

# The area involved – **18th** annual report



MARINE AGGREGATE EXTRACTION 2015





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ISBN: 978-1-906410-70-4



# 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 18th 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 2015 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 extraction 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 2015. 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.

During the second half of 2012 dredging operators were required to be fully compliant with the new Marine Licensing regime. For those areas which were licensed prior to the mid 1990s this required the delivery of Short Term Marine Licence Applications supported by Environmental Impact Assessments to ensure the continuation of dredging operations. Among the conditions of these licences was the limitation of operations to no greater than the maximum historic dredge footprint (since 1993), resulting in a temporary reduction of the permitted extent. The large reduction in the area of seabed licensed described in this report between 2011 and 2012 was largely the result of this condition being imposed on older dredging areas, and has been mostly reversed following successful applications for 15 year full term renewals during 2015.

## Summary information

- A total of 18.82 million tonnes of sand and gravel were dredged from Crown Estate licences in England and Wales during 2015 (16.94 million tonnes in 2014)
- The total area of seabed licensed in 2015 increased to 932km<sup>2</sup> (726km<sup>2</sup> in 2014)
- Dredging took place within 82.67km<sup>2</sup>, 8.87 per cent of the licensed area, compared with 85.66km<sup>2</sup> (11.80 per cent) in 2014
- The area of seabed dredged for more than 1 hour 15 minutes per year (high intensity – red on charts) increased to 7.37km<sup>2</sup> (6.39km<sup>2</sup> in 2014)
- 90 per cent of dredging from Crown Estate licences took place from an area of 31.58km<sup>2</sup> (37.26km<sup>2</sup> in 2014).







## Summary statistics for 2015

Region	Total area licensed during 2015 (km <sup>2</sup> )	Total active dredge area for 2015 (km <sup>2</sup> ) <sup>*1</sup>	Total area dredged during 2015 (km <sup>2</sup> )
Humber	213.05	75.30	9.40
East Coast	244.20	104.19	24.39
Thames	54.67	38.86	11.05
East English Channel	113.50	33.57	15.48
South Coast	118.66	34.10	13.38
South West	101.50	18.90	4.99
North West	86.65	31.81	3.98
<b>Total (km<sup>2</sup>)<sup>*2</sup></b>	<b>932.23</b>	<b>336.73</b>	<b>82.67</b>

### Area of seabed licensed increased by 206km<sup>2</sup> during 2015

Area of seabed licensed (km<sup>2</sup>) 2011-2015

Year <sup>*4</sup>	2011	2012	2013	2014	2015
0-6nm <sup>*5</sup>	346	192	203	202	295
6-12nm <sup>*5</sup>	447	191	233	225	354
>12nm <sup>*5</sup>	481	328	303	299	283
<b>Total area licensed (km<sup>2</sup>)</b>	<b>1274</b>	<b>711<sup>*3</sup></b>	<b>739<sup>*3</sup></b>	<b>726<sup>*3</sup></b>	<b>932</b>
<b>Total active dredge area (km<sup>2</sup>)</b>	<b>567</b>	<b>391</b>	<b>332</b>	<b>332</b>	<b>337</b>

### Area of seabed dredged decreased by 3km<sup>2</sup> during 2015

Area of seabed dredged (km<sup>2</sup>) 2011-2015

Year	2011	2012	2013	2014	2015
0-6nm <sup>*5</sup>	53	42	42	39	39
6-12nm <sup>*5</sup>	36	32	31	21	18
>12nm <sup>*5</sup>	25	23	26	26	26
<b>Total (km<sup>2</sup>)</b>	<b>114</b>	<b>97</b>	<b>99</b>	<b>86</b>	<b>83</b>
<b>Area dredged &gt;1 hr 15 mins (km<sup>2</sup>)</b>	<b>8.52</b>	<b>8.41</b>	<b>6.75</b>	<b>6.39</b>	<b>7.37</b>
<b>90 per cent of dredging effort (area in km<sup>2</sup>)</b>	<b>43.26</b>	<b>36.42</b>	<b>39.2</b>	<b>37.3</b>	<b>31.6</b>

<sup>\*1</sup> Total area actually available to be dredged during 2015, calculated on a cumulative basis

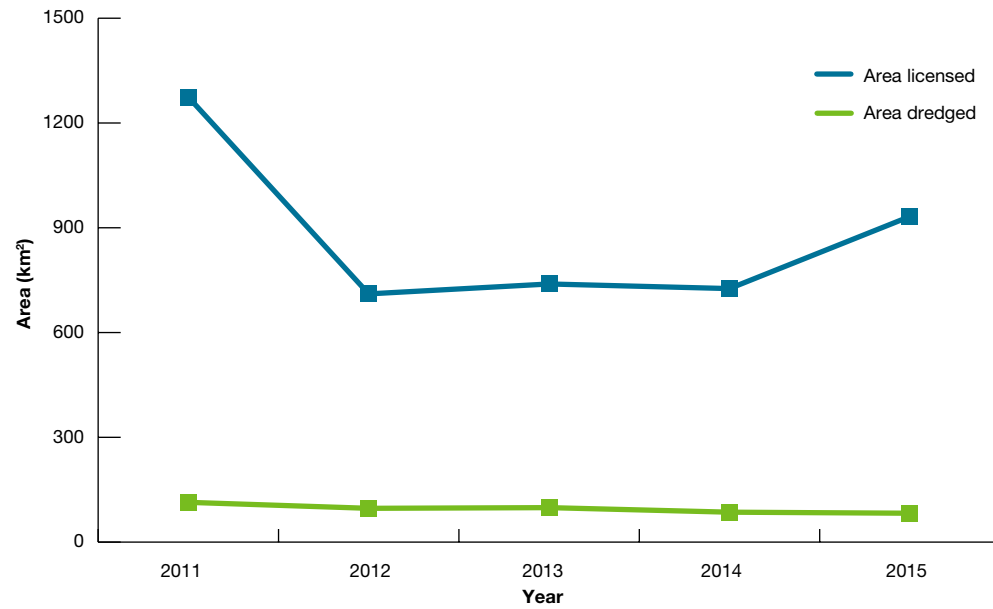
<sup>\*2</sup> Totals are rounded from the correct total rather than a summation of the regional figures

<sup>\*3</sup> The large decrease in the 2012 - 2014 figures is primarily a result of the Short Term Marine Licensing process during 2012, the effect of which was largely reversed during 2015

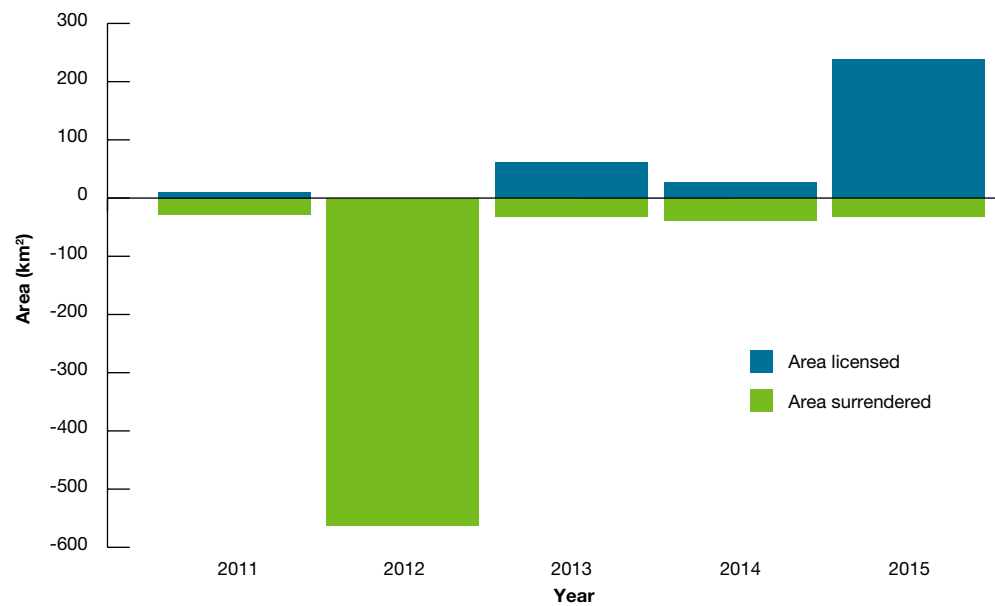
<sup>\*4</sup> Annual figures are calculated as of end of the 31st December, and therefore incorporate any changes that may have occurred through the year

<sup>\*5</sup> Based on a standardised 6 and 12 nm (UKHO 01/01/05) to allow for accurate comparison between years

