

# The area involved – 13th annual report

THE CROWN  
ESTATE

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sustainable solutions  
**bmapa**



MARINE AGGREGATE DREDGING 2010





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# 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 to reviewing all dredging licences over a rolling five-year period. Included was a commitment to surrender areas no longer containing useful resources of sand and gravel and to publish an annual report detailing the extent of dredging within the licensed areas.**

This year's report is the thirteenth in an ongoing series. Its content reflects the continued commitment to this initiative by both The Crown Estate and the members of BMAPA.

This report contains summary information relating to The Crown Estate area of seabed licensed, dredged and surrendered during 2010, based on GIS data and from analysis of dredger Electronic Monitoring System records.

Information on dredged area and intensity has been derived from variable grid analysis.

A set of regional charts has 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 been updated for 2010. 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.



## Summary information

- A total of 15.95 million tonnes of sand and gravel were dredged from Crown Estate licences in England and Wales during 2010 (20.10 million tonnes in 2009)
- The total area of seabed licensed in 2010 increased to 1,291km<sup>2</sup> (1,286km<sup>2</sup> in 2009)
- Dredging took place within 105.4km<sup>2</sup>, 8.2 per cent of the licensed area, compared to 123.6km<sup>2</sup> (9.6 per cent) in 2009
- The area of seabed dredged for more than 1 hr 15 minutes per year (high intensity – red on charts) remained at 6.83km<sup>2</sup> (same as 2009)
- 90 per cent of dredging from Crown Estate licences took place from an area of 37.63km<sup>2</sup> (43.45km<sup>2</sup> in 2009).





## Summary statistics for 2010

Region	Total area licensed during 2010 (km <sup>2</sup> )	Total active dredge area for 2010 (km <sup>2</sup> ) <sup>*1</sup>	Total area dredged during 2010 (km <sup>2</sup> )
Humber	469.89	154.72	23.87
East Coast	266.52	158.17	36.85
Thames Estuary	49.17	49.94	4.18
East English Channel	105.96	29.16	8.90
South Coast	163.67	90.54	22.78
South West	116.81	41.59	8.48
North West	119.08	27.73	0.32
<b>Total (km<sup>2</sup>)<sup>*2</sup></b>	<b>1291.10</b>	<b>551.85</b>	<b>105.37</b>

### Area of seabed licensed increased by 5km<sup>2</sup> during 2010

Area of seabed licensed (km<sup>2</sup>), 2006-2010

Year <sup>*3</sup>	2006	2007	2008	2009	2010
0-6nm <sup>*4</sup>	428	431	384	376	363
6-12nm <sup>*4</sup>	493	492	458	462	447
>12nm <sup>*4</sup>	395	421	436	448	481
<b>Total area licensed (km<sup>2</sup>)</b>	<b>1,316</b>	<b>1,344</b>	<b>1,278</b>	<b>1,286</b>	<b>1,291</b>
<b>Total active dredge area (km<sup>2</sup>)</b>	<b>576</b>	<b>556</b>	<b>570</b>	<b>536</b>	<b>552</b>

### Area of seabed dredged decreased by 19km<sup>2</sup> during 2010

Area of seabed dredged (km<sup>2</sup>), 2006-2010

Year	2006	2007	2008	2009	2010
0-6nm <sup>*4</sup>	73	67	71	61	44
6-12nm <sup>*4</sup>	44	43	41	37	38
>12nm <sup>*4</sup>	24	25	26	26	23
<b>Total (km<sup>2</sup>)</b>	<b>141</b>	<b>135</b>	<b>138</b>	<b>124</b>	<b>105</b>
<b>Area dredged &gt;1 hr 15 mins (km<sup>2</sup>)</b>	<b>8.66</b>	<b>10.16</b>	<b>9.28</b>	<b>6.83</b>	<b>6.83</b>
<b>90 per cent of dredging (area in km<sup>2</sup>)</b>	<b>49.19</b>	<b>49.95</b>	<b>48.22</b>	<b>43.45</b>	<b>37.63</b>

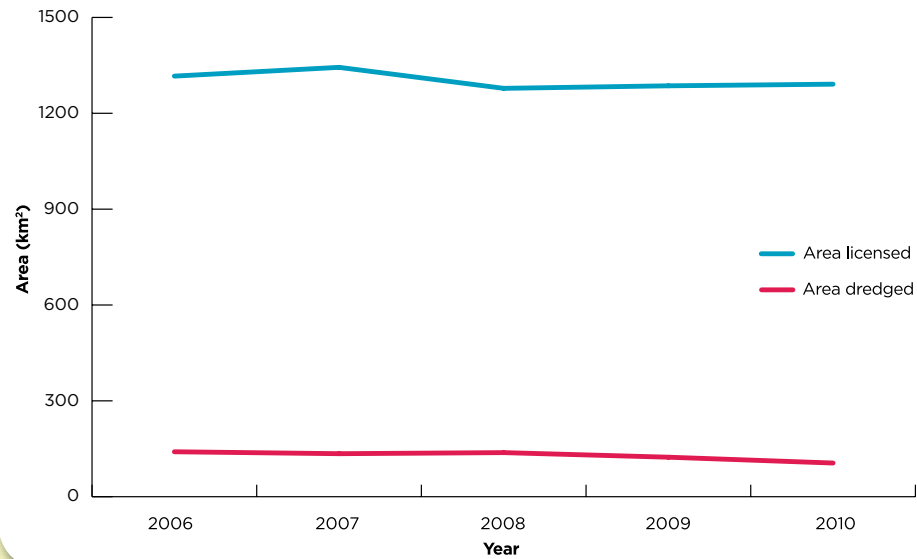
<sup>\*1</sup> Total area actually available to be dredged during 2010, calculated on a cumulative basis

<sup>\*2</sup> Totals are rounded from the correct total rather than a summation of the regional figures

<sup>\*3</sup> Annual figures are calculated as of end of the 31st December, and therefore incorporate any changes that may have occurred through the year

<sup>\*4</sup> Based on a standardised 6 and 12nm (UKHO 01/01/05) to allow for accurate comparison between years



**Area of seabed licensed and dredged 2006-2010****New area licensed versus existing area surrendered 2006-2010**

## Humber region

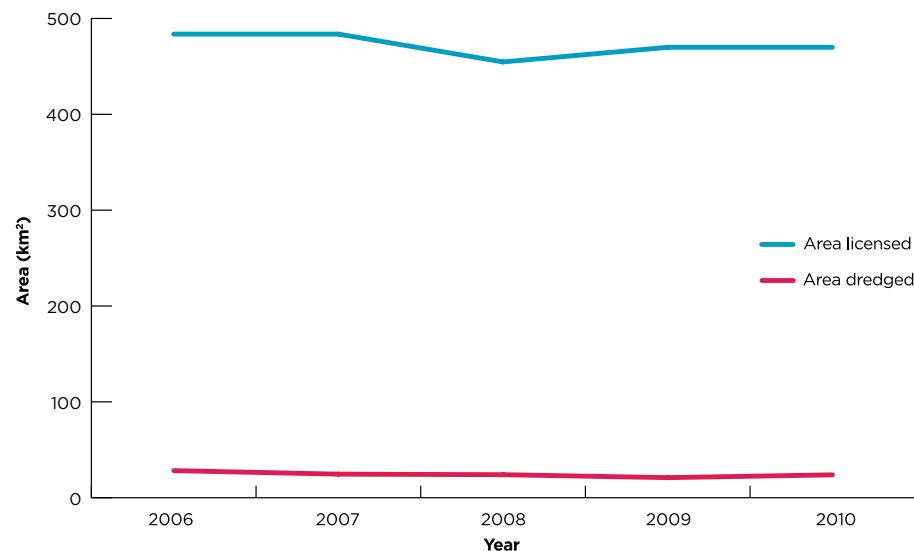
### Background

- The Humber region has 10 production licences, operated by British Dredging Ltd, Hanson Aggregates Marine Ltd, Tarmac Marine Dredging Ltd, Van Oord UK Ltd and Westminster Gravels Ltd for both sand and gravel, principally for use in the construction industry
- During 2010, 2.62 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 5.05 million. In addition 0.55 million tonnes were specifically dredged for a beach nourishment scheme and 0.02 million tonnes were dredged as contract fill
- Of the total marine aggregate dredged for construction from the Humber region:
  - 65.2 per cent of the tonnage dredged was delivered to the Continent (1.71m)
  - 27.9 per cent of the tonnage dredged was delivered to the Humber (0.73m)
  - 6.4 per cent of the tonnage dredged was delivered to the Thames Estuary (0.17m)
  - 0.5 per cent of the tonnage dredged was delivered to the East Coast (0.01m)

