

## **MIRO - SAMP Project Number - 3.A7**

**Development of an Open Access Website to Collate and Disseminate  
Good Practice and Information on Marine Aggregate Dredging**

**[www.goodmarine.com](http://www.goodmarine.com)**

### **Summary Report**

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## **1.0 Introduction**

The aim of this ALSF project was to develop a high-quality, open-access web site to inform members of the public about aggregate extraction in the marine environment. The website that has been developed contains comprehensive, up-to-date information on measures that can be applied to mitigate the environmental effects of marine aggregate extraction. These include compulsory regulations, standard measures routinely adopted by the industry and emerging good practice procedures.

[www.goodmarine.com](http://www.goodmarine.com) now provides a significant information resource similar to [www.goodquarry.com](http://www.goodquarry.com), which successfully disseminates environmental good practice for terrestrial aggregate extraction.

This final report is a very brief summary of the project, as the main deliverable is, of course, the website itself. A two month extension was granted for reasons explained later which meant that website went live on June 1<sup>st</sup> 2007, rather than prior to 31<sup>st</sup> March, as was originally intended.

## **2.0 Delivery Organisations**

The project has been developed under the Sustainable Land-Won and Marine Dredged Aggregates Minerals Programme (SAMP), funded through Defra's ALSF, with administrative assistance from the Mineral Industry Research Organisation (MIRO). Delivery Partners working on the project are based at the University of Leeds, the Centre for Environment, Fisheries and Aquaculture Science (Cefas) and Royal Haskoning. There has also been input from a wider Steering Group set up to participate in the delivery and quality assurance of the project. In addition to the Delivery Partners, the Steering Group has comprised representatives from the following organisations: Department for Communities and Local Government (DCLG), Department for Environment, Food and Rural Affairs (Defra), English Heritage, ABP (Marine Environmental Research Ltd.) and the British Marine Aggregate Producers Association (BMAPA).

## **3.0 Project Objectives**

The objectives for this project were to develop an open-access website to collate and disseminate good practice and information on marine aggregate dredging. The website was designed to provide an overview of the marine aggregates industry, and to consider the environmental implications of the extraction activities. The website aimed to gather together examples of existing and emerging techniques and technologies used by the marine aggregates industry to minimise potential environmental impacts. It is hoped the website will become the entry point or portal for anyone wishing to find out about mitigating the effects of marine aggregate extraction.

The original thematic research priority for this project was to collate and disseminate information 'for a wide range of stakeholders'. The website was intended to serve operators, regulators, conservation organisations and members of the public wishing to be better informed about the issues, by becoming a portal or "one-stop shop" for information. Following the initial project application, the Delivery Partners were asked to amend the objectives of their original proposal to provide best available information suitable for "a wider 'lay-person' audience". The website material has

therefore been developed in a style and form which is understandable to a lay-person audience, and includes explanations, summaries and illustrative features where appropriate. However, the web site is still hoped to be of benefit to the industry, and provides links to more technical information where it is accessible elsewhere.

The need for an open-access information resource on marine aggregate extraction (similar to Goodquarry.com) was highlighted when a request for permission to use a recreational diver's photograph produced this response:

*“As a diver who is concerned about the welfare of the marine environment I am instinctively against marine based dredging and mineral extraction. However as a realist I understand that the practice is not likely to stop in the near future and therefore education and information are the best way of minimising the impact on the environment. I have looked at your existing land based quarry advice site ([www.goodquarry.com](http://www.goodquarry.com)) and can see that your aim is to promote best environmental practice. We are therefore happy to allow you to freely use any of our underwater photos on your new site.”*

One of the original objectives was to build on, and link to, existing and emerging marine aggregates websites. The University of Leeds has worked hard to collaborate with another website provider (ABP Marine Environmental Research Ltd.) who have been represented on the Steering Group Committee throughout the project. Information resources have been shared between the Delivery Partners and appropriate links made between the two websites. Links have also been provided to the websites of other Marine ALSF-funded projects.

#### **4.0 Website Development**

During the writing and editing phase of the project, a development website was used which required a username and password to gain access. The live website can now be found at [www.goodmarine.com](http://www.goodmarine.com).