Area of seabed licensed and dredged 2011-2015



New area licensed versus existing area surrendered 2011-2015



## Humber region

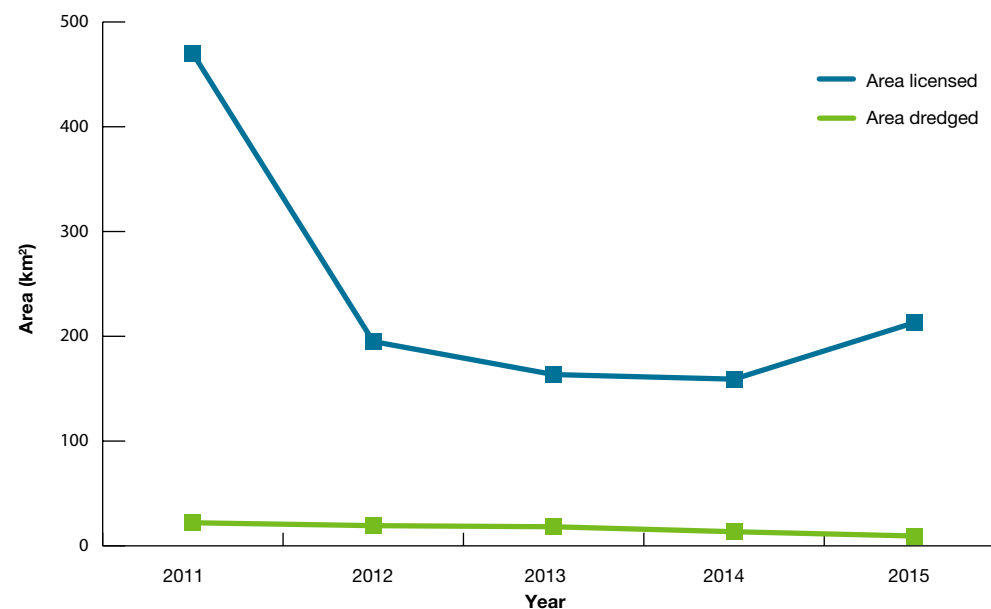
### Background

- The region has 7 production licences, operated by CEMEX UK Marine Ltd, Hanson Aggregates Marine Ltd, Tarmac Marine Ltd, Van Oord UK Ltd and Westminster Gravels Ltd for both sand and gravel, principally for use in the construction industry
- During 2015, 1.32 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 4.70 million. In addition 0.20 million tonnes were dredged for a pipeline project and 0.63 million tonnes were dredged for beach nourishment
- Of the total marine aggregate dredged for construction from the region:
  - 63.2 per cent of the tonnage dredged was delivered to mainland Europe (0.83m)
  - 35.2 per cent of the tonnage dredged was delivered to the Humber (0.46m)
  - 1.5 per cent of the tonnage dredged was delivered to the Thames Estuary (0.02m)
  - 0.1 per cent of the tonnage dredged was delivered to the South Coast (<0.01m)

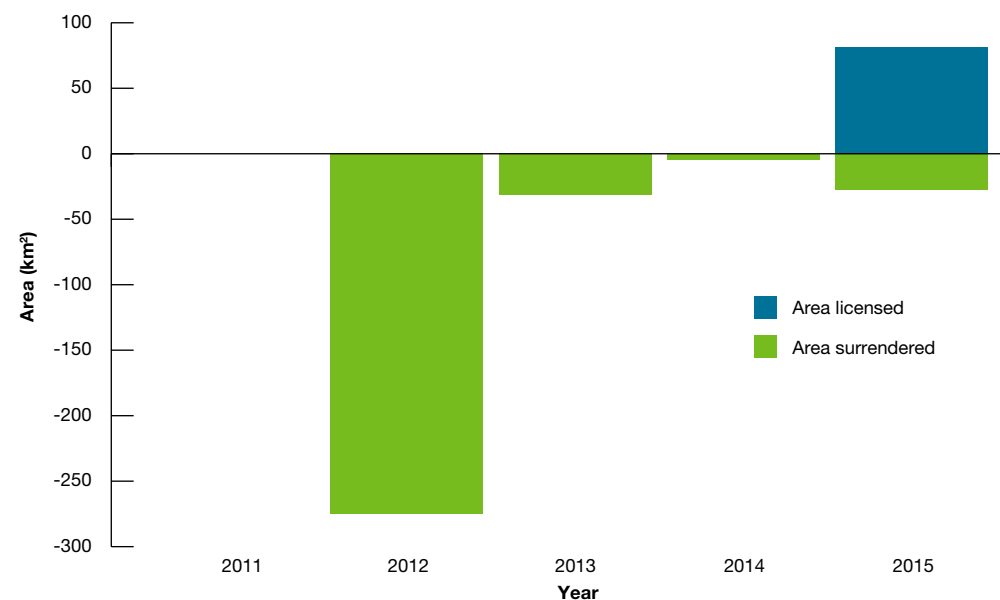
### Regional statistics

- The licensed area in the region was 213.05km<sup>2</sup>
- The total area actually available to be dredged within the region (due to zoning) was 75.30km<sup>2</sup>
- Dredging took place within 9.40km<sup>2</sup>, 4.41 per cent of the licensed area
- High intensity dredging (greater than 1 hour 15 minutes) is equal to 0.52km<sup>2</sup>, 41.30 per cent of regional dredging activity
- 90 per cent of regional dredging effort took place within 4.08km<sup>2</sup>
- During 2015, the area licensed for marine aggregate extraction increased by 53.95km<sup>2</sup>

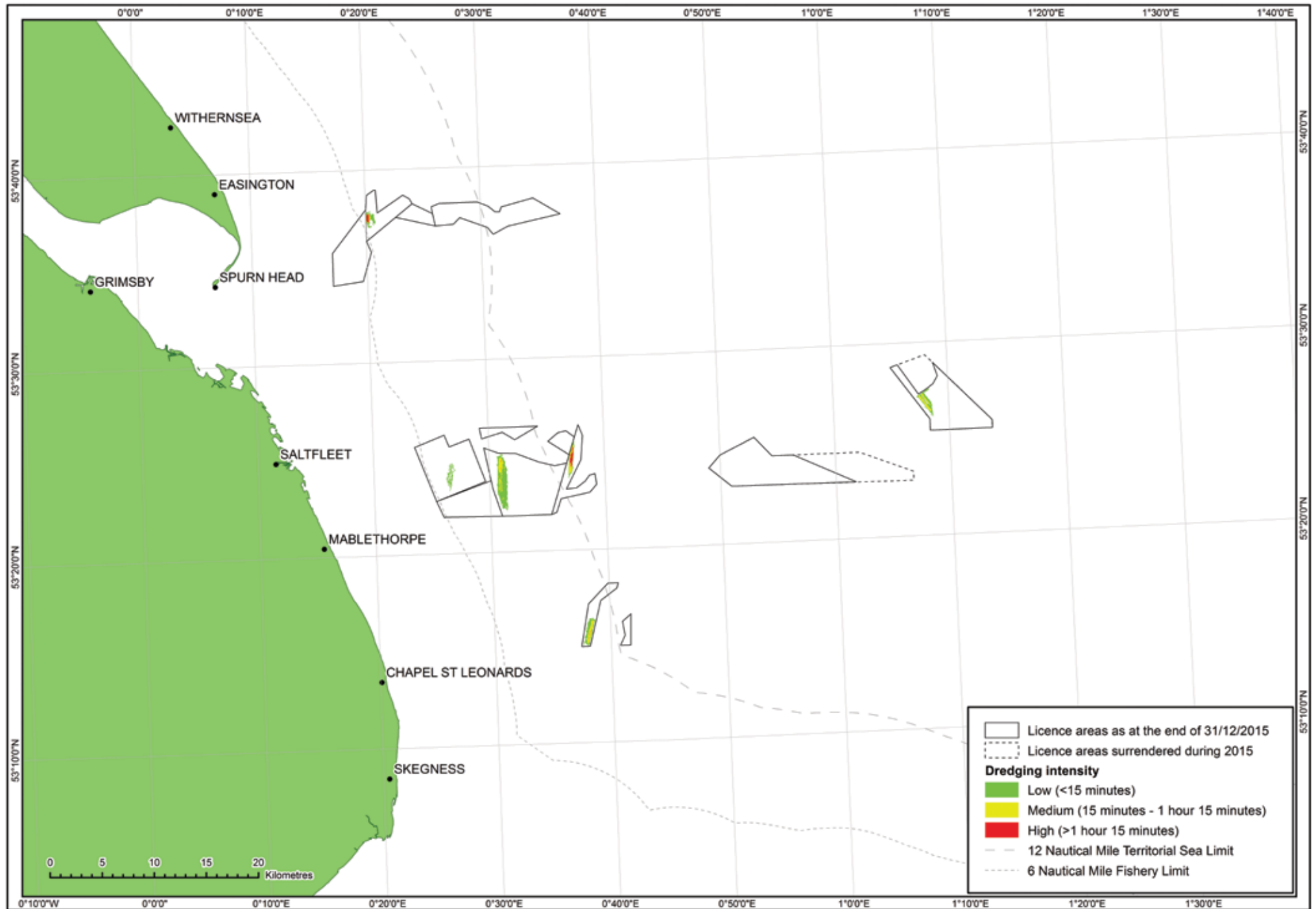
### Area of seabed licensed\* and dredged 2011-2015



### Area of seabed licensed and surrendered 2011-2015\*



\* Includes areas temporarily reduced as part of the Short Term Marine Licence process