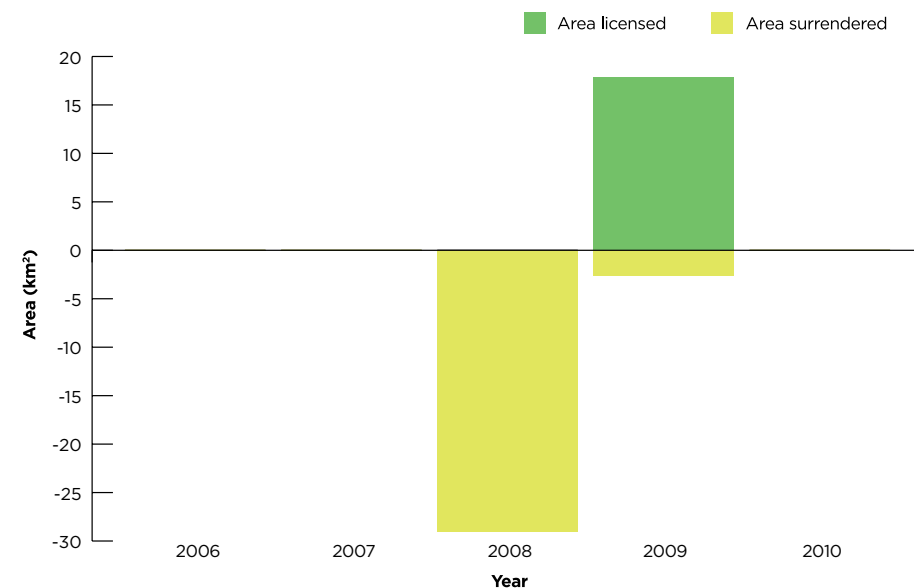
### Regional statistics

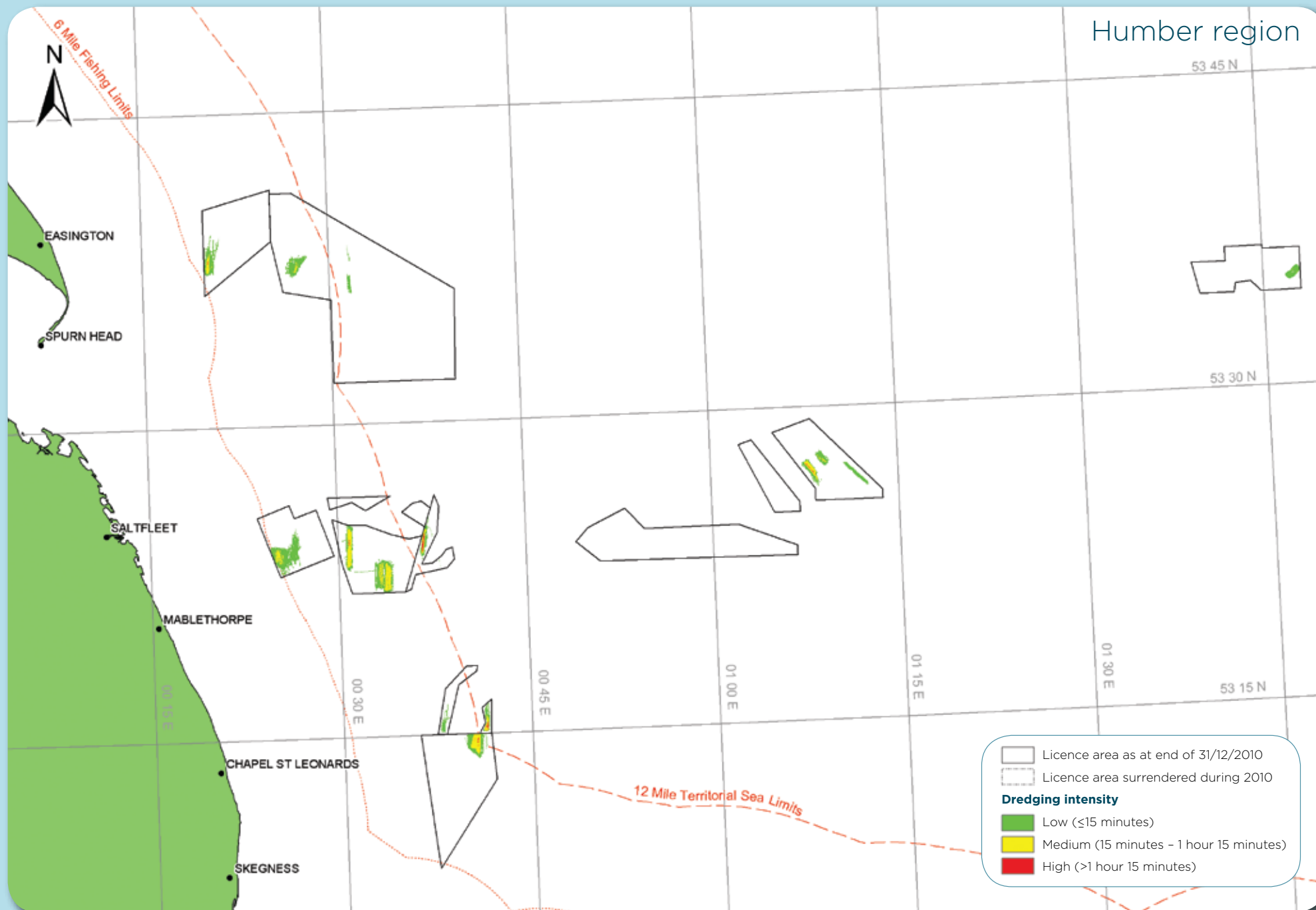
- The licensed area in the Humber region was 469.89km<sup>2</sup>
- The total area actually available to be dredged within the Humber region was 154.72km<sup>2</sup>
- Dredging took place within 23.87km<sup>2</sup>, 5.1 per cent of the licensed area
- High intensity dredging (greater than 1 hour 15 minutes) is equal to 0.40km<sup>2</sup>, representing 13.17 per cent of regional dredging activity
- 90 per cent of regional dredging effort took place from 10.92km<sup>2</sup>
- During 2010, the area licensed for marine aggregate extraction remained unchanged.

### Area of seabed licensed and dredged



### Area of seabed licensed and surrendered





## East Coast region

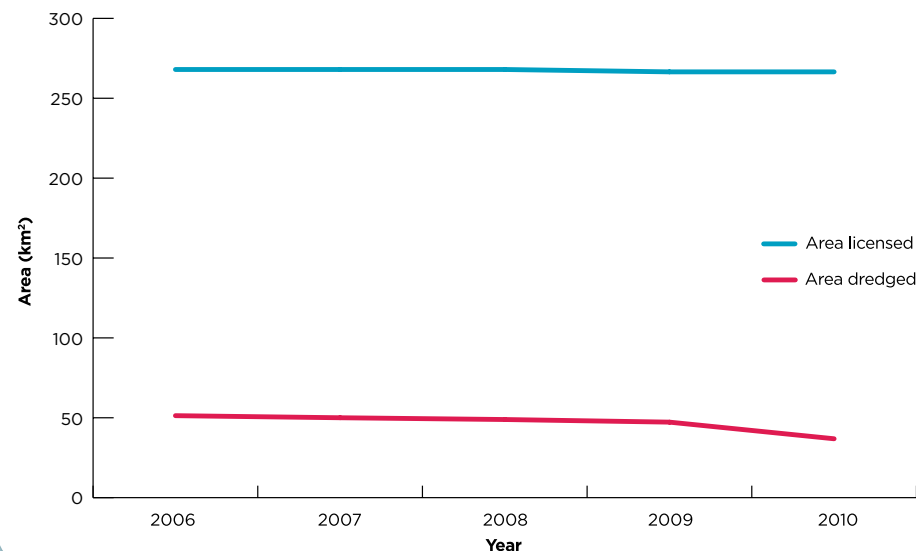
### Background

- The East Coast region has 14 production licences, operated by British Dredging Ltd, CEMEX UK Marine Ltd, Hanson Aggregates Marine Ltd, Tarmac Marine Dredging Ltd and Volker Dredging Ltd for both sand and gravel, principally for use in the construction industry
- During 2010, 4.87 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 10.85 million
- Of the total marine aggregate dredged for construction from the East Coast region:
  - 54.0 per cent of the tonnage dredged was delivered to the Thames Estuary (2.63m)
  - 43.9 per cent of the tonnage dredged was delivered to the Continent (2.14m)
  - 1.3 per cent of the tonnage dredged was delivered to the South Coast (0.06m)
  - 0.6 per cent of the tonnage dredged was delivered to the East English Channel (0.03m)
  - 0.2 per cent of the tonnage dredged was delivered to the East Coast (0.01m)

