

**This is the fifth bi-annual bulletin of the European Marine Sand And Gravel Group (EMSAGG). The aim of these bulletins is to promote the sharing of information and experience relating to commercial extraction of marine sand and gravel throughout Europe**

EMSAGG is an international group made up of organisations spanning an area of interest from the Atlantic to the Baltic. Membership of the group includes national governments, regulators, dredging and aggregate companies, conservation bodies, academics and research institutions

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## EMSAGG News

### EMSAGG meeting, Rijswijk, 14 November 2001

The Ministry of Transport, Public Works and Water Management, North Sea Directorate hosted the eighth biannual EMSAGG meeting. Among the many issues discussed were the forthcoming EMSAGG conference, the development of an EMSAGG website and establishing firm research needs for the industry. A new chairman for the group was also elected and EMSAGG would like to welcome Daniel Leggett to his new role.



*If you wish to contribute to future issues of this bulletin or would like to know more about EMSAGG, please contact Elizabeth Holliday at CIRIA*

## EMSAGG conference update

The EMSAGG conference will be held 20th-21st February 2003 at Aula Congresscentrum, Delft University, The Netherlands. Enclosed is an outline of the conference and a registration form.

If you require further information please contact Elizabeth Holliday at CIRIA on +44 (0)20 7828 4441 or email [elizabeth.holliday@ciria.org.uk](mailto:elizabeth.holliday@ciria.org.uk).

## EMSAGG website

EMSAGG has recently launched its own website. The site contains information on the group's Terms of Reference, conference detail updates, EMSAGG member organisations, relevant CIRIA publications and projects, and also downloadable copies of all EMSAGG bulletins. See [www.ciria.org.uk/emsagg](http://www.ciria.org.uk/emsagg)

EMSAGG will be developing and improving this site, so keep a lookout for updates on its progress.



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## Spotlight on the Netherlands

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Each issue of the EMSAGG Bulletin concentrates on marine aggregate extraction in a north west European country.

### Environmental Impact Assessment studies

Although not yet fully implemented, there is a new obligation in the Netherlands for an Environmental Impact Assessment (EIA) to be carried out for the extraction of aggregate. Before this obligation was set EIAs were only required on extraction exceeding 500 hectares. It is intended that a criterion of 10 million cubic metres volume of extraction will be added to the obligation.

There are currently three EIAs being carried out in the Dutch area of the North Sea.

1. Extraction of aggregate sand from the North Sea, studying the effects in the area off the coast of Zuid-Holland. The study focuses on the environmental impact of the extraction of a maximum of 400 million tonnes of aggregate sand from a depth of five to 30 metres below the seabed.
2. Extraction of aggregate sand and gravel from the Cleaverbank Area, focusing on the environmental impact of extracting 20 million cubic metres of aggregate sand and gravel, to better protect the area's special benthic fauna.
3. Extraction of sand for the Westerschelde Container Terminal in the southern part of the North Sea, focusing on the environmental impact of the extraction of about 20 million cubic metres of fill sand from the 20 m depth contour (Dutch level) to a distance of 40 km from the coast.



Source: BMAPA

### Enlargement of the Rotterdam harbour area

Bulletin 1 reported on Dutch plans to reclaim land just outside the existing harbour area. The Dutch Government has now made the decision to enlarge the Rotterdam harbour area by 1000 ha for industrial use. This enlargement will require 400 million cubic metres of marine sand to be extracted from a nearby area.

### Maps of the Netherlands Continental Shelf

Recognition of archaeological and cultural heritage valuables in extraction planning has been highlighted by the Malta Treaty and the UNESCO Convention of Underwater Cultural Heritage. In response the Netherlands have produced two maps, the first indicating areas with a high chance of containing archaeological and cultural heritage valuables in the seabed and the second providing locations of archaeological remains, mainly wrecks. These will be combined to form a map of archaeological and cultural heritage valuables on the Netherlands Continental Shelf.

Geomorphological and geological features must now also be taken into account in decisions about extraction locations. To assist this a map has been produced indicating areas of geomorphological and geological significance on the Netherlands Continental Shelf. Features on the map include boreholes and areas of seismic lines with unique stratigraphical information.

### Airport island

Bulletin 1 also featured the Dutch proposal to construct an offshore airport off the west coast of Holland. This plan is currently on hold as the Dutch Government has decided to improve Schiphol Airport to facilitate the growth of the air traffic. Nevertheless, the plans have not been totally abandoned and a research programme continues on the effects of an airport in the sea.

### PUTMOR research project

The aim of this study is to determine changes in the physical parameters of the seabed due to the presence of an extraction pit. These physical parameters are important in assisting with qualifying and quantifying the morphological and ecological effects of sand extraction pits. Field measurements were carried out in and outside of a large extraction pit (500 m x 1300 m, 10 m depth relative to the seabed and 22 m-24 m water depth) 10 km off the Dutch coast near Hoek van Holland.

