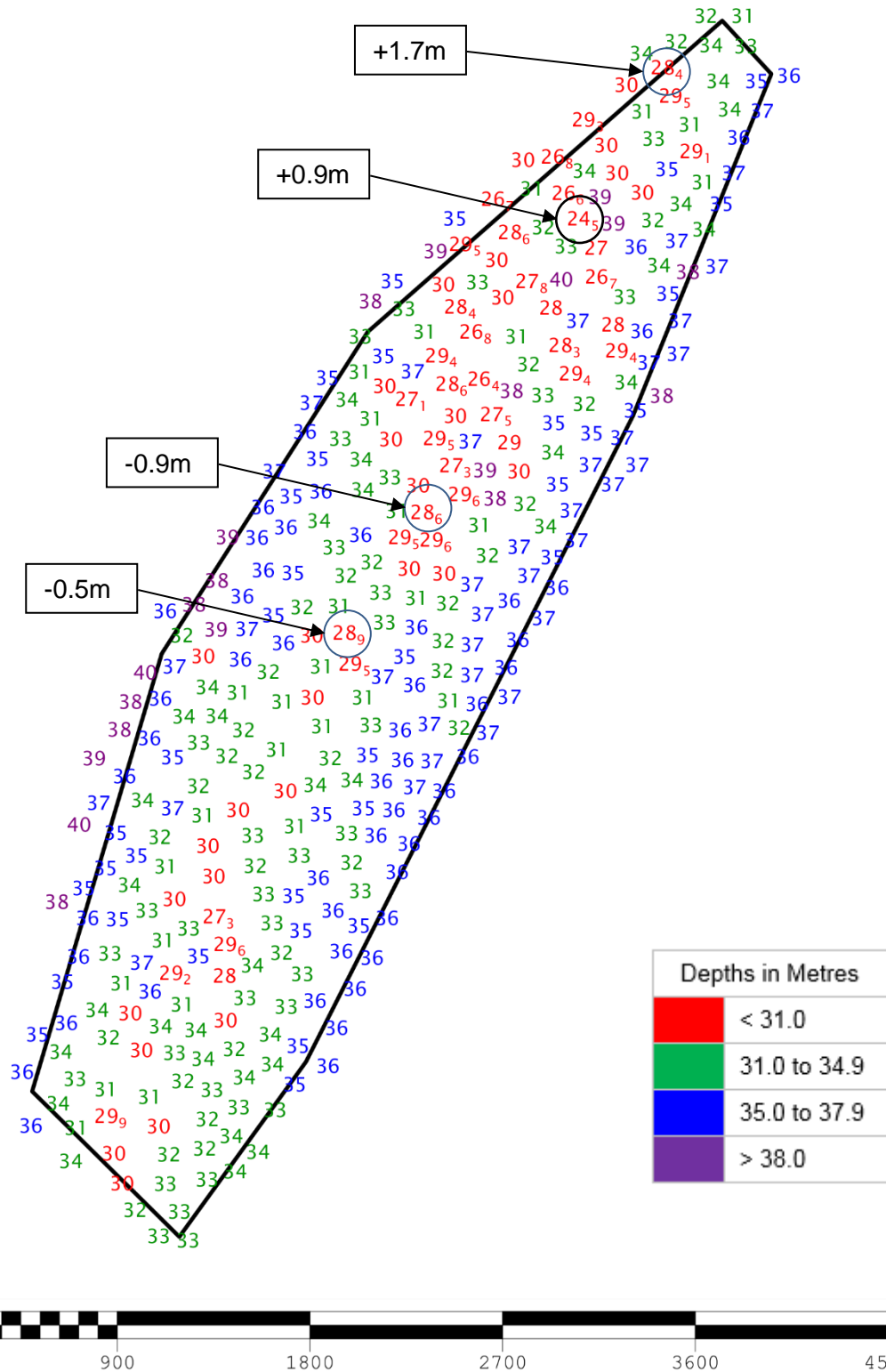


Figure 3 – Colour Banded Depth Plot from the 2017 Survey with selected depth changes since the 2016 survey

6. RECOMMENDATIONS FOR FUTURE SURVEYS

Survey Interval

6.1 Given the location of the area in relation to the DWR and the draught of vessels navigating the area, C1 should remain on the annual survey interval.

Survey Area

10.1 Following a review of the 2015 report, the DWR-C1 area was extended Northwards to encompass the Southern limit of area C3. This will improve coverage of the main sandwave in the area which extends North beyond the current limit of C1 and should be utilised for future surveys.

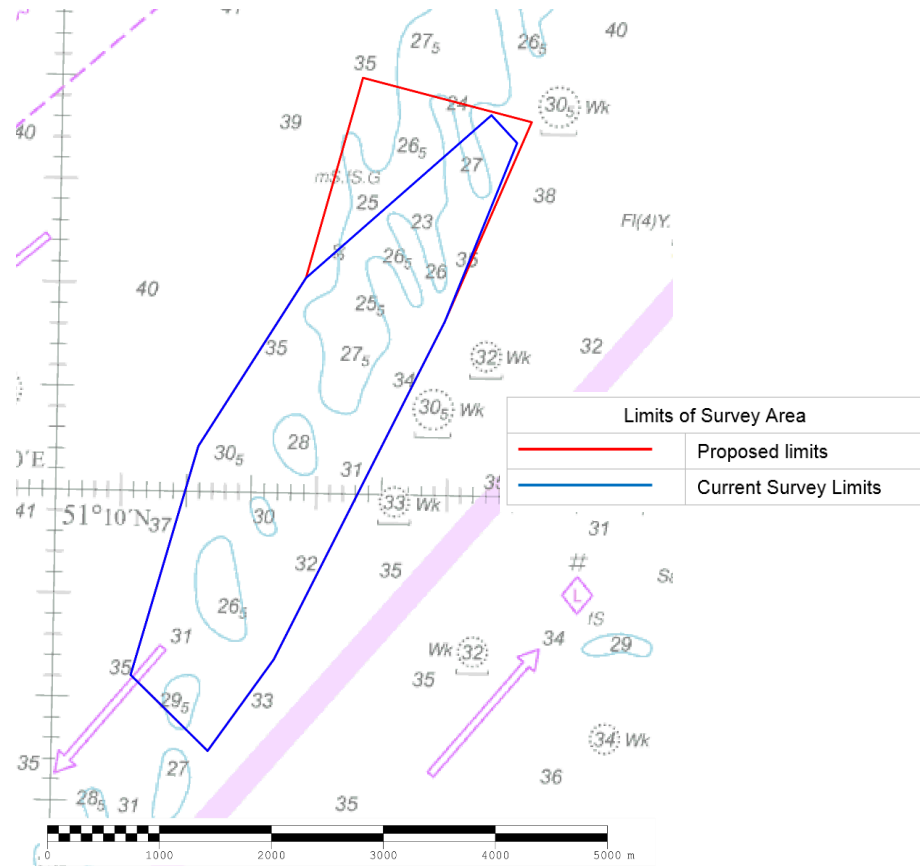


Figure 9 – Future survey limits of area DWR-C1 (current limits given in Blue; future limits given in red)

The coordinates of the adjusted survey area limits for the annual focused area DWR C1 are shown below:

DWR C1 total area: 8.06 km²

A	51.20000	1.70500
B	51.19667	1.72667
C	51.18049	1.71599
D	51.15312	1.69492
E	51.14567	1.68667
F	51.15167	1.67667
G	51.17016	1.68480
H	51.18383	1.69817