

The area involved – 22nd annual report



MARINE AGGREGATE EXTRACTION 2019



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Marine aggregate extraction 2019

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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 marine aggregate extraction 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, for the period 1st January 2019 to 31st December 2019, is the 22nd 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 2019 based on GIS data and from analysis of dredger Electronic Monitoring System records. Information on dredged area and intensity (reported as time dredged per 50m x 50m grid cell) has been calculated using 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 2019. 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 The Crown Estate Marine Aggregates and BMAPA websites, or by contacting the addresses on the last page of this report.

2019 summary

The figures below relate to marine aggregate extraction on Crown Estate Production Agreement areas in England and Wales

The **total amount** of sand and gravel dredged

22m tonnes

(20m tonnes in 2018)

The **area of seabed licensed** decreased to

1079km²

(1102km² in 2018)

The **area of seabed dredged** increased to

105km²

(98km² in 2018)

The **area of seabed dredged for more than 1 hr 15 mins** per year remained

6km²

(6km² in 2018)

The **percentage of licenced area dredged** increased to

10%

(9% in 2018)

90% of dredging effort on Crown Estate licences took place from

42km²

(40km² in 2018)

Region	Total area licensed during 2019 (km ²)	Total active dredge area for 2019 (km ²) *1	Total area dredged during 2019 (km ²)
Humber	312.21	196.69	27.30
East Coast	204.66	148.50	30.18
Thames	130.49	100.82	6.57
East English Channel	88.01	28.61	15.24
South Coast	129.72	56.68	15.81
South West	127.21	28.91	7.85
North West	86.65	19.21	2.17
Total (km²)	1078.95	579.42	105.12

Area of seabed licensed decreased by 23km² during 2019

Area of seabed licensed (km²) 2015-2019

Year *2	2015	2016	2017	2018	2019
0 – 6 nm*3	295	298	318	353	341
6 – 12nm*3	354	336	360	344	343
>12 nm*3	283	300	379	405	395
Total area licensed (km²)	932	934	1057	1102	1079
Total active dredge area (km²)	337	452	522	571	579

Area of seabed dredged increased by 7km² during 2019

Area of seabed dredged (km²) 2015-2019

Year	2015	2016	2017	2018	2019
0 – 6 nm*3	39	45	45	46	50
6 – 12nm*3	18	22	23	23	28
>12nm*3	26	21	23	29	27
Total (km²)	83	88	91	98	105
Area dredged >1 hr 15 mins (km²)	7.37	7.52	8.03	6.31	6.29
90% of dredging effort (km²)	31.60	33.92	38.30	39.50	42.24

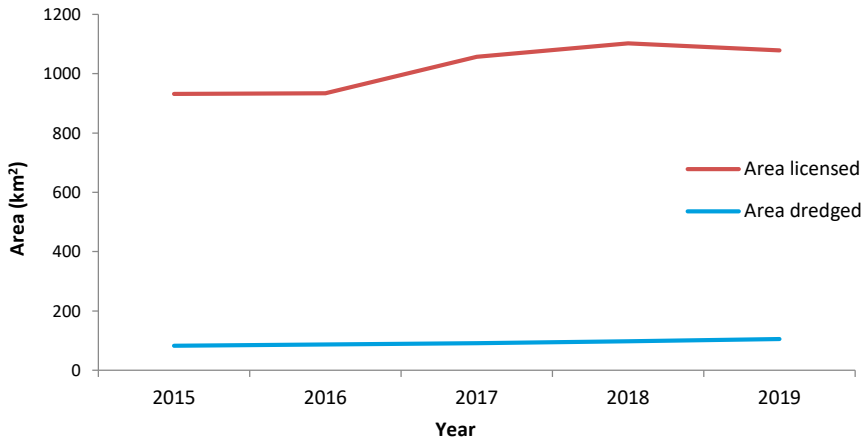
*1 Total area actually available to be dredged due to zoning during 2019, calculated on a cumulative basis

*2 Annual figures are calculated as at 31st December, and therefore incorporate any changes that may have occurred through the year

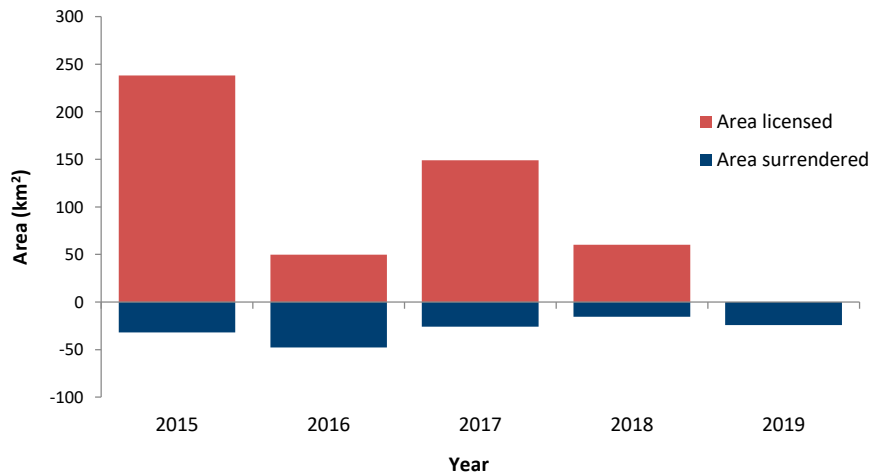
*3 Based on a standardised 6 and 12 nm (UKHO 01/01/05) to allow for accurate comparison between years



Area of seabed licensed and dredged 2015-2019



New area licensed versus existing area surrendered 2015-2019



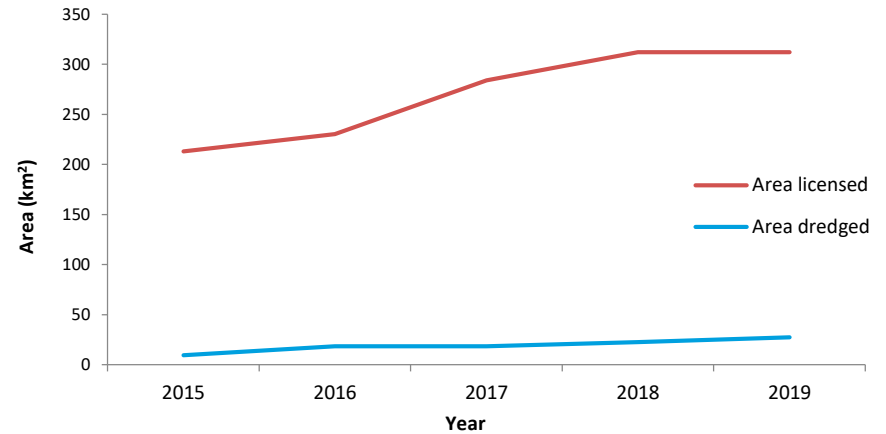
Background

- The Humber region has 10 production licences, operated by CEMEX UK Marine Ltd, DEME Building Materials 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 2019, 3.48 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 5.9 million. In addition 0.7 million tonnes were dredged for beach nourishment
- Of the total marine aggregate dredged for construction from this region:
 - 76.2% was delivered to mainland Europe (2.65 million tonnes)
 - 15.3% delivered to the Humber and North East (0.53 million tonnes)
 - 8.5% was delivered to the Thames Estuary (0.30 million tonnes)

