ANNUAL REVIEW
2023

Marine Aggregates

THE CROWN ESTATE

Contents

Click the titles to jump ahead

National overview

Why are marine aggregates important to Britain?

Britain has one of the world's most developed marine aggregate industries, extracting 15 to 20 million tonnes from the seabed annually. Much of this is used for building houses, transport infrastructure, replenishing beaches and improving coastal defences.

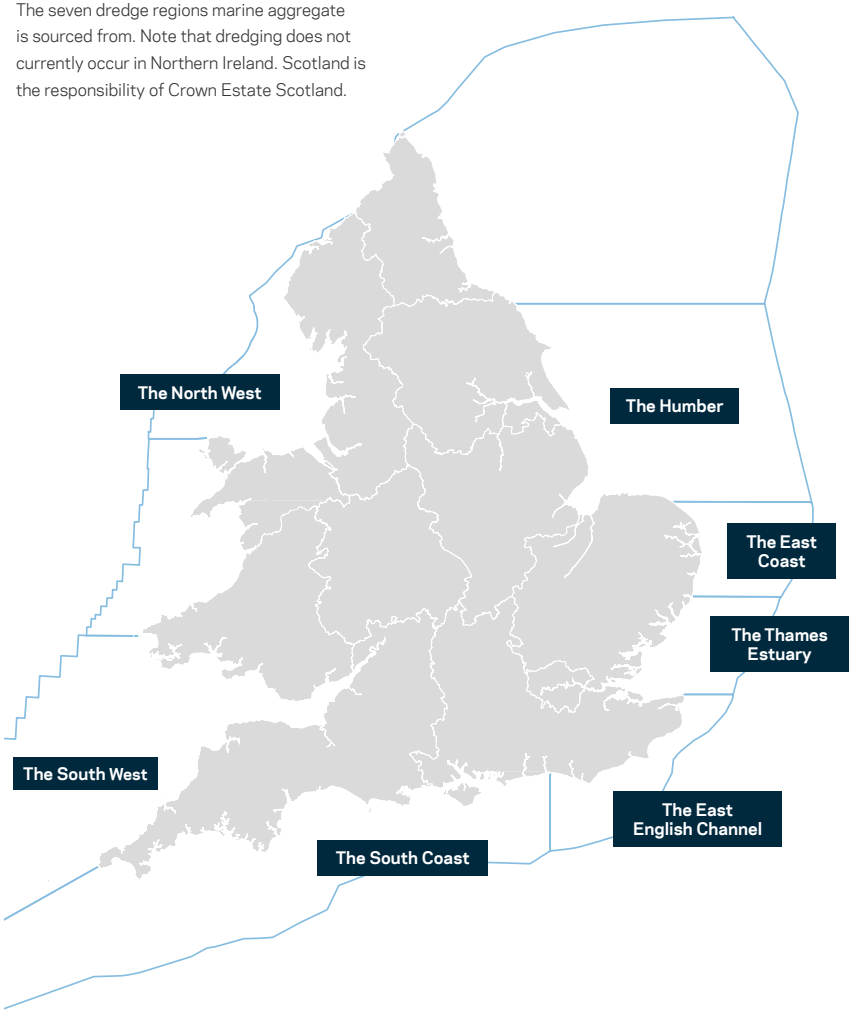
Onshore resources are becoming increasingly constrained, particularly in the South East of England and London. In 2018, marine aggregates satisfied 22% (13.7 million tonnes) of the total construction needs for sand and gravel in Great Britain*

The Crown Estate owns almost all of the sand and gravel resources lying off of the coast of England, Wales and Northern Ireland and we award and manage commercial agreements for companies to extract it.

This document is designed to help planning officers in local authorities understand the contribution that marine aggregates can make, by identifying offshore sources and providing information on supply routes. In turn, this is intended to support local authorities in complying with the National Planning Policy Framework, which requires mineral planning authorities to demonstrate they have a steady and adequate supply of aggregates for their requirements through Local Aggregates Assessments.

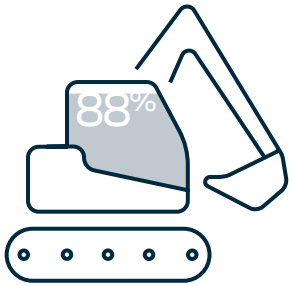
Unless otherwise stated, all figures in this document are correct as of May 2023.

The seven dredge regions marine aggregate is sourced from. Note that dredging does not currently occur in Northern Ireland. Scotland is the responsibility of Crown Estate Scotland.

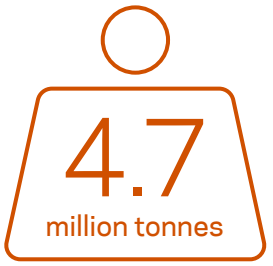


* Source: Mineral Products Association: Profile of the UK Mineral Products Industry 2020 Edition

There is potential for demand to increase to **29 million** tonnes per year by **2030**



88% of marine aggregates landed in England and Wales are used by the **building industry**



4.7 million tonnes of marine aggregate were exported to **Europe** in 2022 (**25%** of all marine aggregate landed)

Sustainability and stewardship

The Crown Estate has a commitment to being a responsible landlord, which includes minimising the impact that marine aggregate dredging has on the natural environment, helping local communities and preserving archaeological finds.

Although the quantity of sand and gravel potentially available from marine sources is vast, the industry is aware that it is extracting from a large but ultimately finite natural mineral resource and is keen to ensure that these valuable minerals are used in the most efficient and effective manner possible.

We work in partnership with industry, regulators and stakeholders to improve the sustainability of the sector, in particular reducing the area of seabed licensed that is dredged year on year.

Via our Electronic Monitoring System, we ensure all dredging is undertaken in the correct locations, and every licence application must be supported by a full Environmental Impact Assessment including a Coastal Impact Study to determine whether a marine licence (essentially the planning consent) can be granted, a process governed by the Marine Licensing process.

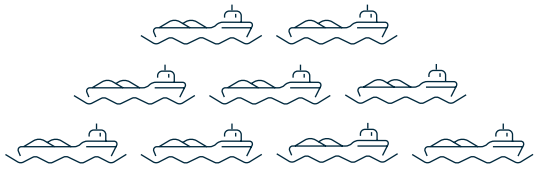
To deliver 8,500 tonnes takes:

1 dredger

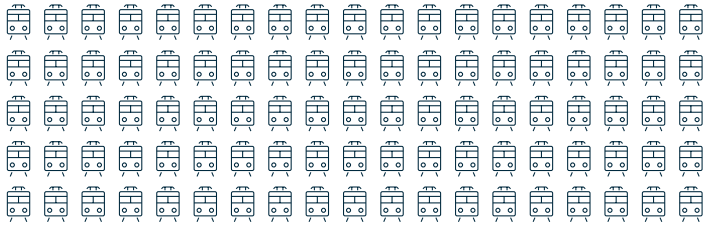
(of 8,500 tonnes)

9 barges

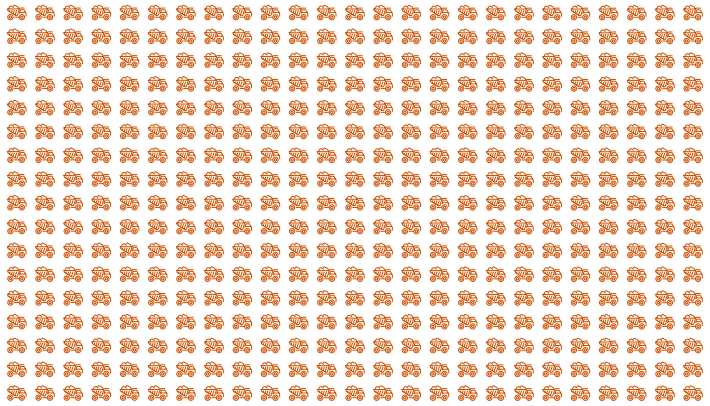
(of 1,000 tonnes)



95 train hopper wagons (of 90 tonnes)



425 aggregate lorries (of 20 tonnes)



Reserves and resources

Reserves and resources

"reserves" are the proportion of a mineral **"resource"** that can be mined for economic purposes

22

Current national estimates suggest there are **22 years** of primary marine aggregate production permitted