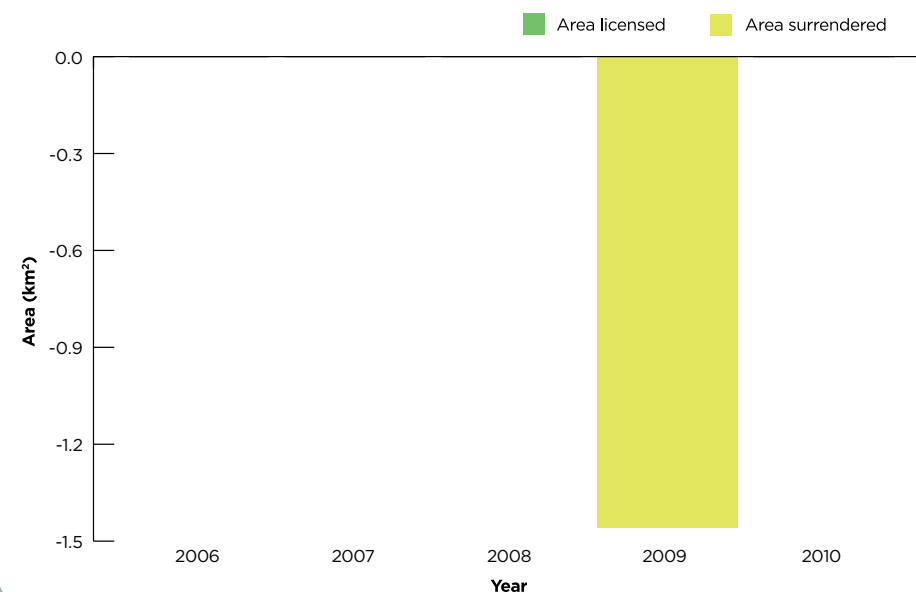
### Regional statistics

- The licensed area in the East Coast region was 266.52km<sup>2</sup>
- The total area actually available to be dredged within the East Coast region was 158.17km<sup>2</sup>
- Dredging took place within 36.85km<sup>2</sup>, 13.8 per cent of the licensed area
- High intensity dredging (greater than 1 hour 15 minutes) is equal to 2.76km<sup>2</sup>, representing 52.80 per cent of regional dredging activity
- 90 per cent of regional dredging effort took place from 12.78km<sup>2</sup>
- During 2010, the area licensed for marine aggregate extraction remained unchanged.