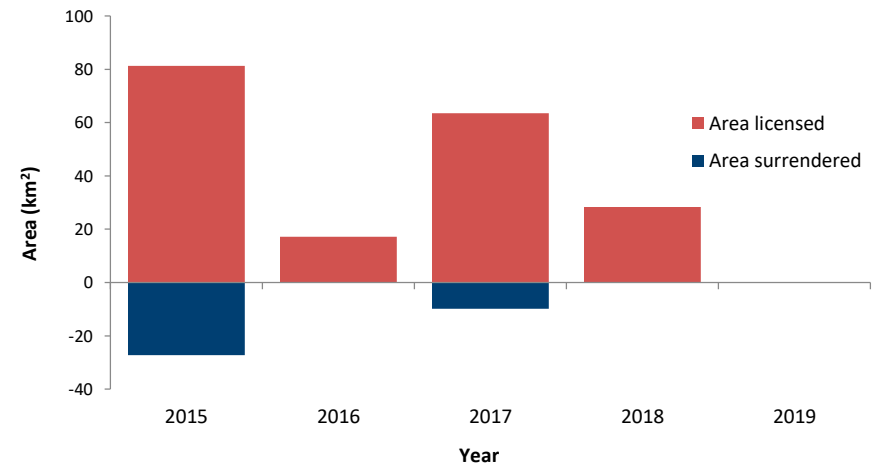
Regional statistics

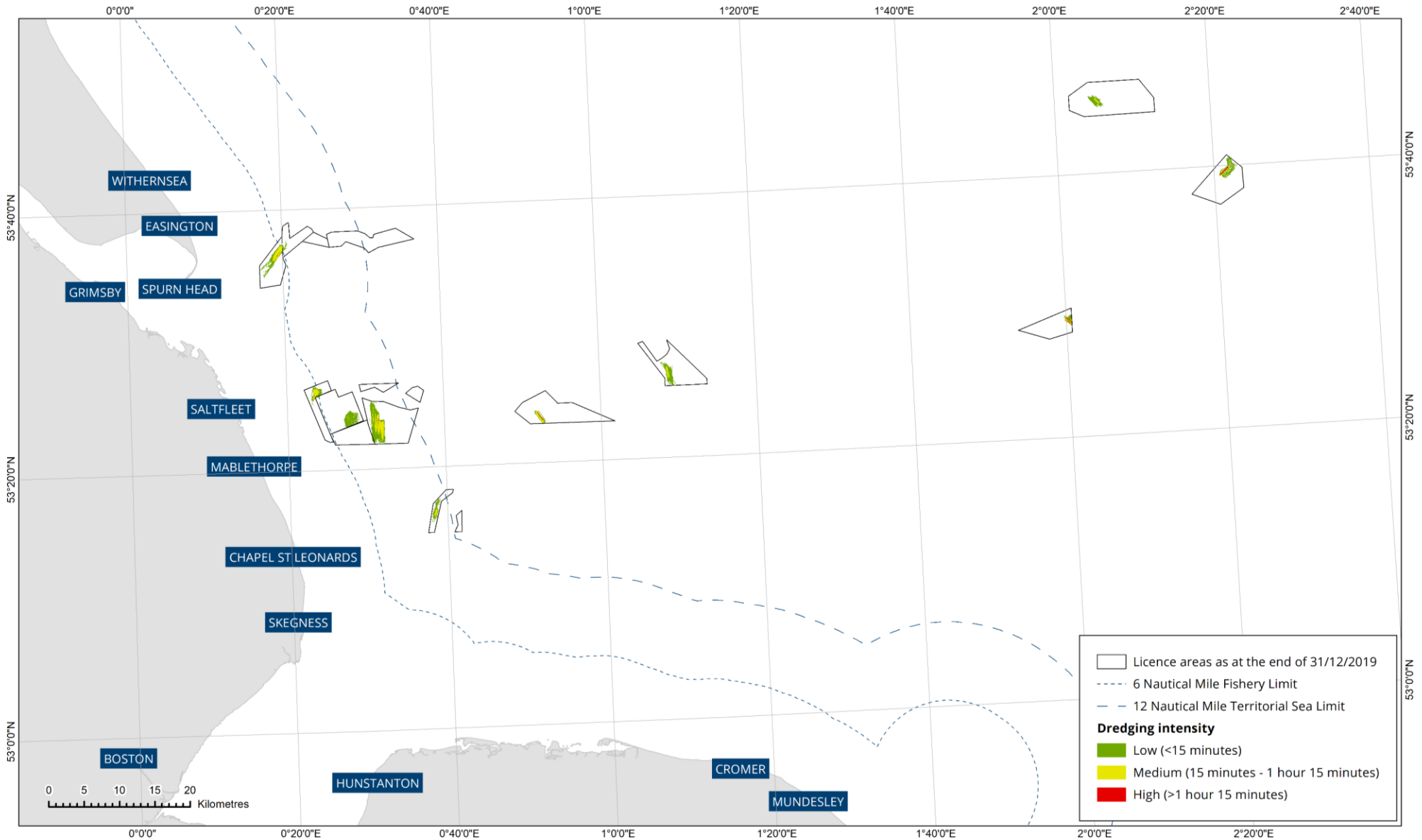
- The licensed area in the region was 312.21km²
- The total area actually available to be dredged within the region (due to zoning) was 196.69km²
- Dredging took place within 27.30km² – 8.74% of the licensed area
- The area dredged with high intensity (for more than 1 hour 15 minutes in the year) was 0.58km²
- 90% of regional dredging effort took place within 12.52km²
- During 2019, the area licensed for marine aggregate extraction remained unchanged

Area of seabed licensed and dredged 2015-2019



New area licensed versus existing area surrendered 2015-2019





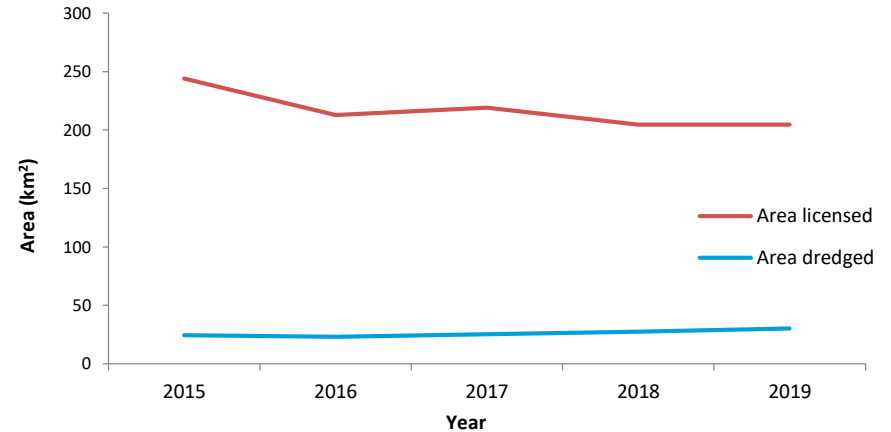
Background

- The East Coast region has 12 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 2019, 4 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 7.9 million. In addition, 3.2 million tonnes were dredged for beach nourishment
- Of the total marine aggregate dredged for construction from this region:
 - 81.3% was delivered to the Thames Estuary (3.3 million tonnes)
 - 13.1% was delivered to mainland Europe (0.5 million tonnes)
 - 5.6% was delivered to the Humber and North East (0.2 million tonnes)

