

The area involved – **16th** annual report

THE CROWN
ESTATE

mpa
essential materials
sustainable solutions
bmapa



MARINE AGGREGATE EXTRACTION **2013**



Contents

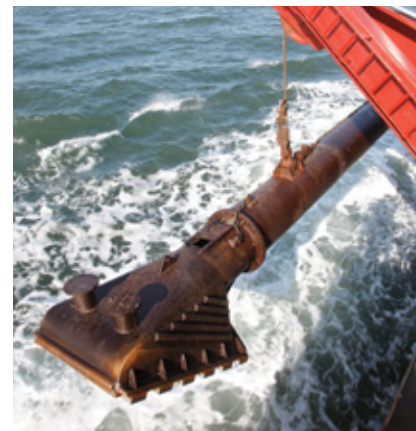
01:	Introduction Summary information
02-03:	Summary statistics for 2013
04-05:	Humber region
06-07:	East Coast region
08-09:	Thames Estuary region
10-11:	East English Channel region
12-13:	South Coast region
14-15:	South West region
16-17:	North West region
Back page:	The Crown Estate and BMAPA

© Crown copyright (2014)

Published by The Crown Estate and the British Marine Aggregate Producers Association

This publication (excluding the logos) may be re-used free of charge in any format or medium. It may only be re-used accurately and not in a misleading context. The material must be acknowledged as Crown copyright and use of it must give the title of the source publication. Where third-party copyright has been identified, further use of that material requires permission from the copyright holders concerned.

ISBN: 978-1-906410-58-2



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 sixteenth 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 2013 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 2013. 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 continued large reduction in the area of seabed licensed described in this year's report is largely the result of this condition being imposed on the older dredging areas, and is likely to be mostly reversed following successful applications for 15 year full term renewals during 2014 and 2015.

Summary information

- A total of 16.03 million tonnes of sand and gravel were dredged from Crown Estate licences in England and Wales during 2013 (16.79 million tonnes in 2012)
- The total area of seabed licensed in 2013 increased to 739km² (711km² in 2012)
- Dredging took place within 98.67km², 13.35 per cent of the licensed area, compared with 96.72km² (13.6 per cent) in 2012
- The area of seabed dredged for more than 1 hr 15 minutes per year (high intensity – red on charts) decreased to 6.75km² (8.41km² in 2012)
- 90 per cent of dredging from Crown Estate licences took place from an area of 39.2km² (36.42km² in 2012).





Summary statistics for 2013

Region	Total area licensed during 2013 (km ²)	Total active dredge area for 2013 (km ²) ^{*1}	Total area dredged during 2013 (km ²)
Humber	163.46	82.67	18.21
East Coast	152.89	108.11	28.18
Thames	25.82	22.87	4.24
East English Channel	113.5	33.64	15.29
South Coast	102.32	42.27	23.14
South West	111.75	29.91	7.82
North West	69.34	12.72	1.79
Total (km²)^{*2}	739.08	332.19	98.67

Area of seabed licensed increased by 28km² during 2013^{*3}

Area of seabed licensed (km²) 2009-2013

Year ^{*4}	2009	2010	2011	2012	2013
0-6nm ^{*5}	376	363	346	192	203
6-12nm ^{*5}	462	447	447	191	233
>12nm ^{*5}	448	481	481	328	303
Total area licensed (km²)	1286	1291	1274	711^{*3}	739^{*3}
Total active dredge area (km²)	536	552	567	391	332

Area of seabed dredged increased by 2km² during 2013

Area of seabed dredged (km²) 2009-2013

Year	2009	2010	2011	2012	2013
0-6nm ^{*5}	61	44	53	42	42
6-12nm ^{*5}	37	38	36	32	31
>12nm ^{*5}	26	23	25	23	26
Total (km²)	124	105	114	97	99
Area dredged >1 hr 15 mins (km²)	6.83	6.83	8.52	8.41	6.75
90 per cent of dredging (area in km²)	43.45	37.63	43.26	36.42	39.2

^{*1} Total area actually available to be dredged during 2013, calculated on a cumulative basis

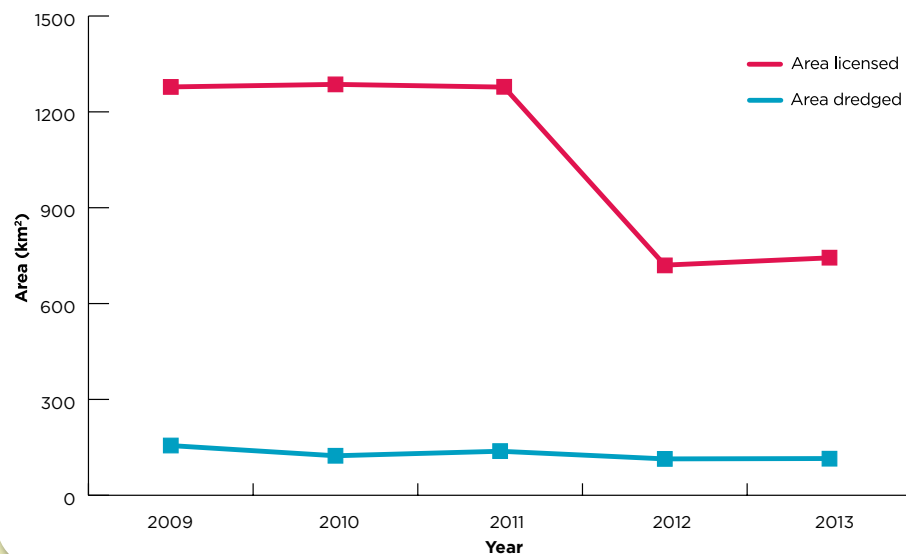
^{*2} Totals are rounded from the correct total rather than a summation of the regional figures

^{*3} This large decrease from the 2011 figure in the area licensed is primarily a result of the Short Term Marine Licensing process during 2012, the effect of which is expected to be a two year temporary situation

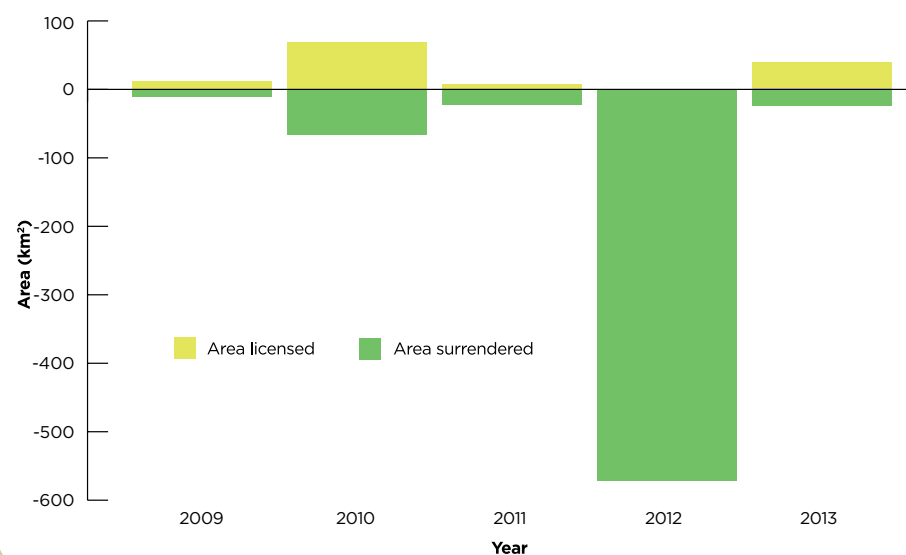
^{*4} Annual figures are calculated as of end of the 31st December, and therefore incorporate any changes that may have occurred through the year