371
million tonnes

Estimated national total current primary reserves

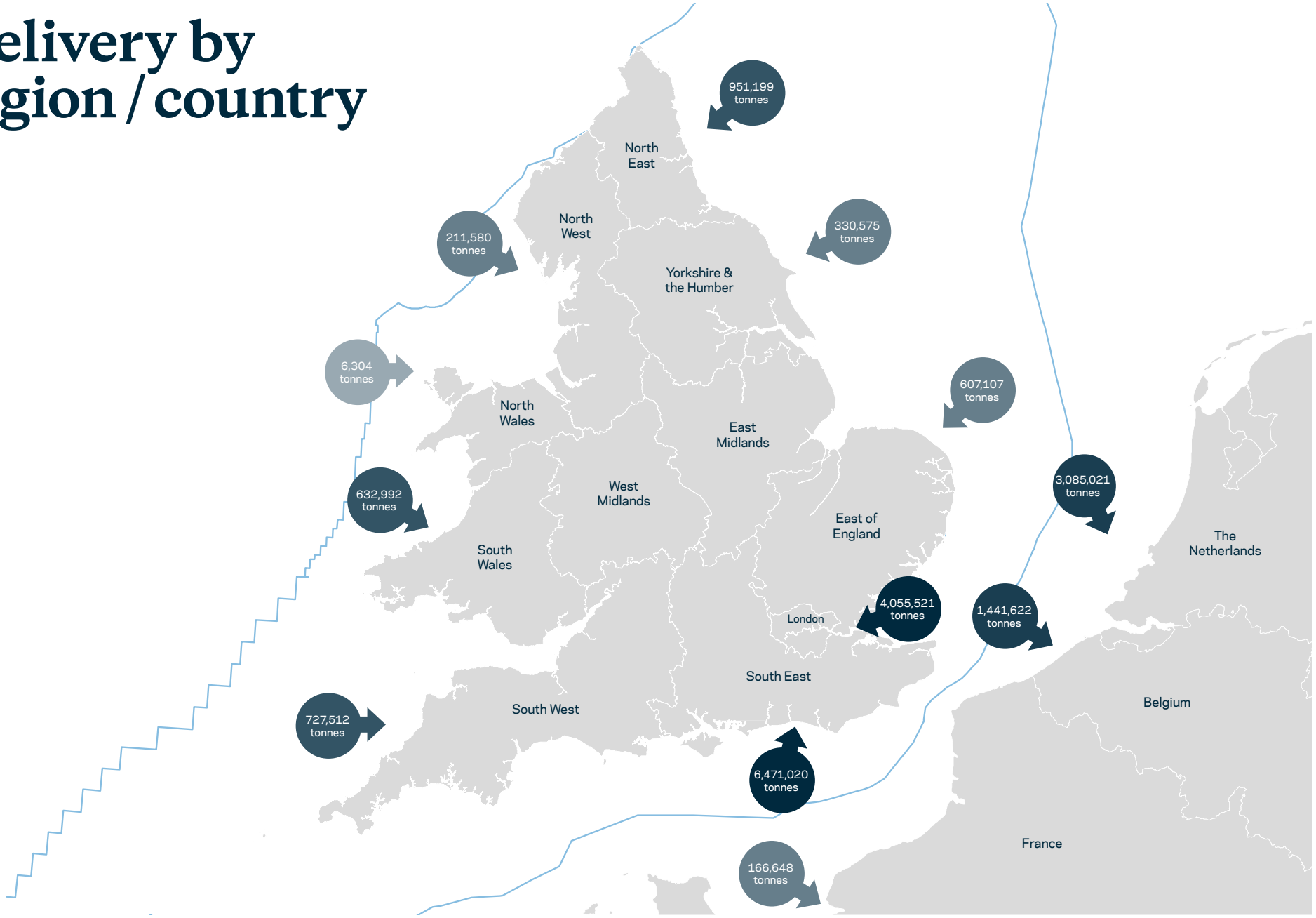
Region	Total current primary reserves	10-year average annual offtake*	3-year average annual offtake*	Peak annual offtake during 10-year period*	Annual permitted offtake (as March 2022)	Regional reserve life at 10-year average annual offtake
		Primary (construction aggregate)				
Humber	40.57	2.47	3.57	3.69	6.88	16.46
East Coast	38.97	4.01	3.26	4.72	7.13	9.71
Thames Estuary	35.78	1.44	1.55	1.94	4.35	24.93
East English Channel	146.80	4.08	4.36	4.65	9.92	36.02
South Coast	70.65	3.39	3.61	3.99	8.13	20.86
South West	29.41	1.25	1.34	1.43	2.80	23.61
North West	8.75	0.27	0.21	0.38	0.70	32.77
Total	**370.93**	**16.89**	**17.90**	**18.10**	**39.89**	**21.96**

All figures are in millions of tonnes
Totals are national averages and peaks, not the sum of regional figures

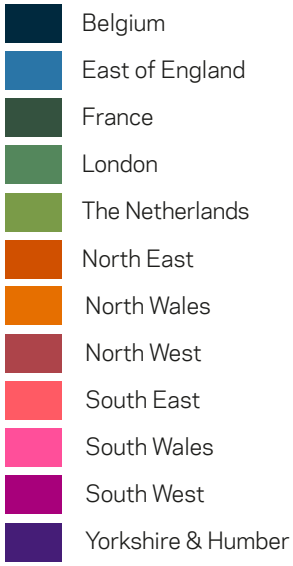
222
million tonnes

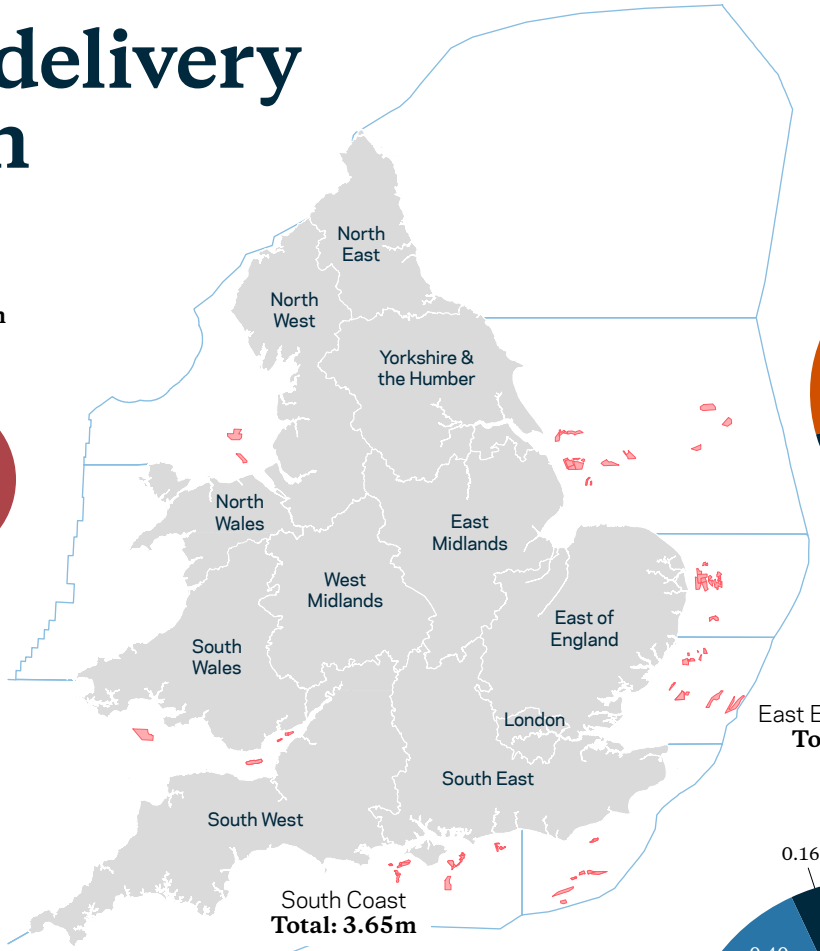
London and the Thames Estuary are supplied by the East Coast, Thames Estuary & East English Channel. These hold reserves of 222m tonnes, giving **London** and the **Thames Estuary** 23 years of production

Delivery by region / country

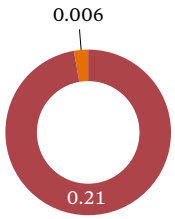


Extraction and delivery by dredge region

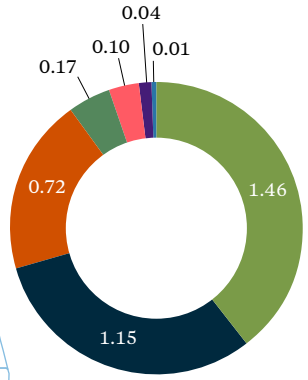




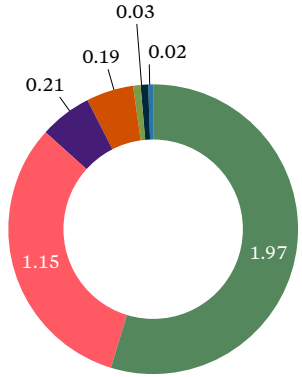
North West
Total: 0.22m



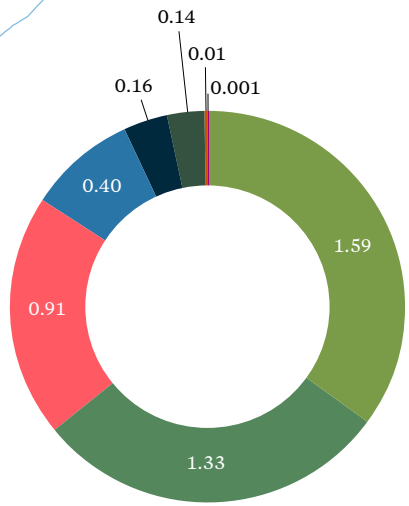
Humber
Total: 3.69m



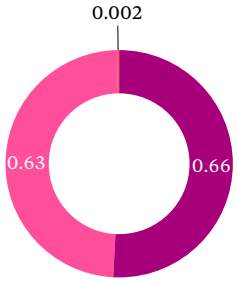
East Coast
Total: 3.60m



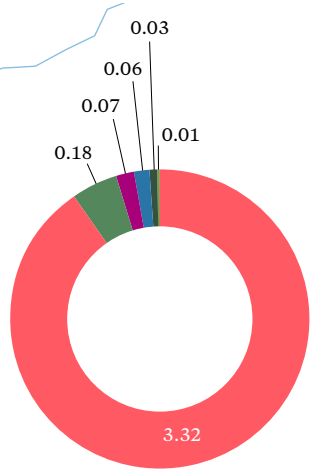
East English Channel
Total: 4.60m



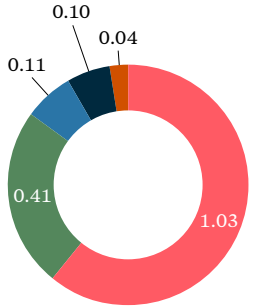
South West
Total: 1.30m



South Coast
Total: 3.65m



Thames Estuary
Total: 1.69m



The Humber region

6.88

million tonnes can be extracted from **10 licences** annually

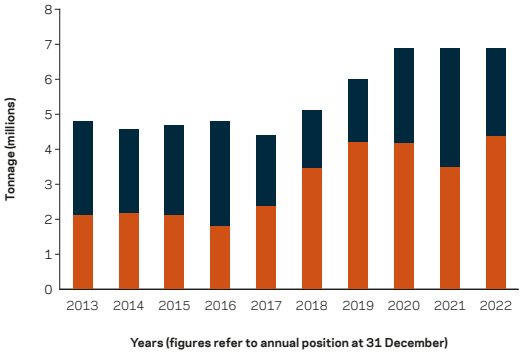
16

Current estimates suggest there are **16 years** of primary marine aggregate production permitted