The study has shown:

- The sand pit has small influences on flow velocities.
- Flow velocities in pit are sufficient to renew water at each tide.
- No increase of stratification.
- Pits do not act as trap for high density water.
- Oxygen content shows only a slight difference (<0.2 mg/l) between bottom of pit and seabed.

Further validated data of the measuring campaign will be available on CD-ROM in December 2002 (Management (RIKZ), Den Haag / Svasek, Rotterdam).

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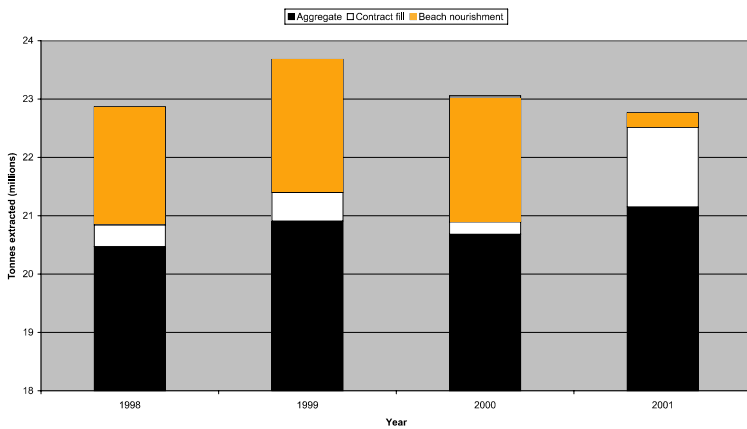
# Crown Estate marine aggregate statistics

Each year the Crown Estate publishes a summary of its statistics on marine aggregate extraction in England and Wales. Figures show that over 22.7 million tonnes of marine aggregates were extracted from Crown Estate licences during 2001. This is less than a 2 per cent decrease on figures for 2000.

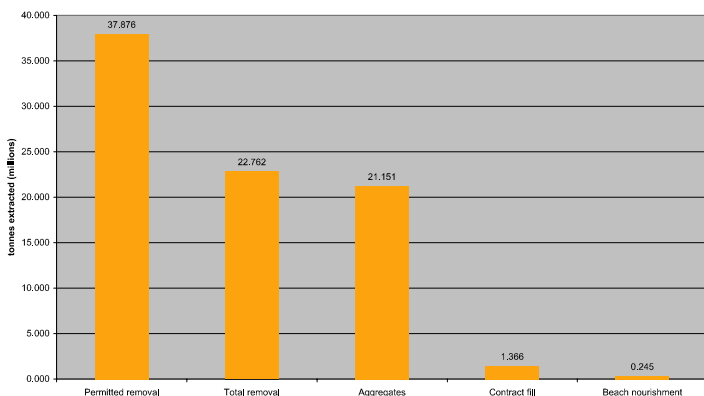


Source: BMAPA

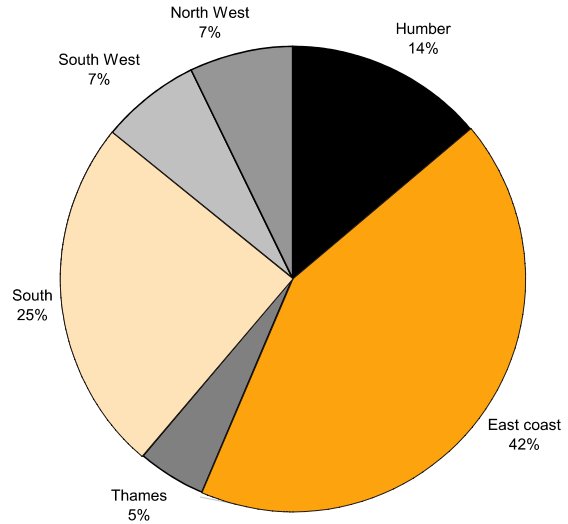
The trend for marine aggregate extraction over the past four years is demonstrated in the graph below.



The statistics show that of the total permitted removal, 62 per cent was actually extracted, compared with 60 per cent in 2000. The chart below demonstrates the extraction totals and the use of the material.

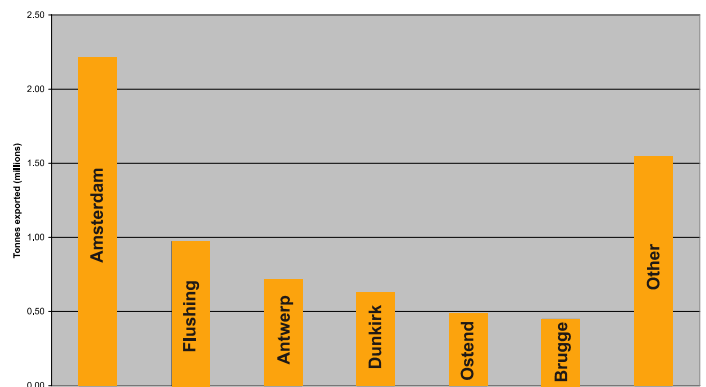


The statistics are divided into six regions covering England and Wales. The East Coast region had the greatest marine mineral extraction, followed by the South and then the Humber. The share of extraction is shown in the pie chart below.