^{*5} 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 2009-2013



New area licensed versus existing area surrendered 2009-2013



Humber region

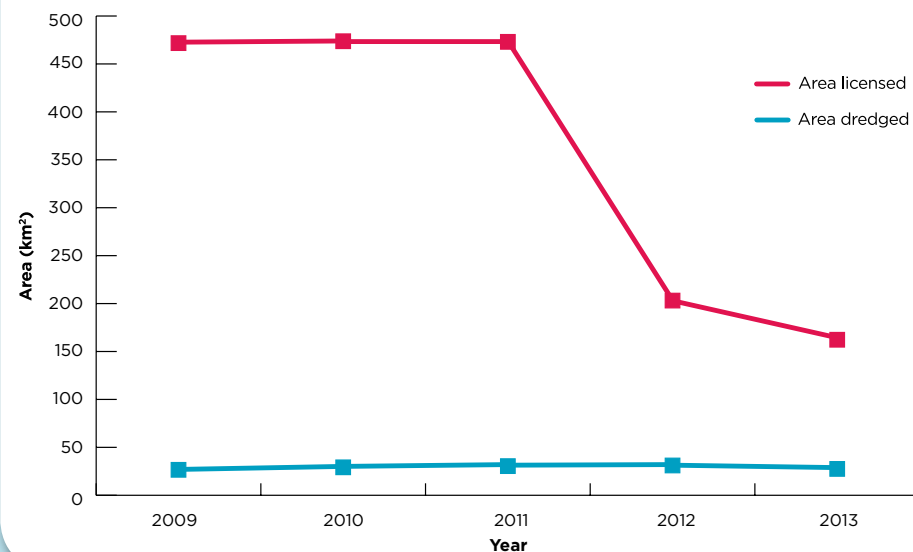
Background

- The Humber region has 9 production licences, operated by CEMEX UK Marine Ltd, Hanson Aggregates Marine Ltd, Lafarge Tarmac Marine Ltd, Van Oord UK Ltd and Westminster Gravels Ltd for both sand and gravel, principally for use in the construction industry
- During 2013, 1.53 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 4.80 million. In addition 0.61 million tonnes were specifically dredged for beach nourishment
- Of the total marine aggregate dredged for construction from the region:
 - 61.20 per cent of the tonnage dredged was delivered to mainland Europe (0.94m)
 - 26.21 per cent of the tonnage dredged was delivered to the Humber and North East (0.40m)
 - 12.59 per cent of the tonnage dredged was delivered to the Thames Estuary (0.19m)

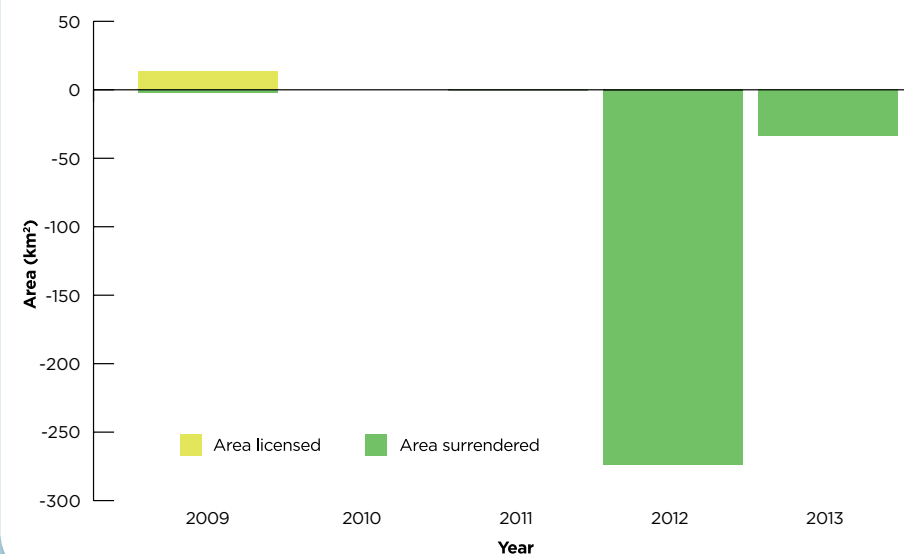
Regional Statistics

- The licensed area in the region was 163.46km²
- The total area actually available to be dredged within the region was 82.67km²
- Dredging took place within 18.21km², 11.14 per cent of the licensed area
- High intensity dredging (greater than 1 hour 15 minutes) is equal to 0.49km², representing 34.50 per cent of regional dredging activity
- 90 per cent of regional dredging effort took place within 7.77km²
- During 2013, the area licensed for marine aggregate extraction decreased by 31.51km²