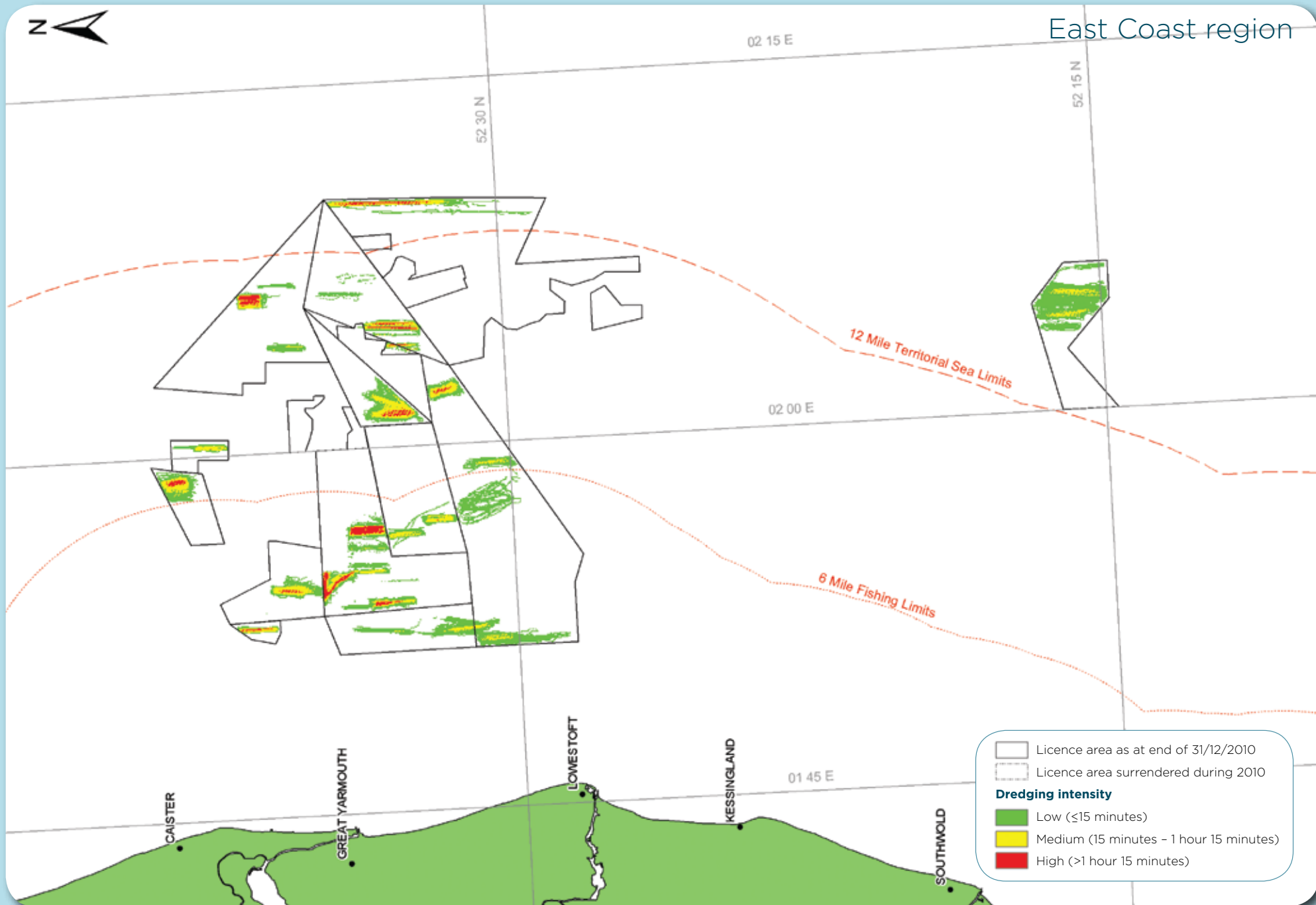
### Area of seabed licensed and dredged



### Area of seabed licensed and surrendered







## Thames Estuary region

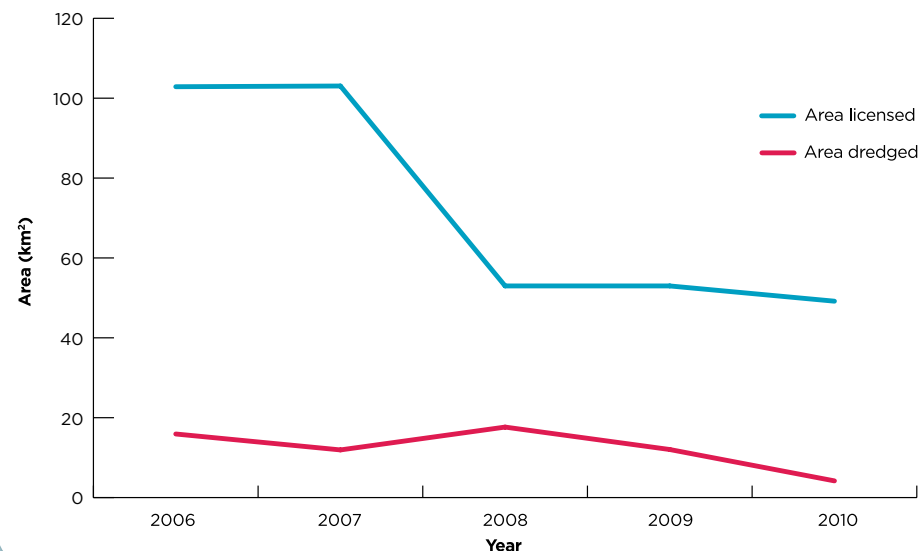
### Background

- The Thames region has 4 production licences, operated by Britannia Aggregates Ltd, CEMEX UK Marine Ltd, Hanson Aggregates Marine Ltd and Tarmac Marine Dredging Ltd for both sand and gravel, principally for use in the construction industry
- During 2010, 0.52 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 1.85 million. In addition 0.17 million tonnes were specifically dredged for a contract fill scheme
- Of the total marine aggregate dredged for construction from the Thames Estuary region:
  - 93.1 per cent of the tonnage dredged was delivered to the Thames Estuary (0.48m)
  - 3.4 per cent of the tonnage dredged was delivered to the East Coast (0.02m)
  - 2.6 per cent of the tonnage dredged was delivered to the South Coast (0.01m)
  - 0.9 per cent of the tonnage dredged was delivered to the Continent (0.005m)

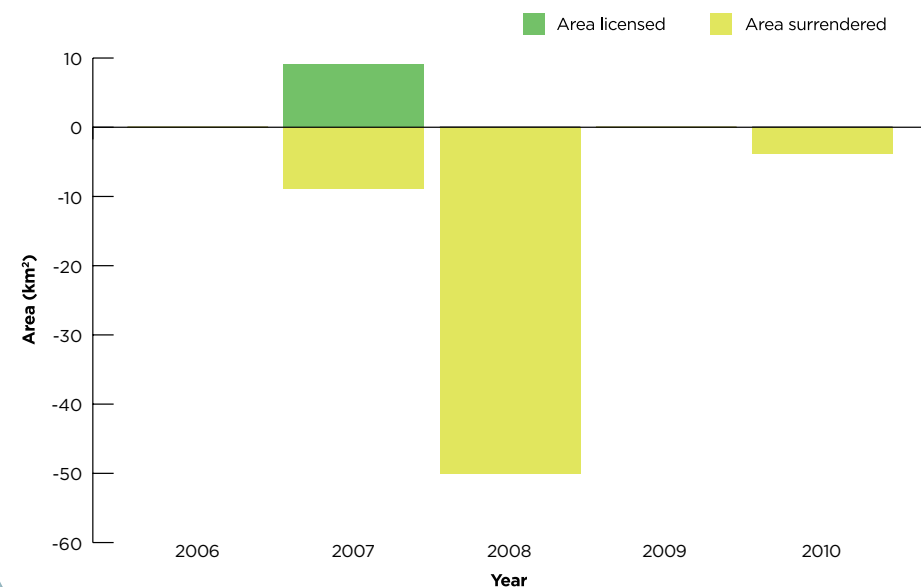
### Regional statistics

- The licensed area in the Thames region at the end of 2010 was 49.17km<sup>2</sup>
- The total area actually available to be dredged within the Thames region during 2010 was 49.94km<sup>2</sup>
- Dredging took place within 4.18km<sup>2</sup>, 8.5 per cent of the licensed area
- High intensity dredging (greater than 1 hour 15 minutes) is equal to 0.21km<sup>2</sup>, representing 38.42 per cent of regional activity
- 90 per cent of regional dredging effort took place from 1.64km<sup>2</sup>
- During 2010, the area licensed for marine aggregate extraction decreased by 3.82km<sup>2</sup>.

### Area of seabed licensed and dredged



### Area of seabed licensed and surrendered





## Thames Estuary region



## East English Channel region

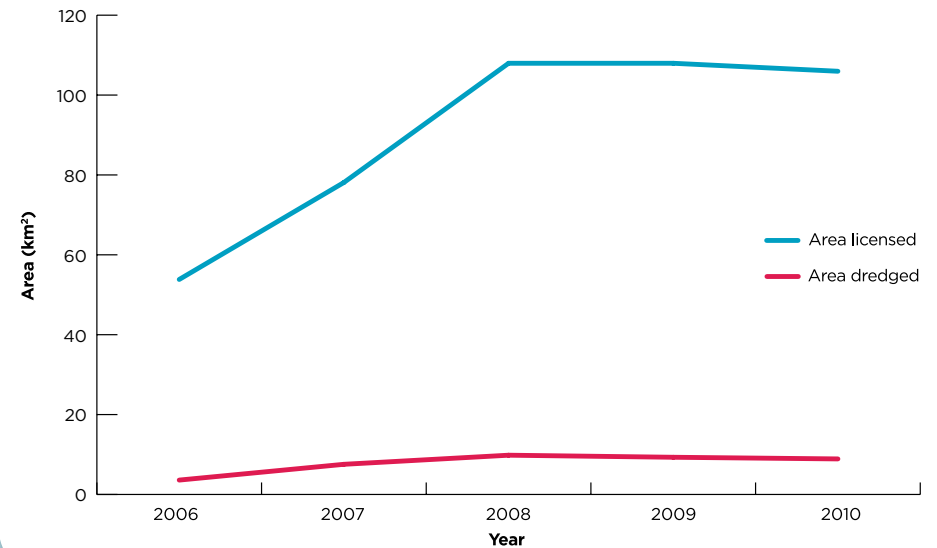
### Background

- The East English Channel region has 6 production licences, operated by CEMEX UK Marine Ltd, DEME Building Materials Ltd, Hanson Aggregates Marine Ltd, Tarmac Marine Dredging Ltd and Volker Dredging Ltd for sand and gravel, principally for use in the construction industry
- During 2010, 2.41 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 8.80 million
- Of the total marine aggregate dredged for construction from the East English Channel region:
  - 55.8 per cent of the tonnage dredged was delivered to the Thames Estuary (1.34m)
  - 37.0 per cent of the tonnage dredged was delivered to the Continent (0.89m)
  - 4.9 per cent of the tonnage dredged was delivered to the East English Channel (0.12m)
  - 2.0 per cent of the tonnage dredged was delivered to the East Coast (0.05m)
  - 0.3 per cent of the tonnage dredged was delivered to the South Coast (0.01m)

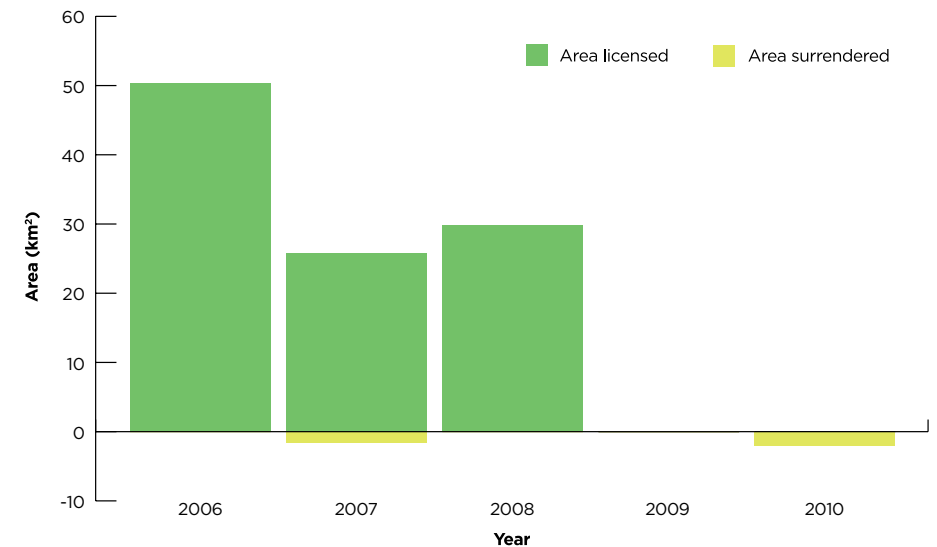
### Regional statistics

- The licensed area in the East English Channel region was 105.96km<sup>2</sup>
- The total area actually available to be dredged within the East English Channel region was 29.16km<sup>2</sup>
- Dredging took place within 8.90km<sup>2</sup>, 8.4 per cent of the licensed area
- High intensity dredging (greater than 1 hour 15 minutes) is equal to 1.28km<sup>2</sup>, representing 65.20 per cent of regional activity
- 90 per cent of regional dredging effort took place from 3.04km<sup>2</sup>
- During 2010, the area licensed for marine aggregate extraction decreased by 2.00km<sup>2</sup>.

