



Base Titanium

About Base Titanium

Base Titanium Limited is a wholly-owned subsidiary of Australian and UK-listed resources company and is located in Kwale County, 50km south of Mombasa. Base Titanium operates Kenya's largest mine, The Kwale Project, which was officially awarded flagship project status under Kenya's Vision 2030 national development blueprint and is expected in the 13-year life of the mine to contribute:

- around \$225 million to the Government of Kenya in direct tax and royalty payments
- close to \$1 billion in GDP contribution.

Already the Mine has and continues to create significant opportunities for local economic development – through a focused local employment programme, and the procurement of goods and services from local vendors. The Company is also investing heavily in a variety of community livelihood enhancement programmes and social infrastructure in Kwale County, demonstrating its commitment to responsible and sustainable development.

The Task

Rehabilitation and restoration are two key processes necessary to minimise and mitigate impacts of mining operations. It is the process of returning land disturbed by mining activities to a degree of its former state. Restoration is the process of ecological recovery of a site to a natural landscape and habitat that provides ecosystem services capable of supporting human, wildlife, and plant communities.

Kwale County's sandy soil presents several challenges for an environmental rehabilitation programme such as the one being undertaken by Base Titanium. The soil requires stabilisation and its water retention abilities are greatly reduced due to its composition. This means that far greater quantities of water are needed to establish and maintain healthy growth of plants. Furthermore, the technical and physical effort needed to transport and distribute the water is immense.





The Solution - GR42



The solution to this problem comes in the form of a soil conditioner called GR42 which helps stabilise the soil and has water retention properties that will allow the grass and plants to slowly absorb water leading to a vast reduction in amount of water needed to establish and maintain healthy growth.

GR42 can be used both in the nursery and out in the planting areas. The effect of water reduction is the same in both applications.

An additional benefit is that as GR42 slowly biodegrades it provides nutrients around the root base and the product enables the roots to create a strong bond, faster, with the sandy soil.

Previous tests of GR42



GR42 has been extensively tested in Australia, India and Bahrain over an eight-year period and test results from each country are available for study.

In India for example it was decided to conduct a test on one field in which pioneer plants were planted.

Following the rainy season and a twelve-week test period the grass planted in the field without GR42 displayed poor growth and developed an averagely sized root system. In comparison, the field with GR42 produced grass three times higher and roots four times bigger (in volume) than the roots without GR42

It is important to point out that no additional water was given to the fields during the test period.

The advantages of using GR42 are therefore clear. GR42 stabilises the soil, saves up to 85% of the water necessary to maintain healthy growth and biodegrades slowly, giving nutrients to the root system.

The Partners

h2o Future Growth

a company incorporated in Kenya, has been granted exclusive rights of production and distribution of GR42 in East Africa. In the initial stages, the company will import and distribute the finished product until a factory has been built.

Green GeoEarth AG/Green GeoEarth GmbH

in Switzerland/Germany, the owners of the product

Sygec International

Providing funding to construct a factory to manufacture the product in the Coastal region of Kenya.



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