The figures show that port landing of marine aggregate from construction was highest at the Thames Estuary ports (7,222,764 tonnes), followed by the South Coast (3,410,838 tonnes).

Exports of marine aggregates to European ports in 2001 totalled 6,992,731 tonnes. This is a 4 per cent decrease in exports to the Continent compared to 2000. The top six landing ports and amounts landed are shown in the chart below.



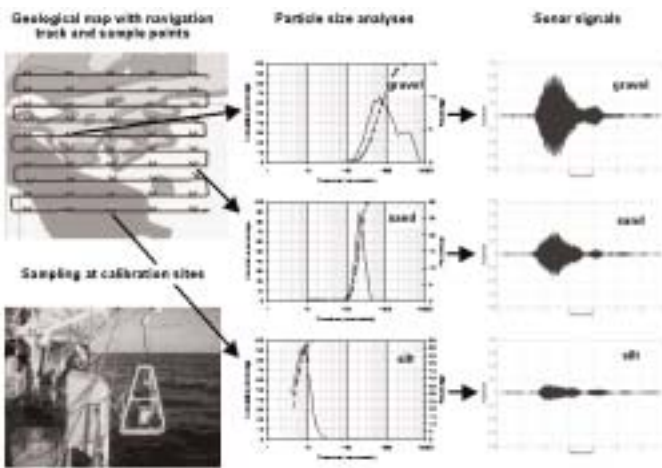
For further information on these statistics see the Crown Estate website. [www.crownestate.co.uk](http://www.crownestate.co.uk)

## Current research

**Research projects relating to marine sand and gravel currently being undertaken or those that have been recently completed by EMSAGG members and organisations associated with EMSAGG.**

### **A novel seabed classification system for downward-, forward-, or side-looking sonar**

Three institutes of the Netherlands Organization for Applied Scientific Research TNO have combined their distinctive expertise in order to develop a sophisticated and easy-to-use seabed classification method for modern sonars, such as forward-looking and multibeam systems. The novel tool extracts all possible features from the sonar signals that are reflected and backscattered by the seabed, and uses these to uniquely classify and map the various seabed sediments.



Part of the project was to test the developed method on a series of trials with different sonar systems in a selected area, of 10 x 10 nautical miles, in the North Sea. In order to validate the results of the sonar sediment classification, a total of 50 grab samples were collected at regularly spaced intervals along the navigation track. The seabed in this area includes sediments covering a full range of particle sizes, varying from silts and fine sands to coarse sands and gravel, producing distinctly different sonar signatures.

### **EUROSEISMIC – a new EuroGeoSurveys initiative**

EUROSEISMIC has been established to generate and develop a central metadatabase for geophysical data derived from marine seismic surveys for the European seas. The project will establish a metadatabase on the Internet for marine geophysical survey data held by the marine departments of the European geological surveys and their project partners.

Users of this website will have 'one-stop' access to a significant amount of publicly available marine metadata for the European seas.

Partners in this EU-financed project are the Geological Surveys of Ireland, United Kingdom, Norway, Sweden, Finland, Germany, Denmark, the Netherlands, Belgium, France, Spain, Portugal, Italy and Greece.

For more information see [www.eu-seased.net](http://www.eu-seased.net)

### **Industry news**

#### **Update on MMG2 and MPG6**

It is still intended that Marine Minerals Guidance Note 2 (MMG2) will be published this year, but the Note will now be called MMG1. Mineral Planning Guidance Note 6 (MPG6) will go to public consultation later this year. The exact form of MPG6 is unclear at present as this will depend on the outcome of the consultation on the Planning Green Paper.

#### **Update on aggregate levy**

EMSAGG Bulletin 4 provided details on the UK aggregate levy. Despite a legal challenge by the British Aggregate Association (BAA), this levy came into effect on the 1st April 2002. The result of this challenge, delivered on the 19th April 2002, found against the BAA. Leave to appeal against the judgement has been given and the BAA is seeking legal advice on whether to progress with an appeal. The levy therefore remains legal and a duty for all dredging aggregate from the seabed within UK territorial waters. Further information on the levy can be found at [www.hmce.gov.uk/business/othertaxex/agg-levy.htm](http://www.hmce.gov.uk/business/othertaxex/agg-levy.htm)

### **EMSAGG is supported by:**

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