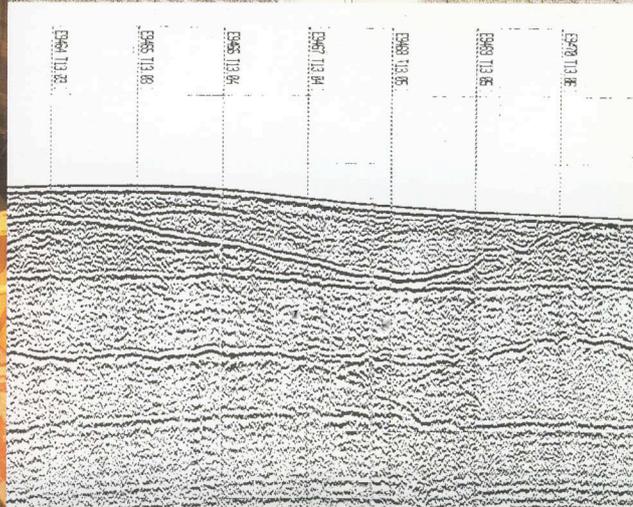
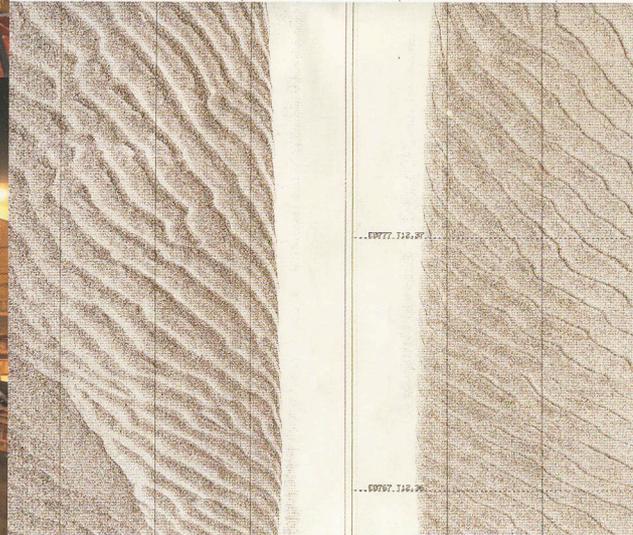
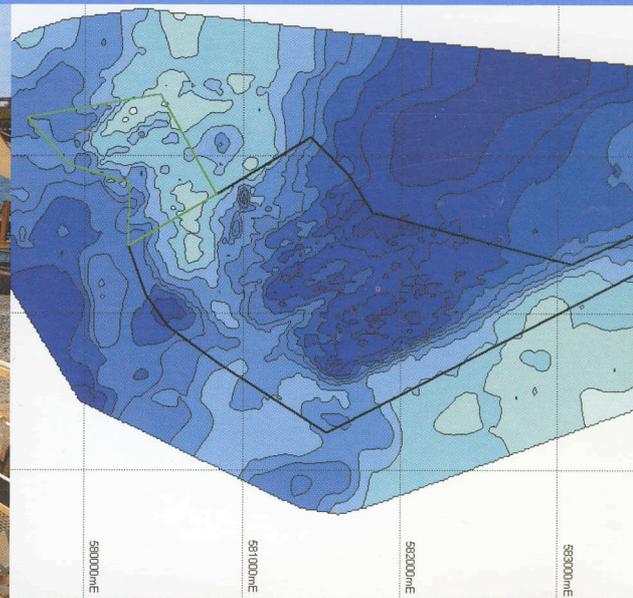


MARINE AGGREGATE DREDGING

2002

THE AREA INVOLVED - 5th ANNUAL REPORT



An industry committed to responsible management through continual development

In March 1999 The Crown Estate and the British Marine Aggregate Producers Association (BMAPA) issued a statement of intent committing themselves to reviewing all licences over a rolling five year period, surrendering areas no longer containing useful resources of sand and gravel and publishing an annual report detailing the extent of dredging within licensed areas.

This year's report is the fifth in an ongoing series, and its content reflects the continual development of this initiative by both The Crown Estate and the members of BMAPA.

This report contains summary information on the area of seabed licensed, dredged and surrendered during 2002, based on data from The Crown Estate Offshore Marine GIS and from analysis of dredger Electronic Monitoring System records.