## East Coast region

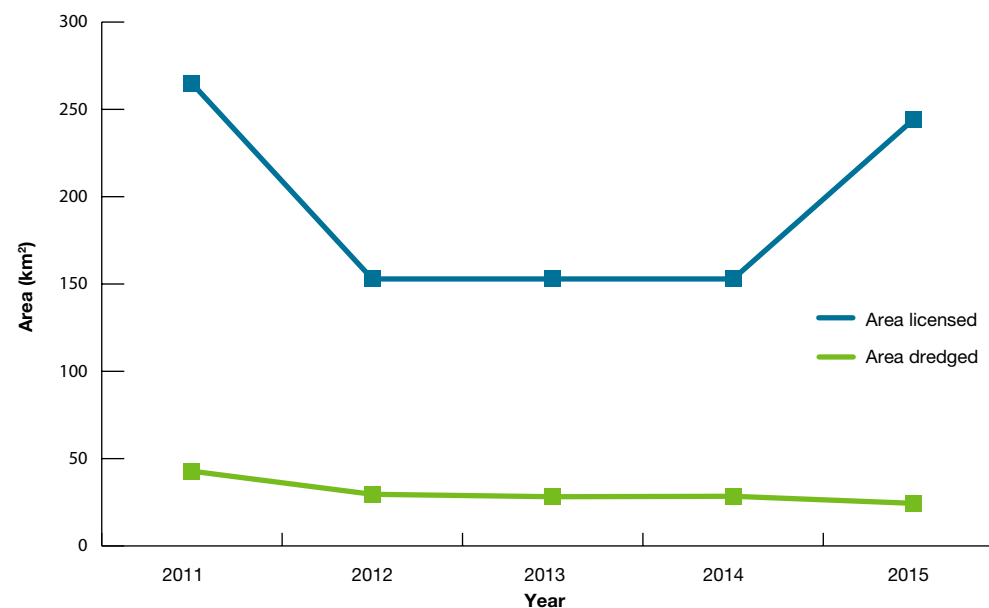
### Background

- The East Coast region has 13 production licences, operated by CEMEX UK Marine Ltd, Hanson Aggregates Marine Ltd, Tarmac Marine Ltd and Volker Dredging Ltd for both sand and gravel, principally for use in the construction industry
- During 2015, 4.47 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 9.22 million
- Of the total marine aggregate dredged for construction from the region:
  - 90.7 per cent of the tonnage dredged was delivered to the Thames Estuary (4.06m)
  - 7.0 per cent of the tonnage dredged was delivered to mainland Europe (0.31m)
  - 2.1 per cent of the tonnage dredged was delivered to the Humber (0.09m)
  - 0.2 per cent of the tonnage dredged was delivered to the South Coast (<0.01m)

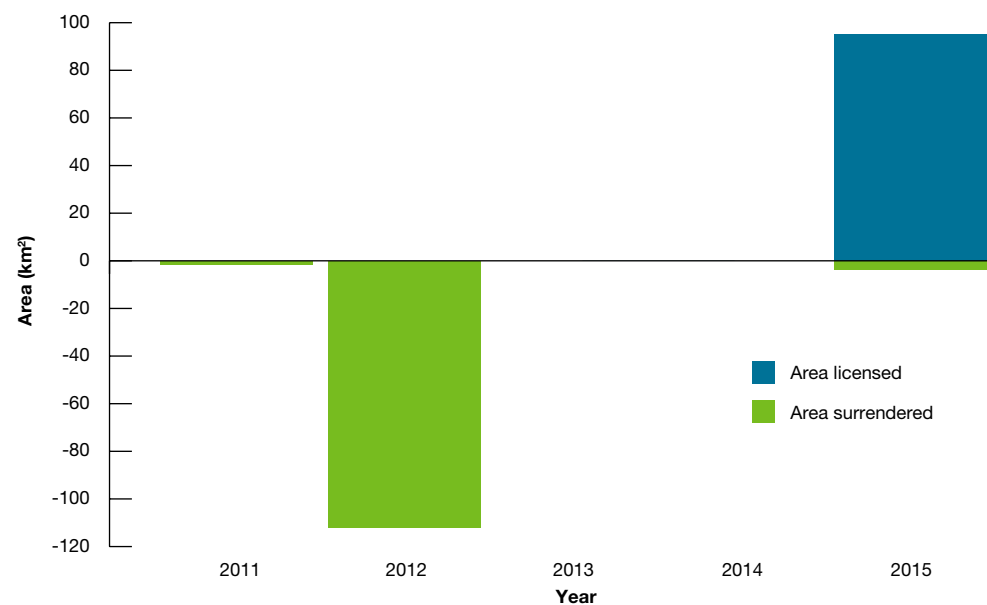
### Regional statistics

- The licensed area in the region was 244.20km<sup>2</sup>
- The total area actually available to be dredged within the region (due to zoning) was 104.19km<sup>2</sup>
- Dredging took place within 24.39km<sup>2</sup>, 9.99 per cent of the licensed area
- High intensity dredging (greater than 1 hour 15 minutes) is equal to 2.13km<sup>2</sup>, 57.45 per cent of regional dredging activity
- 90 per cent of regional dredging effort took place within 8.94km<sup>2</sup>
- During 2015, the area licensed for marine aggregate extraction increased by 91.31km<sup>2</sup>

### Area of seabed licensed\* and dredged 2011-2015

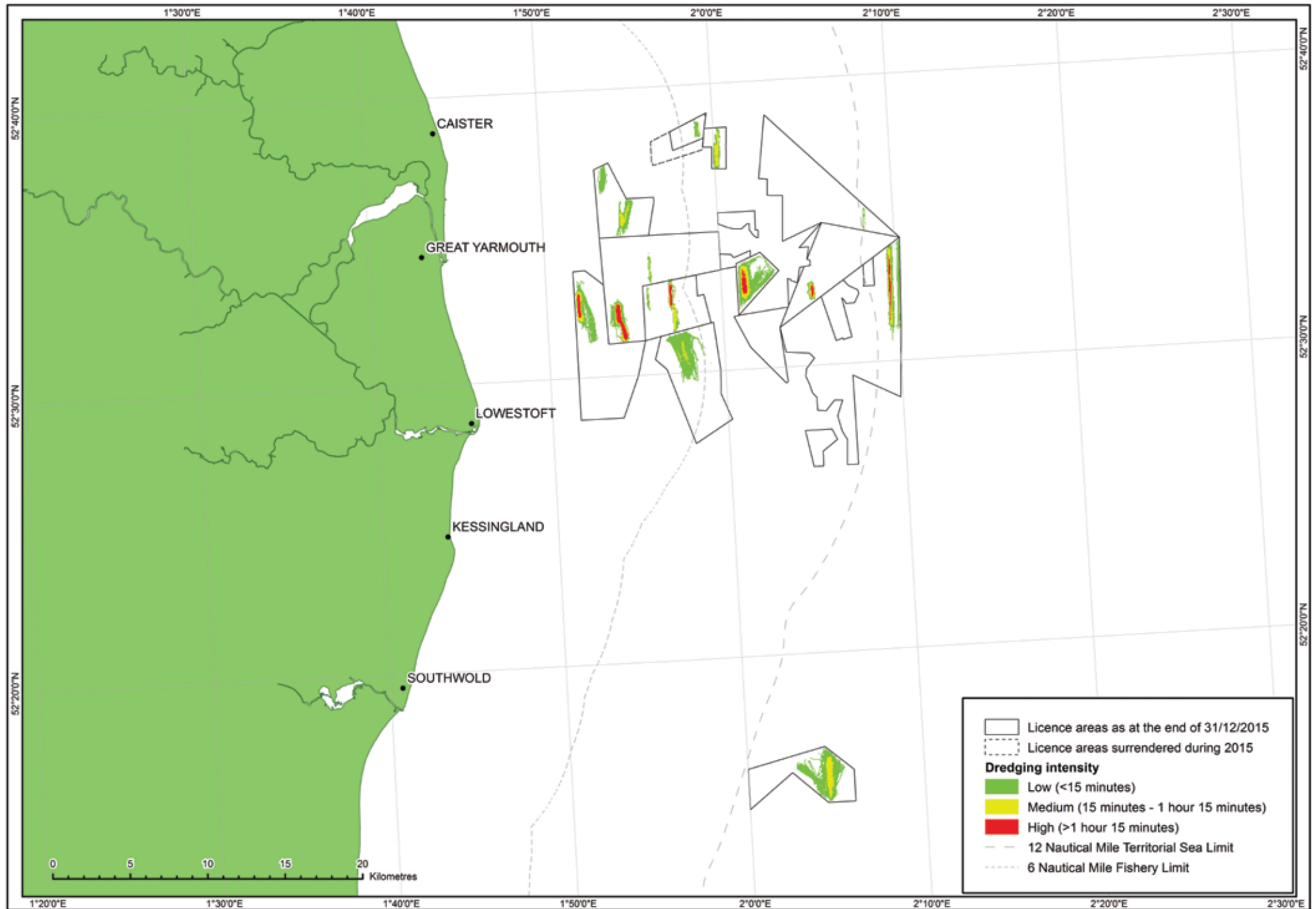


### Area of seabed licensed and surrendered 2011-2015\*



\* Includes areas temporarily reduced as part of the Short Term Marine Licence process