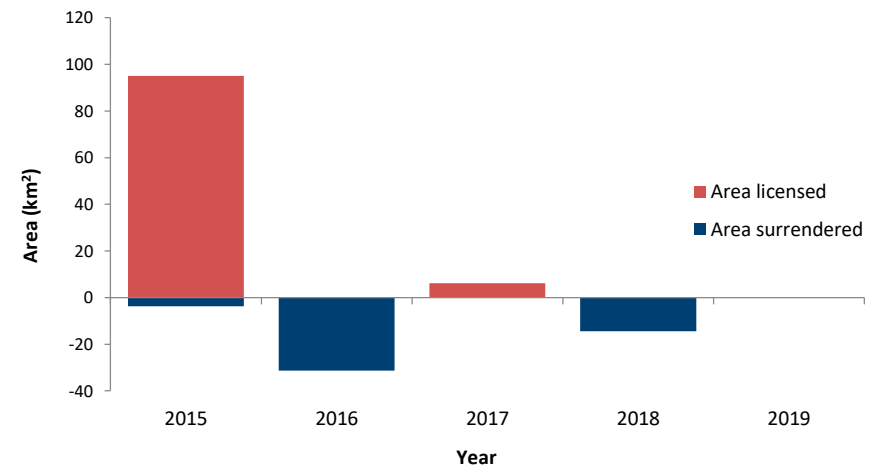
Regional statistics

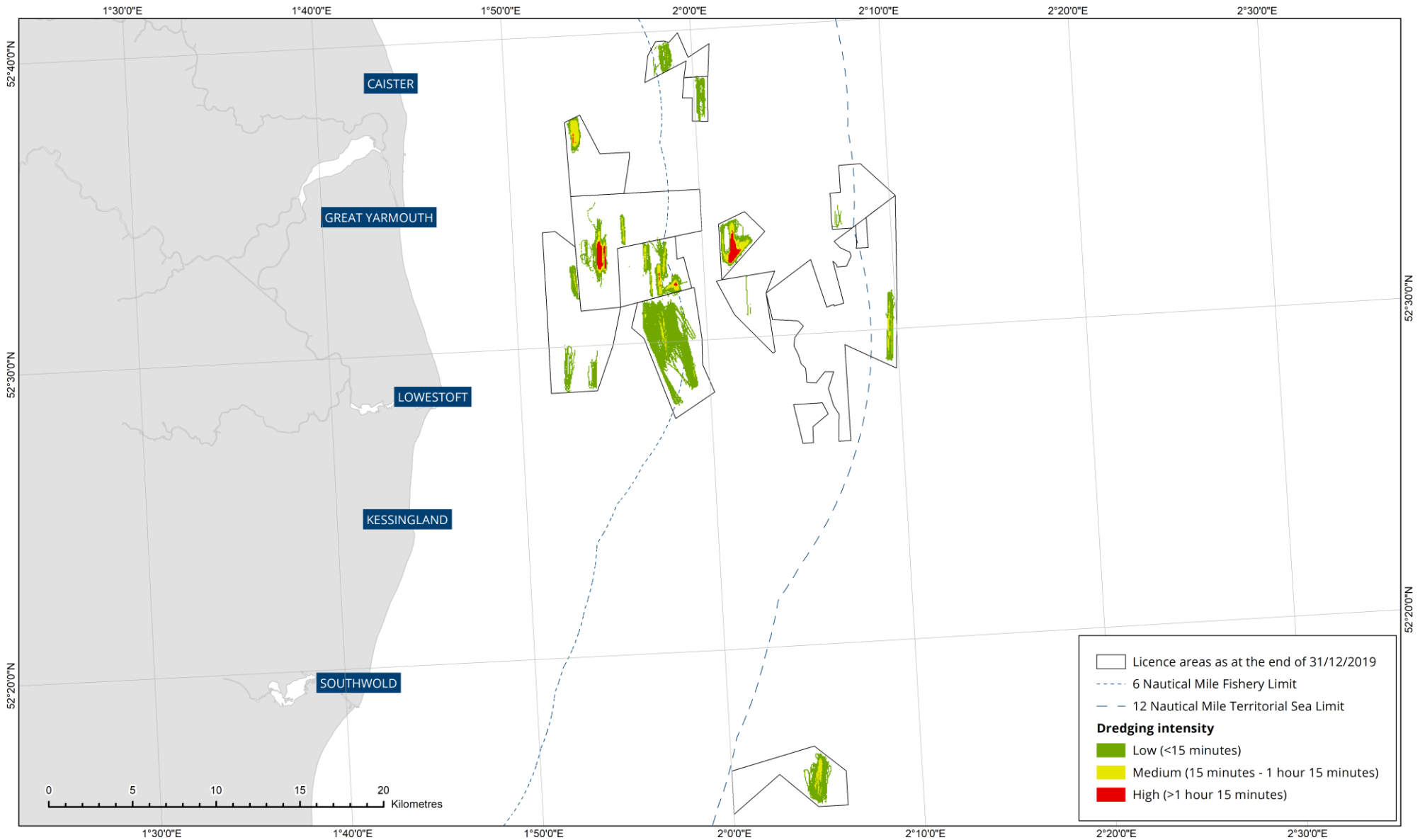
- The licensed area in the region was 204.66km²
- The total area actually available to be dredged within the region (due to zoning) was 148.50km²
- Dredging took place within 30.18km² – 14.75% of the licensed area
- The area dredged with high intensity (for more than 1 hour 15 minutes in the year) was 1.30km²
- 90% of regional dredging effort took place within 12.13km²
- During 2019, the area licensed for marine aggregate extraction remained unchanged

Area of seabed licensed and dredged 2015-2019



New area licensed versus existing area surrendered 2015-2019





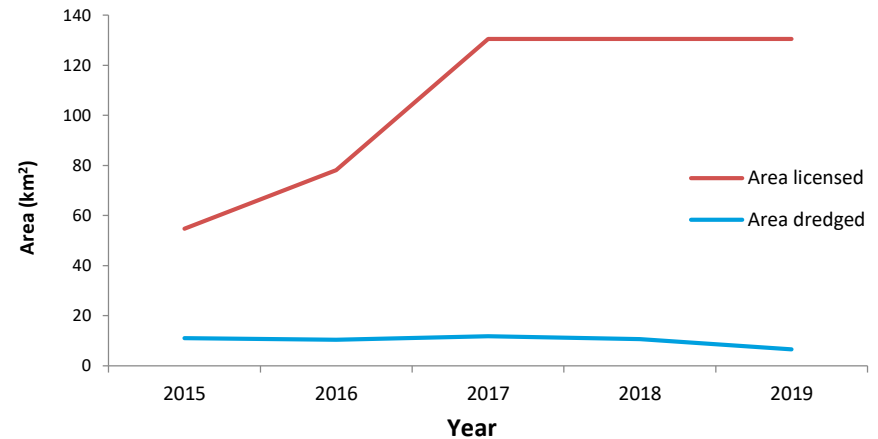
Background

- The Thames Estuary region has 7 production licences, operated by Britannia Aggregates Ltd, CEMEX UK Marine Ltd, Tarmac Marine Ltd, Volker Dredging Ltd and Westminster Gravels Ltd for both sand and gravel, principally for use in the construction industry
- During 2019, 1.3 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 3.4 million
- Of the total marine aggregate dredged for construction from this region:
 - 69.1% was delivered to the Thames Estuary (0.92 million tonnes)
 - 21.7% was delivered to mainland Europe (0.29 million tonnes)
 - 3.9% was delivered to the East Coast (0.05 million tonnes)
 - 3.4% was delivered to the East English Channel (0.05 million tonnes)
 - 1.3% was delivered to the Humber & North East (0.02 million tonnes)
 - 0.6% was delivered to the South Coast (0.01 million tonnes)