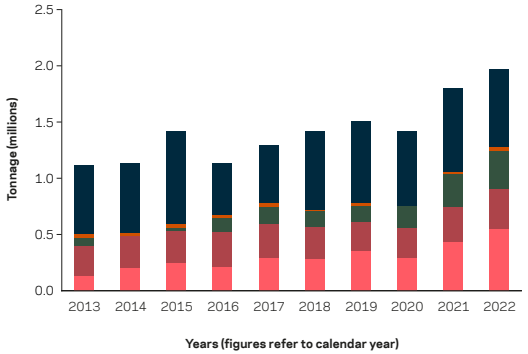
1

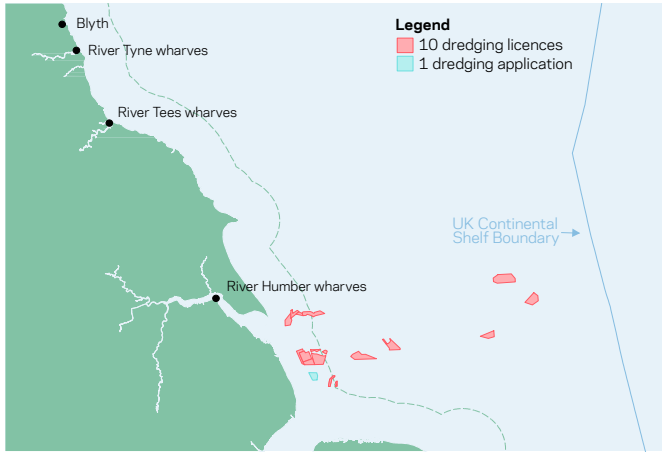
application for a licence could, if approved, increase the permitted tonnage by **0.5 million** tonnes

Permitted and extracted tonnage

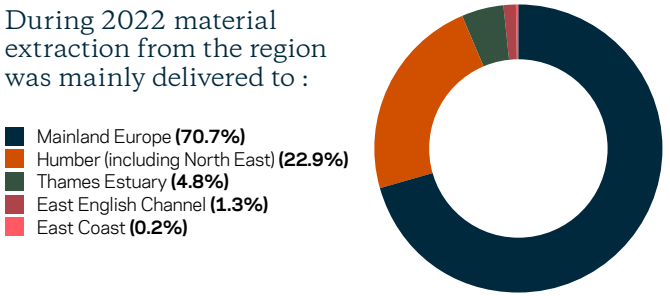


Delivery of marine aggregate to the region





During 2022 material extraction from the region was mainly delivered to :



Sediment and indicative grain sizes

Fine sand
0.063 - 0.25mm

Medium sand
0.25 - 0.5mm

Coarse sand
0.5 - 2mm

Very coarse sand
2 - 4mm

Fine gravel
4 - 20mm

Medium gravel
20 - 40mm

Coarse gravel
40 - 63mm

The East Coast region

7.13

million tonnes can be extracted from **11 licences** annually

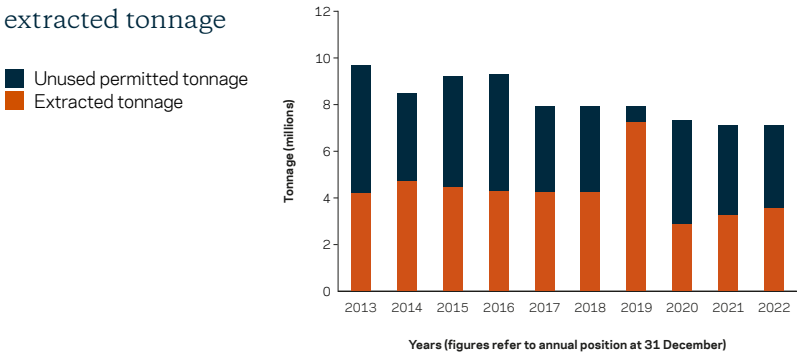
10

Current estimates suggest there are **10 years** of primary marine aggregate production permitted

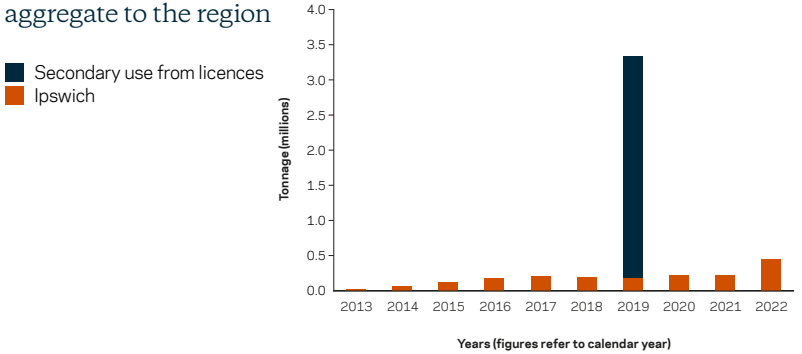
1

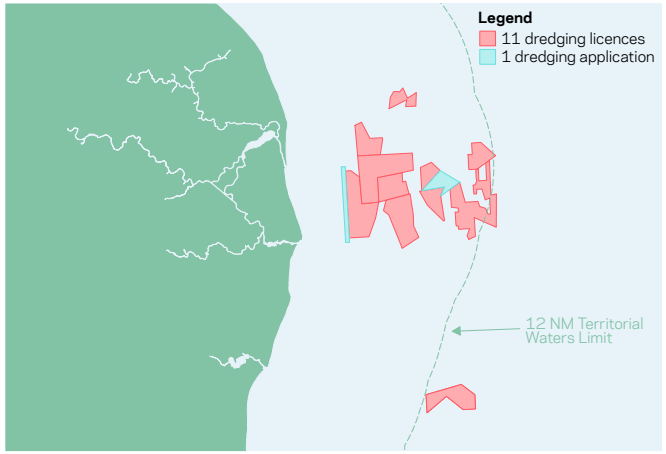
application for a licence could, if approved, increase the permitted tonnage by **0.65 million** tonnes

Permitted and extracted tonnage



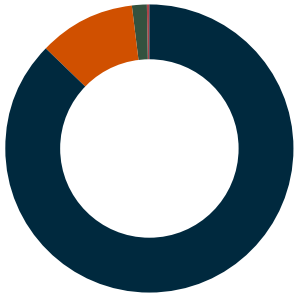
Delivery of marine aggregate to the region





During 2022 material extraction from the region was mainly delivered to :

- Thames Estuary **(87.2%)**
- Humber (including North East) **(10.9%)**
- Mainland Europe **(1.8%)**
- South Coast **(0.05%)**



Sediment and indicative grain sizes

Fine sand
0.063 - 0.25mm

Medium sand
0.25 - 0.5mm

Coarse sand
0.5 - 2mm

Very coarse sand
2 - 4mm

Fine gravel
4 - 20mm

Medium gravel
20 - 40mm

Coarse gravel
40 - 63mm

The Thames region

4.35

million tonnes can be extracted from **8 licences** annually

25

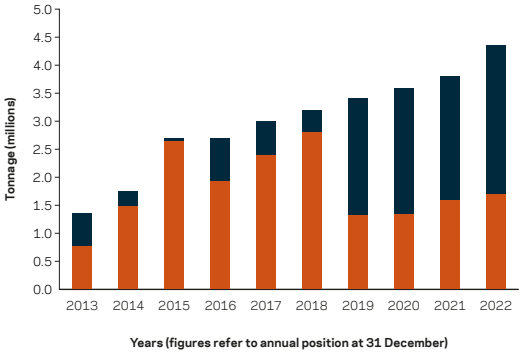
Current estimates suggest there are **25 years** of primary marine aggregate production permitted

1

application for a licence could, if approved, increase the permitted tonnage by **0.5 million** tonnes

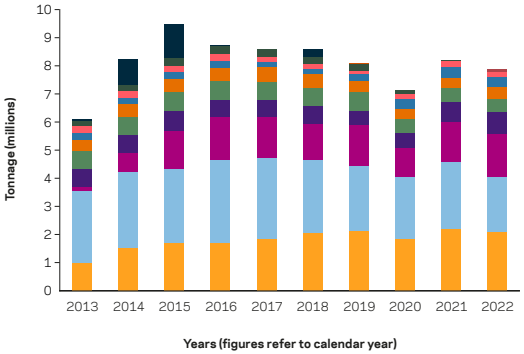
Permitted and extracted tonnage

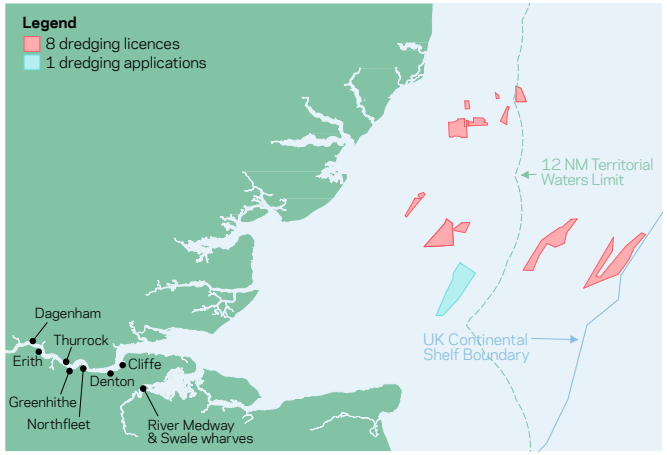
- Unused permitted tonnage
- Extracted tonnage



Delivery of marine aggregate to the region

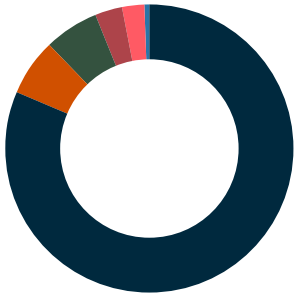
- Secondary use from licences
- Isle of Grain
- Erith
- Tilbury
- Thurrock
- Greenhithe
- River Medway & Swale wharves
- Denton
- Northfleet
- Cliffe
- Greenwich wharves
- Dagenham





During 2022 material extraction from the region was mainly delivered to :

- Thames Estuary **(81.5%)**
- East Coast **(6.6%)**
- Mainland Europe **(5.9%)**
- East English Channel **(3.3%)**
- Humber (including North East) **(2.3%)**
- South Coast **(0.45%)**



Sediment and indicative grain sizes

Fine sand
0.063 - 0.25mm

Medium sand
0.25 - 0.5mm

Coarse sand
0.5 - 2mm

Very coarse sand
2 - 4mm

Fine gravel
4 - 20mm

Medium gravel
20 - 40mm

Coarse gravel
40 - 63mm

The East English Channel region

9.92

million tonnes can be extracted from **9 licences** annually

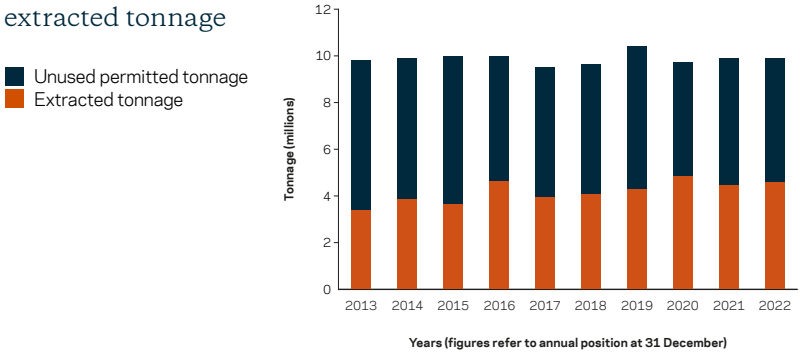
36

Current estimates suggest there are **36 years** of primary marine aggregate production permitted