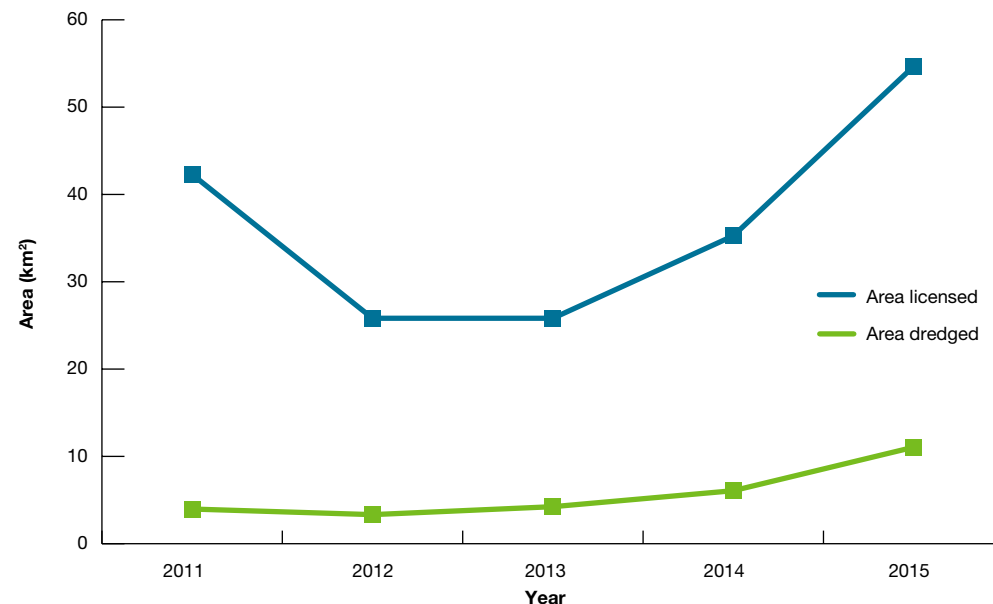
## Thames Estuary region

- The Thames region has 8 production licences, operated by Britannia Aggregates Ltd, CEMEX UK Marine Ltd, Hanson Aggregates Marine Ltd, Tarmac Marine Ltd and Volker Dredging Ltd for both sand and gravel, principally for use in the construction industry
- During 2015, 1.50 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 2.70 million. In addition 1.16 million tonnes were dredged for beach nourishment
- Of the total marine aggregate dredged for construction from the region:
  - 88.5 per cent of the tonnage dredged was delivered to the Thames Estuary (1.33m)
  - 4.9 per cent of the tonnage dredged was delivered to the East Coast (0.07m)
  - 2.7 per cent of the tonnage dredged was delivered to the South Coast (0.04m)
  - 2.5 per cent of the tonnage dredged was delivered to the Humber (0.04m)
  - 1.4 per cent of the tonnage dredged was delivered to mainland Europe (0.02m)

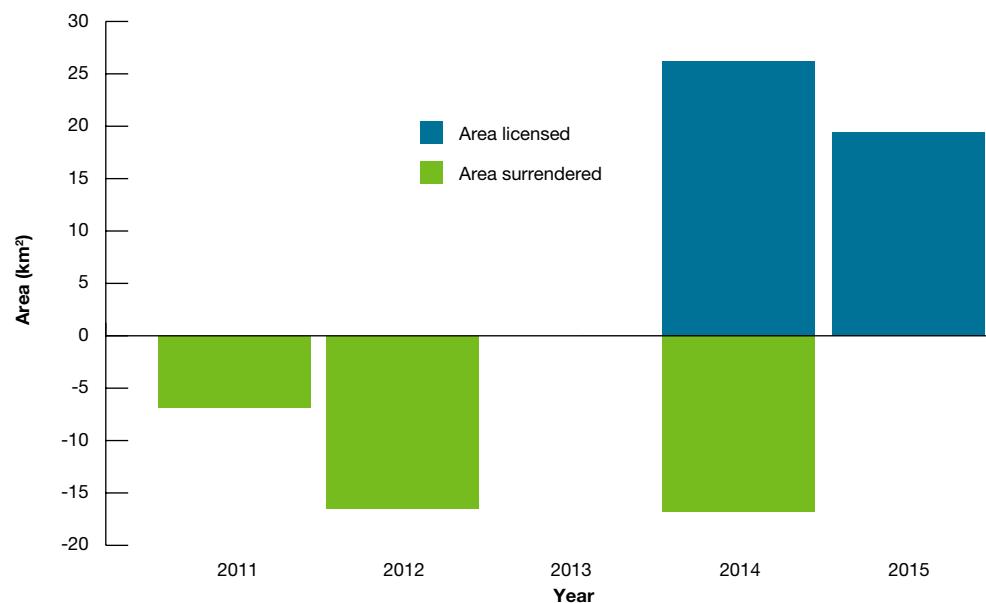
### Regional statistics

- The licensed area in the region was 54.67km<sup>2</sup>
- The total area actually available to be dredged within the region (due to zoning) was 38.86km<sup>2</sup>
- Dredging took place within 11.05km<sup>2</sup>, 20.21 per cent of the licensed area
- High intensity dredging (greater than 1 hour 15 minutes) is equal to 0.69km<sup>2</sup>, 39.79 per cent of regional dredging activity
- 90 per cent of regional dredging effort took place within 4.72km<sup>2</sup>
- During 2015, the area licensed for marine aggregate extraction increased by 19.41km<sup>2</sup>

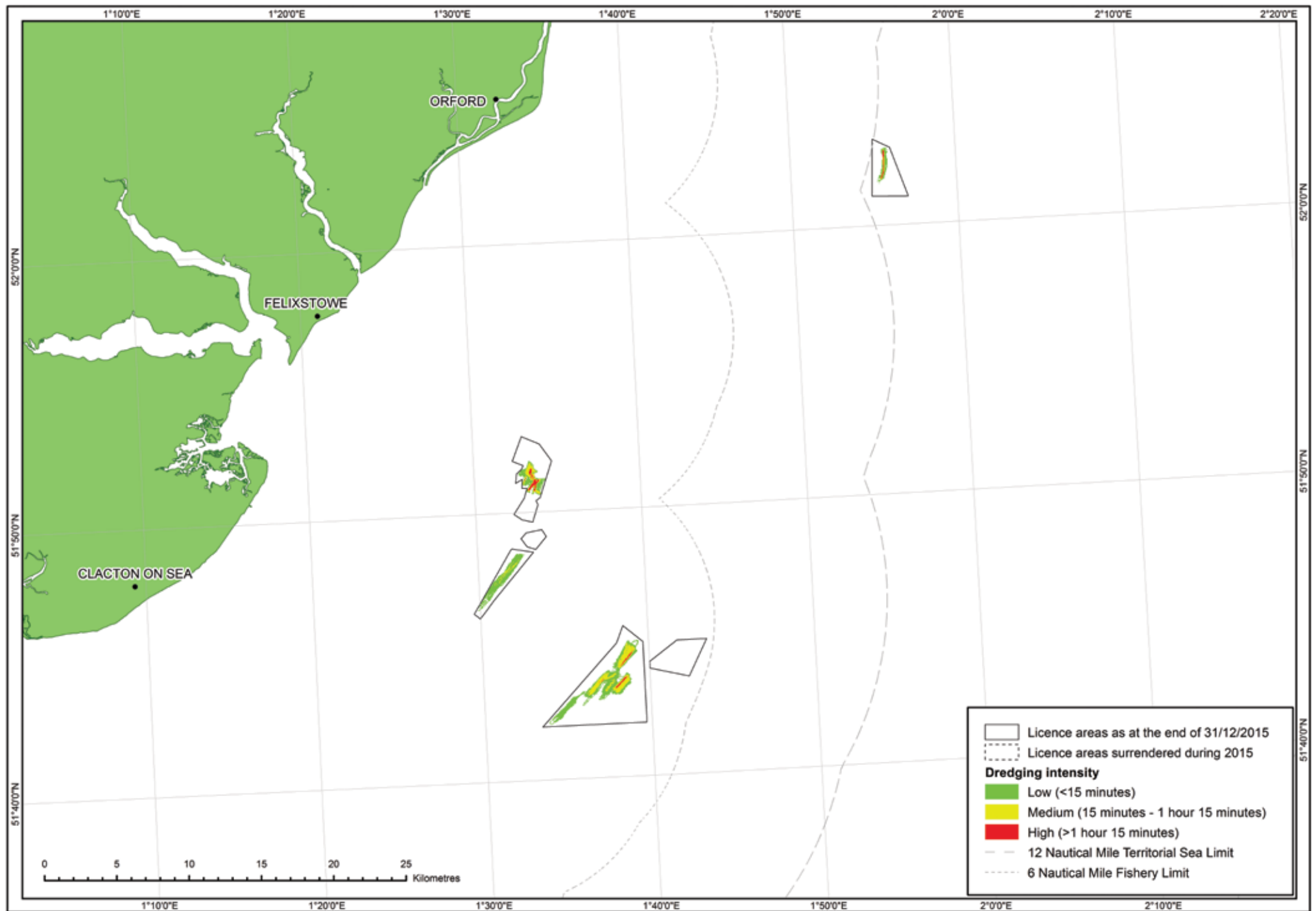
### Area of seabed licensed\* and dredged 2011-2015



### Area of seabed licensed and surrendered 2011-2015\*



\* Includes areas temporarily reduced as part of the Short Term Marine Licence process