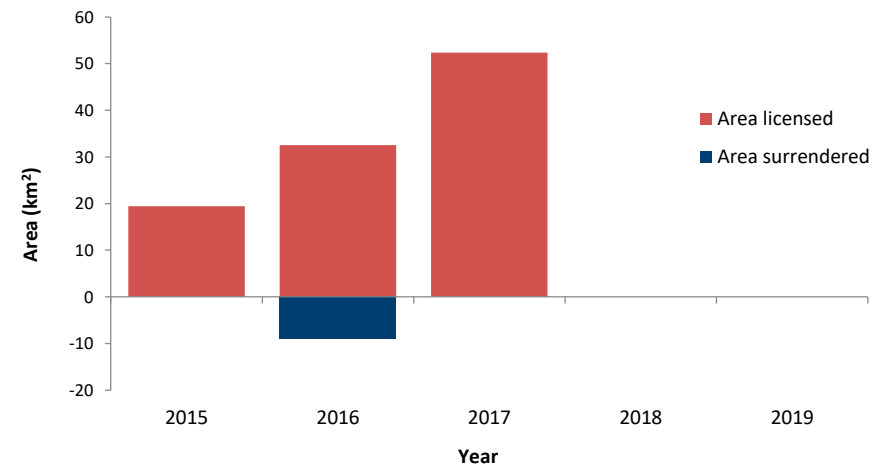
Regional statistics

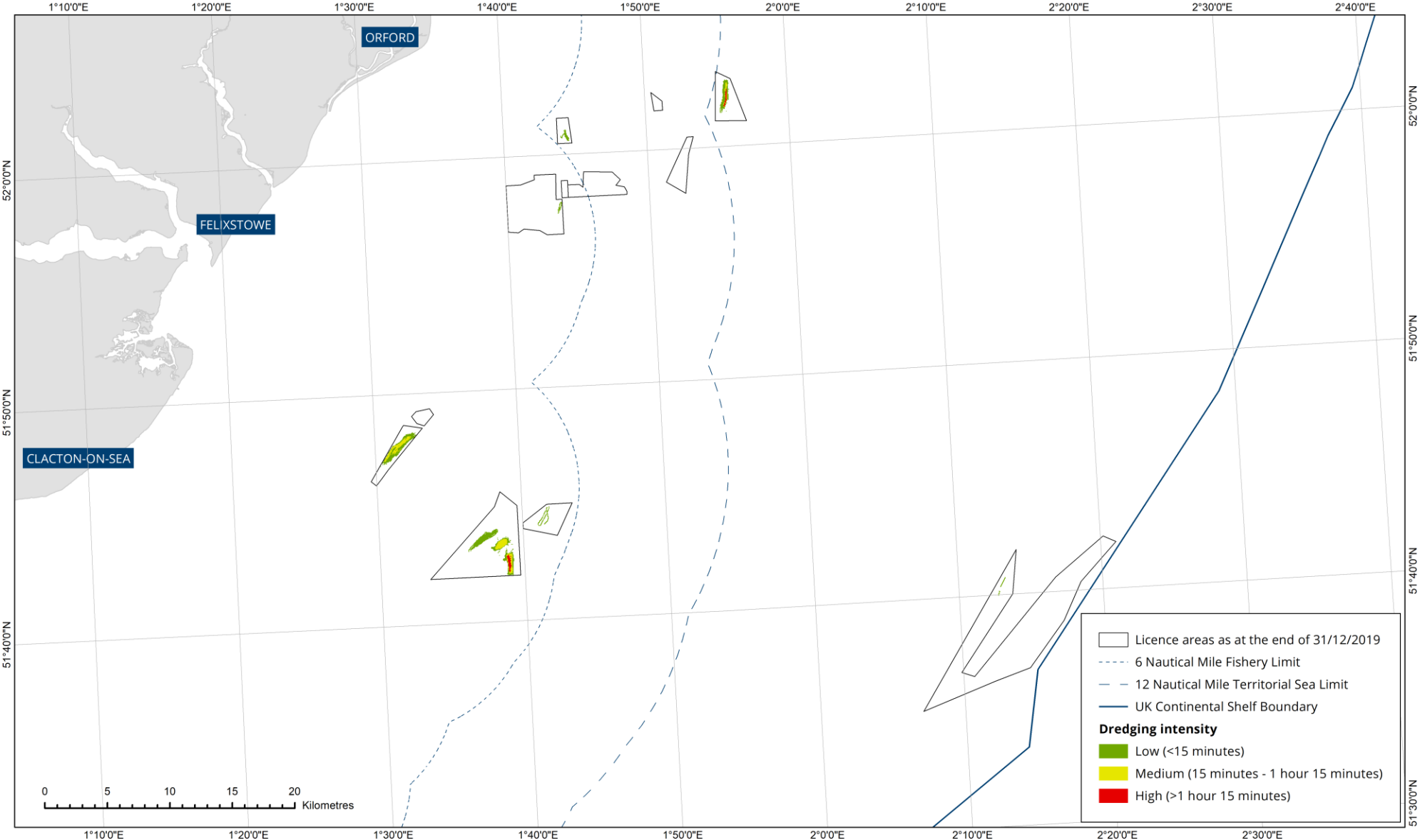
- The licensed area in the region was 130.49km²
- The total area actually available to be dredged within the region (due to zoning) was 100.82km²
- Dredging took place within 6.57km² – 5.03% of the licensed area
- The area dredged with high intensity (for more than 1 hour 15 minutes in the year) was 0.38km²
- 90% of regional dredging effort took place within 2.64km²
- During 2019, the area licensed for marine aggregate extraction remained unchanged

Area of seabed licensed and dredged 2015-2019



New area licensed versus existing area surrendered 2015-2019





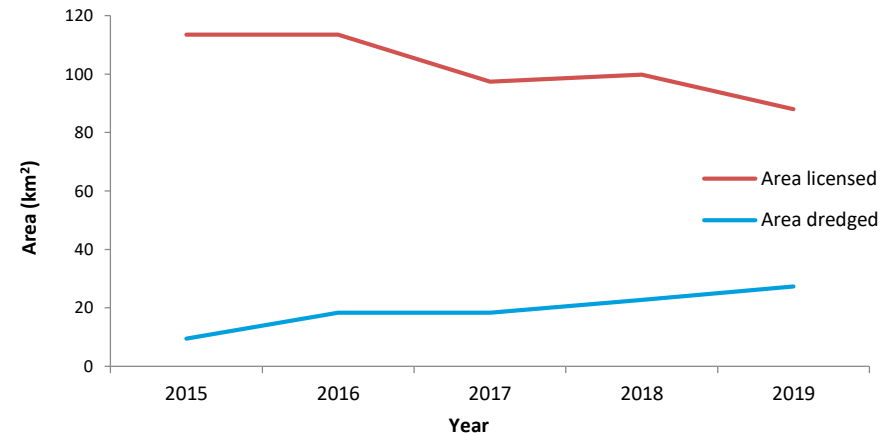
Background

- The East English Channel region has 10 production licences, operated by CEMEX UK Marine Ltd, DEME Building Materials Ltd, Dover Harbour Board, Hanson Aggregates Marine Ltd, Tarmac Marine Ltd and Volker Dredging Ltd for sand and gravel, principally for use in the construction industry
- During 2019, 4.3 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 10.4 million
- Of the total marine aggregate dredged for construction from this region:
 - 69.7% was delivered to the Thames Estuary (2.99 million tonnes)
 - 26.6% was delivered to mainland Europe (1.14 million tonnes)
 - 3.2% was delivered to the East Coast (0.14 million tonnes)
 - 0.4% was delivered to the East English Channel (0.02 million tonnes)
 - 0.1% was delivered to the South Coast (0.02 million tonnes)
 - <0.1% was delivered to the Humber & North East (<0.01 million tonnes)

