

The Crown Estate Electronic Monitoring System



ANNUAL REPORT 2016
ISSUED APRIL 2017



1. Introduction

Since 1993, The Crown Estate Commissioners have required that all vessels dredging Crown Estate minerals be fitted with an Electronic Monitoring System (EMS) which automatically records the date, time, and location of all dredging activities. EMS data are encoded for security purposes and analysed to ensure compliance with Marine Licence conditions.

EMS data play an important role in research and assisting in the targeting of annual monitoring studies undertaken by licensees. It also assists in shaping policy for future dredging initiatives and activities.

The Crown Estate collects information of a commercially sensitive nature from those vessels operating upon its ownership. The EMS records are analysed and processed by The Crown Estate as landowner and shared with the Regulators (the Marine Management Organisation and Welsh Government). It is the responsibility of the Regulators to undertake any compliance enforcement action under legislation.

The Crown Estate regularly publishes on its website information relating to aggregates dredging, this includes the annual Area of Seabed Dredged reports, and the twice yearly Licensed Dredge Area Charts and Active Dredge Zone Charts.

EMS data form the basis of the Area of Seabed Dredged reports as well as the 15 Year Review (1998-2012), published in 2014.

See <http://www.thecrownestate.co.uk/energy-minerals-and-infrastructure/aggregates/working-with-us/electronic-monitoring-system/> for more information.

2. System Description

The Electronic Monitoring System comprises a standard PC which is linked to a GPS navigation system, and up to 4 dredging status indicators in addition to a pumps running trigger switch. The dredging status indicators identify whether the vessel is pumping water or loading aggregates.

The EMS has 2 modes: standby and operational. In standby mode the system logs a record every 30 minutes to show that it is switched on and functioning correctly. In operational mode, when pumps are switched on, it logs a record every 30 seconds detailing the vessel's position and the output of the dredging status indicators.

From March 2011 monthly data has been copied to the Regulators to fulfil the data provision and monitoring requirements of dredging regulations.

3. Licensee Requirements

It is the licensee's responsibility to provide and maintain all the EMS equipment installed on their vessels, and this must comply with The Crown Estate EMS Specification and Guidance Notes (July 2005).

The EMS must be approved by The Crown Estate, and validation checks may be carried out before dredging is permitted.

Data recorded by the EMS or other equipment/systems must be provided to The Crown Estate or their appointed agent and the Regulators within 15 working days of the end of the calendar month.

4. Summary of 2016 EMS Data

a. Dredging Vessels

During 2016

- An average of 23 vessels per month operated on Crown Estate Production Agreement Areas.
- A maximum of 25 and a minimum of 20 vessels operated in any one month.

b. Reported EMS Breakdowns

Licensees are required to notify The Crown Estate immediately in the event of a breakdown of any kind of a vessel's EMS and give details of remedial measures being undertaken.

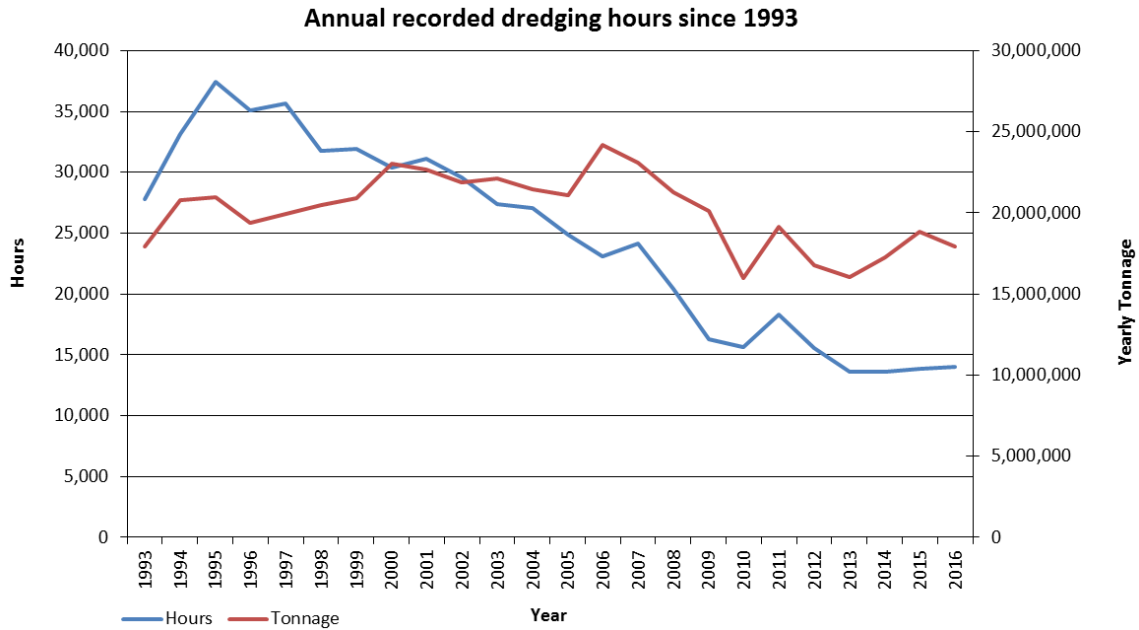
Subject to satisfactory alternative recording procedures, the licensee has 72 hours to rectify a fault, after which no dredging is permitted unless specific authorisation has been received from The Crown Estate.

There were 12 EMS breakdowns during 2016. The breakdowns were rectified satisfactorily and full details of dredging activity during the period of missing data were supplied to The Crown Estate

c. Dredging Activity

In 2016, there were a total of 14,013 hours of recorded dredging activity which is equivalent to approximately 1.7 million dredging positions, and approximately 42,000 km of dredge track*.

Dredging vessels were present on The Crown Estate Production Agreements for approximately 7% of the total time available throughout the year†



* Based on an average dredging speed of 3 km/hr

† Available time based on an average of 23 vessels multiplied by the total number of hours in a year

d. Time Gaps

All unexplained gaps in EMS data lasting over 1 hour in standby mode and over 2 minutes during pumps running/dredging mode are automatically flagged during analysis.

In 2016 235 hours of time gaps were investigated. In each case alternative records such as outputs from other vessel tracking systems, deck logs, legally binding Master's statements, and track plots were provided to confirm vessel movements and activity.

No evidence of unauthorised dredging during time gaps was found during 2016.

e. Out of Area/Out of Zone Dredging

In 2016 there were no confirmed incidents of dredging outside of Production Agreement Areas.

In 2016 there were 7 confirmed incidents of dredging outside of active zones (but within overall Production Agreement Areas) totalling 3 hours and 42 minutes.

All out of zone and out of area incidents were reported to the relevant authority, together with copies of all correspondence with the licensee for subsequent action as appropriate. Any incidents are the responsibility of the licensee as they are held legally responsible for all dredging activities relating to the licensed area.

5 . Conclusions

During 2016:

- Recorded dredging hours totalled 14,013 hours, compared to the 10 year annual average of 16,546.
- There was a total of 235 hours of time gaps compared to the 10 year annual average of 1,825 hours.
- There was a total of 3 hours and 42 minutes of unauthorised dredging, compared to the 10 year annual average of 1 hour and 10 minutes.
- The percentage of licensed seabed dredged has remained low at 9.41 %, compared to the 10 year annual average of 10.8%.