## East English Channel region

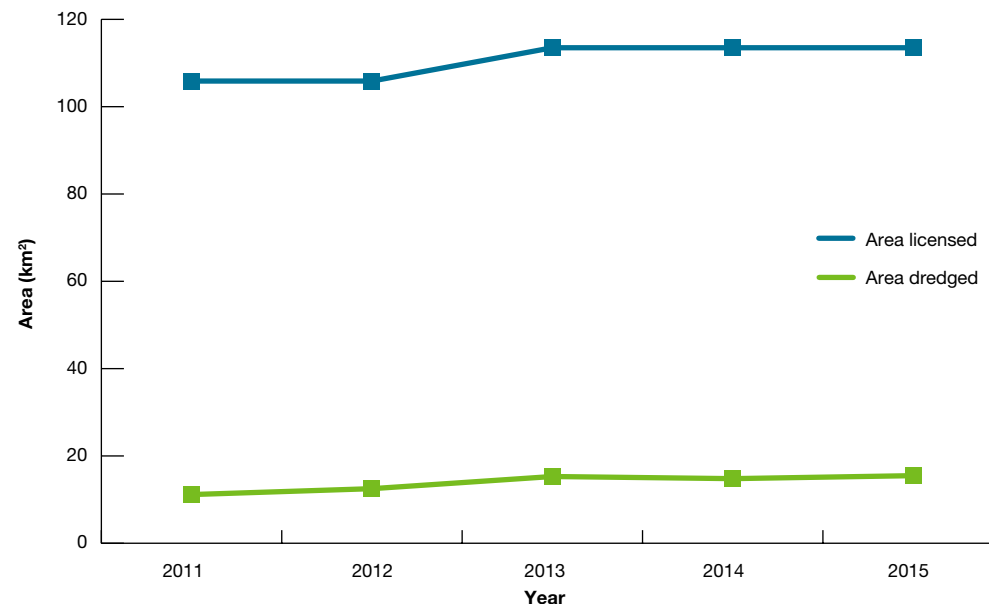
### Background

- The East English Channel region has 11 production licences, operated by CEMEX UK Marine Ltd, DEME Building Materials Ltd, Hanson Aggregates Marine Ltd, Tarmac Marine Ltd and Volker Dredging Ltd for sand and gravel, principally for use in the construction industry
- During 2015, 3.65 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 10 million. In addition 0.02 million tonnes were specifically dredged for reclamation fill
- Of the total marine aggregate dredged for construction from the region:
  - 71.1 per cent of the tonnage dredged was delivered to the Thames Estuary (2.60m)
  - 26.5 per cent of the tonnage dredged was delivered to mainland Europe (0.97m)
  - 1.3 per cent of the tonnage dredged was delivered to the East Coast (0.04m)
  - 1.1 per cent of the tonnage dredged was delivered to the South Coast (0.04m)

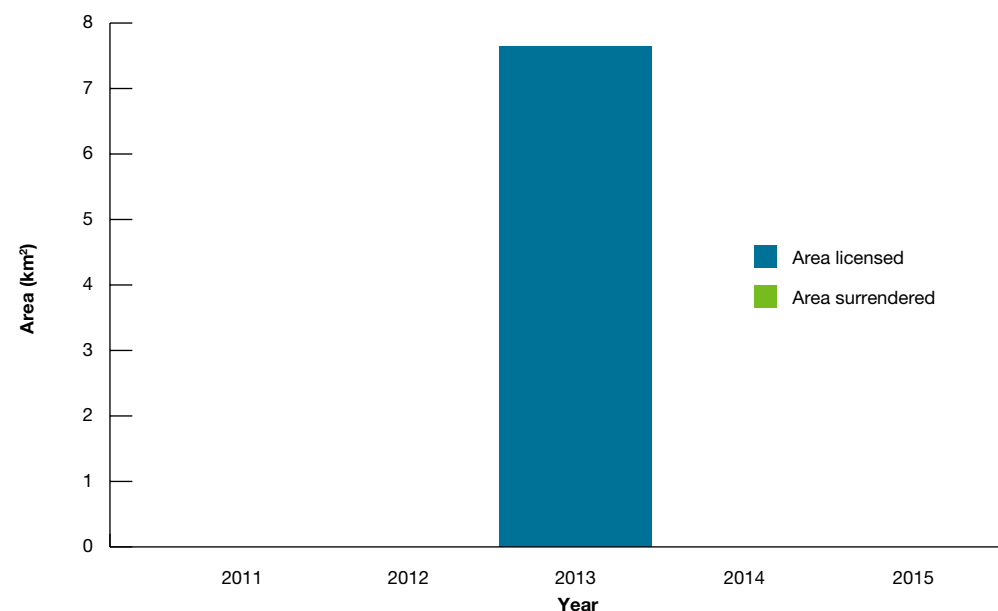
### Regional statistics

- The licensed area in the region was 113.50km<sup>2</sup>
- The total area actually available to be dredged within the region (due to zoning) was 33.57km<sup>2</sup>
- Dredging took place within 15.48km<sup>2</sup>, 13.64 per cent of the licensed area
- High intensity dredging (greater than 1 hour 15 minutes) is equal to 1.27km<sup>2</sup>, 46.60 per cent of regional dredging activity
- 90 per cent of regional dredging effort took place within 5.98km<sup>2</sup>
- During 2015, the area licensed for marine aggregate extraction remained unchanged

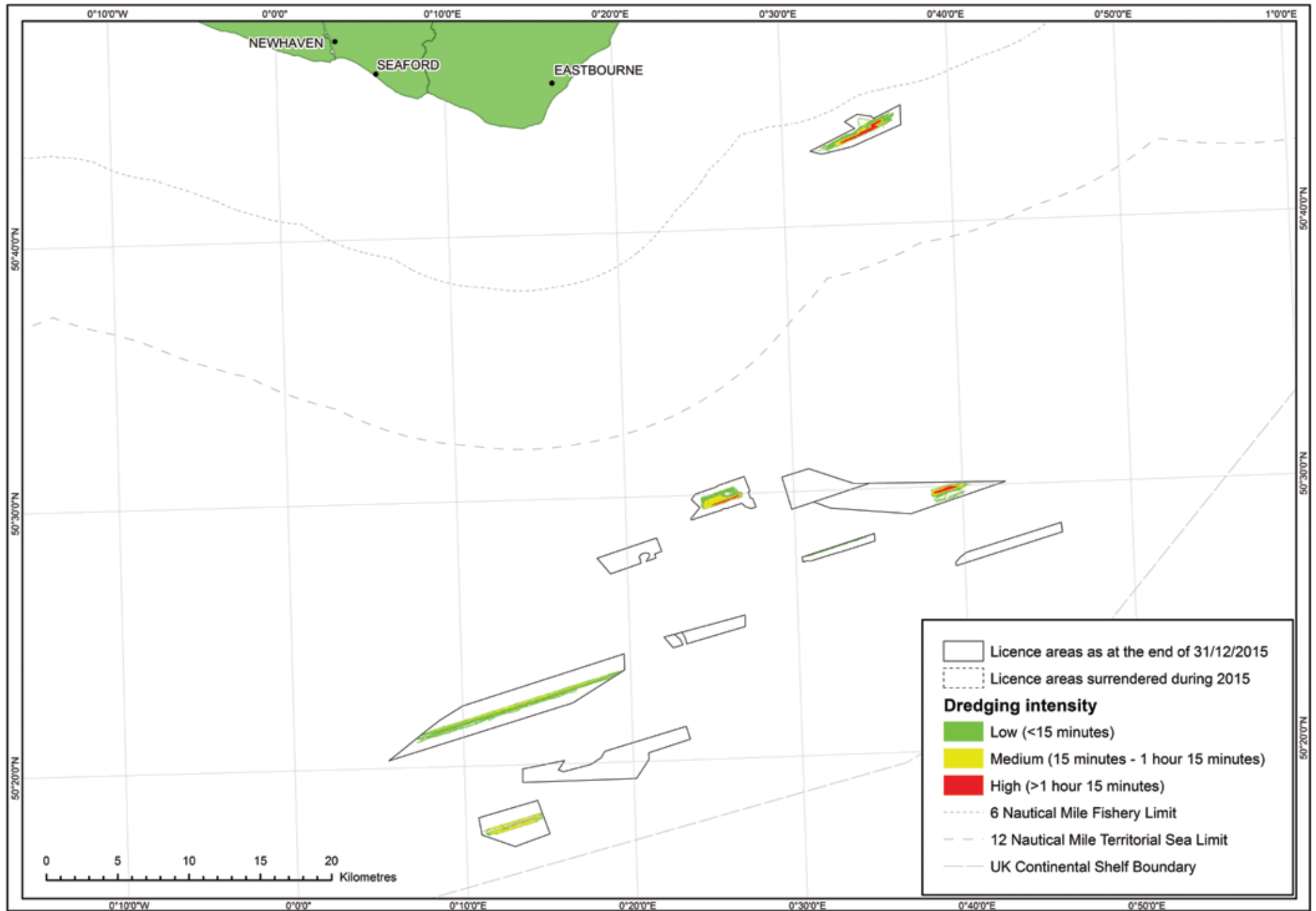
### Area of seabed licensed\* and dredged 2011-2015



### Area of seabed licensed and surrendered 2011-2015\*



\* Includes areas temporarily reduced as part of the Short Term Marine Licence process



