

# HARBOURING THE FUTURE

Phase 1 of the Karaikal Port being developed by Marg Ltd is on schedule for its April 2009 completion. *Construction Week* visits the project site to learn more about this future-ready port. Text and Photographs: Niranjan Mudholkar

Dredging in progress at Port Karaikal.  
Marg Cauvery (seen above) can dredge at depths in the range of 5-25 m



Our ports handle 95% of the country's trade in terms of volume and 70% in value. This naturally implies that an enhanced port infrastructure will play a critical role in the country's endeavours to be a bigger player in the global economy. Although traditionally the government has been the primary investor in this segment, the future of successful port development greatly depends on active participation from the private sector. The Indian Government too has been liberalising its policies towards this end, and as a result private players have started to play a meaningful role in this space in recent times. An excellent example here is the Karaikal Port development undertaken by Marg Ltd.

#### BUSINESS OPPORTUNITIES

- Terminal operations
- Operational contracts
- Marine services
- Thermal power plants
- Oil terminal and oil refinery
- Container freight station
- Bunkering facilities
- Warehousing
- Ship repair yard

Incidentally, the Karaikal Port is Marg's maiden venture in port development. "It is one of the few large greenfield ports being developed in the country today," says GRK Reddy, chairman & managing director, Marg Ltd.

Marg incorporated a special purpose vehicle called Karaikal Port Pvt Ltd (KPPL) in February 2006 for the implementation and operation of this project. The port will cater primarily to the industrial base in Tamil Nadu. "Currently there is no deep-water port with all-weather berthing facilities within a distance of 640km between the Chennai Port and the Tuticorin Port. This means increased cost and time in rail-road freight. Thus, with its excellent rail and road connectivity, the Karaikal Port will be a boon for the region's economy," adds Reddy. Equally important is Karaikal's presence in the Cauvery basin that's actively with oil exploration giving it a distinctly strategic location advantage.

Karaikal Port is located at Vanjore village in the Karaikal Taluk embedded within the Nagapattinam and Tiruvarur regions of Tamil Nadu. However, administratively it is one of the four regions of the Union Territory of Puducherry (all of which are territorially dislocated from the town of Puducherry). Karaikal is connected to central Tamil Nadu by the National Highway (NH) 67, which starts at Nagapattinam

and terminates at Coimbatore. It is serviced by NH45A that begins at Puducherry and ends at Nagapattinam. The nearest rail head for Karaikal is Nagore located about 6km from the port. Work is ongoing on the rail link between Nagore and Tiruchirappalli (Trichy) to convert it from metre gauge to broad gauge. The rail line will be extended to Karaikal and pass through the Port. Work is on for a siding for this rail line at the port currently. The line is expected to be operational by April 2009.

The Karaikal Port has been envisaged as the gateway to central Tamil Nadu, a major industrial belt. "It will have advanced cargo handling equipment, suitable warehouse facilities, damage-free storage, faster turnaround of ships due to mechanisation and market driven competitive port tariff," says Jayesh Bhatt, COO of port infrastructure, KPPL. When completely ready, this lagoon type, all-weather seaport will have a capacity to handle vessels up to 1,20,000 DWT (deadweight tonnage). It will be capable of handling a diverse mix cargo of coal, containers, liquid and general cargo. With completion of Phase I, the total cargo handling capacity of the port will be 5.2 million tonnes per annum (mtpa) and will be gradually increased to 21 mtpa in Phase 2 and to 47 mtpa in Phase 3.

This versatility in handling capacity can prove extremely beneficial to major indus-

trial segments in the region like coal-based power plants, the cement industry, oil refineries, textile firms, fertilisers, ship repair & ancillary industries, container cargo as well as agriculture. The port is also strategically well-located to source heavy crude from Middle East or even Venezuela and export to high-consumption markets like China, Taiwan, Singapore, Thailand, South Korea as well as Japan. Refineries could also be set up in Karaikal to process heavy crude. In short, the port will foster strong international trade with Sri Lanka, South East Asia, the Far East, the APAC region, Latin America and even the Middle East. "The single window professional service, paperless working, cost effective technology, best logistics support for door-to-door, online update for all customers to facilitate efficient handling cargo are this port's special features," adds Bhatt who comes with an experience of 23 years with the country's leading private port developers including the Adani Group.

Spread over an expanse of 602 acres leased from the Government of Puducherry, the Karaikal Port area is currently abuzz with activities. The investment of Rs416 crore (debt Rs302 crore + equity Rs114 crore) is being put to good use. Trucks, cranes, excavators, concrete batching plants and similar other equipment and machines dot the landscape of the project site, which stands on reclaimed land.

According to one of the officers working at the site, KPPL has raised the site height by about 3-3.5 feet through reclamation. KPPL has already received the necessary environmental clearances from the Ministry of Environment & Forests.