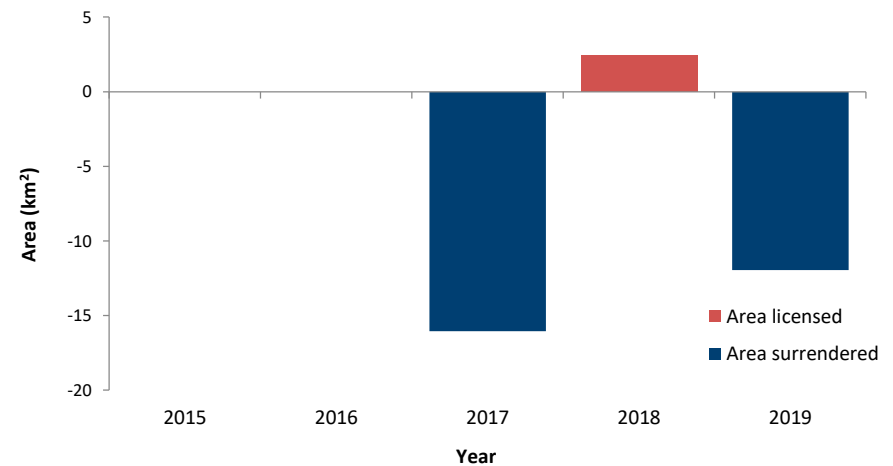
Regional statistics

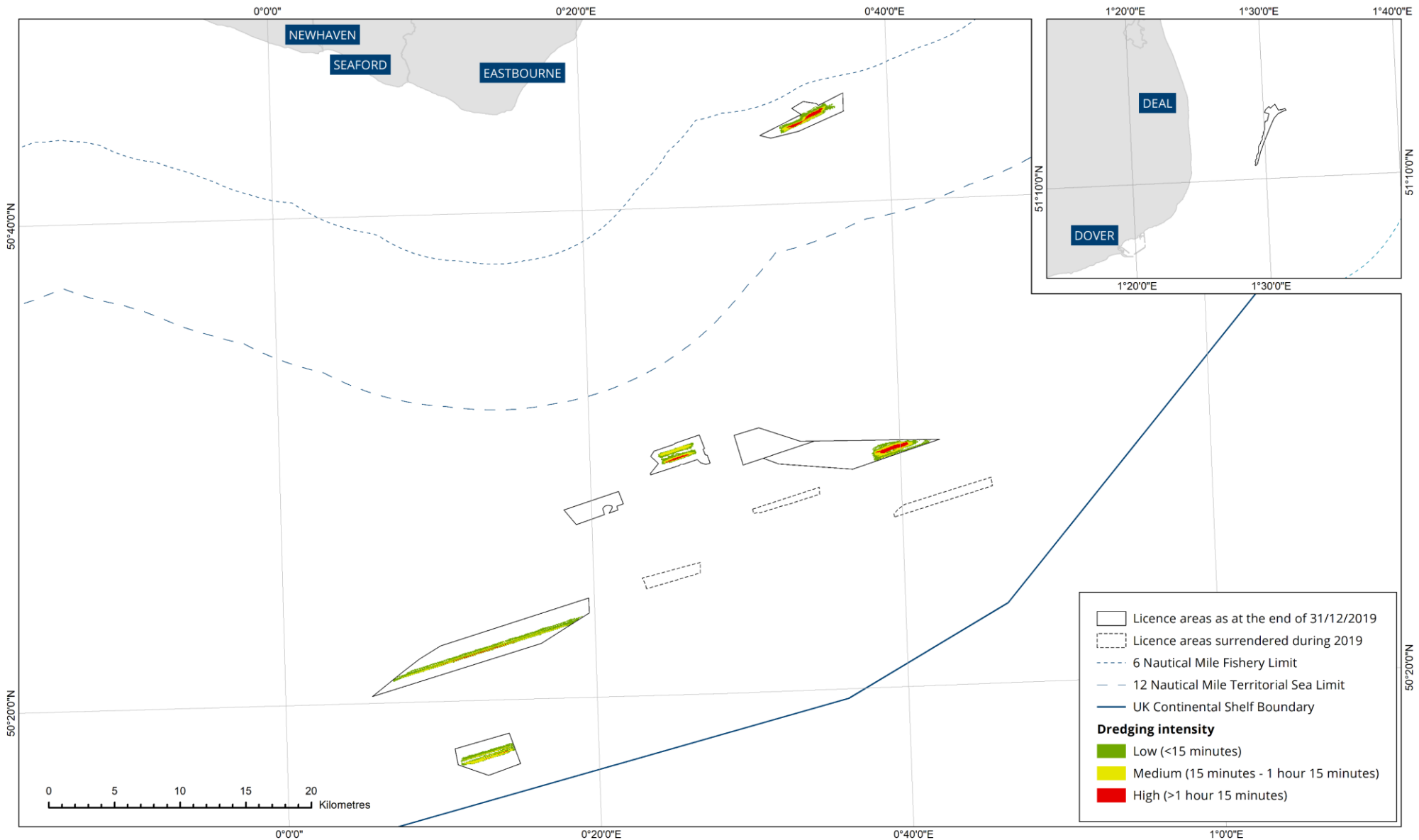
- The licensed area in the region was 88.01km²
- The total area actually available to be dredged within the region (due to zoning) was 28.61km²
- Dredging took place within 15.24km² – 17.32% of the licensed area
- The area dredged with high intensity (for more than 1 hour 15 minutes in the year) was 1.54km²
- 90% of regional dredging effort took place within 6.37km²
- During 2019, the area licensed for marine aggregate extraction decreased by 12 km²

Area of seabed licensed and dredged 2015-2019



New area licensed versus existing area surrendered 2015-2019





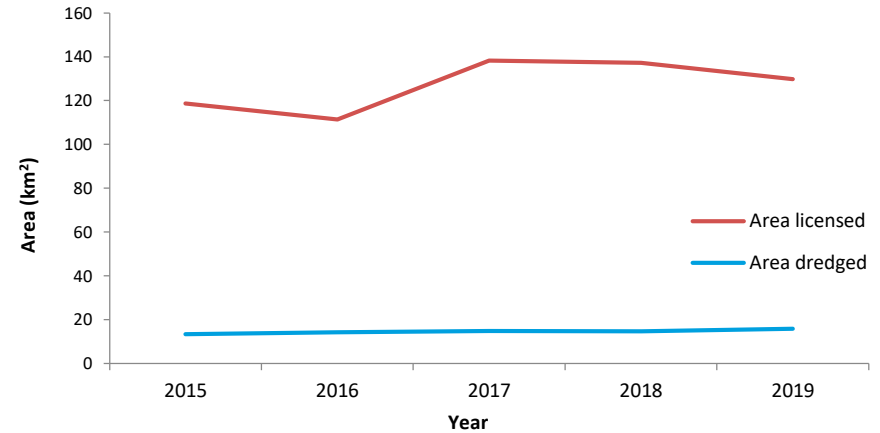
Background

- The South Coast region has 15 production licences, operated by Aggregate Industries UK Ltd, CEMEX UK Marine Ltd, the Environment Agency, Hanson Aggregates Marine Ltd, Tarmac Marine Ltd, Volker Dredging Ltd and Westminster Gravels Ltd for sand and gravel, principally for use in the construction industry
- During 2019, 3.3 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 7.1 million
- Of the total marine aggregate dredged for construction from this region:
 - 82% was delivered to the South Coast (2.7 million tonnes)
 - 16.6% was delivered to the Thames Estuary (0.55 million tonnes)
 - 1.4% was delivered to mainland Europe (0.05 million tonnes)