Information on dredged area and intensity has been derived from the variable grid analysis, introduced last year. As such, direct comparisons between the variable grid analysis presented here, and block analysis data presented in earlier annual reports are not possible. The summary statistics in this report (1998-2002) have therefore also been reanalysed using the new technique to allow comparisons with previous years.

A set of regional charts have been prepared to show the extent and intensity of dredging operations. Additional facts and figures on marine aggregate dredging activity by region are also presented.

The figures for the active dredge area – the area actually available to be dredged at any one time – have also been updated for 2002. While the limits of these areas are not presented on the charts associated with this report, detailed regional zoning plans (updated on a bi-annual basis) are available from either The Crown Estate or BMAPA websites, or by contacting the addresses on the reverse of this report.

The variable grid introduced last year has demonstrated good comparability with the block analysis with increased accuracy and resolution in the reported data. It confirmed the area of intensive dredging (red area) and enabled the equivalent of the < 5 hours category to be split further into medium (yellow) and low (green) intensity on the regional charts. The variable grid also identified an error in the 90% dredging effort calculation.

Summary Information:

- A total of 21.93 million tonnes of sand and gravel were dredged from Crown Estate licences in England & Wales during 2002.
- The total area of seabed licensed in 2002 decreased to 1301 km².
- Dredging took place within 149.80 km², 11.5% of the licensed area.
- > 1 hr 15 mins dredging intensity per year is equal to 11.88 km² and represents 58.79% of dredging activity.
- 90% of dredging from Crown Estate licences took place from an area of 51.57 km².

Variation in the 90% dredging effort

Whilst the high intensity dredging effort (red area) still covers about 12 km² it actually represented about 60% of dredging effort in 2002. The area, which represented 90% of dredging effort, was 51.57 km².

An error occurred in the original analysis of the block data which was repeated in following years until it was discovered by variable grid analysis. The error only affected the 90% figure and it did not affect any other figures. This still only represents about a third of the area dredged and about 4% of the area licensed.

The following table compares the variable grid at 50m by 50m and 100m by 100m, which clearly shows the improved accuracy and increased resolution of the 50m by 50m grid.



	1998	1999	Year 2000	2001	2002
50m x 50m					
Area of High Intensity Dredging > 1hr 15 mins	13.46	11.01	11.54	12.33	11.88
Area of 90% dredging effort	79.30	76.80	48.97	48.55	51.57
100m x 100m					
Area of High Intensity Dredging > 5hr	13.71	11.14	11.59	12.40	12.32
Area of 90% dredging effort	86.07	84.29	54.13	54.25	57.07

Future reports

Variable grid analysis allows the precise area associated with a particular dredging intensity e.g. high, medium, low or any particular number of hours to be quantified. Dredging records can also be analysed by dates, periods, e.g. particular months, by company, vessels, areas of equal intensity, nationally, by region or even by licence. Variable grid gives us the ability to design packages specifically to aid management and develop new ones as occasion demands.



Summary statistics for 2002

Area of seabed licensed/available/dredged by region 2002

Region	Total Area Licensed (km ²) During 2002	Total Active Dredge Area ¹ for 2002 (km ²)	Total Area ¹ Dredged (km ²)	Area (km ²) dredged > 1hr 15mins
Humber	518.30	334.95	27.61	1.37
East Coast	290.95	213.98	62.44	5.28
Thames	155.69	150.91	17.82	0.55
South Coast	182.15	120.66	30.01	3.38
South West	55.81	55.81	10.18	1.13
North West	97.91	19.96	1.74	0.17
Total (km²)	1300.81	896.27	149.80	11.88

¹Total area actually available to be dredged during 2002, calculated on a cumulative basis.

Area of seabed licensed decreased by 103 km² during 2002

Area of seabed licensed by distance from shore 1998-2002

Year ¹	1998	1999	2000	2001	2002	Change 01/02
0-6nm	695	686	654	607	609	+2
6-12nm	504	420	454	408	352	-56
>12nm	259	256	389	389	340	-49
Total Area Licensed (km²)	1458	1362	1497	1404	1301	-103
Total Active Dredge Area (km²)				972	896	