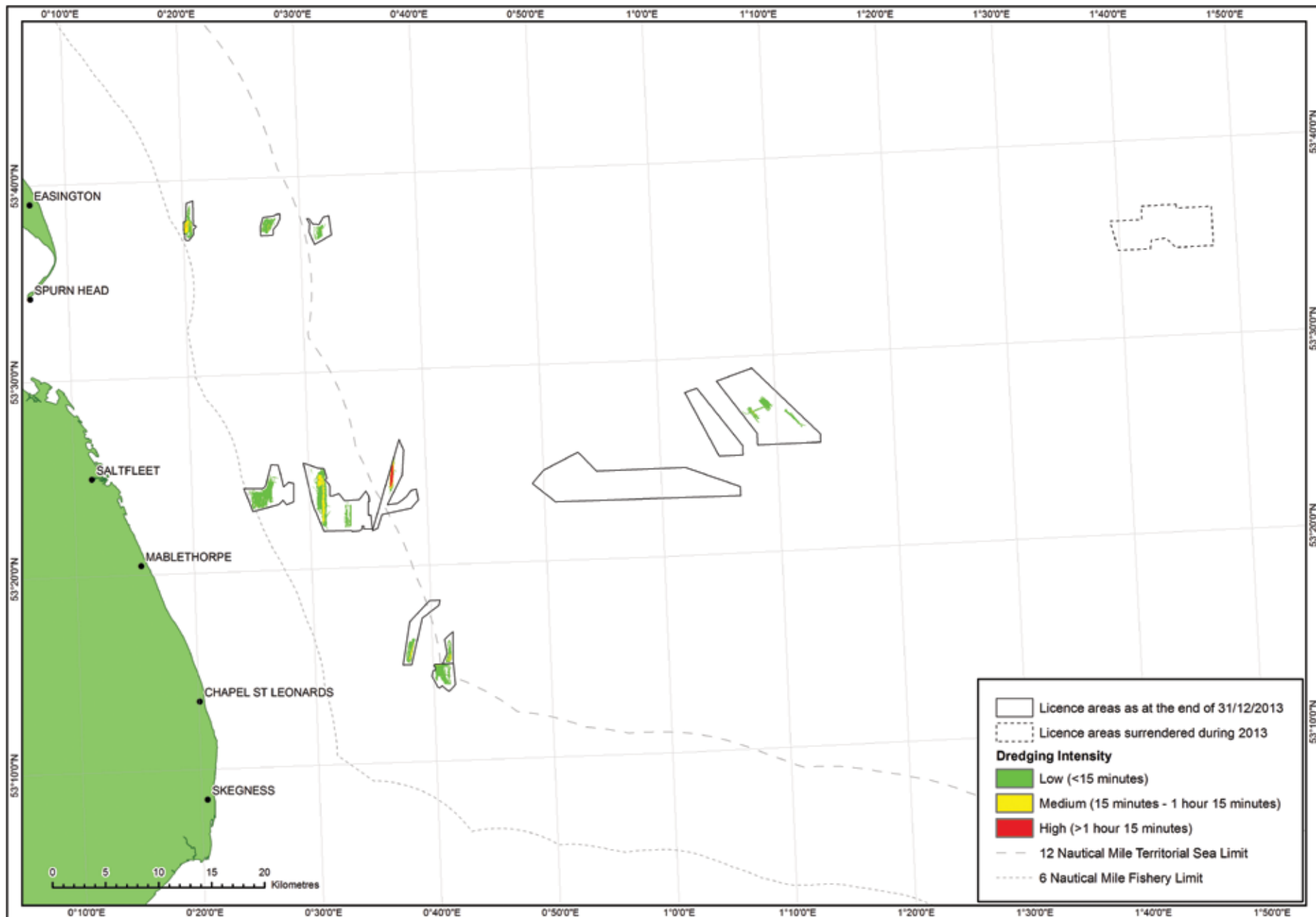
Area of seabed licensed* and dredged



Area of seabed licensed and surrendered



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



East Coast region

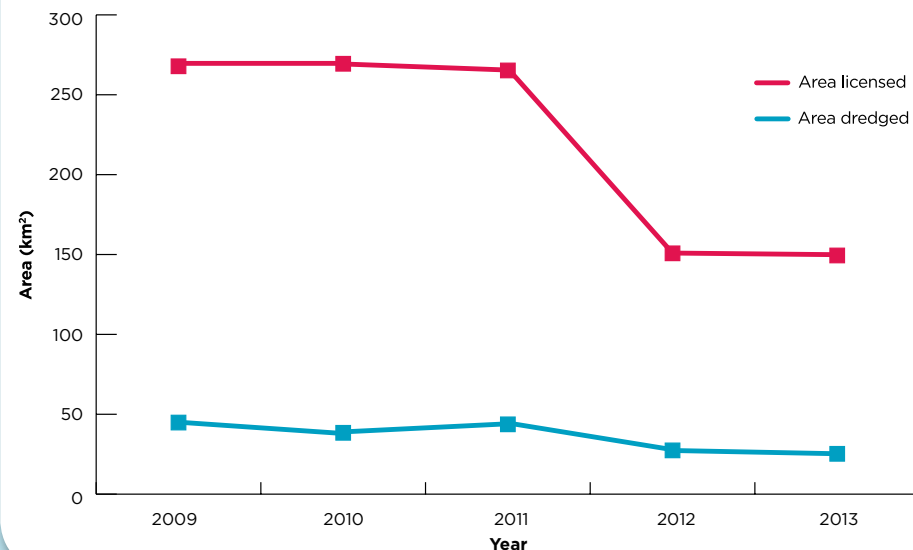
Background

- The East Coast region has 13 production licences, operated by CEMEX UK Marine Ltd, Hanson Aggregates Marine Ltd, Lafarge Tarmac Marine Ltd and Volker Dredging Ltd for both sand and gravel, principally for use in the construction industry
- During 2013, 4.25 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 9.7 million
- Of the total marine aggregate dredged for construction from the region:
 - 67.15 per cent of the tonnage dredged was delivered to the Thames Estuary (2.85m)
 - 30.51 per cent of the tonnage dredged was delivered to mainland Europe (1.30m)
 - 1.95 per cent of the tonnage dredged was delivered to the North East and Humber (0.08m)
 - 0.17 per cent of the tonnage dredged was delivered to the East English Channel (0.01m)
 - 0.11 per cent of the tonnage dredged was delivered to the East Coast (0.004m)
 - 0.11 per cent of the tonnage dredged was delivered to the South Coast (0.004m)

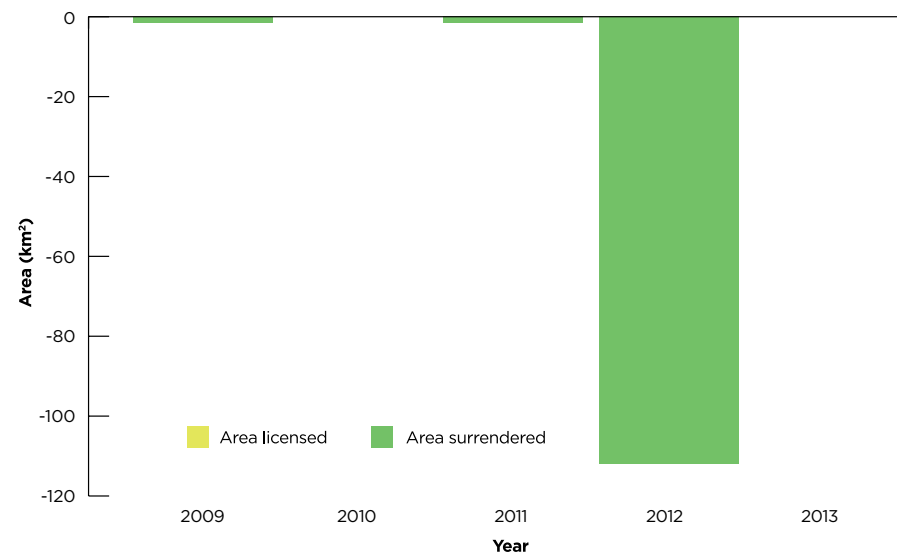
Regional Statistics

- The licensed area in the region was 152.89km²
- The total area actually available to be dredged within the region was 108.11km²
- Dredging took place within 28.18km², 18.43 per cent of the licensed area
- High intensity dredging (greater than 1 hour 15 minutes) is equal to 1.82km², representing 50.76 per cent of regional dredging activity
- 90 per cent of regional dredging effort took place within 10.97km²
- During 2013, the area licensed for marine aggregate extraction remained unchanged