## South Coast region

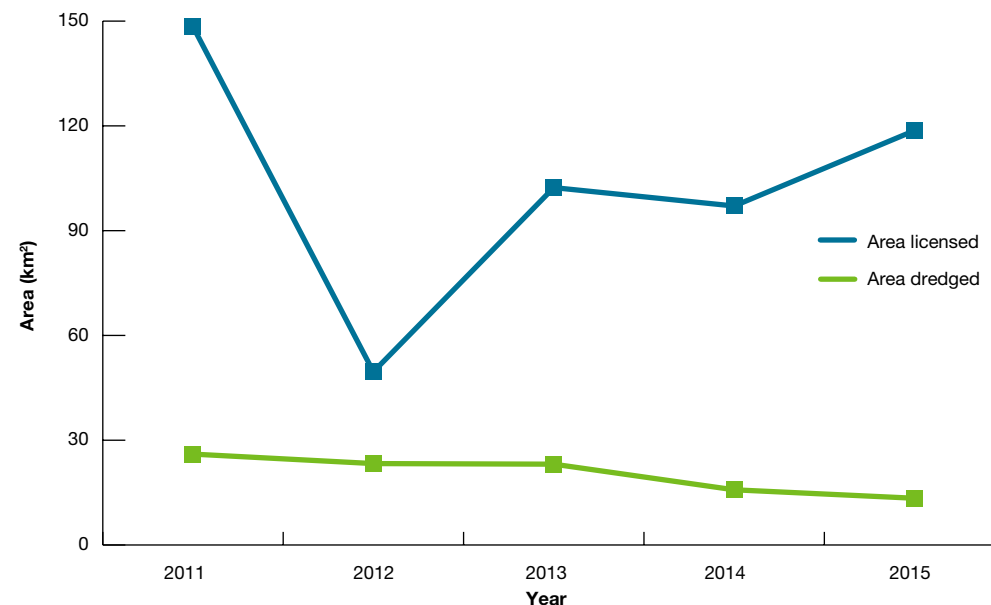
### Background

- The South Coast region has 14 production licences, operated by CEMEX UK Marine Ltd, Hanson Aggregates Marine Ltd, Kendall Bros (Portsmouth) Ltd, Northwood (Fareham) Ltd, Tarmac Marine Ltd, Volker Dredging Ltd and Westminster Gravels Ltd for sand and gravel, principally for use in the construction industry
- During 2015, 3.05 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 7.38 million. In addition 0.1 million tonnes were specifically dredged for beach nourishment
- Of the total marine aggregate dredged for construction from the region:
  - 89.6 per cent of the tonnage dredged was delivered to the South Coast (2.74m)
  - 9.9 per cent of the tonnage dredged was delivered to the Thames Estuary (0.30m)
  - 0.5 per cent of the tonnage dredged was delivered to mainland Europe (0.01m)

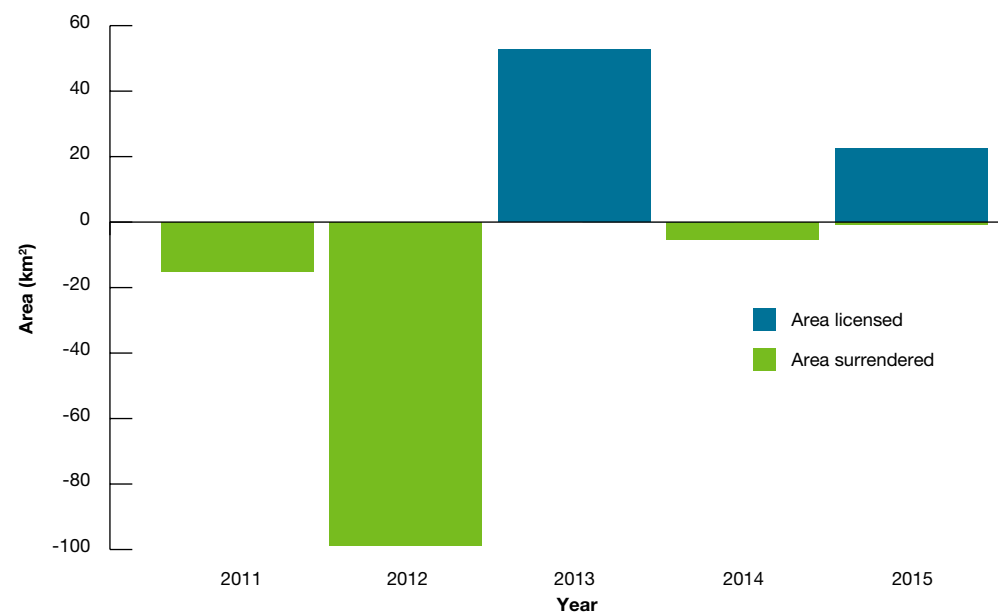
### Regional statistics

- The licensed area in the region was 118.66km<sup>2</sup>
- The total area actually available to be dredged within the region (due to zoning) was 34.10km<sup>2</sup>
- Dredging took place within 13.38km<sup>2</sup>, 11.28 per cent of the licensed area
- High intensity dredging (greater than 1 hour 15 minutes) is equal to 1.60km<sup>2</sup>, 53.04 per cent of regional dredging activity
- 90 per cent of regional dredging effort took place within 5.58km<sup>2</sup>
- During 2015, the area licensed for marine aggregate extraction increased by 21.60km<sup>2</sup>

### Area of seabed licensed\* and dredged 2011-2015

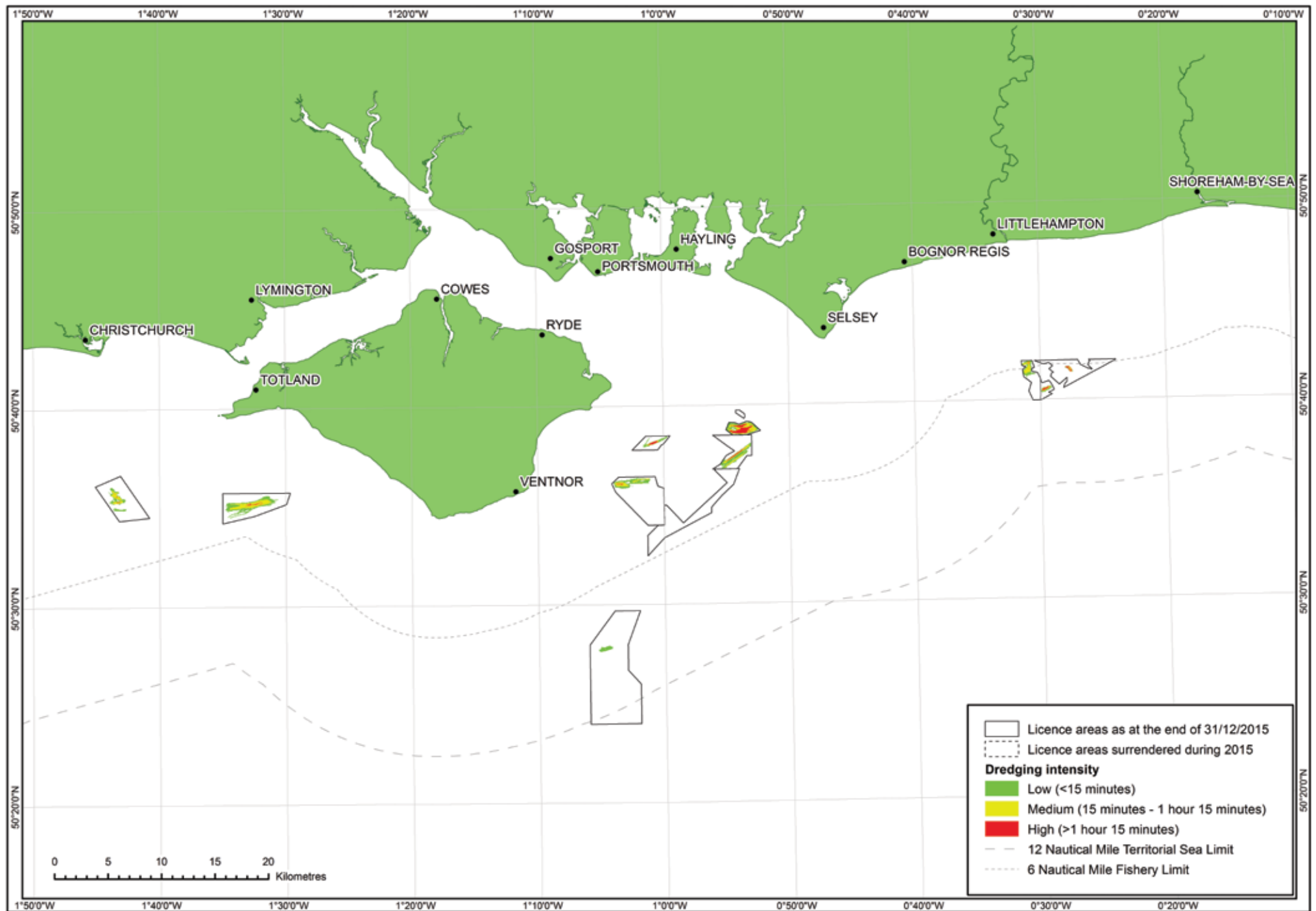


### Area of seabed licensed and surrendered 2011-2015\*



\* Includes areas temporarily reduced as part of the Short Term Marine Licence process





