
GreenSeas Resources

Company Profile

GreenSeas Resources is a newly-established company within the marine aquaculture sector. Based in Pembroke Dock on the Milford Haven waterway, they are concerned about the increasingly large volumes of 'opportunistic' green seaweeds growing there. Partially due to increased nitrogen run-off from farming intensification, these mats of floating 'weed' detrimentally impact important recreational amenities such as boating, swimming and fishing within the estuary. GreenSeas Resources are investigating the business potential of removing the seaweed from the estuary, and using it to generate saleable products, whilst simultaneously improving the water quality.



Collaborating with BEACON

BEACON's pilot-scale facility is ideally suited to processing large quantities of the mixed green seaweeds and was used in a collaborative R&D project to investigate the potential of pressing the algae with a screw-press prior to downstream processing.

Reducing the moisture content improves transport efficiencies

and processing the liquid fraction allows extraction of water soluble compounds. The intention of the collaboration was to develop a new process for the company and to identify compounds within the fractions which could become new products or open up new markets. BEACON's screwpress was used to process the seaweed and trials showed excellent release of liquid from the seaweed following pressing. Dried samples of the solid and liquid fractions were also analysed by liquid chromatography mass spectrometry to identify the high value compounds



For further information:
www.greenseas.co.uk

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present which could be targeted for future extractions and markets.

As an outcome of this collaboration, GreenSeas Resources are currently purchasing a screwpress for their own processing purposes. Interactions with BEACON staff have also led to the submission of two KESS PhD studentships between GreenSeas Resources and IBERS.

One will develop the seaweed downstream processing, looking at separation technologies and marketable compounds. The other will look at the ecological aspects of removing the seaweed at scale, identifying and quantifying the beneficial impact this will have on the waterway, its users and the environment. If funded, the results from these projects will assist GreenSeas Resources in delivering remediation services and sustainably sourcing seaweed and converting it through a range of viable processes to marketable products.

“Working with BEACON has helped our business develop new processes and has generated research projects that will enable us to operate profitably and sustainably.”

Joseph Kidd
Development Director



Opportunistic macroalgal growth at its most prolific at Coshston Pill, Milford Haven.

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