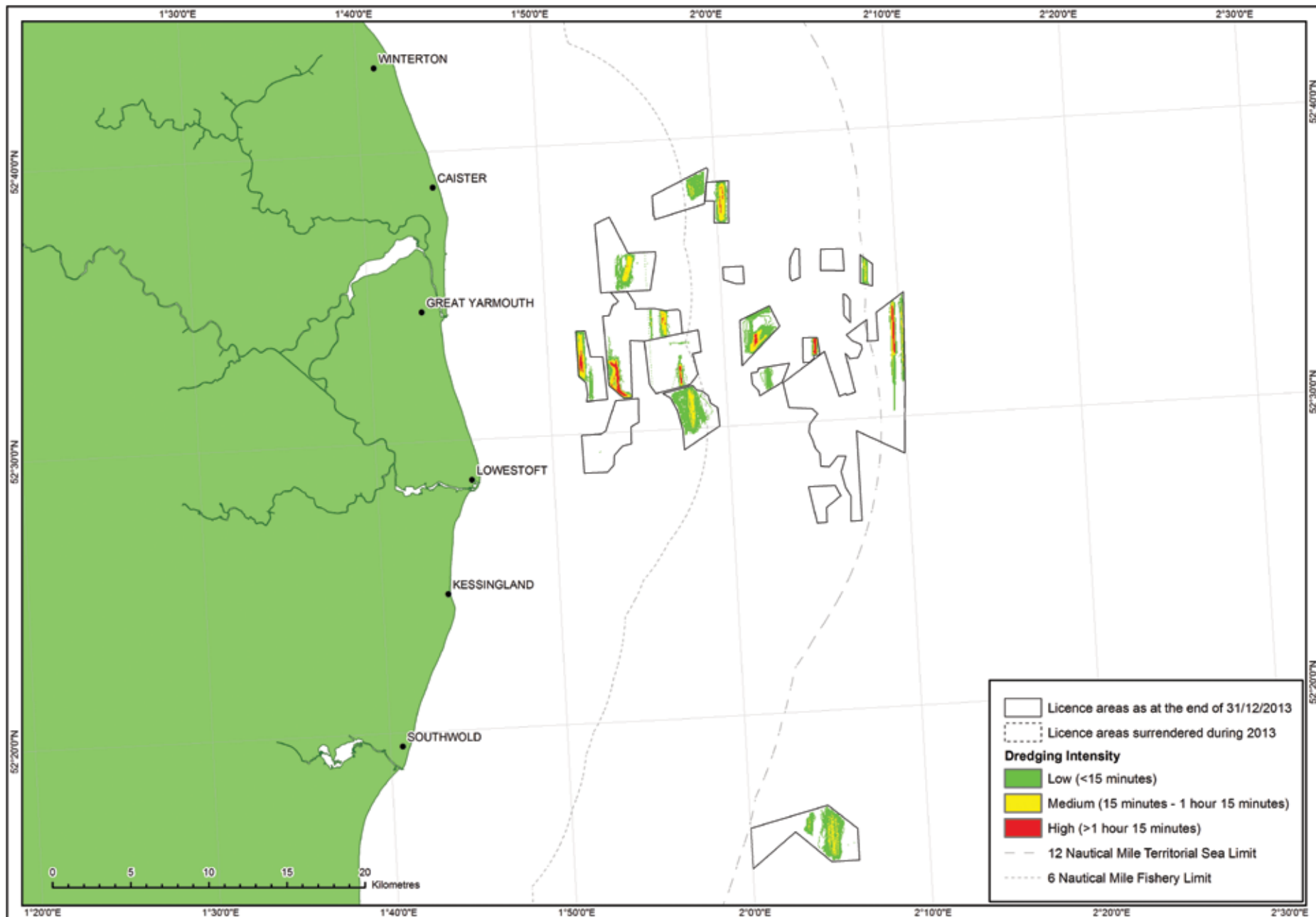
Area of seabed licensed* and dredged



Area of seabed licensed and surrendered



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



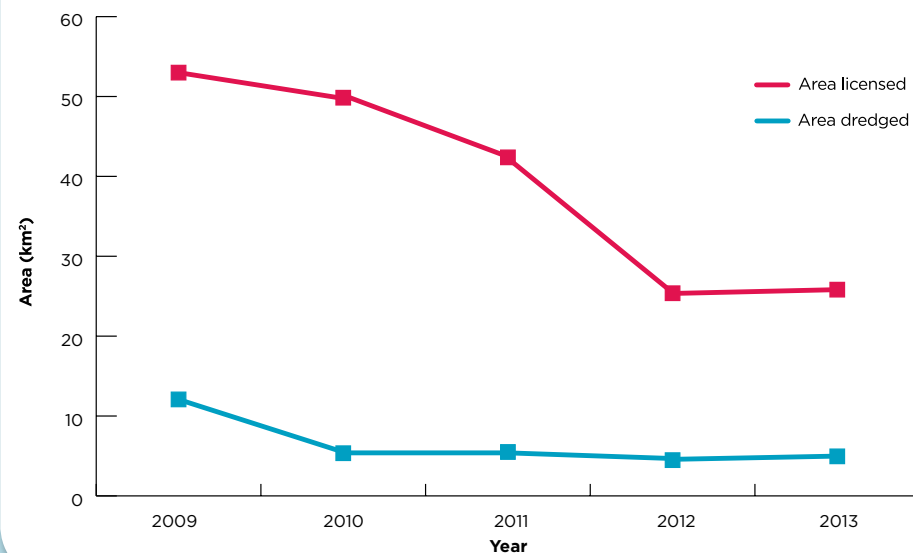
Thames Estuary region

- The Thames Estuary region has 4 production licences, operated by Britannia Aggregates Ltd, CEMEX UK Marine Ltd, Hanson Aggregates Marine Ltd and Lafarge Tarmac Marine Ltd for both sand and gravel, principally for use in the construction industry
- During 2013, 0.74 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 1.36 million. In addition 0.05 million tonnes were specifically dredged for the London Array offshore windfarm project
- Of the total marine aggregate dredged for construction from the Thames Estuary region:
 - 96.99 per cent of the tonnage dredged was delivered to the Thames Estuary (0.72m)
 - 2.53 per cent of the tonnage dredged was delivered to the Humber and North East (0.02m)
 - 0.48 per cent of the tonnage dredged was delivered to the South Coast (0.003m)

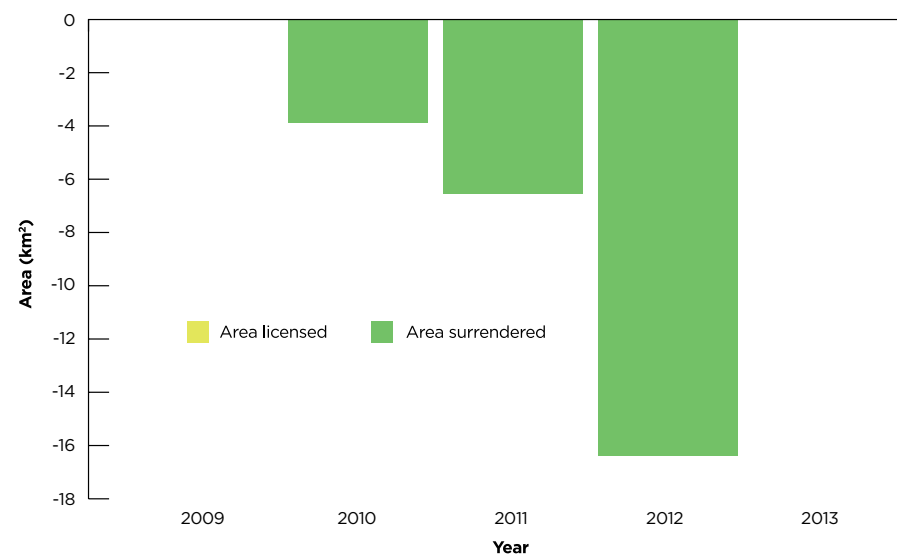
Regional Statistics

- The licensed area in the region was 25.82km²
- The total area actually available to be dredged within the region was 22.87km²
- Dredging took place within 4.24km², 16.42 per cent of the licensed area
- High intensity dredging (greater than 1 hour 15 minutes) is equal to 0.30km², representing 39.85 per cent of regional dredging activity
- 90 per cent of regional dredging effort took place within 1.58km²
- During 2013, the area licensed for marine aggregate extraction remained unchanged

