Overview

June 2014

A nationally significant resource

Chatham Rock Phosphate (CRP) has just applied for an environmental consent to undertake seabed mining at 400 m water depth, about 450 km from the South Island.

New Zealand scientists discovered the rock phosphate resource on the crest of the Chatham Rise in the 1950s. Mining the resource has only become viable with the rising price of phosphate and advances in marine technology. CRP has identified at least 35 million tonnes within the mining permit area – more than a 20-year supply at expected production rates.

Our technical partner, international dredging company Royal Boskalis Westminster, will use conventional dredging technology attached to a flexible pipe to suck the top 30 cm of sandy silt up to a large mining vessel. Mechanical sieving will separate the phosphate nodules (2 to 150 mm in size) and discharge the finer sand and silt from another flexible pipe near the seabed.

CRP has built a highly skilled technical team (including three scientists who collected and interpreted most of the data in the 1970s and 80s) and has spent more than $20 million on scientific research, including six CRP-funded surveys to the Chatham Rise.

The principal focus has been to:
- evaluate the likely environmental impact of the project
- identify ways to minimise and monitor effects
- define the resource and develop a mining plan

Stakeholder involvement has been central to the project. After talking to anyone with a potential interest (including environmental groups, industry, iwi and imi, media, etc) we’ve identified and investigated their concerns and provided information and mitigation options.

Environmental benefits

The project will have localised environmental effects on the seabed within our permit area but will also have significant environmental benefits. Some arise from substituting our product for phosphate fertiliser now sourced from Morocco and other distant locations.

The benefits of using local phosphate include:
- It’s an organic New Zealand-origin product
• It offers security of supply
• It’ll reduce the carbon footprint by lowering transport distances
• It has one of the lowest known concentrations of cadmium of any phosphate rock
• It reduces water pollution from run-off when used as a direct application fertiliser because it releases slowly, requiring less frequent applications than conventional fertilisers, further reducing its carbon footprint
• The rock is highly reactive, heightening its effectiveness as a fertiliser, and has strong liming qualities.

Benefits for NZ and Chatham Is

CRP expects to sell the product to New Zealand and at least eight countries in the Asia-Pacific. The project also has significant economic benefits, including making New Zealand $900 million richer, according to the New Zealand Institute of Economic Research.

It will have particular benefits for the Chatham Islands. We’ll be able to supply cheap fertiliser; little is applied there because of prohibitive transport costs.

Chathams Federated Farmers representatives estimate fertiliser could increase farm production 10-fold and add 350 new jobs. Given the current population is below 600, that increase in farm production could transform the local economy and improve the affordability of infrastructure such as power and transport.

What about fishing concerns?

Our mining permit area – covering less than 1% of the Chatham Rise - is not a fishing area. The research predicts sediment effects will be confined to a few kilometres of our mining area, about 250 km from the Chatham Islands.

Our annual 30 km² footprint is equivalent to the areas covered by bottom trawing over 8 hours.

The Deep Water Fishing Group is concerned about possible impacts on commercial fishing. The key environmental effect will be sediment plume from the return of the fine material to the sea floor. Modelling predicts those effects will be very localised, with sensitive organisms affected up to 7 km from the mining ship.

Fishing on the Chatham Rise

Scientists predict silt and clay concentrations so small they’re not visible (1 mg per litre) could drift tens of kilometres and concentrations higher than 100 mg per litre will last for no more than a few days in the immediate mining area. Sediment won’t rise more than 50 m above the seabed – well below the most biologically productive part of the water column where most fish are.

The approval process

The marine consent process has a six-month prescribed time-frame so interested parties can make submissions and be heard at public hearings.

The Environmental Protection Authority is managing the process, including appointing a panel of experts who base their decision on scientific evidence. Environmental considerations are balanced against economic benefits. The process provides the opportunity for submissions from any interested party or organisation.

Assuming we receive consent at the end of the year we expect to start production in 2017.

Linda Sanders
Corporate Affairs Director
linda@crpl.co.nz
+6427 471 5593

Chris Castle,
Managing Director
chris@crpl.co.nz
+6421 55 81 85