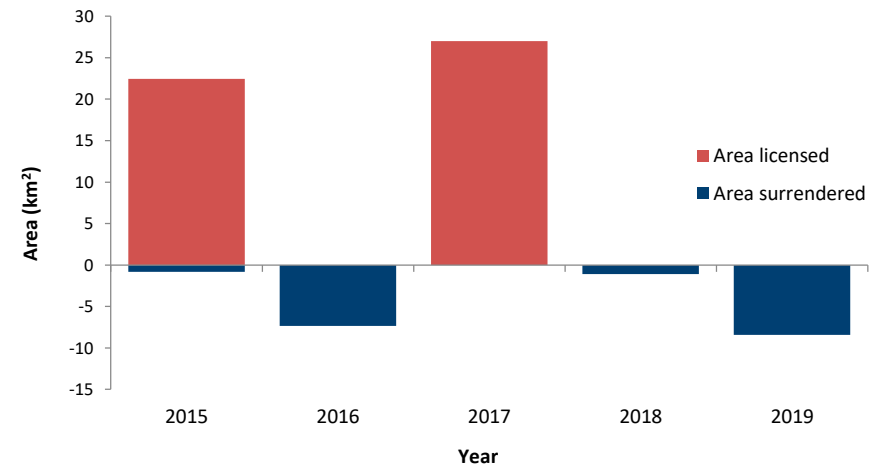
Regional statistics

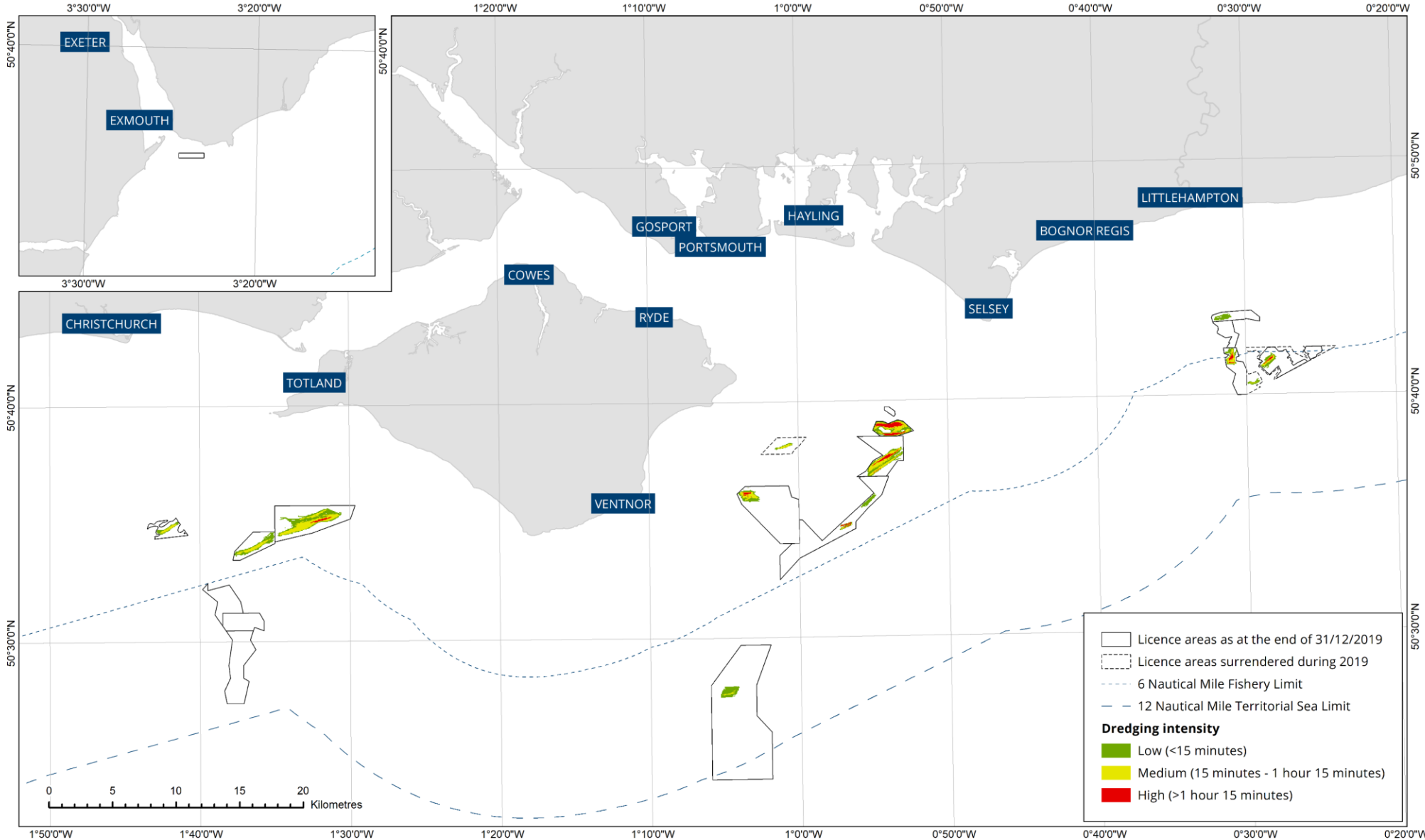
- The licensed area in the region was 129.72km²
- The total area actually available to be dredged within the region (due to zoning) was 56.68km²
- Dredging took place within 15.81km² – 12.19% of the licensed area
- The area dredged with high intensity (for more than 1 hour 15 minutes in the year) was 1.63km²
- 90% of regional dredging effort took place within 7.23km²
- During 2019, the area licensed for marine aggregate extraction decreased by 8 km²

Area of seabed licensed and dredged 2015-2019



New area licensed versus existing area surrendered 2015-2019





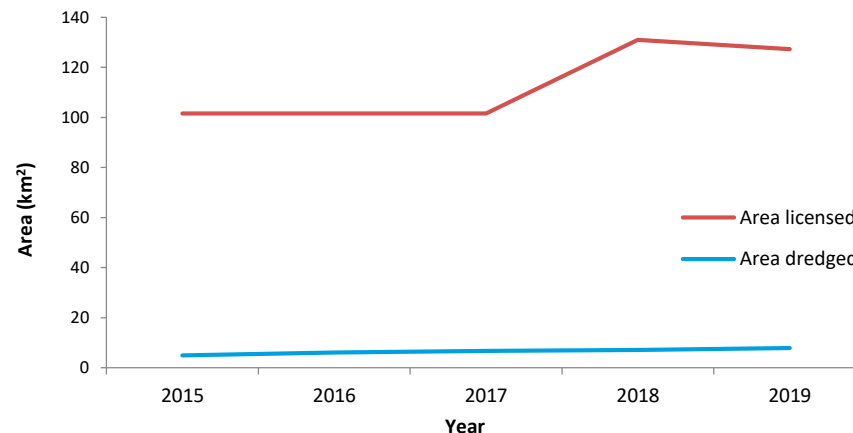
Background

- 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 2019, 1.37 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 3.7 million. In addition, 0.04 million tonnes were dredged for non-construction purposes
- Of the total marine aggregate dredged for construction from this region:
 - 99.8 % was delivered to the South West (1.37 million tonnes)
 - 51.9% of this was delivered to English wharves (0.71 million tonnes)
 - 48.1% of this was delivered to Welsh wharves (0.66 million tonnes)
 - 0.15% was delivered to the North West (<0.01 million tonnes)
 - 100% of this was delivered to English wharves (<0.01 million tonnes)
 - <0.1 was delivered to the South Coast (<0.01 million tonnes)