## South West region

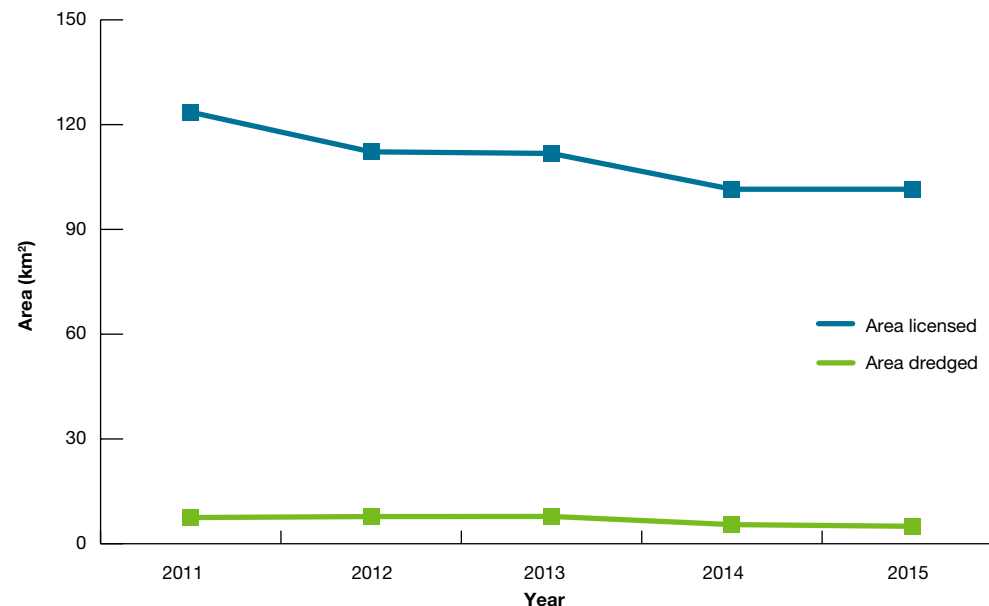
### Background

- The South West region has 7 production licences, operated by CEMEX UK Marine Ltd, Hanson Aggregates Marine Ltd, Llanelli Sand Dredging Ltd, Severn Sands Ltd and Tarmac Marine Ltd for sand, principally for use in the construction industry
- During 2015, 1.13 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 1.7 million
- Of the total marine aggregate dredged for construction from the region:
  - 99.8 per cent of the tonnage dredged was delivered to the South West (1.13m)
    - 57.2 per cent of this went to Welsh wharves (0.65m)
    - 42.8 per cent of this went to English wharves (0.48m)
  - 0.2 per cent of the tonnage dredged was delivered to the South Coast (<0.01m)

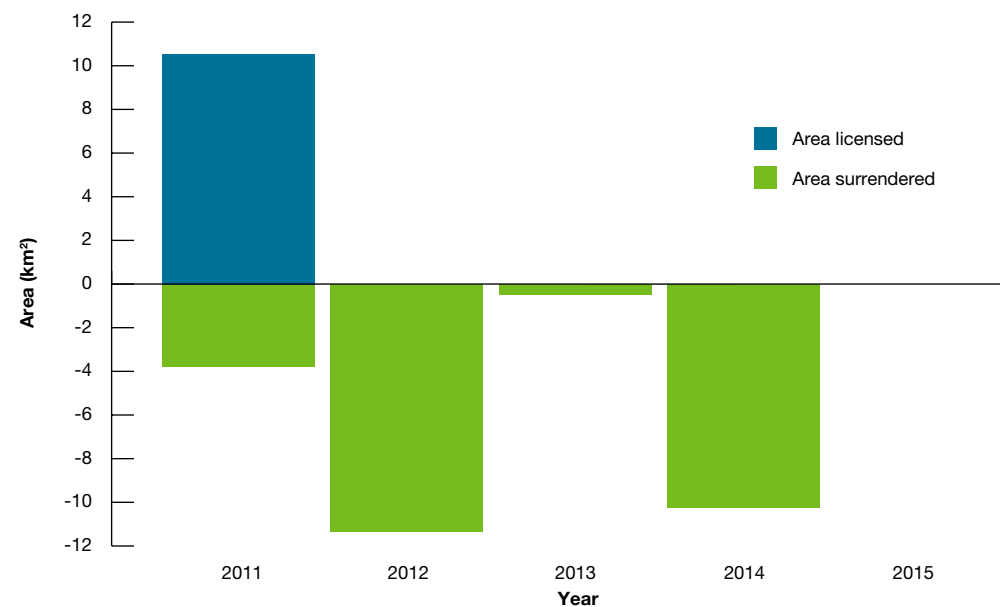
### Regional statistics

- The licensed area in the region was 101.50km<sup>2</sup>
- The total area actually available to be dredged within the region (due to zoning) was 18.90km<sup>2</sup>
- Dredging took place within 4.99km<sup>2</sup>, 4.92 per cent of the licensed area
- High intensity dredging (greater than 1 hour 15 minutes) is equal to 1.03km<sup>2</sup>, 76.80 per cent of regional dredging activity
- 90 per cent of regional dredging effort took place within 1.84km<sup>2</sup>
- During 2015, the area licensed for marine aggregate extraction remained unchanged

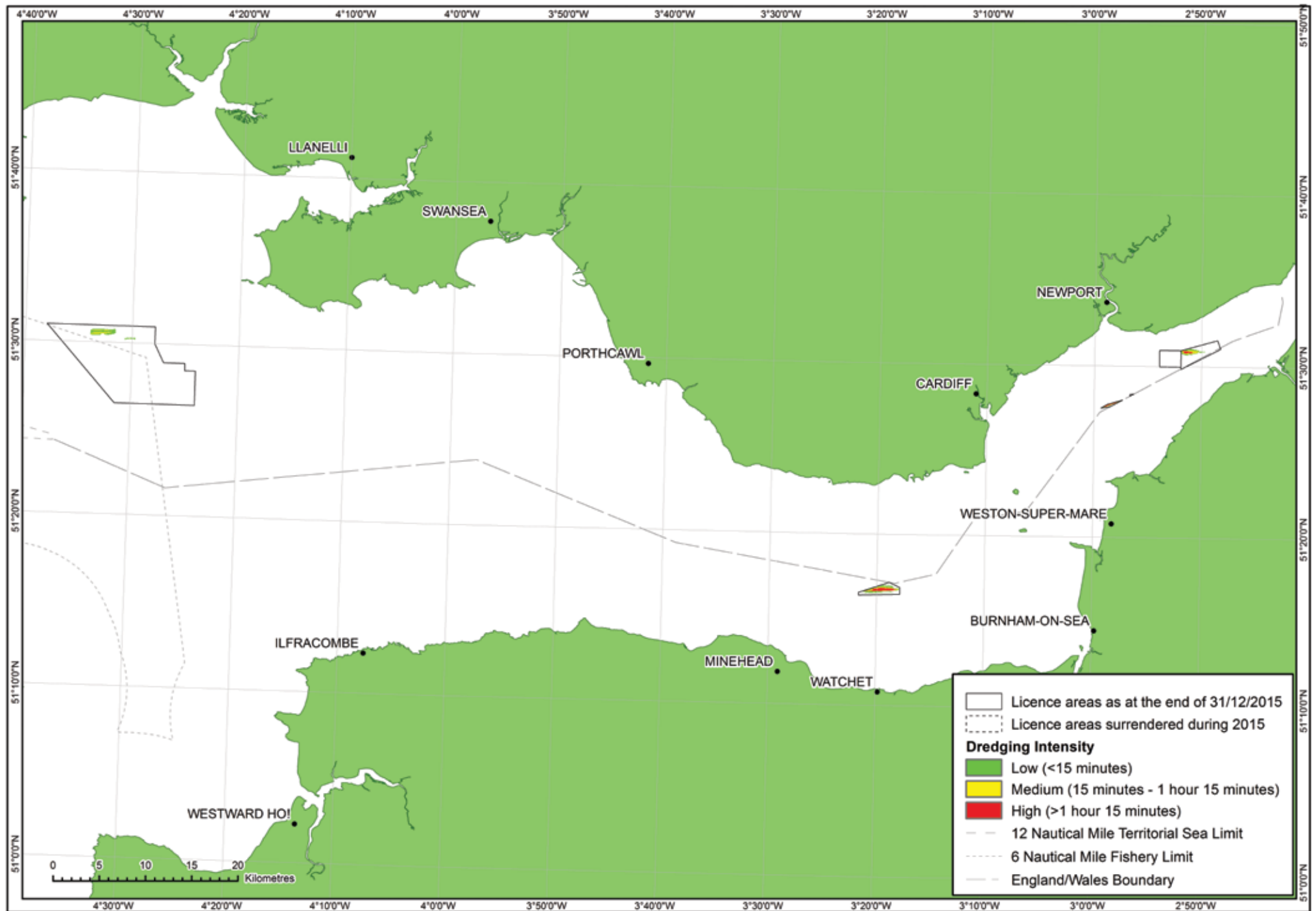
### Area of seabed licensed\* and dredged 2011-2015



### Area of seabed licensed and surrendered 2011-2015\*



\* Includes areas temporarily reduced as part of the Short Term Marine Licence process





