

## **PROJECT BACKGROUND**

The National Ports Authority (NPA) of South Africa is investing R3,2 billion in the development of the new Port of Ngqura. The new deep water Port, situated on the Coega River Mouth, 20km from Port Elizabeth, will be the deepest container terminal in Africa and will accommodate the new generation of giant container ships expected to visit our shores.

Adjacent to the port is the Coega Industrial Development Zone (IDZ). The IDZ will complement the port and provides vast areas of land for industrial developments including the automotive, electronics, commercial, metal and agri-industrial industries

Situated on South Africa's eastern cape coast, equidistant from American, European and Pacific Rim destinations, the port is ideally placed to serve both local and international markets.

## **GENERAL INFORMATION**

Construction on the new deepwater port began in September 2002 however, a delay in the construction of the first phase means that the harbour will only become operational towards the end of 2008 - more than two years later than originally planned.

In Phase two of the port development, Transnet has approved the construction of a four-berth container terminal and has also approved a project for a rail connection between the port and Gauteng. This project will be a joint venture undertaken by the NPA, South African Port Operations and Spoornet. Both of these projects are also expected to be complete by the end of 2008.

The Port will be the eighth commercial port in South Africa. Other commercial ports managed by NPA are Richards Bay, Durban, East London, Port Elizabeth, Mossel Bay, Cape Town and Saldanha.

## **INFRASTRUCTURE**

The NPA is building the modern deepwater port while the Coega Development Corporation is developing the entire landside infrastructure for the IDZ. The area is already well serviced by existing transport networks and a skilled labour force.

The Paleo Channel at the mouth of the Coega River in the protected Algoa Bay provides an opportunity for the economic development of a deepwater port. The port will be able to accommodate vessels up to 80 000 dead-weight tonnage. With the current economic growth in South Africa, the container ports of Port Elizabeth, Durban and Cape Town would only offer a short term solution as they are nearing capacity. The need to provide further container capacity has contributed towards the development of South Africa's eighth port.

The initial maritime infrastructure consists of two breakwaters, basins and channels and the quay walls. The current construction phase caters for five berths comprising two container berths and three bulk cargo berths.



## KEY DIMENSIONS

MAIN BREAKWATER	The main breakwater is 2,6km long, extending to a depth of 17,0m below chart datum with the wave wall crest at 9m above chart datum
SECONDARY BREAKWATER	The secondary breakwater is 1,3km long extending to a depth of 14m below chart datum with the wave wall crest at 8,5m above chart datum.
QUAY WALLS	The quay walls are 1 864m long and they have been constructed in the dry.
BULK LIQUID QUAY WALL	The bulk liquid quay walls are 23m (of which 18m is below chart datum). 452m long
CONTAINER QUAY WALLS	The container quay walls are 21,5m (of which 16,5m is below chart datum). 780m long with a back-up depth of 400m to 500m.
DRY BULK QUAY WALLS	The dry bulk quay walls are 21,5m (of which 16,5m is below chart datum). 632m long and 100m wide

The height of Ngqura is designed for 4 500 twenty foot equivalent unit (TEU) vessels but can accommodate up to 6 500 TEU vessels. The maximum depth at the container terminal is 16m, which will enable the port to accommodate bigger container vessels than can be accommodated at the other container terminals in the country.

## LANDSIDE INFRASTRUCTURE

Landside infrastructure will include a road network within the port and connecting the port to the IDZ, bridges and rail network linking the port to the main line to Port Elizabeth, stormwater, sewer and water.

## CONSTRUCTION

The NPA awarded a contract to Ngqura Harbour Contractors in September 2002 to construct the new Port of Ngqura. This construction required massive amounts of sand, rock, concrete, dolosse, excavation and labour hours.

### LARGE SCALE EARTHWORKS

- 13 million m<sup>3</sup> land-based excavation.
- 14 million m<sup>3</sup> dredging works to level the cargo areas and create deepwater berths. Original land levels of 45m above sea level had to be flattened.

### BREAKWATERS

- 5 million tonnes of rock needed for the construction of the breakwaters.
- 380 000m<sup>3</sup> of concrete.
- 26 500 x 4 m high, 30 tonne dolosse.
- 3 large cranes to lift and position the rock and dolosse.
- 30 x 25 tonne trucks working 24 hours a day to transport rock and aggregate from the quarry to site.