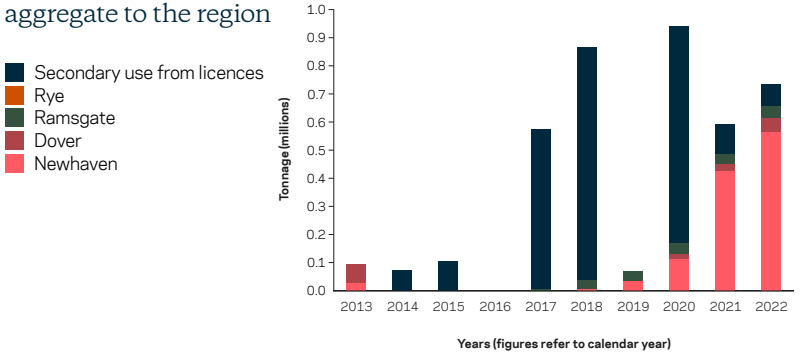
5

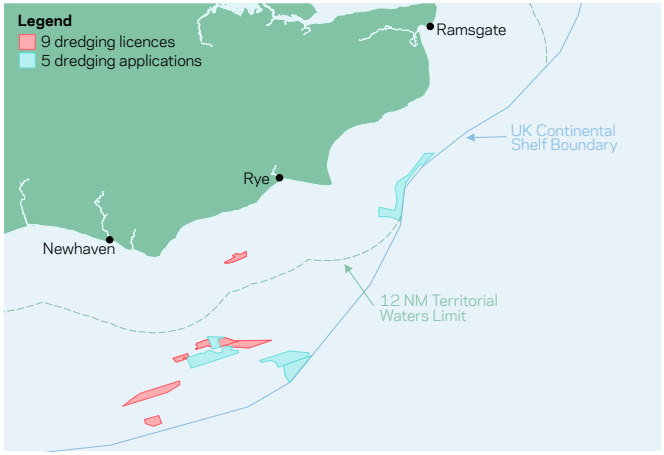
application for a licence could, if approved, increase the permitted tonnage by **2.1 million** tonnes

Permitted and extracted tonnage



Delivery of marine aggregate to the region





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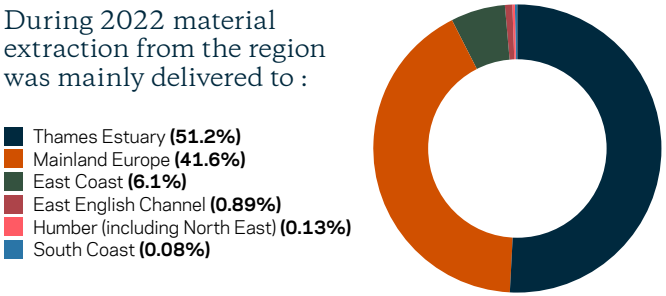


Sediment and indicative grain sizes

Fine sand
0.063 - 0.25mm

Medium sand
0.25 - 0.5mm

Coarse sand
0.5 - 2mm

Very coarse sand
2 - 4mm

Fine gravel
4 - 20mm

Medium gravel
20 - 40mm

Coarse gravel
40 - 63mm

The South Coast region

8.13

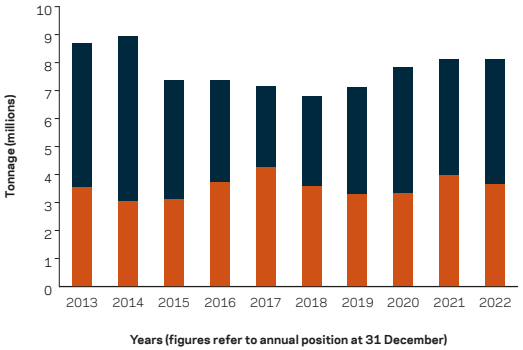
million tonnes can be extracted from **15 licences** annually

21

Current estimates suggest there are **21 years** of primary marine aggregate production permitted

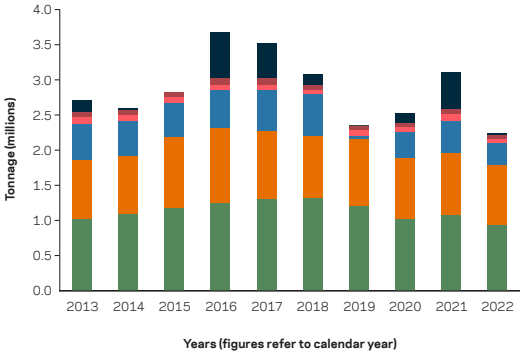
Permitted and extracted tonnage

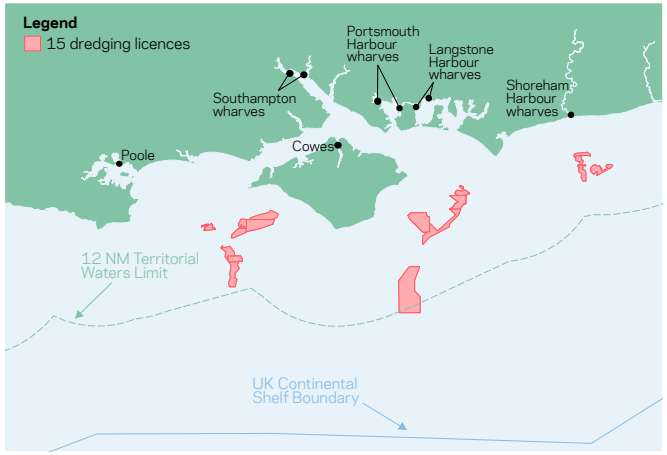
- Unused permitted tonnage
- Extracted tonnage



Delivery of marine aggregate to the region

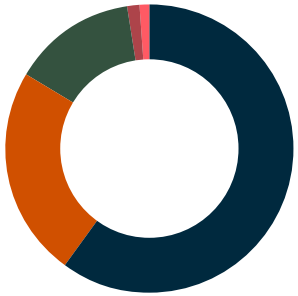
- Secondary use from licences
- Portsmouth Harbour wharves
- Littlehampton
- Cowes
- Poole
- Langstone Harbour wharves
- Southampton wharves
- Shoreham Harbour wharves





During 2022 material extraction from the region was mainly delivered to :

- South Coast **(60.2%)**
- Thames Estuary **(23.7%)**
- East English Channel **(14.0%)**
- East Coast **(1.3%)**
- Mainland Europe **(0.86%)**



Sediment and indicative grain sizes

Fine sand
0.063 - 0.25mm

Medium sand
0.25 - 0.5mm

Coarse sand
0.5 - 2mm

Very coarse sand
2 - 4mm

Fine gravel
4 - 20mm

Medium gravel
20 - 40mm

Coarse gravel
40 - 63mm

The South West region

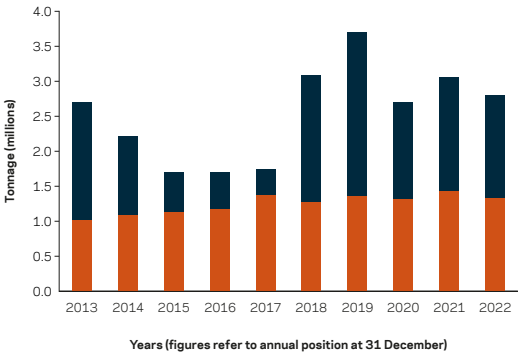
2.8

million tonnes can be extracted from **9 licences** annually

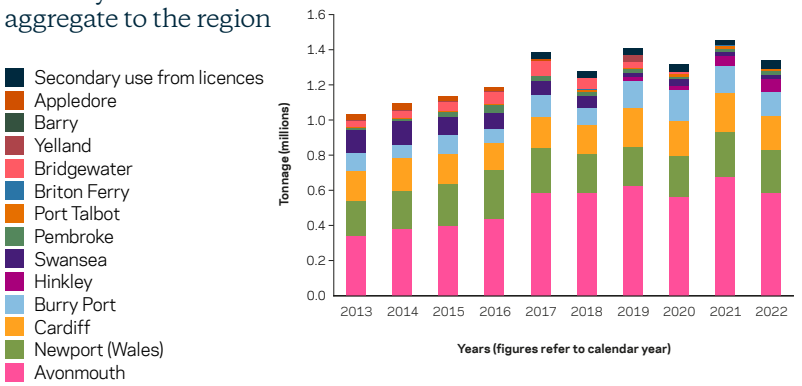
24

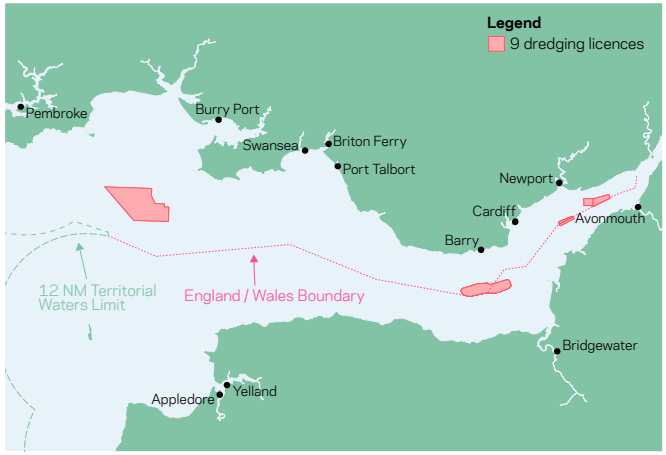
Current estimates suggest there are **24 years** of primary marine aggregate production permitted

Permitted and extracted tonnage

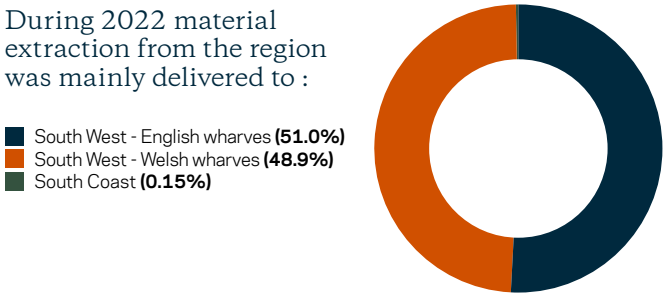


Delivery of marine aggregate to the region





During 2022 material extraction from the region was mainly delivered to :