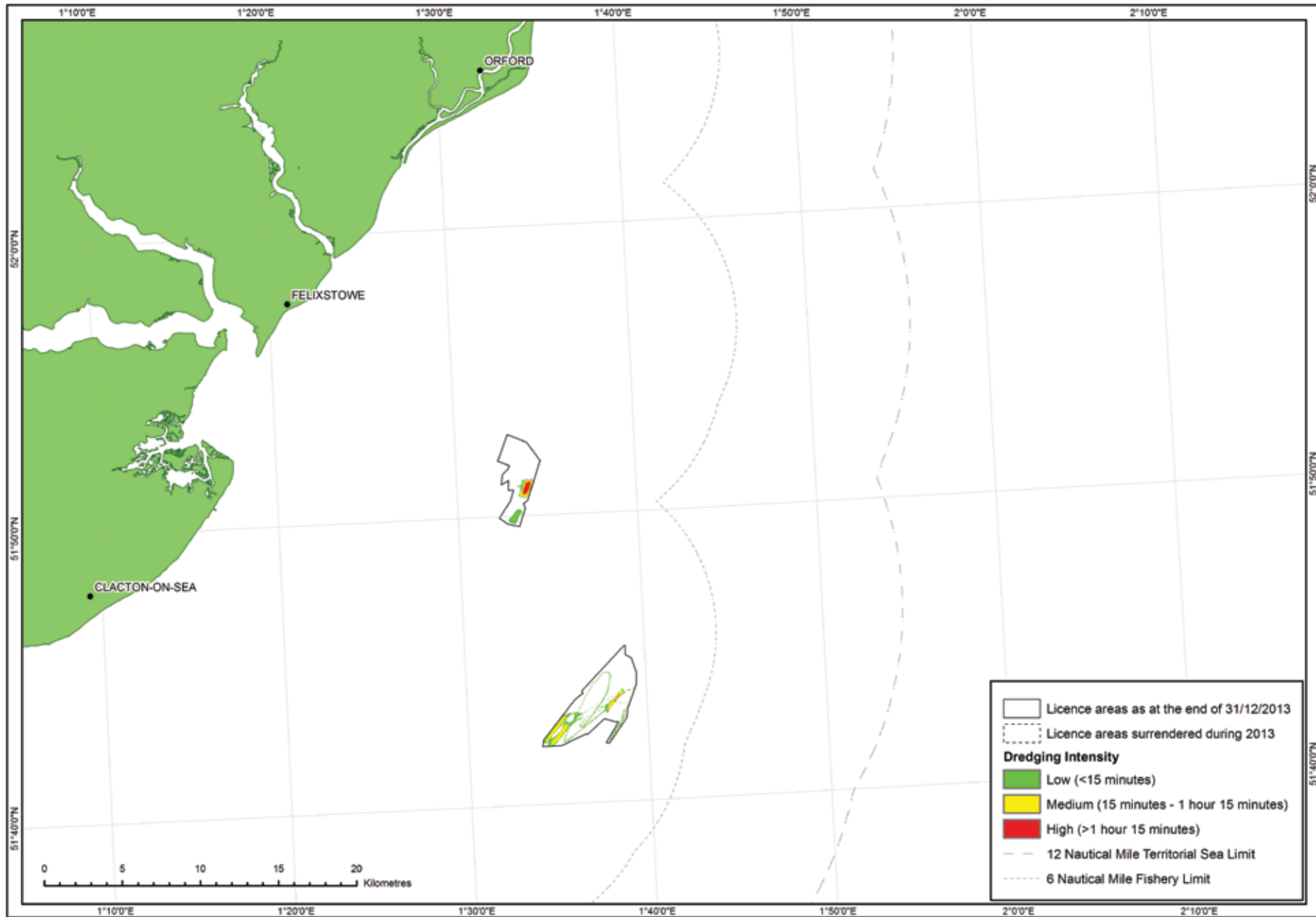
Area of seabed licensed* and dredged



Area of seabed licensed and surrendered



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



East English Channel region

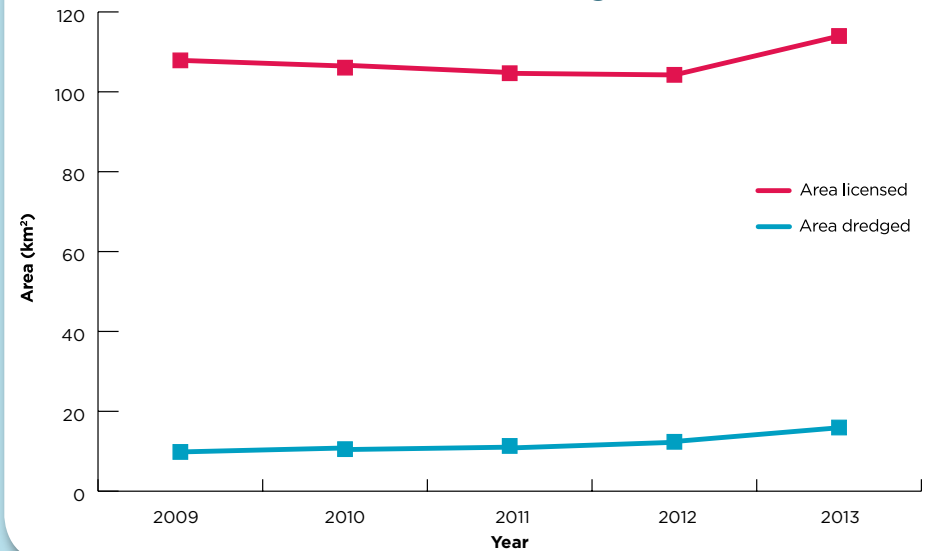
Background

- The East English Channel region has 11 production licences, operated by CEMEX UK Marine Ltd, DEME Building Materials Ltd, Hanson Aggregates Marine Ltd, Lafarge Tarmac Marine Ltd and Volker Dredging Ltd for sand and gravel, principally for use in the construction industry
- During 2013, 3.40 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 9.80 million.
- Of the total marine aggregate dredged for construction from the East English Channel region:
 - 56.28 per cent of the tonnage dredged was delivered to the Thames Estuary (1.91m)
 - 39.14 per cent of the tonnage dredged was delivered to mainland Europe (1.33m)
 - 3.14 per cent of the tonnage dredged was delivered to the South Coast (0.11m)
 - 1.17 per cent of the tonnage dredged was delivered to the East English Channel (0.04m)
 - 0.27 per cent of the tonnage dredged was delivered to the East Coast (0.01m)

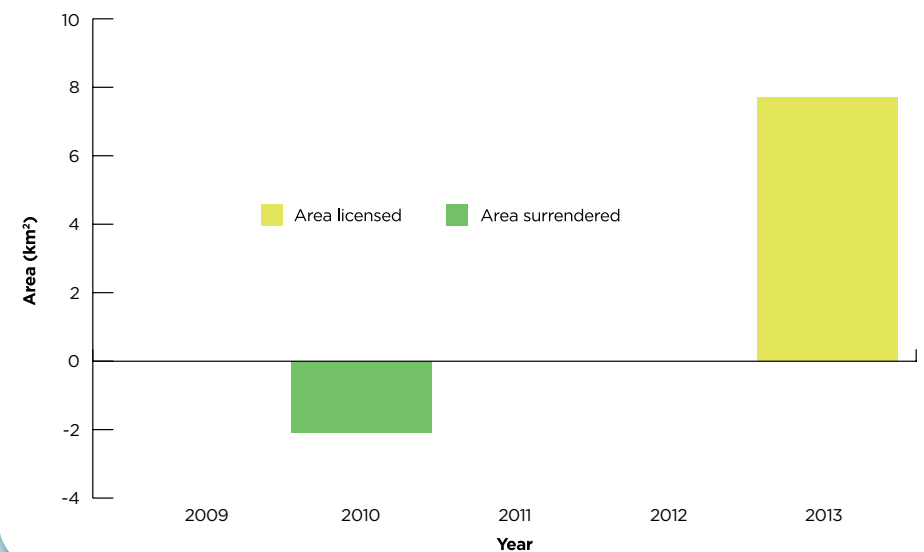
Regional Statistics

- The licensed area in the region was 113.5km²
- The total area actually available to be dredged within the region was 33.64km²
- Dredging took place within 15.29km², 13.47 per cent of the licensed area
- High intensity dredging (greater than 1 hour 15 minutes) is equal to 1.47km², representing 53.31 per cent of regional dredging activity
- 90 per cent of regional dredging effort took place within 6.19km²
- During 2013, the area licensed for marine aggregate extraction increased by 7.63m²

