



Marine Minerals Ltd and the recovery of Cornish marine tin
A briefing note
October 2012

What is Marine Minerals Ltd?

Marine Minerals is a Cornish company created to investigate whether it is possible, in an environmentally, socially and economically viable way, to recover tin from the marine environment. Currently the company is investigating possible options off the North Cornwall coast: the tin here is from material deposited in sand on the seabed as a result of Cornwall's historic tin mining past.

Plans are at an early stage, with most aspects still being investigated. Informal discussions with interested parties have just begun. This briefing note gives further detail on the development of the project. Additional updates will be circulated, and placed on the company's website, as progress is made.

Why recover the tin?

Because of increased global demand, tin is a valuable resource, with applications in many hi-tech industries. Recovering the tin will bring valuable investment into Cornwall and well paid skilled, non-seasonal jobs which Cornwall desperately needs. The company is on record as saying that the project can only proceed if the tin can be extracted in a way which is environmentally, socially as well as commercially viable.

Marine tin deposits have been mined off the Cornwall coast in the past (most recently in the 1980s). **However, Marine Minerals has rejected the techniques used previously, such as traditional dredging, as being environmentally unacceptable.** The company is investigating whether more modern technologies can be used to recover tin in a way that will cause minimal disturbance to wildlife and the seabed. One solution being investigated is to filter the sand at sea, with only the portion containing tin being retained. This small proportion - 5% or less of the sand filtered - would be taken ashore, while the remaining 95% would be immediately placed back in the seabed. Such a technique will cause very significantly less disturbance than dredging.

The company is also considering options for how and where the tin bearing sand can be brought ashore for processing. The site for processing the tin has not yet been identified and that decision will be dependent on many factors which are still being identified and are the subject of in-depth discussions with stakeholders. It is possible that residual sandy material could have beneficial environmental uses and this potential is currently being discussed with various parties.

Investigations currently underway

Marine Minerals has been given permission by the government's Marine Management Organisation (MMO) to undertake extremely limited investigative work (taking around 40 small sand core samples) which will help build a good understanding of the characteristics of the mineral sand. This work is expected to start at some time in the near future and is subject to a suitable vessel being available and a good weather outlook.

A full and detailed environmental and social assessment research project is being initiated and is expected to run for a year. It will investigate a wide range of topics, and

the company and its advisers have already begun talking to local interest groups and statutory bodies to make sure the research covers issues they might have concerns about.

Before any license can be granted for the tin recovery work, a formal Environmental Impact Assessment (EIA) will be submitted to the MMO for the marine aspects of the project and another one for the shore based work. The MMO and Cornwall Council will then consult with a large number of statutory consultees and the wider community at large.

A Cornish invention with global application

If this project - to recover this valuable resource in an environmentally and socially practical way - goes ahead, then Cornwall will have developed innovative marine mining techniques with potential global application. The new techniques could be taken to other parts of the world where marine mining takes place, and used to establish far less intrusive and destructive methods than are currently employed. This would further enhance Cornwall's position as a global hub of mining expertise.

The Team

The team behind the project has extensive experience of working in the Cornish tin mining industries. It is led by Mike Proudfoot, C.Eng., ACSM, MIMMM, a former manager of Wheal Jane Tin Mine, CEO of the Marine Mining Cornwall Consortium and Vice-Chairman of the Cornish Chamber of Mines; and John Sewell C.Eng., M.I.C.E. a civil engineer with extensive experience of both mining and marine engineering works.

Robert Goodden is non-executive director of Marine Minerals; he is a graduate from Camborne School of Mines with extensive experience in seabed excavation, marine mining and drilling. He is currently Deputy Chair of the Marine Mining Group within ECOR (Engineering Committee on Oceanic Resources).

Contact

The project is still at an early investigative stage, and the company has begun consulting widely on many matters.

- Updates on any developments will be posted on the Marine Minerals website: www.marine-minerals.com
- If individuals or organisations would like to find out more, they can contact Marine Minerals via the website or by emailing info@marine-minerals.com.