

## Enlargement of the open-air storage yard and construction of a new access road in the northeast region of the great port of São Vicente

City of Mindelo, Island of São Vicente, Cape Verde

### Work Description

This project undertaken by Seth (in consortium) in Mindelo, São Vicente Island (Cape Verde), provides the city with two major, significant improvements: increase of the area of the port and alterations to its road accesses, and a significant increase of the dry area of the Laginha beach.

The better to understand the benefit of this job, it should be explained that the climate in São Vicente allows the beach to be used year round.

The enlargement of the open-air storage yard covers an area of about 24,000m<sup>2</sup>, built entirely on an area that was previously sea.

This enlargement was made possible by the construction of a prism embankment 580m in length using rip-rap. Having been built to a height of 1.80m above the average sea level, the embankment was externally lined with stones weighing between 500 and 1,500 kg and lined on the inside with geotextile with a mass of 300g/m<sup>2</sup>.

The area contained by the embankment was reclaimed by sand pumped in by a trailing hopper suction dredger trough a 600 mm pipeline.

About 90,000m<sup>3</sup> were dredged and pumped ashore until the correct level was reached, allowing crusher-run aggregate/ C 8/10 concrete to be laid.

As far as Laginha is concerned, it was a beach about 300m long by 20m wide on average at the start of the job, its entire width sloping down to the sea.

Upon completion of the work the beach is now as follows: a level area 400m long by 70m wide, which then slopes gently till reaching sea level.

This beach is now bounded to the south by the embankment and to the north by a stone groin 130 m long.

The increase of the beach to its final dimensions involved the use of 170,000m<sup>3</sup> of sand that was dredged and pumped ashore.



Laginha Beach after completion of sand filling



General view of the port area with embankment construction in progress

### Resumo da Obra

#### Work Summary

Cliente	<b>Ministério das Infraestruturas, Transportes e Telecomunicações de Cabo Verde</b>	<i>Client</i>
Tipo de contracto	<b>Valor Global / Lump-sum</b>	<i>Contract type</i>
Construtores	<b>Seth, SA (in Consortium)</b>	<i>Contractor</i>
Data de construção	<b>2013-2014</b>	<i>Construction period</i>
Custo	<b>€ 14.309.000,00</b>	<i>Cost</i>