Sediment and indicative grain sizes

Fine sand
0.063 - 0.25mm

Medium sand
0.25 - 0.5mm

Coarse sand
0.5 - 2mm

Very coarse sand
2 - 4mm

Fine gravel
4 - 20mm

Medium gravel
20 - 40mm

Coarse gravel
40 - 63mm

The North West region

0.7

million tonnes can be extracted from **2 licences** annually

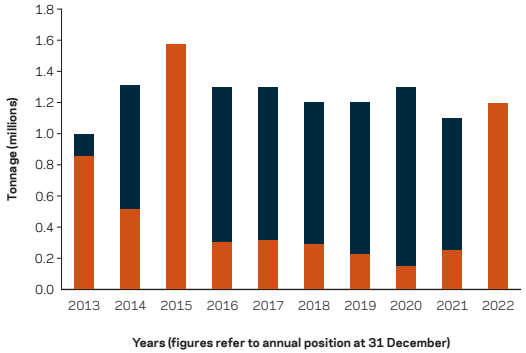
33

Current estimates suggest there are **33 years** of primary marine aggregate production permitted

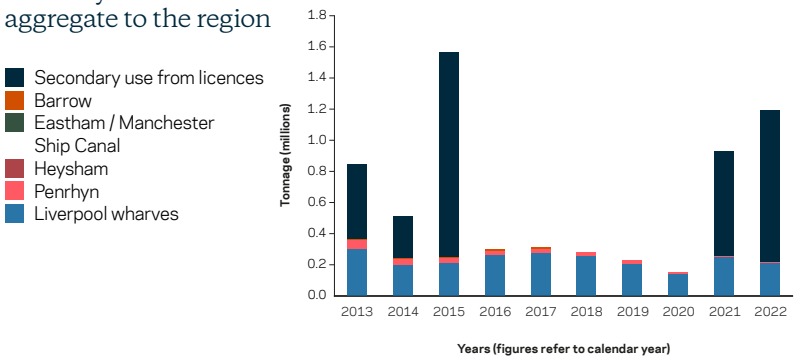
1

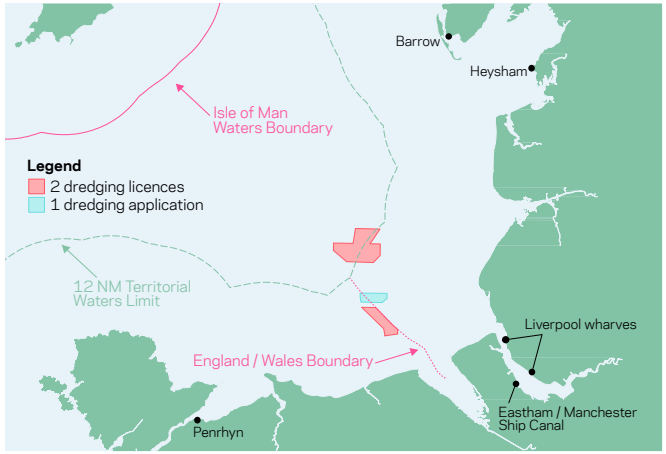
application for a licence could, if approved, increase the permitted tonnage by **0.5 million** tonnes

Permitted and extracted tonnage

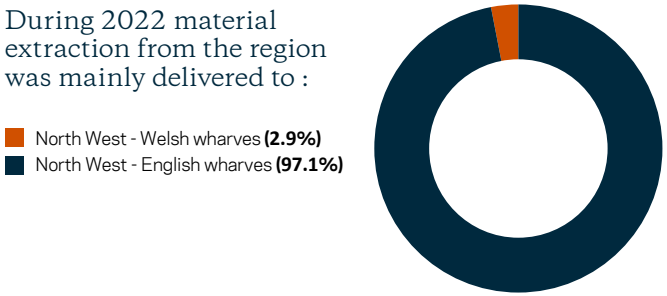


Delivery of marine aggregate to the region





During 2022 material extraction from the region was mainly delivered to :



Sediment and indicative grain sizes

Fine sand
0.063 - 0.25mm

Medium sand
0.25 - 0.5mm

Coarse sand
0.5 - 2mm

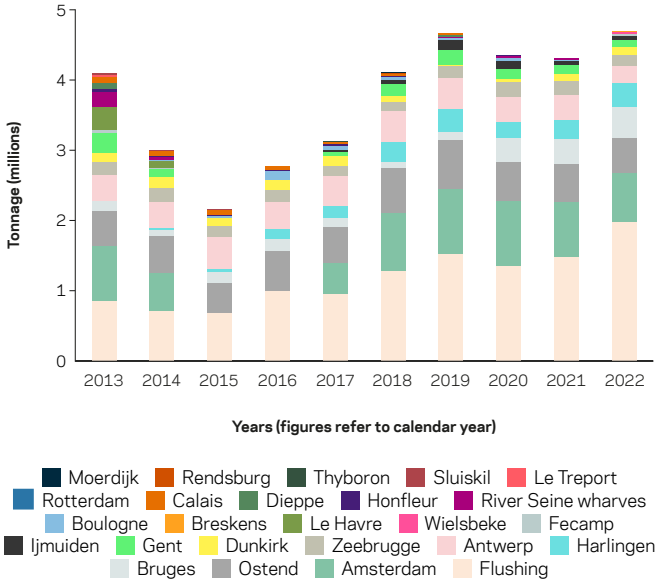
Very coarse sand
2 - 4mm

Fine gravel
4 - 20mm

Medium gravel
20 - 40mm

Coarse gravel
40 - 63mm

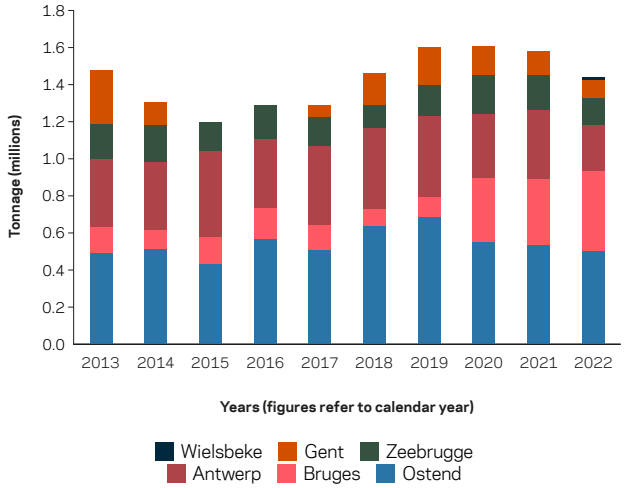
Export to mainland Europe from the UK



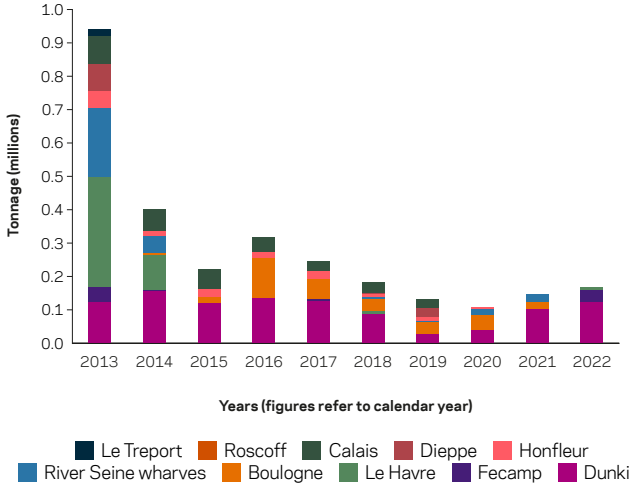
During 2022 material extracted from Crown Estate licensed areas was exported to:

- The Netherlands **(3.09m)**
- Belgium **(1.44m)**
- France **(0.17m)**

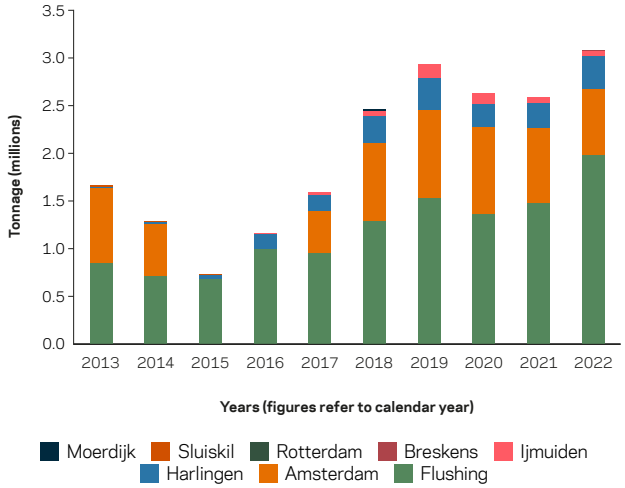
Delivery of marine aggregate to Belgium



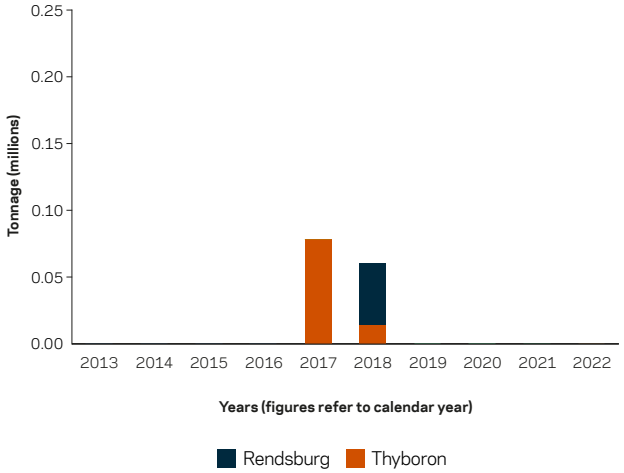
Delivery of marine aggregate to France



Delivery of marine aggregate to The Netherlands



Delivery of marine aggregate to Northern Europe



Uses of marine aggregates around the UK

The below projects have all used marine aggregates in their construction.