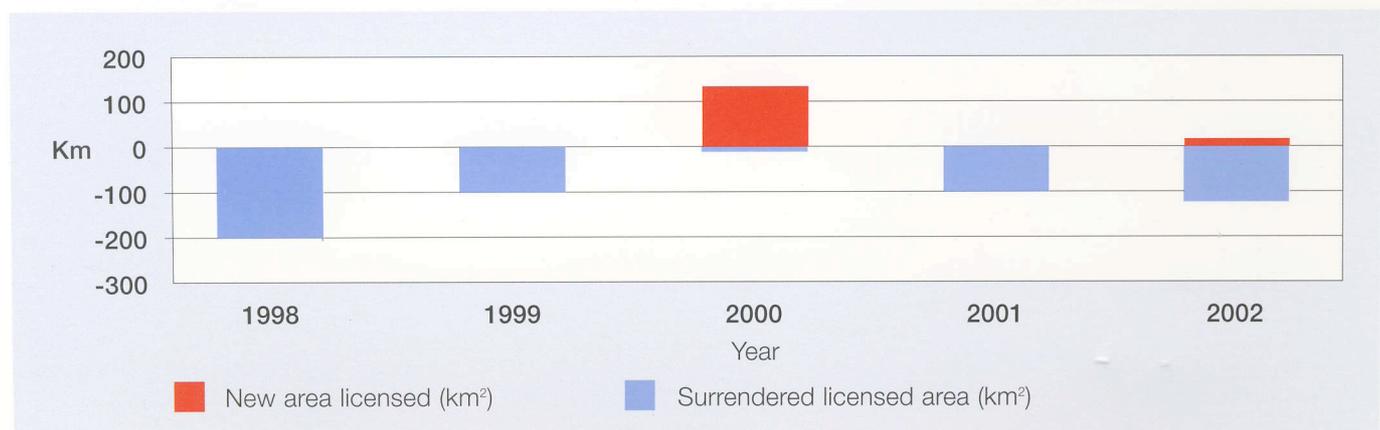
¹Annual figures are calculated as of the 31st December, and therefore incorporate any changes that may have occurred through the year. N.B. Figures for the Active Dredge Area are only available from 2001 onwards.

Area of seabed dredged remained stable during 2002

Area of seabed dredged by distance from shore 1998-2002

Year	1998	1999	2000	2001	2002	Change 01/02
0-6nm	98	107	79	74	70	-4
6-12nm	94	83	59	55	58	+3
>12nm	30	30	17	21	21	0
Total (km²)	222	220	155	150	149	-1
Area Dredged >1 hr 15 mins (km²)	13	11	11	12	12	0
90% of Dredging (Area in km²)	79	77	49	48	51	+3

New area licensed v. Existing area surrendered 1998-2002



Background

Dredging offshore for aggregates began in the early Twentieth Century but it did not reach a significant scale until the 1970's, as markets for marine aggregates expanded and dredging technology improved. Almost all marine aggregate extraction takes place from licences on seabed owned by the Crown Estate. Planning permission is granted by the Office of the Deputy Prime Minister or the Welsh Assembly Government/Scottish Office under the Government View Procedure. The Crown Estate will only grant a licence following a favourable Government View.

The Crown Estate

The Crown Estate is a landed estate including more than 120,000 hectares of agricultural land in England, Scotland and Wales, substantial blocks of commercial property (primarily in London) and an extensive marine estate covering 55% of the foreshore and all of the seabed out to the 12 mile territorial Limit. Its origins date back to the reign of King Edward the Confessor. The Crown Estate is part of the hereditary possessions of the Sovereign "in right of the Crown" managed under the provisions of the Crown Estate Act 1961 by the Crown Estate Commissioners who have a duty to maintain and enhance the value of the Estate and the income derived from it. The net revenue surplus is paid to the exchequer.

BMAPA

The British Marine Aggregate Producers Association (BMAPA) was formed in 1992 and comprises members of the Quarry Products Association with a marine interest. Marine sand and gravel is supplied to home markets, as well as contributing to the balance of payments through exports to Continental Europe. In addition, marine aggregates are fulfilling an increasingly important role by supporting beach replenishment schemes. The marine aggregates industry operates over 30 vessels on 72 production licences around the UK. The vessels are almost entirely British registered and carry British crew.

BMAPA membership is comprised of: Britannia Aggregates Ltd, British Dredging Ltd, Hanson Aggregates Marine Ltd, Kendall Bros. (Portsmouth) Ltd, Northwood (Fareham) Ltd, Norwest Sand and Ballast Company, RMC Marine Ltd, United Marine Dredging Ltd, DEME Building Materials Ltd and Volker Dredging Ltd.



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