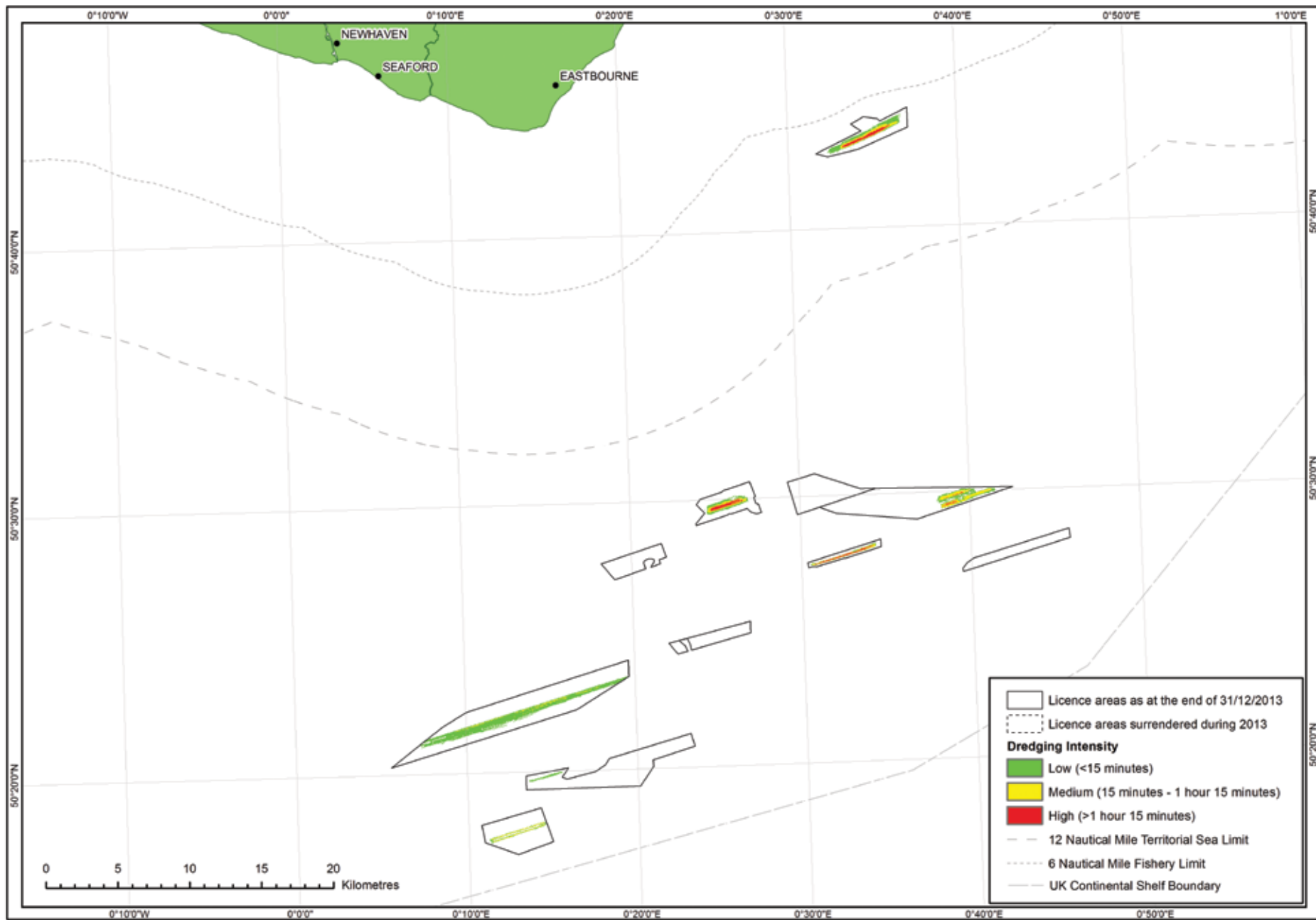
Area of seabed licensed* and dredged



Area of seabed licensed and surrendered



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



South Coast region

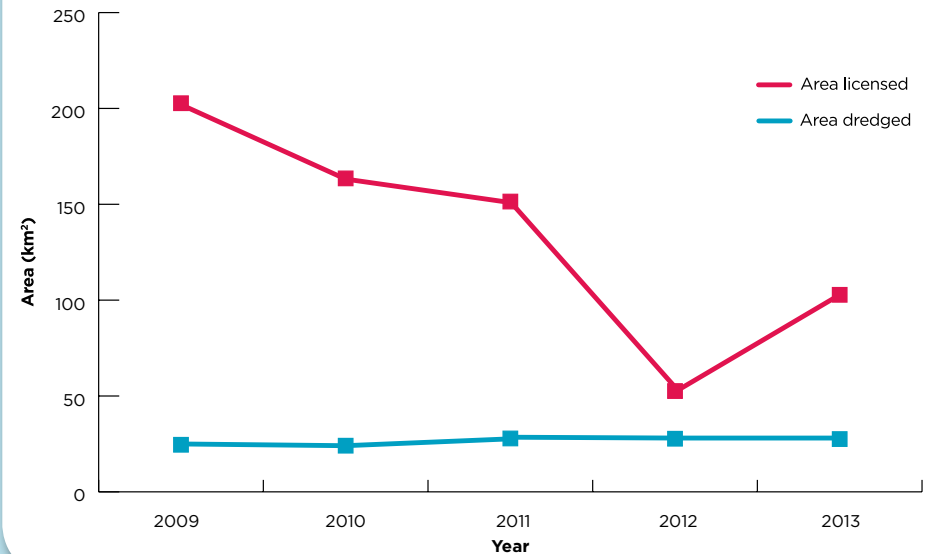
Background

- The South Coast region has 16 production licences, operated by CEMEX UK Marine Ltd, Hanson Aggregates Marine Ltd, Kendall Bros (Portsmouth) Ltd, Lafarge Tarmac Marine Ltd, Northwood (Fareham) Ltd, Volker Dredging Ltd and Westminster Gravels Ltd for sand and gravel, principally for use in the construction industry
- During 2013, 3.40 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 8.68 million. In addition 0.17 million tonnes were specifically dredged for beach nourishment
- Of the total marine aggregate dredged for construction from the South Coast region:
 - 71.3 per cent of the tonnage dredged was delivered to the South Coast (2.42m)
 - 15.50 per cent of the tonnage dredged was delivered to mainland Europe (0.53m)
 - 11.40 per cent of the tonnage dredged was delivered to the Thames Estuary (0.39m)
 - 1.38 per cent of the tonnage dredged was delivered to the East English Channel (0.05m)
 - 0.42 per cent of the tonnage dredged was delivered to the East Coast (0.01m)

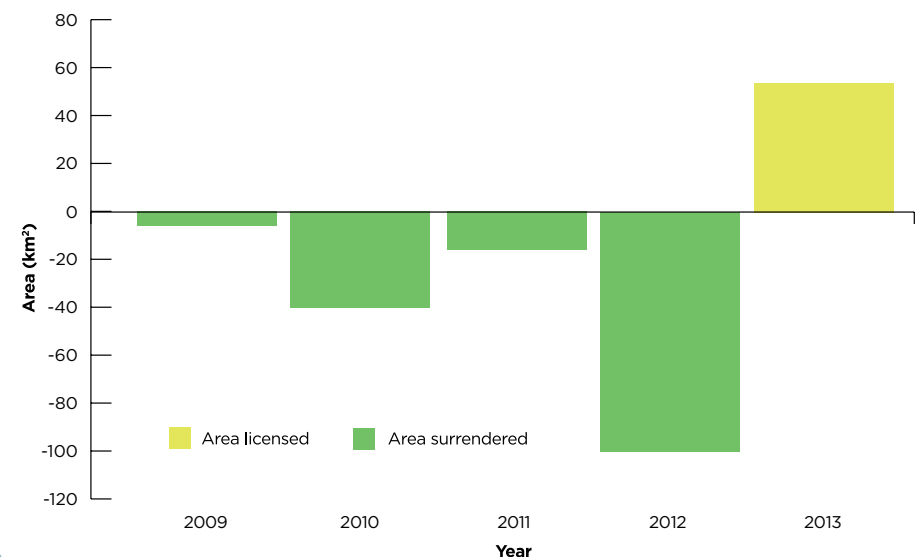
Regional Statistics

- The licensed area in the region was 102.32km²
- The total area actually available to be dredged within the region was 42.27km²
- Dredging took place within 23.14km², 22.62 per cent of the licensed area
- High intensity dredging (greater than 1 hour 15 minutes) is equal to 1.57km², representing 44.66 per cent of regional dredging activity
- 90 per cent of regional dredging effort took place within 10.53km²
- During 2013, the area licensed for marine aggregate extraction increased by 52.72km²