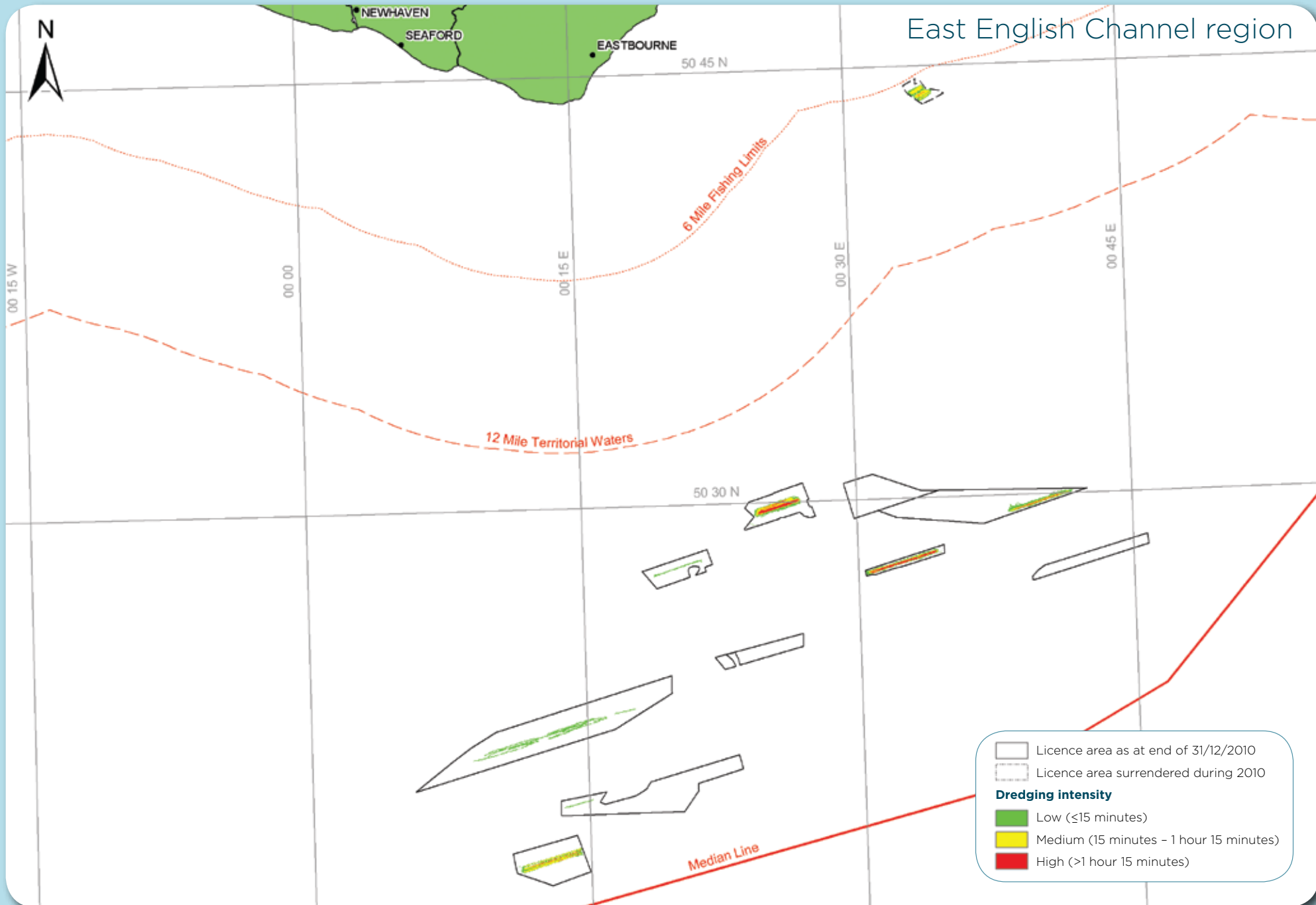
### Area of seabed licensed and dredged



### Area of seabed licensed and surrendered







## South Coast region

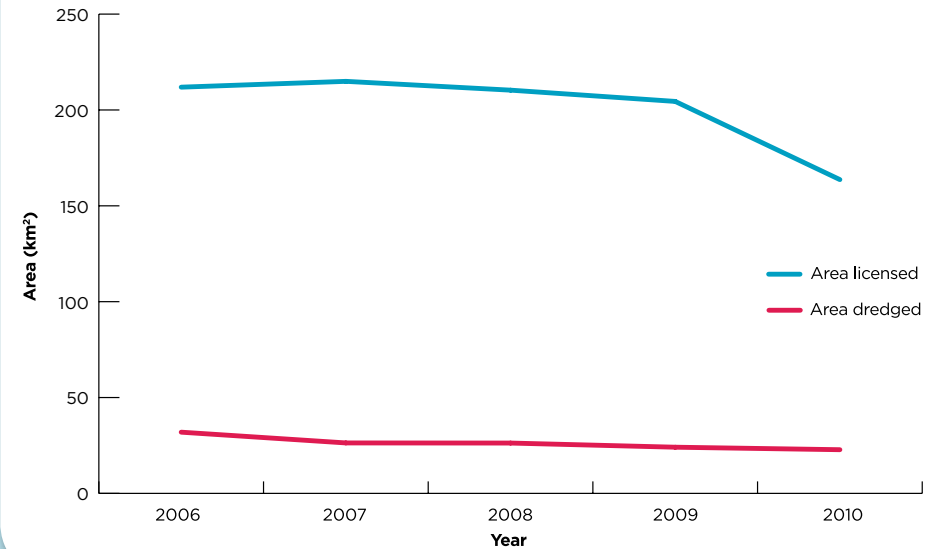
### Background

- The South Coast region has 17 production licences, operated by CEMEX UK Marine Ltd, Hanson Aggregates Marine Ltd, Kendall Bros (Portsmouth) Ltd, Northwood (Fareham) Ltd, Tarmac Marine Dredging Ltd, Volker Dredging Ltd and Westminster Gravels Ltd for sand and gravel, principally for use in the construction industry
- During 2010, 3.43 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 9.75 million. In addition 0.09 million tonnes were specifically dredged for a beach nourishment scheme and 0.03 million tonnes were dredged as contract fill
- Of the total marine aggregate dredged for construction from the South Coast region:
  - 59.2 per cent of the tonnage dredged was delivered to the South Coast (2.03m)
  - 22.0 per cent of the tonnage dredged was delivered to the Thames Estuary (0.75m)
  - 13.1 per cent of the tonnage dredged was delivered to the Continent (0.45m)
  - 4.9 per cent of the tonnage dredged was delivered to the East English Channel (0.17m)
  - 0.7 per cent of the tonnage dredged was delivered to the East Coast (0.02m)
  - 0.1 per cent of the tonnage dredged was delivered to the Humber (0.002m)