Coastal & flood defences

1. Minehead Beach
2. Sea Defences (reefs), Sea Palling
3. Thames Barrier, London
4. Clacton Beach
5. Colwyn Bay Beach
6. Pevensey Bay Beach
7. Lincshore Beach
8. Dawlish Warren Beach
9. Bacton to Walcott Sandscaping scheme
10. Bournemouth Beach
11. Hythe to Lydd Coastal Defence scheme

Commercial development & regeneration

12. 1 New Burlington Place W1, London
13. 20 Fenchurch Street (Walkie-Talkie), London
14. Cardiff Bay Barrage
15. Canary Wharf & Docklands Developments, London
16. Central St Martins, London
17. Spinnaker Tower, Portsmouth
18. Superstore site raising, Seaton
19. Land reclamation, Rochester Riverside
20. Dover Western Docks Revival
21. St James's Market, London

Energy & utilities

22. Energy Recovery Facility, Newhaven
23. Wastewater Treatment Plant, Birkenhead
24. London Array Wind Farm
25. Nuclear Power Station, Dungeness
26. Thames Tideway Tunnel, London
27. Hinkley Point C Nuclear Power Station, Bridgwater

Community & leisure

28. Principality Stadium, Cardiff
29. National Botanic Gardens of Wales, Great Glasshouse, Carmarthenshire
30. The Darwin Centre, Natural History Museum, London
31. Northumberland Development Project, Tottenham Hotspur FC, London
32. British Airways i360 Observation Tower, Brighton
33. Everton Football Ground, Bramley Moore docks

Port development

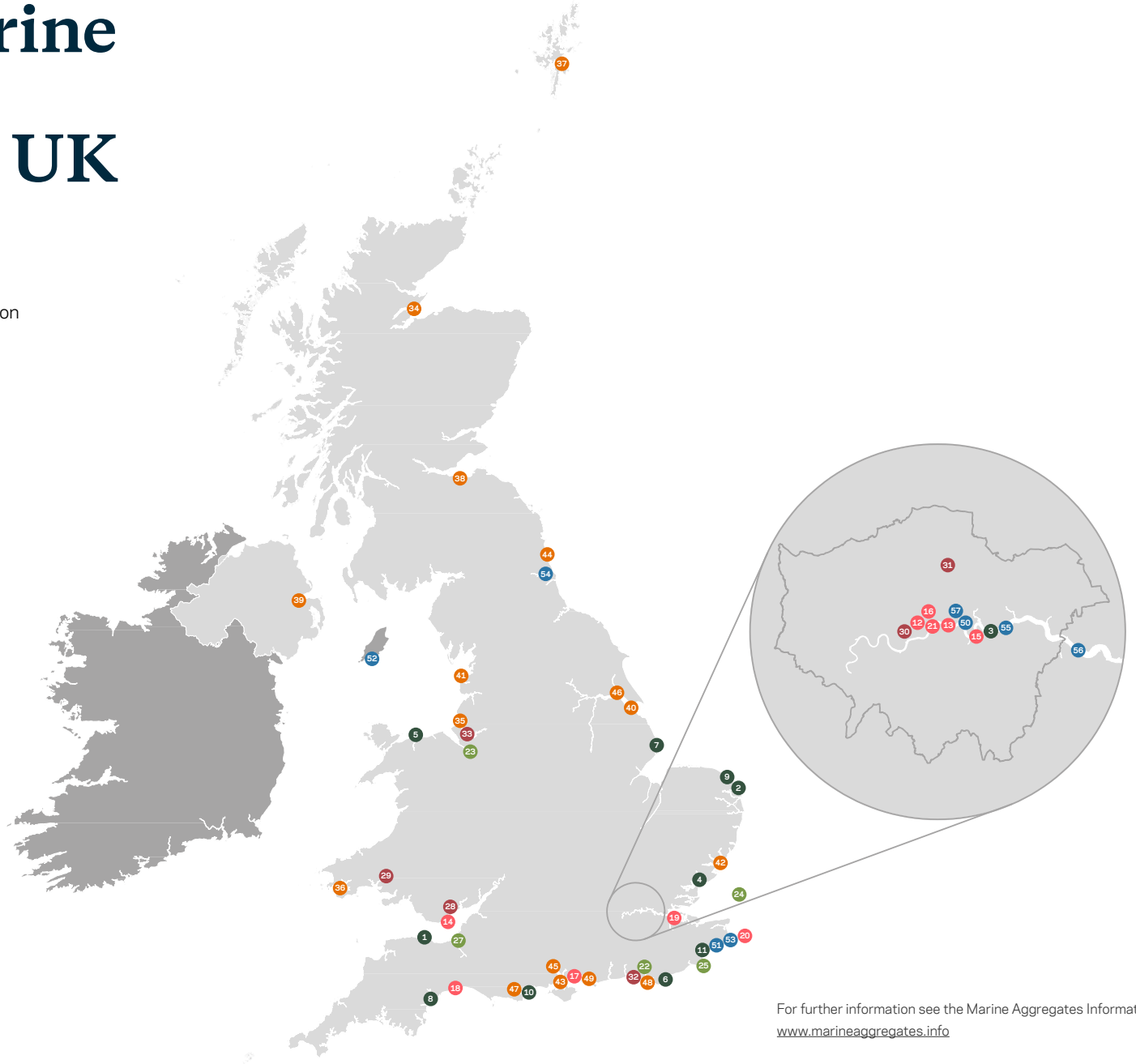
34. Nigg Yard, Cromarty Firth
35. Liverpool2 Container Terminal
36. Oil Terminal, Milford Haven
37. Lerwick, Shetland Islands
38. Leith Docks, Edinburgh
39. Belfast
40. Grimsby
41. Fleetwood
42. Container Terminal, Felixstowe
43. Breakwater, Cowes
44. Blyth
45. Container Terminal, Southampton
46. Green Port Hull
47. South Quay, Poole
48. Brett Wharf, Newhaven
49. Brett Wharf, Portsmouth

Transport infrastructure

50. Canary Wharf Underground Station, London
51. Channel Tunnel Rail Link
52. Ronaldsway Airport Extension, Isle of Man
53. Ferry Terminal, Dover
54. Gateshead Millennium Bridge, Newcastle-upon-Tyne
55. City Airport, London
56. Queen Elizabeth II Bridge, Dartford
57. Crossrail, London

Uses of marine aggregates around the UK

- Coastal & flood defences
- Commercial development & regeneration
- Energy & utilities
- Community & leisure
- Port development
- Transport infrastructure



For further information see the Marine Aggregates Information Centre website: www.marineaggregates.info

Case study: Earth Friendly Concrete

Uses of marine aggregates for construction

The Brett Group has over 60 sites across the south east and south coast of England including ten wharf sites supplying marine dredged aggregates for use in concrete manufacture and construction projects.

Brett Aggregates' wharf site at Cliffe in Kent receives material dredged by Brett owned Britannia Aggregates and other dredgers, from around the south east coast and the Thames Estuary. Brett then transports the resulting aggregate products by barge to its Thames based Peruvian Wharf in Silvertown, where it is used by Brett Group joint venture company, Capital Concrete in its new, innovative product - Earth Friendly Concrete.

Earth Friendly Concrete or EFC® as it's known, is a cement free product which has a low level of embodied carbon and can offer 75% -87% less embodied CO_2 than concrete made with traditional Portland Cement, which is great news for sustainable construction.

For some time Capital Concrete has been the sole supplier of this innovative product in London and it has been used successfully in a number of high profile construction projects across the capital such as in temporary works at Euston Station for HS2, which saved 76 tonnes of carbon and 2,500m^3 to Plaistow Wharf, Silvertown for Keltbray's new waste treatment facility, saving 800 tonnes of CO_2.

The product is establishing a strong track record, particularly as it helps projects achieve their sustainable targets.

The technical bit:

EFC is an Alkali Activated geopolymer concrete made from a binder consisting of Ground Granulated Blast Furnace Slag (GGBS), Pulverized Fuel Ash (PFA), which has been developed by Australian company, Wagners.

Images courtesy of Brett

Earth Friendly Concrete

a cement free product which has a low level of embodied carbon

We are delighted to be able to supply marine aggregates for use in such a ground-breaking product, particularly as a large part of the marine dredged material is transported to concrete plants in Central London by barge and by rail, reducing road miles and supporting the sustainable credentials of both EFC® and the projects which use it.

Oliver Brown
Managing Director of Britannia Aggregates

Case study: Colywn Bay

Uses of marine aggregates for beach nourishment

The Colwyn Bay beach renourishment project constituted Phase 2b of the Colwyn Bay Waterfront Project. This contract was awarded to Boskalis Westminster as the main contractor by Conwy County Borough Council, and included the supply of 485,000m^3 of material to a length of promenade towards the west of the bay to provide a renourished, sandy beach. Additionally, the eastern section of the bay near to Port Eiras, part of which had been renourished by Boskalis Westminster in 2013 as part of the earlier Phase 1b scheme, was reprofiled to new design specifications.

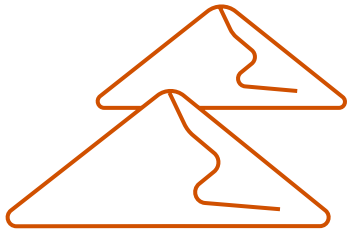
Material was dredged from Westminster Gravels licensed Area 457, situated approximately twelve nautical miles from the site, just beyond the Burbo Bank Wind Farm. The trailing suction hopper dredger vessel 'Willem van Oranje' dredged, transported, and pumped the beach material ashore through a 1,000m long sinker pipeline. Towards the end of the project, the Willem van Oranje was relieved by the smaller 'Causeway', which continued with the dredging operations. The work was completed to program – on time and on budget. Disruptions due to weather and sea state were minimised by delivering the pipeline to North Wales from The Netherlands by road.

Logistically, the challenges of constructing the almost one kilometre of sinker pipeline on Rhos Bay were immediately apparent, especially when considering the public access along the designated area. However, the pipeline was assembled and welded together during periods of low tide, utilising the entire length of the beach. The sinker line was then floated out and installed before being connected to the floater line.

The 400 metre floating pipeline was towed from Oosterschelde in the Netherlands to Colwyn Bay, after it became unexpectedly available in one continuous piece. In the final days of the project, demobilisation of the pipeline was carried out, although this was delayed by several days due to adverse weather conditions.

In conjunction with the pumping of material to the west section of the beach, the middle and eastern sections were surveyed and reprofiled to new specifications, with the sand being graded every 5000m^3 on average.