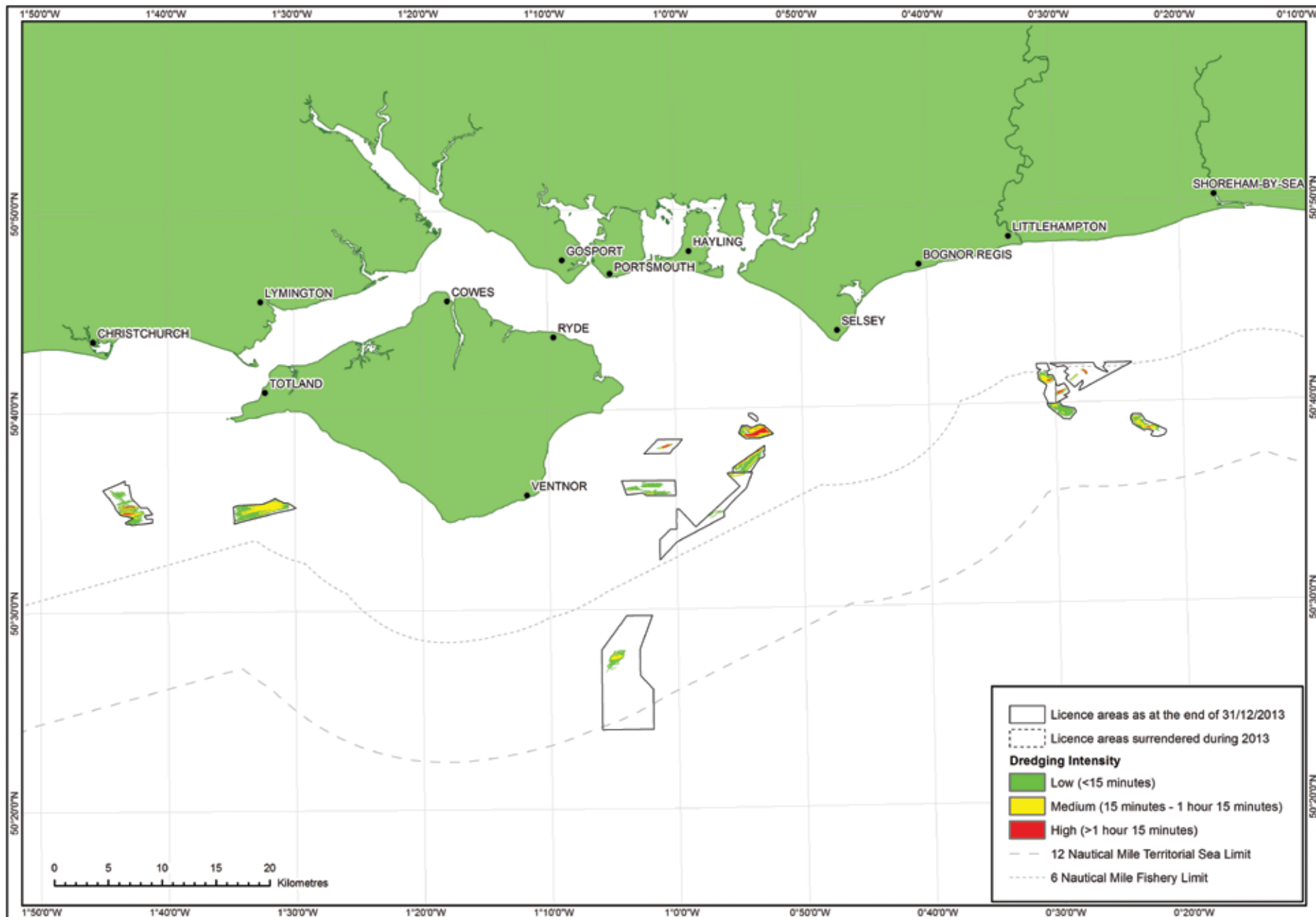
Area of seabed licensed* and dredged



Area of seabed licensed and surrendered



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



South West region

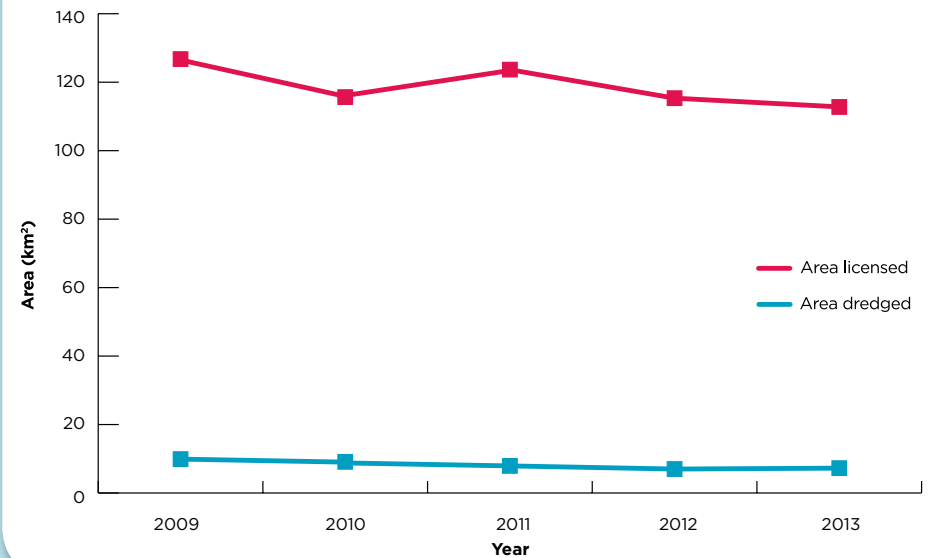
Background

- The South West region has 11 production licences, operated by CEMEX UK Marine Ltd, Hanson Aggregates Marine Ltd, Lafarge Tarmac Marine Ltd, Llanelli Sand Dredging Ltd and Severn Sands Ltd for sand, principally for use in the construction industry
- During 2013, 1.02 million tonnes of material were dredged from a permitted licensed tonnage of 2.21 million
- Of the total material dredged in the South West region:
 - 100 per cent of the tonnage dredged was delivered to the South West (1.02m)
 - 39.99 per cent of this went to English wharves (0.41m) and 60.01 per cent went to Welsh wharves (0.61m)

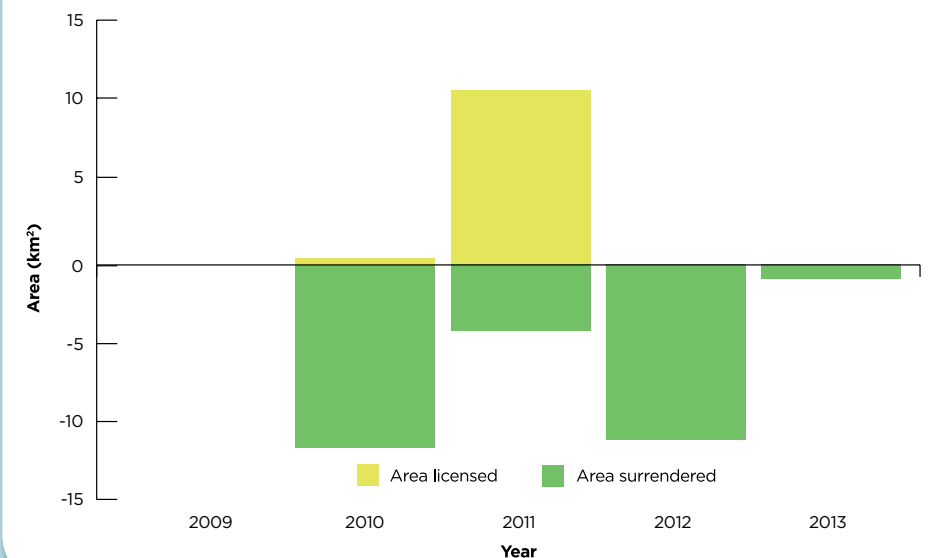
Regional Statistics

- The licensed area in the region was 111.75km²
- The total area actually available to be dredged within the region was 29.91km²
- Dredging took place within 7.82km², 7.00 per cent of the licensed area
- High intensity dredging (greater than 1 hour 15 minutes) is equal to 0.95km², representing 41.71 per cent of regional dredging activity
- 90 per cent of regional dredging effort took place within 3.22km²
- During 2013, the area licensed for marine aggregate extraction decreased by 0.46km²