##### **4.1 Data Collation**

The Centre for Environment, Fisheries and Aquaculture Science (Cefas) and Royal Haskoning have assisted the University of Leeds to facilitate the collation of material from a comprehensive list of existing publications and reports. The Project Partners have liaised with the British Marine Aggregate Producers Association to determine current operational good practice. Other organisations represented on the Steering Group have been involved in the collation and editing of website material. Efforts have been made to monitor and review emerging publications and reports to ensure that the website contains up-to-date and relevant information.

##### **4.2 Website Structure and Content**

The 'Home Page' provides an introduction to the website, and access to the eleven main sections via the left hand navigation bar. The four introductory sections in the Background Information provide an overview of the marine aggregates industry, the nature and location of aggregate resources, the dredging process and operations, and the strict regulations that control extraction activities.

Having provided a background to the industry, the majority of the website is then dedicated to considering the implications of the marine aggregate extraction on a range of environmental receptors and other sea users. The section headings are:

Physical Environment, Ecology, Conservation Areas, Historic Environment, and Other Sea Users. Each of the sections includes detailed descriptions of the baseline data requirements, potential environmental impacts to be assessed, and the good practice mitigation and monitoring measures relevant to that specific receptor. An up-to-date summary of current research in relation to Cumulative Impacts and Recovery and Rehabilitation is also provided.

### **4.3 Additional Features**

There are a number of additional features included within the website which help to make a more interesting, interactive and engaging information resource. High quality graphics, interactive animations, diagrams, photos and video clips have been used throughout the resource to help illustrate concepts and ideas introduced within the text.

Case studies have been included wherever relevant to illustrate the practical use of good practice mitigation and monitoring. Glossary definitions are provided for all scientific terms and abbreviations to avoid any confusion to the 'lay-reader' and to reduce unnecessary repetition. Links are made to the 'References' page throughout the text, where the full citation of the referenced document can be found. The reader is redirected to the Full Text Document if it is publicly available, via a link to the appropriate page within the ABP(Mer) Marine ALSF Database Project. Links to a variety of relevant organisations are provided throughout the text, as well as on a dedicated 'Links' Page. The Project Partners are able to monitor usage and opinion of the site through a website statistics package and a 'Feedback' form.

## **5.0 Review Process**

Towards the end of the project, the Steering Group requested that an independent review of the website material be carried out, to identify and factual inaccuracies and to give an assessment of its ability to meets its targets.

### **5.1 Review by Richard Newell (Marine Ecological Surveys Limited)**

A formal independent review of the content of the website was undertaken by Dr Richard Newell in December 2006. This highlighted a number of issues which were discussed at length at the Steering Group meeting in January. It was agreed at this meeting that the project would be given a two month extension (until 31<sup>st</sup> May 2007) in order to address the points of concern and that there was no further funding for this additional work. The Steering Group requested another review be carried out before the website went live.

### **5.2 Review by Stuart Lowe (MarineSpace Limited)**

The second review in April 2007 was less detailed but made a number of further recommendations which were all implemented prior to the website going live.

### **5.3 Incorporation of New Material**

Although no contractual commitment exists, the University of Leeds will endeavour maintain the website and keep the information as accurate and up-to-date as possible after the project's closure.

## **6.0 Conclusions**

The development of Goodmarine.com has contributed to the aims and objectives of the Marine ALSF, particularly to Theme D: Co-ordination, Dissemination and Outreach.

This web resource disseminates comprehensive information on marine aggregate extraction in a format easily accessible to the interested public. A non-technical summary of the latest research projects can be found in a single location. The well-structured sections provide easy navigation through the information, and the illustrations and video clips provide visual representations of some of the more complicated concepts. A wide audience is now able to gain free access to up-to-date information on marine aggregate extraction and the environment.

## **7.0 Acknowledgements**

The Project Manager would like to thank all those who have made an enormous contribution to the project, particularly the project partners; Dave Carlin (Cefas), Chris Adnitt (Royal Haskoning) and Abbie Richards (MIRO). The two reviews by Richard Newell and Stuart Lowe are gratefully acknowledged. Finally, thanks are also given to those individuals who have contributed through the Steering Group.

## **Project and Contact Details**

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