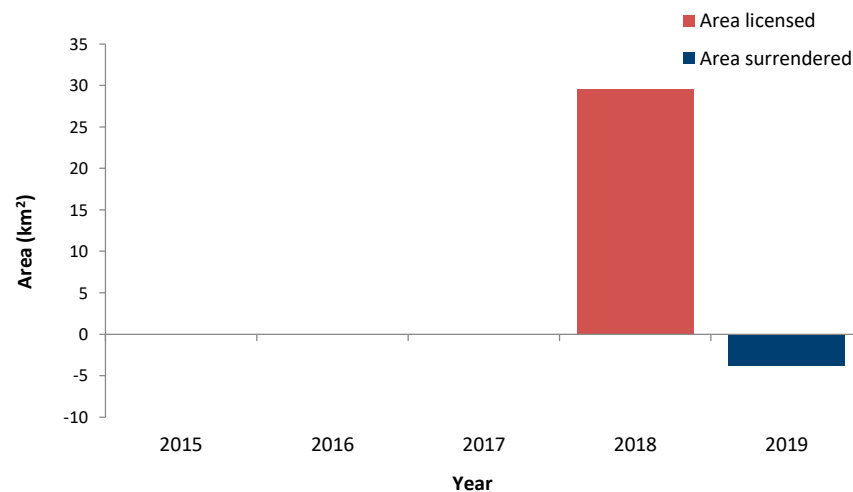
Regional statistics

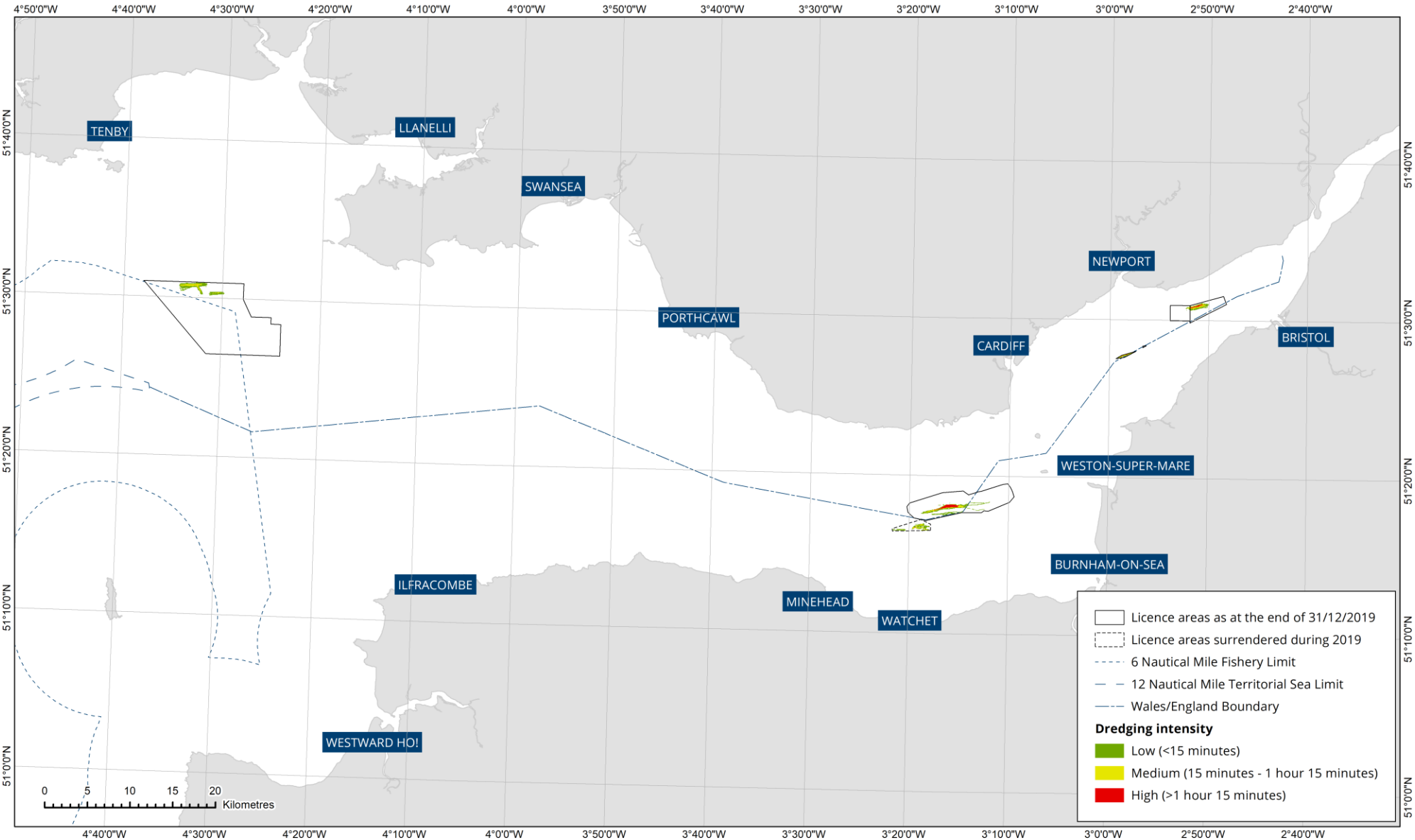
- The licensed area in the region was 127.21km²
- The total area actually available to be dredged within the region (due to zoning) was 28.91km²
- Dredging took place within 7.85km² – 6.17% of the licensed area
- The area dredged with high intensity (for more than 1 hour 15 minutes in the year) was 0.79km²
- 90% of regional dredging effort took place within 2.59km²
- During 2019, the area licensed for marine aggregate extraction decreased by 4 km²

Area of seabed licensed and dredged 2015-2019



New area licensed versus existing area surrendered 2015-2019





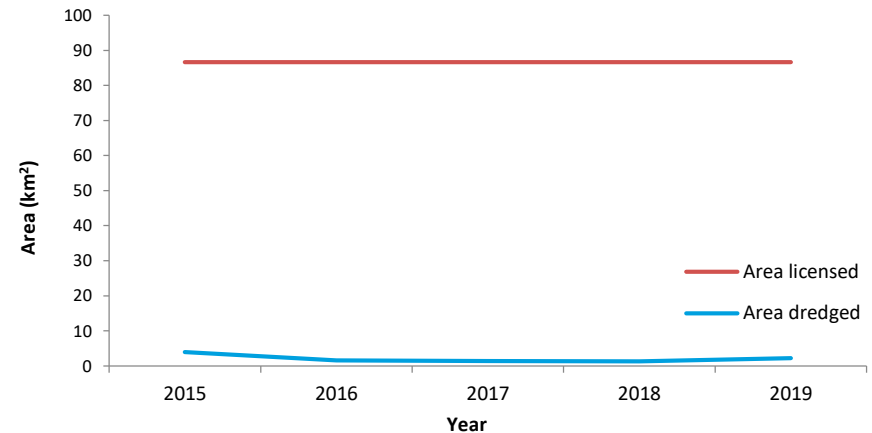
Background

- 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 2019, 0.23 million tonnes of construction aggregate were dredged from a permitted licensed tonnage of 1.2 million
- Of the total marine aggregate dredged for construction from this region:
 - 98.4% was delivered to the North West (0.22 million tonnes)
 - 90.2% of this was delivered to English wharves (0.2 million tonnes)
 - 9.8% of this was delivered to Welsh wharves (0.02 million tonnes)
 - 1.6% was delivered to the South West (<0.01 million tonnes)
 - 100% of this was delivered to English wharves (<0.01 million tonnes)