With the site having public access running through it, the hire of a dedicated on site security company was crucial in successfully carrying out the works with no major incidents. Additionally, the work was undertaken within tidal windows that had the potential to disrupt progress. However, throughout the project the tides were generally favourable, but as a precaution, a production engineer was on site during the first days of the arrival of the Willem van Oranje to assist the crew in establishing the best times to come in and discharge. The crew were able to take this cycle and run with it, improving the efficiency as the work continued.



485,000m^3

volume of sand deposited

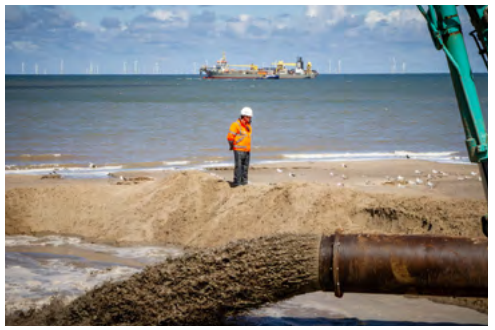


Image courtesy of Boskalis

Dredging fleet update

Van Oord invests in new LNG dredging vessels

Van Oord operates trailing suction hopper dredgers for a wide range of global activities, such as coastal protection, port construction, deepening waterways and land reclamation.

Van Oord is expanding its dredging fleet with three new LNG-powered trailing suction hopper dredgers. The Vox Ariane, Vox Apolonia and Vox Alexia are medium-sized vessels built to boost the mid-class section of Van Oord's fleet and each will ultimately replace an existing vessel.

The three new vessels have a significantly lower carbon footprint than conventional trailing suction hopper dredgers. Nitrogen oxides and particulate emissions are also minimal with this new generation of hopper dredgers. These features will qualify the vessels for Green Passports and Clean Ship notations, awarded to owners and operators who choose to design and operate their ships in an environmentally sustainable manner. Van Oord is investing in expertise, equipment, and vessels to operate a more sustainable fleet in order to achieve its net-zero emission targets by 2050. The three new vessels will help Van Oord accomplish the aim of modernising its fleet and making it more economical and energy efficient. Their LNG fuel system and energy-efficient design will reduce company fuel consumption and carbon emissions substantially.

The vessels were built at Keppel Singmarine Pte Ltd shipyard in Singapore. They have a hopper capacity of approximately 10,500 cubic metres, measure 137.5 metres in length and 27.0 metres across the beam.

The Vox Ariane was formally launched in June 2022 and has already been successfully deployed on several projects. The Vox Apolonia was formally launched in March 2023, and the Vox Alexia is in the final stages of construction.

The Vox Apolonia will be operating in the UK in early summer 2023, undertaking dredging and beach nourishment activities along the Lincolnshire coast.

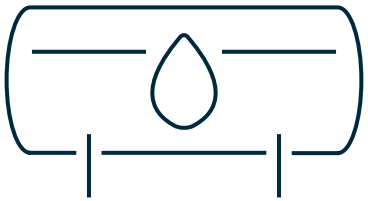
Award winning design

In 2022, Van Oord won the Maritime KNVR Shipping Award for its contribution to innovation in the Dutch maritime industry by commissioning the three new trailing suction hopper dredgers.

According to the jury, Van Oord's introduction of the three vessels marks it as 'a trailblazer for international standards aimed at minimising climate and environmental impact within the available technological capabilities.

Images courtesy of Van Oord

10,500m^3
hopper capacity



Liquefied natural gas
powered

Wharf development update

Tilbury 2

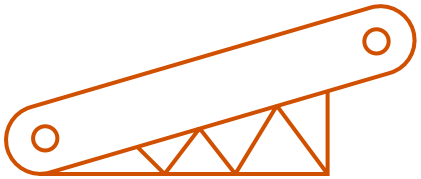
Tarmac has opened a large integrated aggregates, concrete and asphalt production site on the north bank of the River Thames at West Tilbury in Essex.

The site receives both marine aggregates and crushed rock by ship, using conveyors some 400 metres long extending from the riverside to the wharf stockpiles.

A combination of marine aggregates and crushed rock processing, asphalt and ready-mixed concrete production, rail and barge loading all operate on the one site to maximise efficiency and reduce material double-handling and transport requirements.

The site is expected to receive and process increasing tonnages of marine aggregates in the coming years and has the advantage of deep water access on the River Thames, removing any tidal and water depth restrictions that affect wharves further upstream. The photograph illustrates the large extent of the processing facilities and the space available for the stockpiling of marine aggregates, using a radial conveyor.

Images courtesy of Tarmac



400m

conveyor belt length

The deep water access at Tilbury wharf provides Tarmac Marine the ability to supply aggregates from our licence areas at any state of the tide and is reducing the cycle time between the dredging and the landing of our cargoes. As a consequence, we expect to see continued improvements in the efficiency and productivity of our ships, as Tilbury wharf becomes well established as a focal point for Tarmac's supply of marine aggregates in the south-east of England.

Gordon Tuck
Marine Director for Tarmac

The Marine Aggregates Archaeology Protocol

In 2005, the British Marine Aggregates Producers Association (BMAPA) and Historic England put in place an archaeological protocol, developed by Wessex Archaeology to advise staff on how to protect submerged heritage, including shipwreck, aircraft and archaeological material.

The Crown Estate joined the scheme as a funding partner in 2009. The protocol, which is now a formal condition of all Marine Licences, recommends that every find of archaeological potential discovered during aggregate dredging or processing is reported.

The way finds are reported also allows our submerged heritage to be understood further and the discovery of the finds has provided more detail about Palaeolithic human activity (approximately 12,000 to 2 million years ago), rising sea levels and movement of sediments following deglaciation after the last Ice Age.

Of particular importance has been the discovery of numerous worked flint artefacts which provide an indication of the presence of early man in the southern part of the North Sea and these combined with hundreds of fossilised bones gives an insight into palaeoclimates and palaeolandscapes. Although the protocol covers marine aggregate operations across English & Welsh waters, the discovery of a large amounts of flint materials represents a hot spot off the East Coast around the Anglian block of licences.

Through these finds a huge amount has been discovered about the wider submerged palaeolithic landscape associated with the Palaeo-Yare, an ancient system of river channels that extended across the shallow continental shelf draining the landmass we now know as Norfolk. ▸

Daryl Mason, finder of the donated tooth, officially handing it over to Dr Neil Adams (Curator of Modern Mammals) and Professor Adrian Lister (Merit Researcher, Quaternary Mammal Research Group), both of the Natural History Museum. See page 23

From Hanson's Area 240 licence, a large mammoth tooth was discovered on board the Arco Avon and reported through the Archaeological Protocol in 2019, representing one of the most complete finds ever recovered from the Palaeo-Yare landscape.

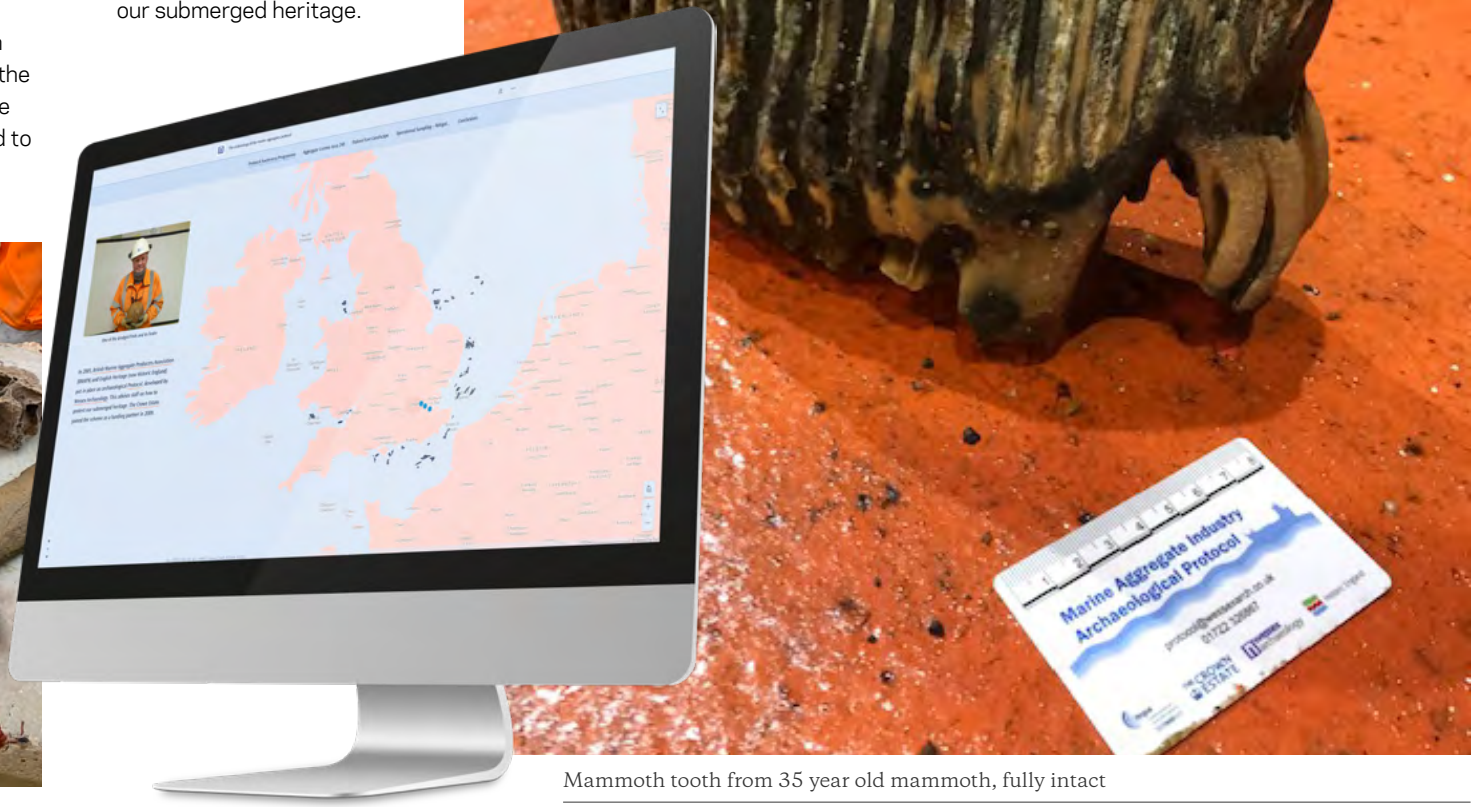
It was carefully stored in freshwater to help remove the salt, and images sent to the Natural History Museum for further examination.