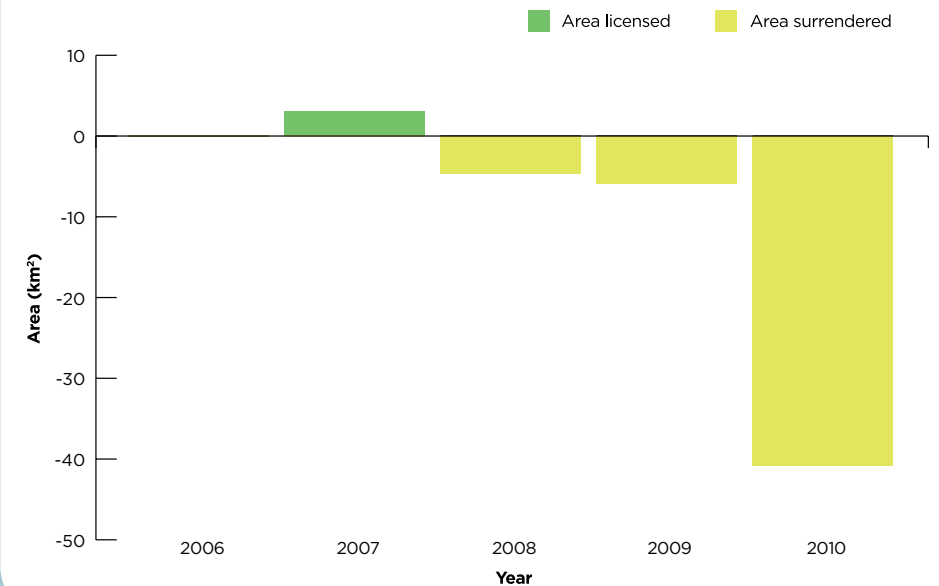
### Regional statistics

- The licensed area in the South Coast region was 163.67km<sup>2</sup>
- The total area actually available to be dredged within the South Coast region was 90.54km<sup>2</sup>
- Dredging took place within 22.78km<sup>2</sup>, 13.9 per cent of the licensed area
- High intensity dredging (greater than 1 hour 15 minutes) is equal to 1.28km<sup>2</sup>, representing 47.81 per cent of regional activity
- 90 per cent of regional dredging effort took place from 8.92km<sup>2</sup>
- During 2010, the area licensed for marine aggregate extraction decreased by 40.79km<sup>2</sup>.

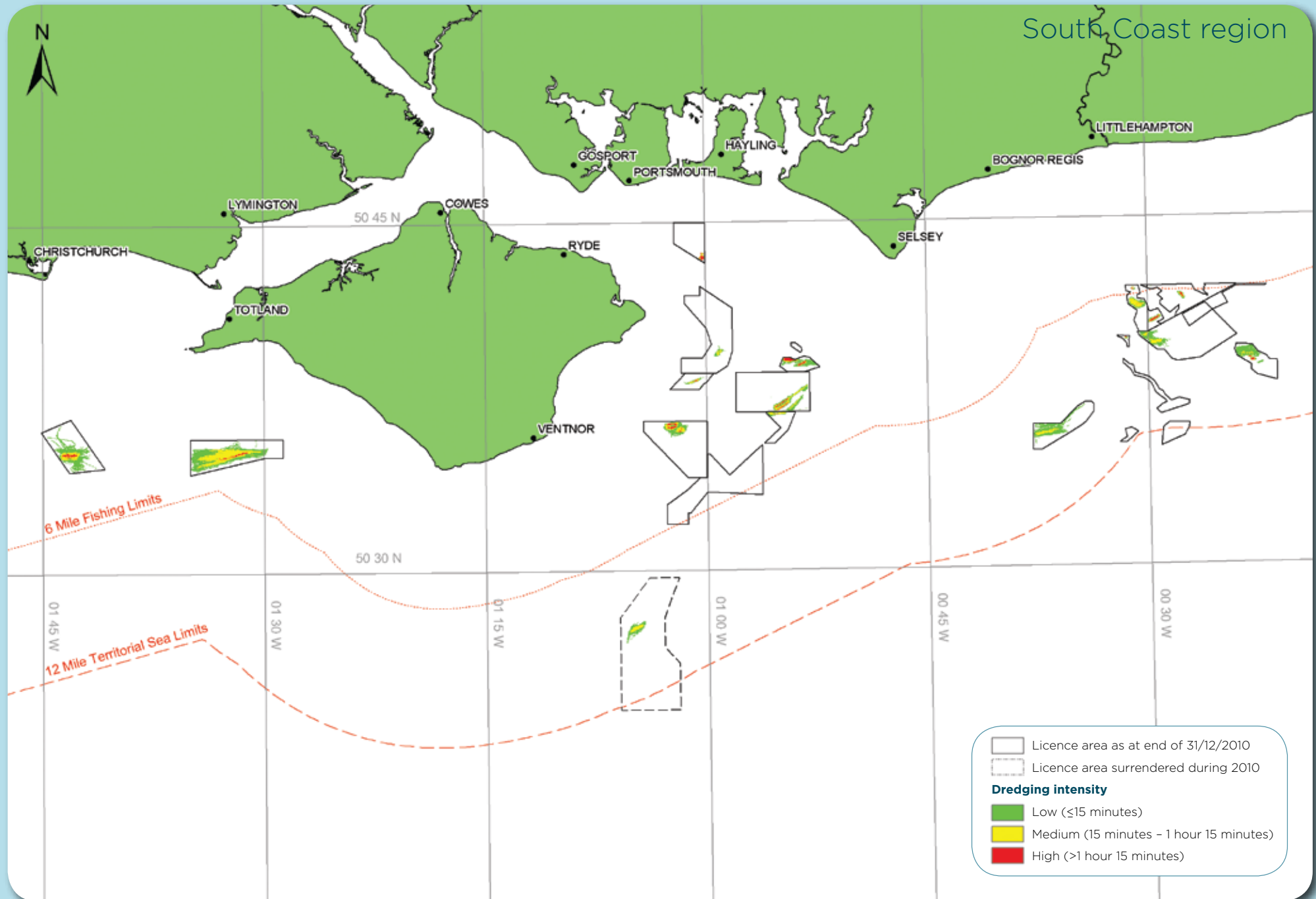
### Area of seabed licensed and dredged



### Area of seabed licensed and surrendered







## South West region

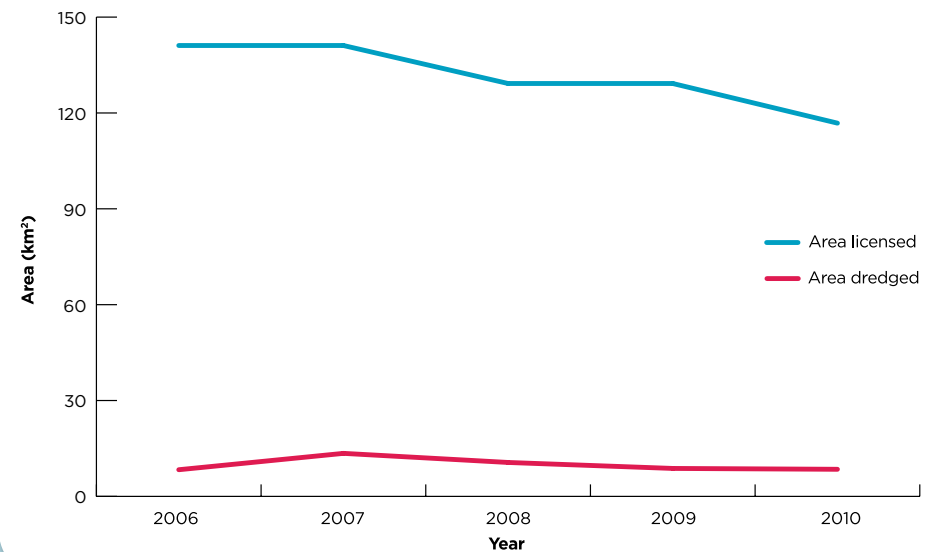
### Background

- The South West region has 11 production licences, operated by British Dredging Ltd, CEMEX UK Marine Ltd, Hanson Aggregates Marine Ltd, Llanelli Sand Dredging Ltd and Tarmac Marine Dredging Ltd for sand, principally for use in the construction industry
- During 2010, 0.93 million tonnes of material were dredged from a permitted licensed tonnage of 3.03 million
- Of the total material dredged in the South West region:
  - 99.9 per cent of the tonnage dredged was delivered to the South West (0.93m).
  - 58.2 per cent of this went to Welsh wharves (0.54m).
  - 41.8 per cent of this went to English wharves (0.39m)
- 0.1 per cent of the tonnage dredged was delivered to the North West (0.001m)