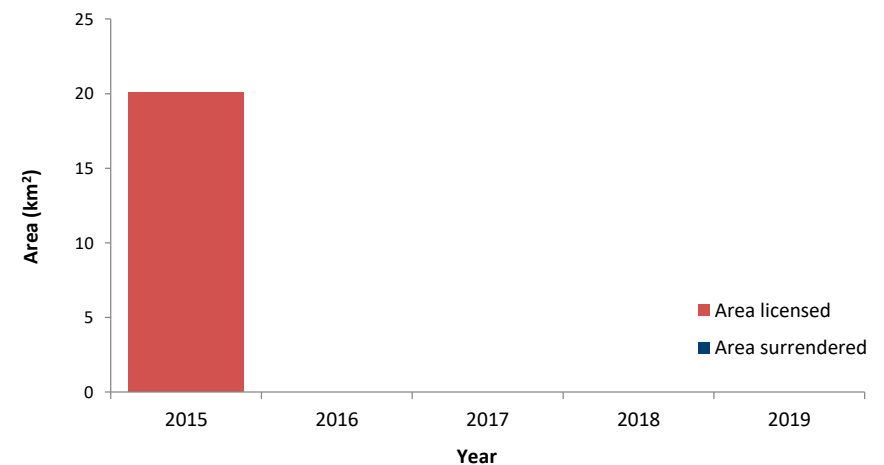
Regional statistics

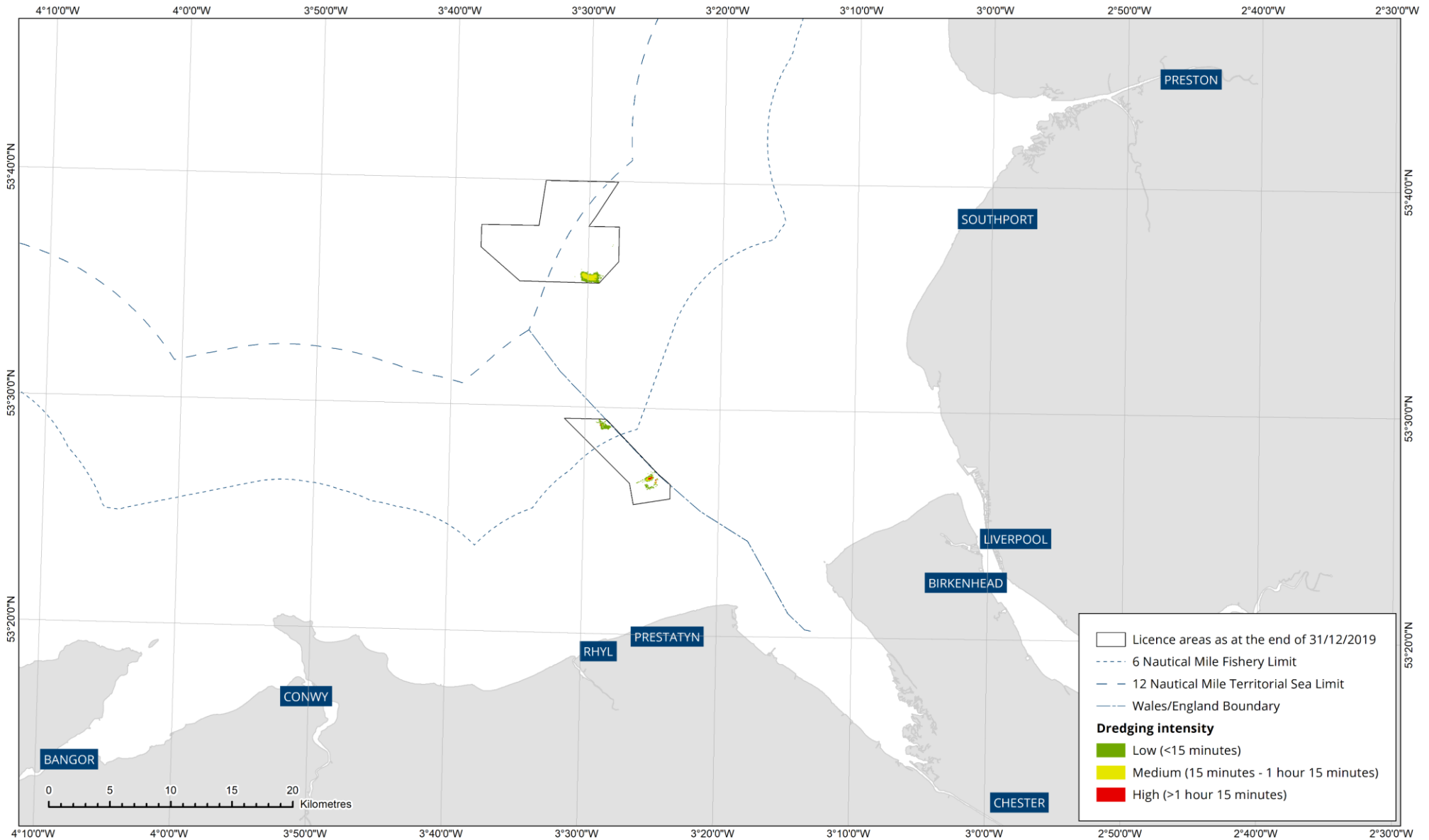
- The licensed area in the region was 86.65km²
- The total area actually available to be dredged within the region (due to zoning) was 19.21km²
- Dredging took place within 2.17km² – 2.5% of the licensed area
- The area dredged with high intensity (for more than 1 hour 15 minutes in the year) was 0.07km²
- 90% of regional dredging effort took place within 0.88km²
- During 2019, the area licensed for marine aggregate extraction remained unchanged

Area of seabed licensed and dredged 2015-2019



New area licensed versus existing area surrendered 2015-2019





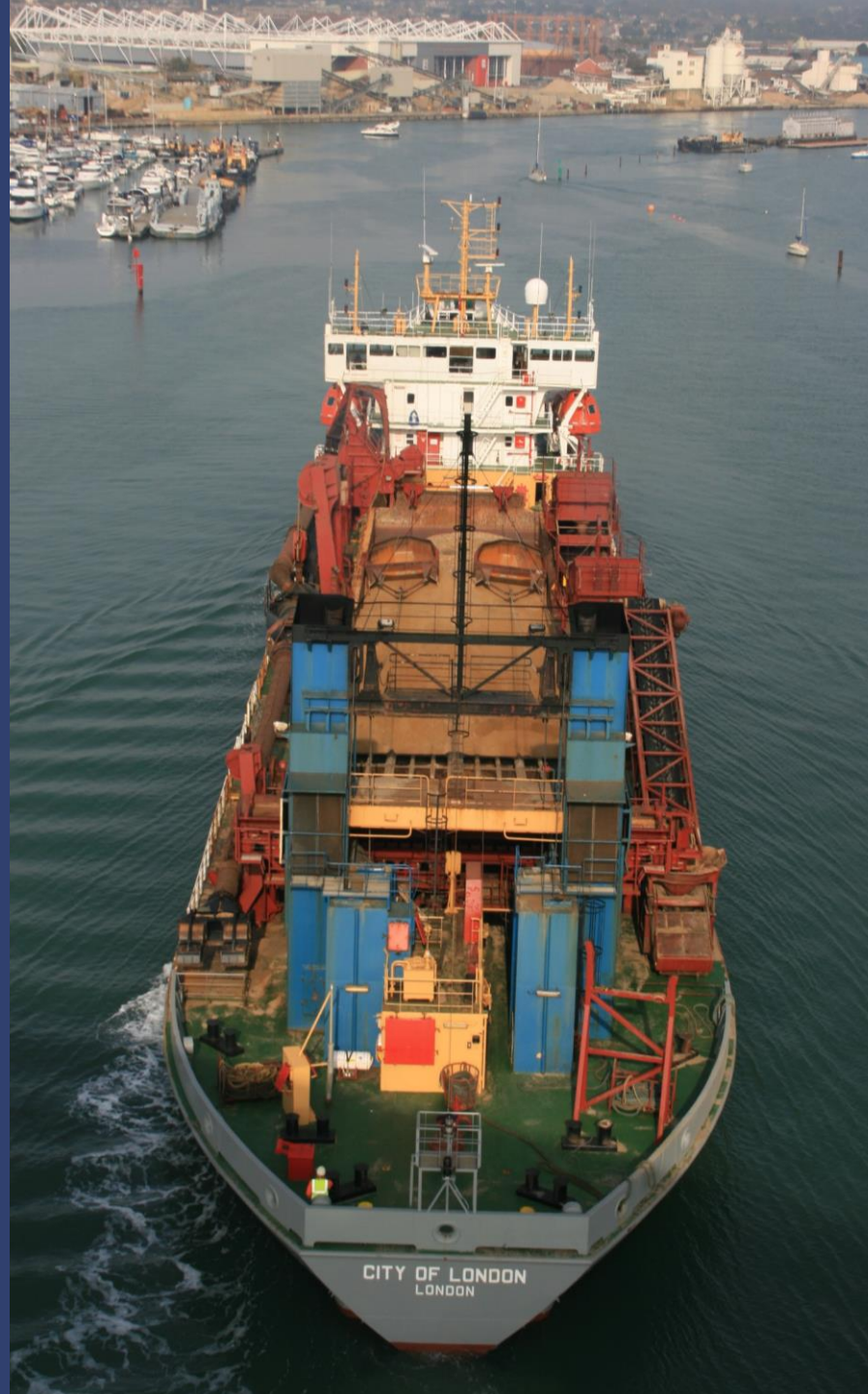
England and Wales have one of the largest and most efficient dredging industries in the world, extracting 15 to 20 million tonnes of sand and gravel from the seabed each year for a variety of uses. These range from housebuilding, to major infrastructure projects like the Thames Tideway Tunnel and Liverpool 2 container terminal, to coastal protection such as the innovative Bacton to Walcott Sandscaping scheme.

The Crown Estate manages the seabed around England, Wales and Northern Ireland, and the sand and gravel resources in these waters. 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 played an important role in the building industry since the 1960s and today meet over 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 construction 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 27 vessels on 64 production licences around the UK as of July 2020.

BMAPA membership (as of July 2020) is comprised of: Aggregate Industries, Britannia Aggregates, Brett Group, CEMEX UK Marine, DEME Building Materials, Hanson Aggregates Marine, Norwest Sand & Ballast Co, Sea Aggregates, Tarmac Marine and Volker Dredging.



The Crown Estate

1 St James's Market
London
SW1Y 4AH

T 020 7851 5000

W www.thecrownestate.co.uk
www.marineaggregates.info

E marineminerals@thecrownestate.co.uk

🐦 @thecrownestate



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

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