On the 24th April 2023 the Mammoth Tooth was presented to the Natural History Museum where it was accepted into the Museum's Collection, being so well preserved and rare. This find is extremely important in a number of ways:

- Its exact position is known, which is rare for finds of this age and provenance
- It is large and fully intact with the root, and it is possible that a complete skull, or parts of it are still on the seabed
- From the physiology it can be identified as a woolly mammoth
- The age of the mammoth can be determined from the tooth's size and wear. The mammoth was estimated to be 35 years old
- This type of mammoth dates to 2 stages of the Ice Age, Marine Isotope Stage (MIS) 7 to 6, which covers the period from 240,000 to 170,000 years ago.

Wessex Archaeology have put together a Storyboard telling the story of this sunken landscape as revealed through the Marine Aggregate Industry Archaeological Protocol. It also shows how the protocol has improved our understanding of our submerged heritage.

Images courtesy of Hanson



Mammoth tooth from 35 year old mammoth, fully intact

The Marine Minerals Academy

The Crown Estate recognises that knowledge forms a key component of the landscape in this specialist sector.

It therefore sponsors a course to equip future company leaders and decision makers associated with the Marine Aggregates industry with the skills and understanding required for success.

The Marine Minerals Academy comprises seven one day workshops spread over the course of one year where interaction is encouraged to stimulate wide-ranging discussion.

First launched in 2015, the course runs annually and continues to grow in popularity with an output totalling over 120 alumni. 2022 saw the welcome return of the course following a Covid-19 enforced hiatus.

The course aims to provide a full sector perspective for upcoming business leaders and associated practitioners (including regulators and advisors) to the wider policy, regulatory, operating and financial environment, as well as addressing key risks and opportunities. The course delivers a focused, high intensity immersion in the sector, delivered by leading experts from industry, government and consultancy.

Topics include:

- Marine sand and gravel industry history
- Markets: construction, coastal adaptation
- Resources – identification, evaluation and management
- Marine policy and planning
- Marine licensing and regulation
- Access to minerals – commercial licensing & asset management
- Vessel and wharf visits
- Marine archaeology and munitions and their impact on operations
- Dredger management – productivity and optimisation, crewing and people
- Business performance, optimisation and efficiencies
- Sustainability and environmental performance.

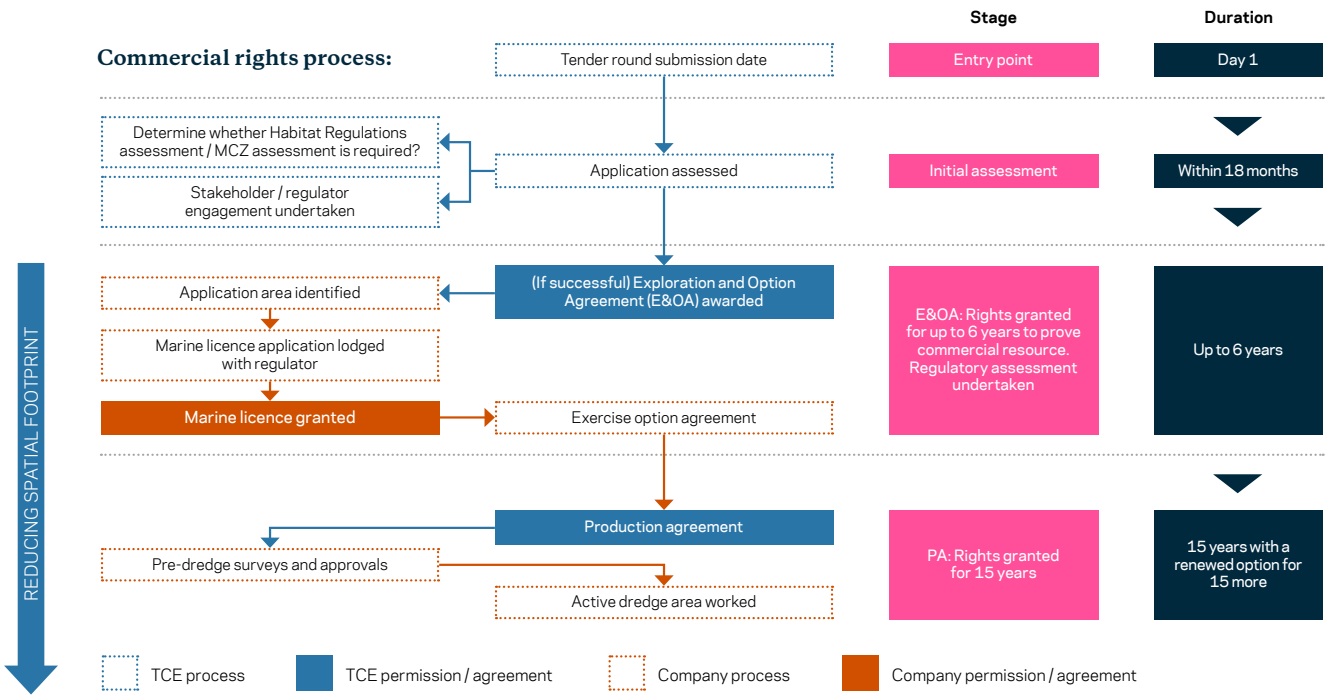
Nick Everington, Portfolio Manager for Marine Minerals at The Crown Estate, presented a trophy to the winners of the Business Scenario Workshop, which was held on the final event of the 2022 course

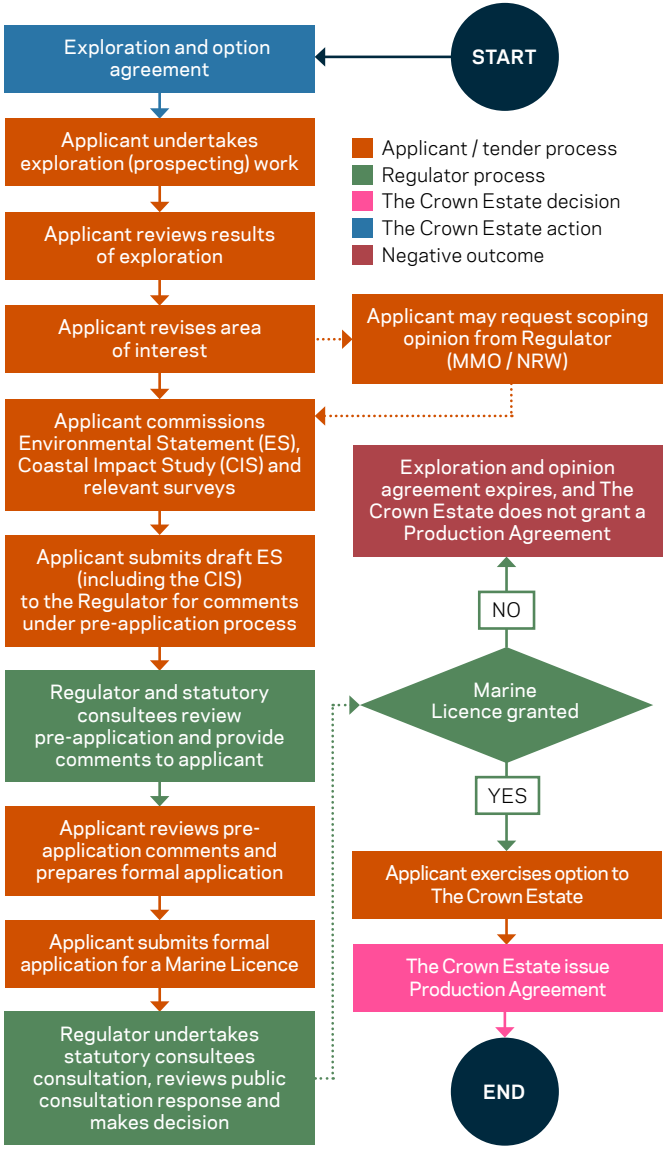
Obtaining rights for sand and gravel extraction

To obtain a licence from The Crown Estate for the rights to extract marine aggregates from the seabed, a number of stages are involved.

- The first stage is to identify an area of interest and submit a tender bid during a Marine Aggregates Tender Round
- Once a bid is submitted the tenders will be assessed by The Crown Estate and rights may be awarded
- Once the commercial rights have been secured from The Crown Estate the second phase of the application process commences
- The successful tenderer is required to apply for a Marine Licence (environment and legal rights/permissions) from the regulator (Marine Management Organisation in England, and Natural Resources Wales in Wales).

Only if a Marine Licence is received will the applicant be able to request The Crown Estate issue a Production Agreement for extraction to commence. The Marine Licence and commercial rights processes are summarised in the following flowcharts.





THE CROWN ESTATE

The Crown Estate is a significant national landowner creating financial, environmental and social value for the nation, both for now and for the long term. Our £16 billion portfolio includes urban centres and development opportunities; one of the largest rural holdings in the country; an estate across Regent Street and St James's in London's West End; and Windsor Great Park. We manage the seabed and much of the coastline around England, Wales and Northern Ireland, playing a major role in the UK's world-leading offshore wind sector.

Our focus is on delivering three strategic objectives – climate resilience and energy security, thriving communities, and nature recovery. Through these we aim to address national needs where we are best placed to draw on our unique combination of strengths and support economic growth and equality of outcomes.

Set up by an Act of Parliament, and occupying a space between the public and private sectors, we act independently and commercially to grow the value of the portfolio for the nation. A company for the country, all of our net revenue profit goes to the Treasury for the benefit of the nation's finances. This has totalled more than £3.2 billion over the last ten years.

The Crown Estate
1 St James's Market
London
SW1Y 4AH
-
T 020 7851 5000
www.thecrownestate.co.uk
@TheCrownEstate

Links and useful references

The Crown Estate
www.thecrownestate.co.uk/en-gb/what-we-do/on-the-seabed/minerals-dredging

Marine Aggregate Information Centre
www.marineaggregates.info

British Marine Aggregate Producers Association
www.bmapa.org

Marine Management Organisation
www.gov.uk/mmo

Natural Resources Wales
www.naturalresourceswales.gov.uk

British Geological Survey – Minerals UK
www2.bgs.ac.uk/mineralsUK

Southern Coastal Group and SCOPAC
southerncoastalgroup-scopac.org.uk