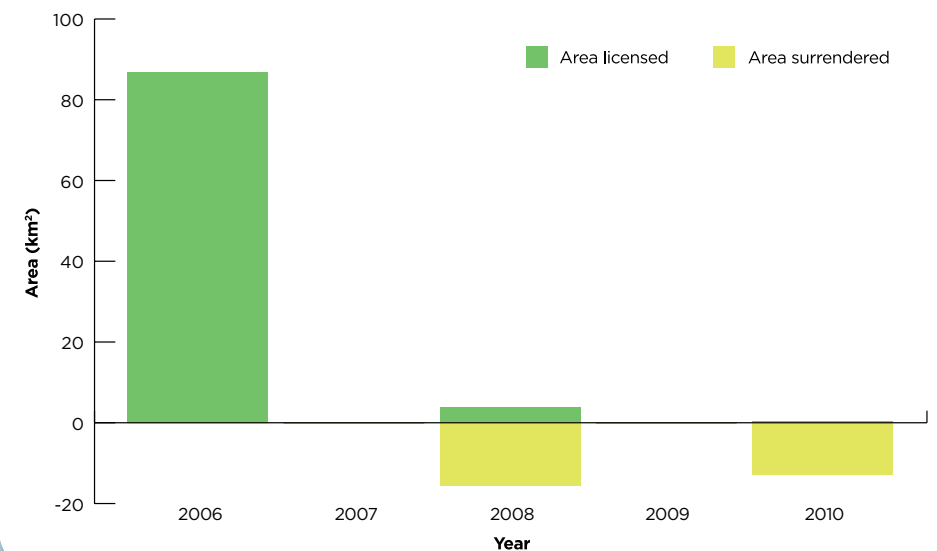
### Regional statistics

- The licensed area in the South West region was 116.81km<sup>2</sup>
- The total area actually available to be dredged within the South West region was 41.59km<sup>2</sup>
- Dredging took place within 8.48km<sup>2</sup>, 7.3 per cent of the licensed area
- High intensity dredging (greater than 1 hour 15 minutes) is equal to 0.73km<sup>2</sup>, representing 65.09 per cent of regional activity
- 90 per cent of regional dredging effort took place from 2.43km<sup>2</sup>
- During 2010, the area licensed for marine aggregate extraction decreased by 12.41km<sup>2</sup>.

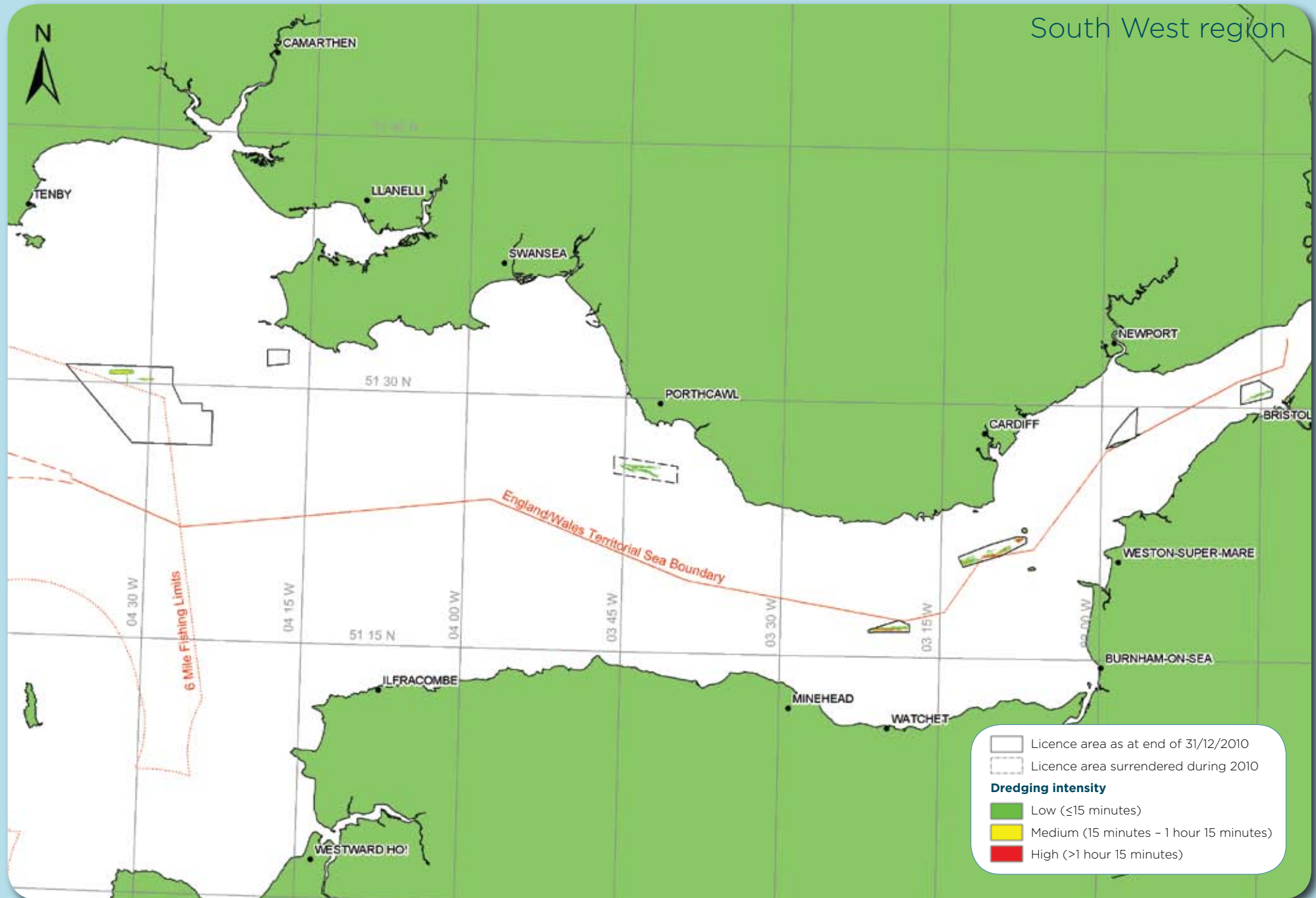
### Area of seabed licensed and dredged



### Area of seabed licensed and surrendered







## North West region

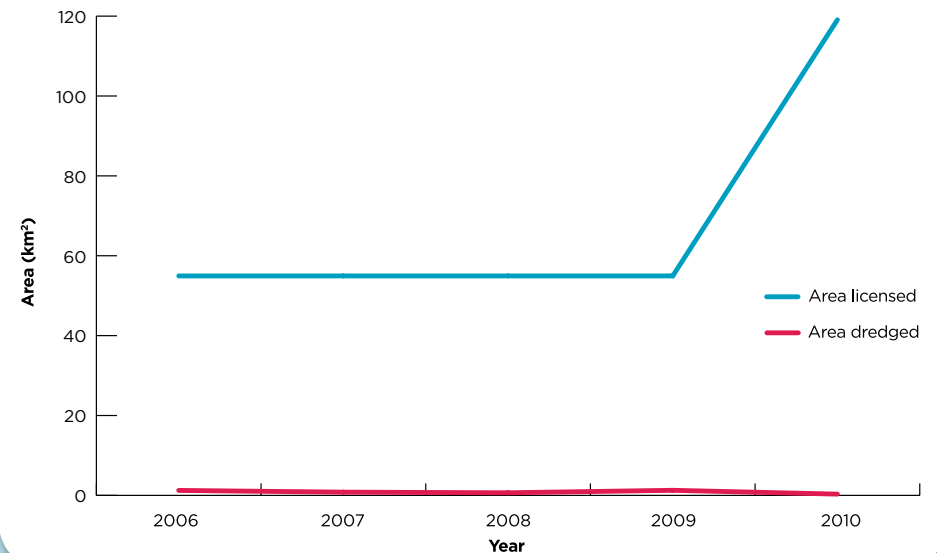
### Background

- The North West region has 4 production licences, operated by Norwest Sand and Ballast Co, Tarmac Marine Dredging Ltd and Westminster Gravels Ltd. for sand, principally for use in the construction industry
- During 2010, 0.31 million tonnes of material were dredged from a permitted licensed tonnage of 1.24 million. In addition 0.01 million tonnes were specifically dredged for a contract fill scheme
- Of the total material dredged in the North West region:  
94.7 per cent of the tonnage dredged was delivered to the North West (0.29m)  
5.3 per cent of the tonnage dredged was delivered to the South West (0.02m)