## North West region

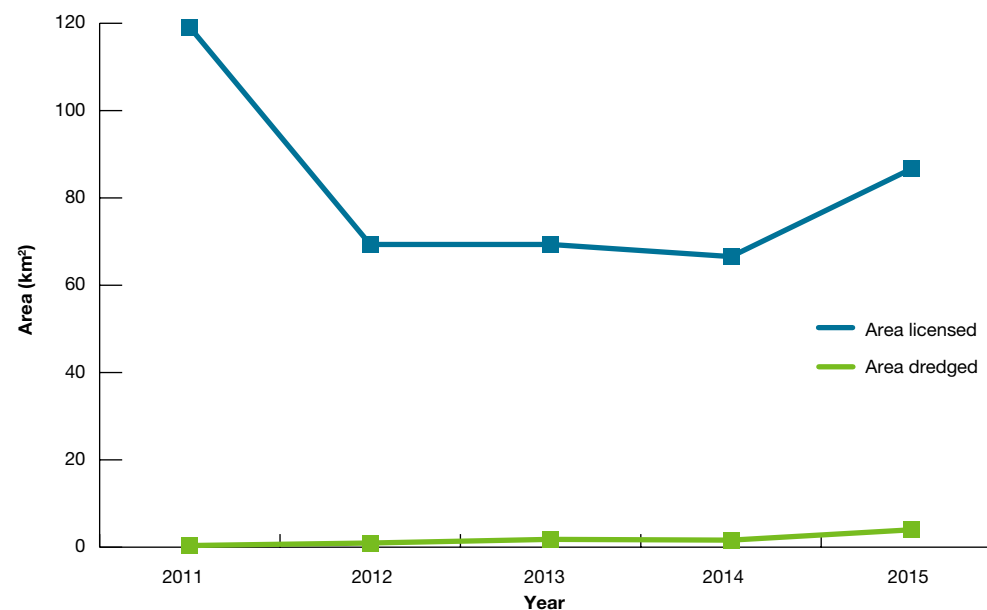
### Background

- The North West region has 3 production licences, operated by Norwest Sand and Ballast Co, Tarmac Marine Ltd and Westminster Gravels Ltd for sand, principally for use in the construction industry
- During 2015, 0.26 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 1.30 million. In addition 1.32 million tonnes were specifically dredged for reclamation
- Of the total marine aggregate dredged for construction from the region:
  - 97.0 per cent of the tonnage dredged was delivered to the North West (0.25m)
    - 85.4 per cent of this went to English wharves (0.21m)
    - 14.6 per cent of this went to Welsh wharves (0.04m)
  - 3.0 per cent of the tonnage dredged was delivered to the South West (<0.01m)
    - 100.0 per cent of this went to Welsh wharves

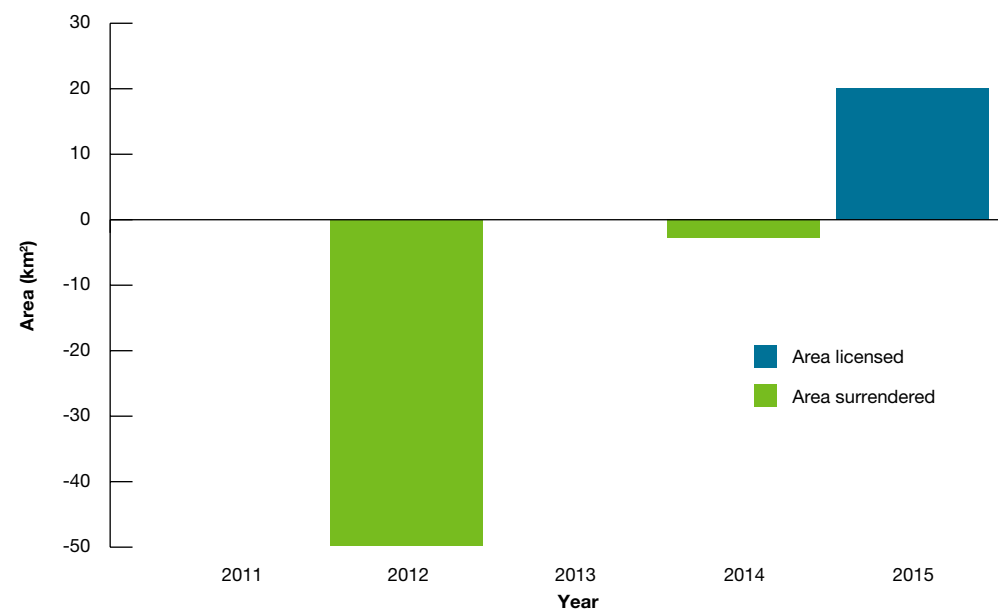
### Regional statistics

- The licensed area in the region was 86.65km<sup>2</sup>
- The total area actually available to be dredged within the region (due to zoning) was 31.81km<sup>2</sup>
- Dredging took place within 3.98km<sup>2</sup>, 4.59 per cent of the licensed area
- High intensity dredging (greater than 1 hour 15 minutes) is equal to 0.13km<sup>2</sup>, 39.17 per cent of regional dredging activity
- 90 per cent of regional dredging effort took place within 1.52km<sup>2</sup>
- During 2015, the area licensed for marine aggregate extraction increased by 20.09km<sup>2</sup>

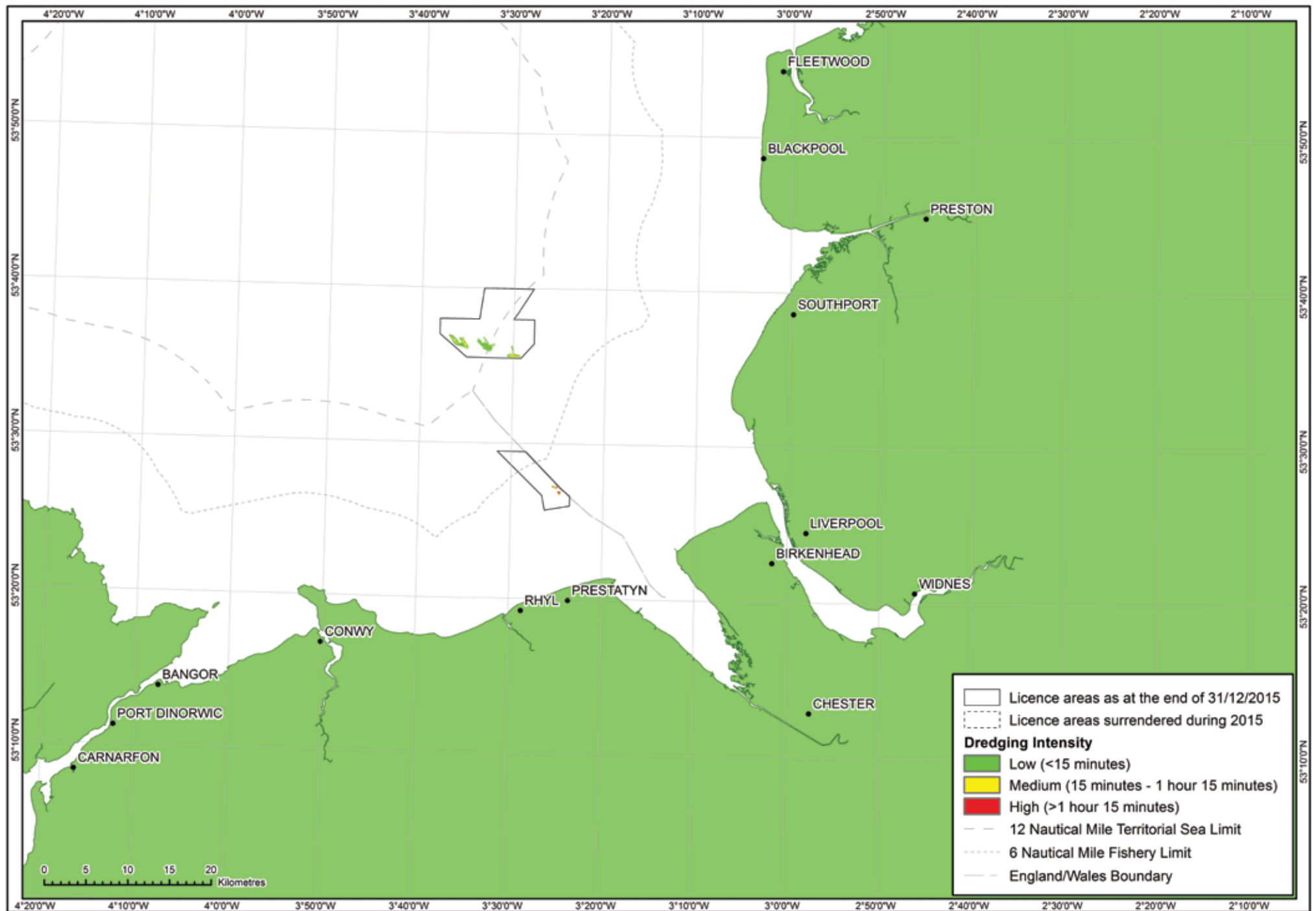
### Area of seabed licensed\* and dredged 2011-2015



### Area of seabed licensed and surrendered 2011-2015\*



\* Includes areas temporarily reduced as part of the Short Term Marine Licence process



England and Wales have one of the largest and most efficient dredging industries in the world, extracting 15 to 20 million tonnes of sand and gravel from the seabed each year for a range of uses, from building homes, to major projects such as construction of the 'Shard' and the London Aquatics centre, port developments and coastal adaptation.

**The Crown Estate** owns almost all of the sand and gravel resources lying off the coast of the UK. We take an active approach to managing this natural asset effectively and sustainably to deliver value over the long term, including awarding and managing commercial agreements for extraction. We also award and manage leases for the extraction of other minerals such as potash from undersea deposits that extend several kilometres offshore.

Marine aggregates have been playing an increasingly important role in the building industry since the 1960s and today meet about 20 per cent of sand and gravel demand in England and Wales.

**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 aggregate industry operates an average of 23 vessels on 63 production licences around the UK as of June 2016.

BMAPA membership (as of June 2016) is comprised of: Britannia Aggregates, Brett Group, CEMEX UK Marine, DEME Building Materials, Hanson Aggregates Marine, Northwood (Fareham), Norwest Sand & Ballast Co, Sea Aggregates, Tarmac Marine and Volker Dredging.



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ISBN: 978-1-906410-70-4