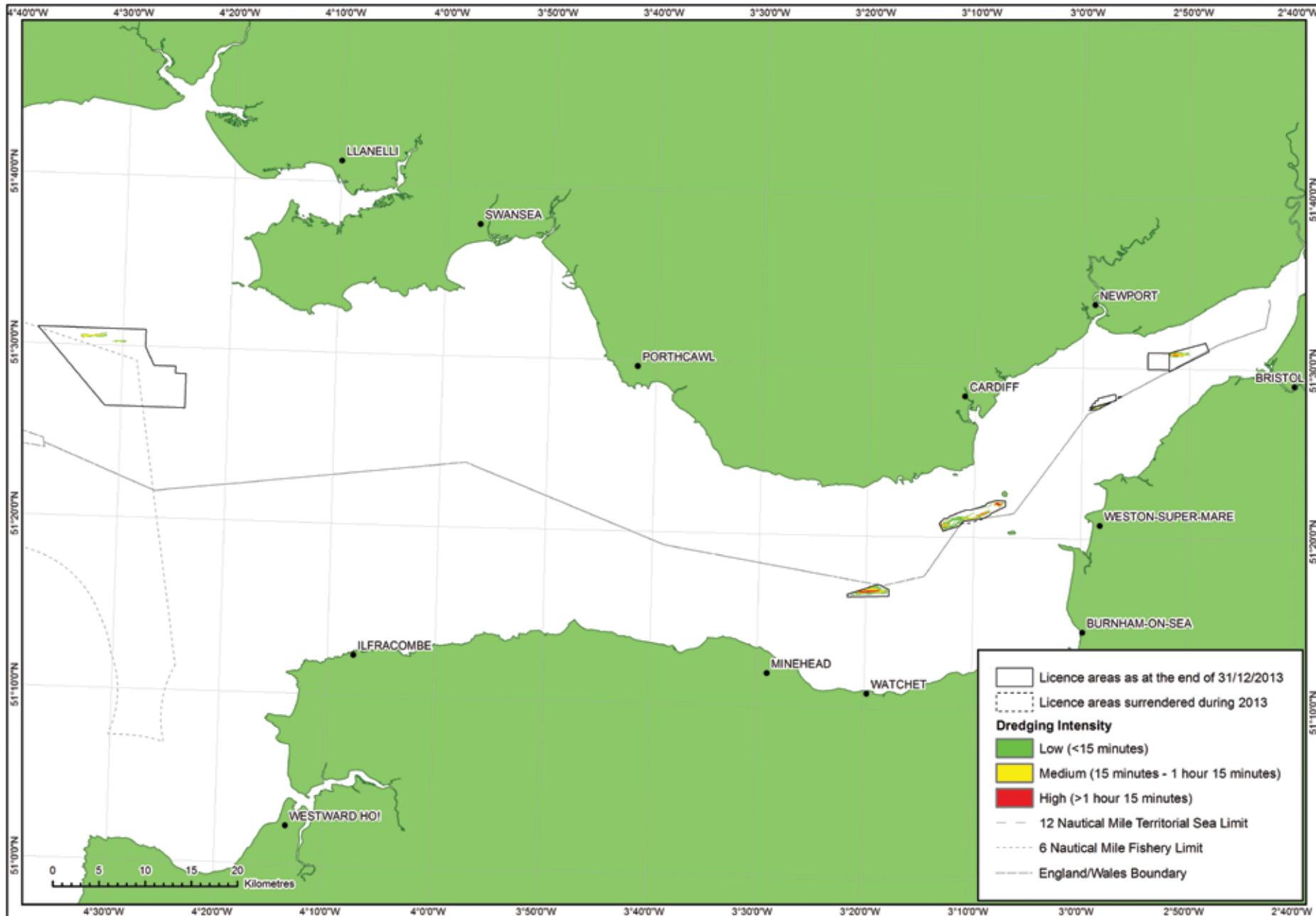
Area of seabed licensed* and dredged



Area of seabed licensed and surrendered



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



North West region

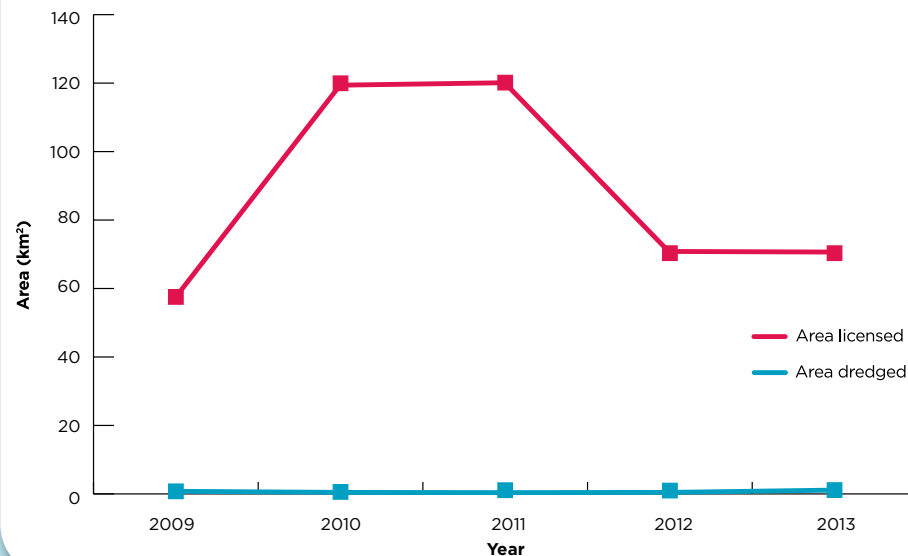
Background

- The North West region has 4 production licences, operated by Lafarge Tarmac Marine Ltd, Norwest Sand and Ballast Co and Westminster Gravels Ltd. for sand, principally for use in the construction industry
- During 2013, 0.38 million tonnes of material were dredged from a permitted licensed tonnage of 0.99 million. In addition 0.48 million tonnes were specifically dredged for beach nourishment
- Of the total material dredged in the North West region:
 - 97.46 per cent of the tonnage dredged was delivered to the North West (0.37m). Of this 0.32m went to English wharves and 0.05m went to Welsh wharves
 - 2.54 per cent of the tonnage dredged was delivered to the South West (Wales) (0.01m)

Regional Statistics

- The licensed area in the region was 69.34km²
- The total area actually available to be dredged within the region was 12.72km²
- Dredging took place within 1.79km², 2.58 per cent of the licensed area
- High intensity dredging (greater than 1 hour 15 minutes) is equal to 0.17km², representing 71.18 per cent of regional dredging activity
- 90 per cent of regional dredging effort took place within 0.55km²
- During 2013, the area licensed for marine aggregate extraction remained unchanged

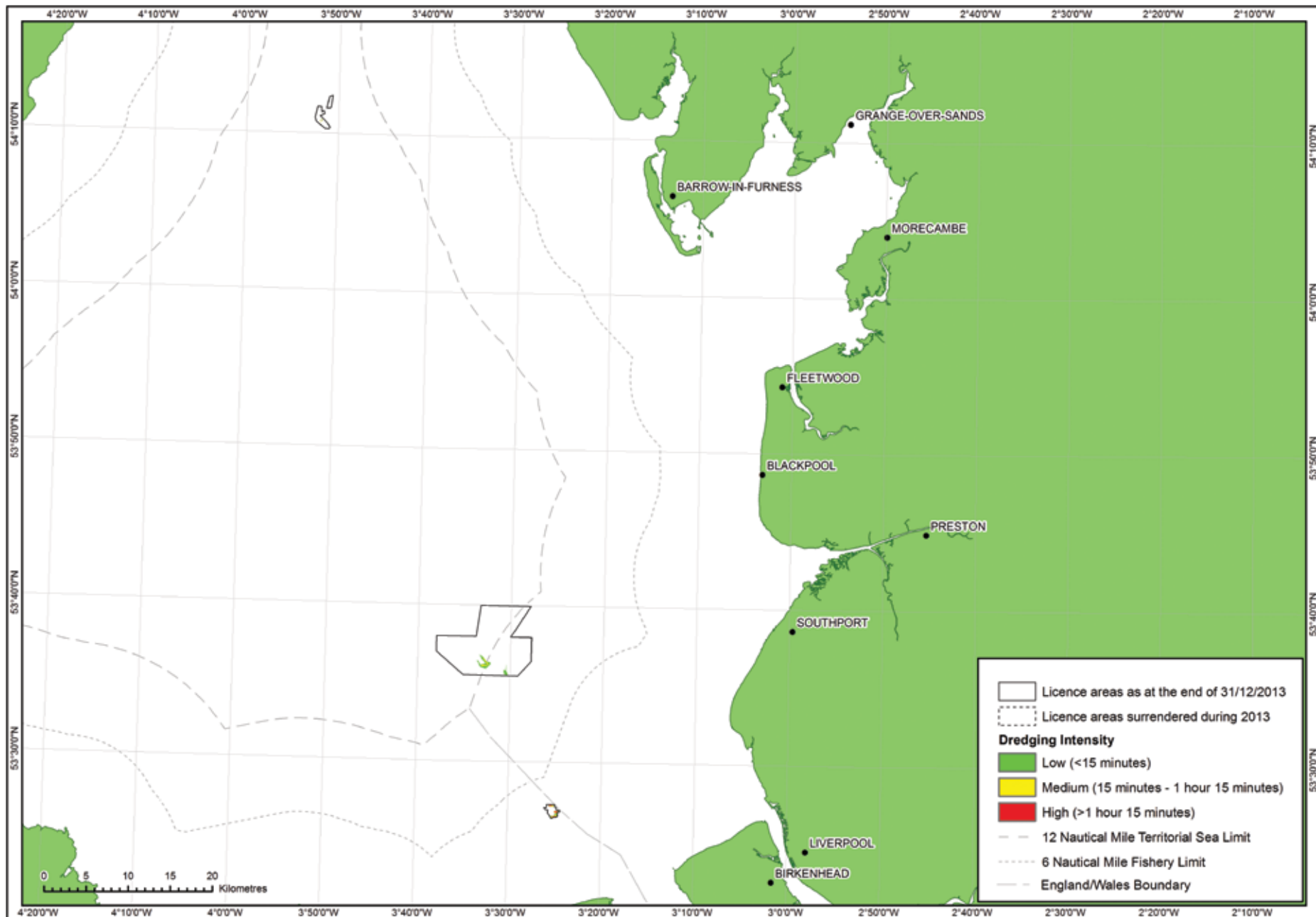
Area of seabed licensed* and dredged



Area of seabed licensed and surrendered



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



BRITAIN HAS 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 and we award and manage 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 23 vessels on 61 production licences around the UK as of September 2014.

BMAPA membership (as of September 2014) 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 Tarmac Marine Ltd, Northwood (Fareham) Ltd, Sea Aggregates Ltd and Volker Dredging Ltd.



The Crown Estate

16 New Burlington Place
London
W1S 2HX

T 020 7851 5000

E marineminerals@thecrownestate.co.uk

W www.thecrownestate.co.uk

Twitter @thecrownestate



essential materials
sustainable solutions

bmapa

British Marine Aggregate Producers Association

Gillingham House
38-44 Gillingham Street
London
SW1V 1HU

T 020 7963 8000

E bmapa@mineralproducts.org

W www.bmapa.org

ISBN: 978-1-906410-58-2