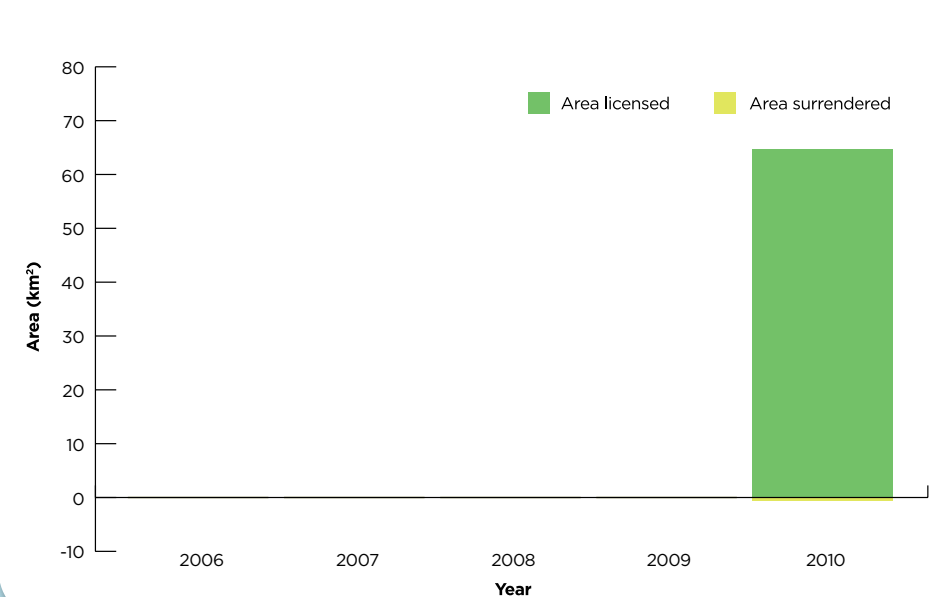
### Regional statistics

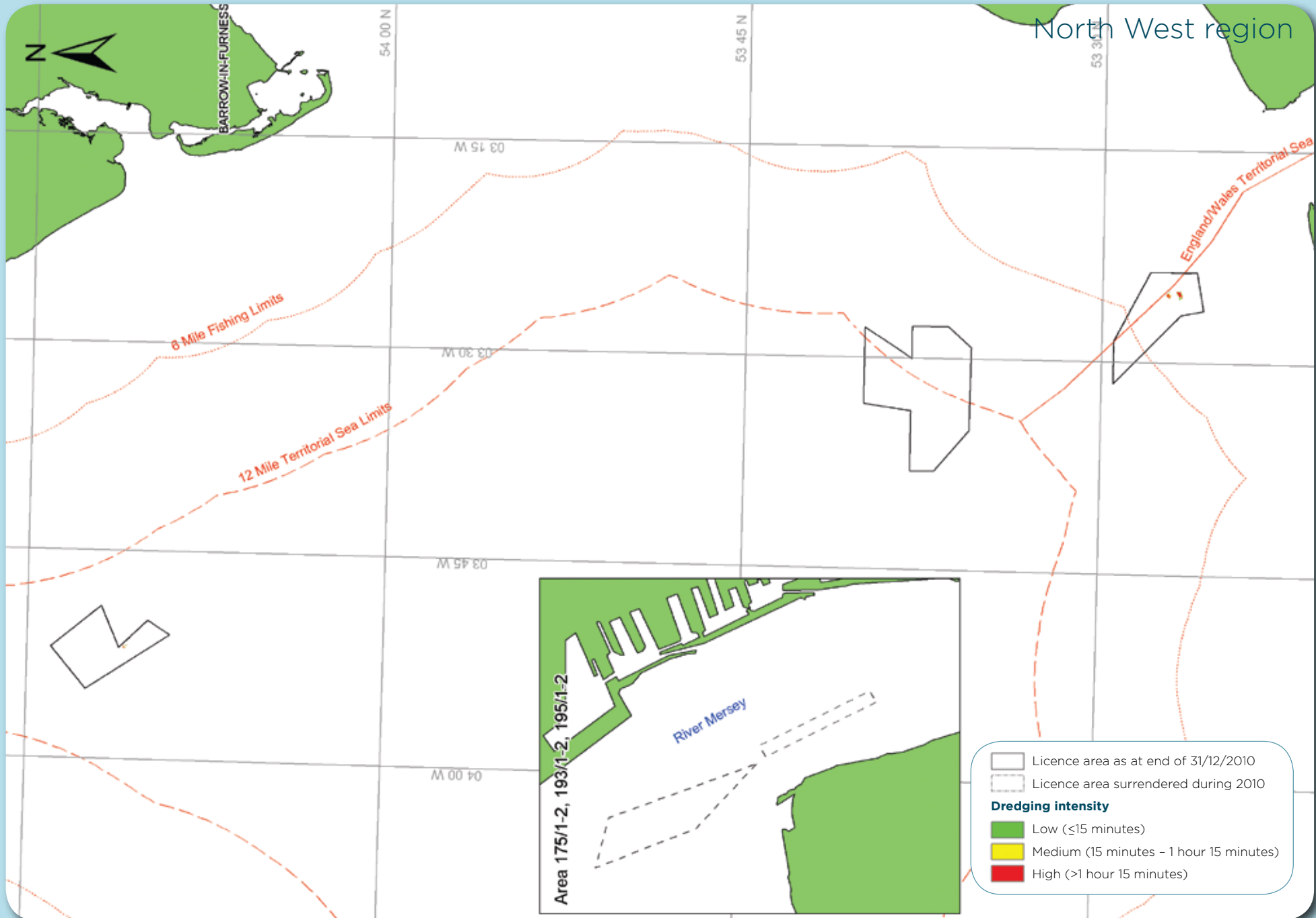
- The licensed area in the North West was 119.08km<sup>2</sup>
- The total area actually available to be dredged within the North West region was 27.73km<sup>2</sup>
- Dredging took place within 0.32km<sup>2</sup>, 0.3 per cent of the licensed area
- High intensity dredging (greater than 1 hour 15 minutes) is equal to 0.18km<sup>2</sup>, representing 93.99 per cent of regional activity
- 90 per cent of regional dredging effort took place from 0.15km<sup>2</sup>
- During 2010, the area licensed for marine aggregate extraction increased by 64.13km<sup>2</sup>.

### Area of seabed licensed and dredged



### Area of seabed licensed and surrendered







THE CROWN ESTATE manages a highly diverse £6 billion property portfolio across the UK, comprising of four estates: urban, marine, rural and Windsor. The Crown Estate's marine properties include around half the UK's foreshore (17,000km) and almost the entire seabed out to the 12 nautical mile (nm) territorial limit around the UK. It also includes the rights to the natural resources in the UK Continental Shelf, with the exception of oil, coal and gas.

The responsibilities of the Crown Estate are to maintain and enhance the value of the estate and its income over the long term and to do this having regard to good management. All surplus revenue (profit) is paid to the Treasury for the benefit of the nation every year. The Crown Estate is a successful business organisation guided by our core values – commercialism, integrity and stewardship.

THE BRITISH MARINE AGGREGATE PRODUCERS ASSOCIATION (BMAPA) was formed in 1992 and comprises members of the Mineral 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 operated over 25 vessels on 66 production licences around the UK during 2010.

BMAPA membership is comprised of: Brett Group Ltd, Britannia Aggregates Ltd, CEMEX UK Marine Ltd, DEME Building Materials Ltd, Hanson Aggregates Marine Ltd, Kendall Bros. (Portsmouth) Ltd, Lafarge Aggregates Ltd, Northwood (Fareham) Ltd, Sea Aggregates Ltd, Tarmac Marine Dredging Ltd and Volker Dredging Ltd.



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