While dredging for the channel has been complete, it continues to dominate other sections of the site. Interestingly, Karaikal also marks Marg's foray into the field of dredging. In November 2007, Marg acquired a cutter suction dredger (now named Marg Cauvery) from China. Marg Cauvery with a dredging capacity of 2000 cu.m/hour was immediately deployed at the Karaikal Port on its arrival in India. International Seaport Dredging Ltd, a joint venture between Larsen & Toubro (L&T) and Belgium-based Dredging International, is also involved in the dredging work at Karaikal. The dredging work is expected to be completed by March 2009.

Reputed names have been involved in the project planning for the Karaikal Port. For example, the technical planning and design of the port and marine structures as well as the detailed project report for Phase 1 has been done by L&T Ramboll Consulting Engineers Ltd. The same firm along with M/s Wimta Labs, Indomer Coastal Hydraulics (P) Ltd and Annamalai University has been responsible for the environmental impact assessment stud-



Pic courtesy: Marg

**"It will be a boon for the region's economy as currently there's no deepwater port with all-weather facilities for 640km between the ports of Chennai and Tuticorin."**

GRK Reddy, CMD, Marg Ltd



Work on the 1.2 km long breakwaters is 90% complete





**“We will have advanced cargo handling equipment, suitable warehouse facilities, proper storage, faster turnaround of ships due to mechanisation and market driven competitive port tariff.”**

- Jayesh Bhatt, COO of port infrastructure, KPPL (flanked by his team)



**“Continued investment in infrastructure projects is critical as it will not only generate employment but also keep inflation under check. Also, it will act as enabler for the economy to bounce back.”**

BG Menon, executive director, Marg Ltd

ies. L&T Ramboll in association with IIT-Chennai also did the mathematical design for the breakwaters. The physical design for the same was done by IIT-Chennai independently. Shore monitoring has been the responsibility of Indomer Coastal Hydraulics (P) Ltd and Geo Foundations has been in charge of soil investigation (offshore as well as onshore).

Detailed engineering for the project is done by Howe India while the ship simulation studies are conducted by HR Wallingford. Traffic study and techno economic feasibility study has been done by I-maritime Consultancy Pvt Ltd. “Although, we have outsourced (subcontracted) many activities for Phase 1, gradually we are building in-house capacity in many of these areas to take over for the subsequent phases,” says Bhatt. Construction work is in full swing with leading infrastructure developer Simplex Infrastructures being a key subcontractor. Marg’s in-house EPC team too is substantially involved in the project.

About 90% work on the breakwaters has been completed. These breakwaters measuring 1.2 km in length would protect the access channel connecting the harbour to the sea. The first berth is almost ready while the second berth is expected to be completed by end February 2009. When ready, these berths will handle coal and general cargo, respectively. Other support infrastructure including electrical works, boundary wall, administrative building, sub-station and marine tower would be ready by March 2009. Orders have been placed for the required navigational equipment and cranes to be erected also by March 2009.

KPPL has so far followed all the timelines as per the Concession Agreement with the Government of Puducherry and is confident of meeting all deadlines going ahead. It is indeed critical that a strategically poised port like Karaikal is ready on time as it will not only boost the existing industrial and commercial activities but will also open up opportunities for further progress. It will have a positive cascading effect on the entire region’s economy with growth across associated segments like real estate, services, education, hospitality and various other ancillary sectors.

Investment in infrastructure can have a positive impact on the country’s economy,

# Advertisement



The project site is currently abuzz with activities

## PHASEWISE DEVELOPMENT AND FEATURES

Phase	I (Under construction)	II (Planned)	III (Proposed)
<b>Berths</b>	Two (one coal and one general cargo)	Three (one OSV/PSV, One coal and one edible oil)	Four (two container, one coal and one general cargo)
<b>Dredging</b>	7.5-8 mln Cum	12.23 mln Cum	8.2 mln Cum
<b>Breakwaters</b>	1.2 Km	Will be extended if required	NA
<b>Draft (overall water depth)</b>	14.5 m	16.5 m	16.5 m
<b>Suitable for</b>	45,000 DWT vessels	1,20,000 DWT vessels	1,20,000 DWT vessels
<b>Cargo handling capacity</b>	18,000-25,000 tonnes/day for bulk, 8000-12000 for timber and granite	40,000 tonnes/day average for coal	40000 tonnes/day for coal
<b>Total cargo handling capacity per annum</b>	5.2 million tonnes	21 million tonnes	47 million tonnes
<b>Coal handling facility</b>	Semi-mechanised, dust suppression systems, rail siding	Fully-mechanised & dust suppression systems, in motion rail wagon loading system	Fully-mechanised & dust suppression systems, in motion rail wagon loading system
<b>Scheduled date of completion</b>	April 2009	Mid 2011	FY 2015

particularly during a financial downturn. "In the present scenario, continued investment in infrastructure projects is critical as it will not only generate employment but also keep inflation under check. Also, the investments in roads, railways, ports, airports, power, etc. will act as enablers for the economy to bounce back. Infrastructure development has always played a key role in driving the economy, especially in down times," says BG Menon, executive director, Marg Ltd.

At the national level, we also need to increase the number of ports as well as the efficiency of all our ports. And all this needs to happen fast. According to government statistics, the average shipping turnaround time (ASTA) at major Indian ports is more than 3.5 days which is ridiculously poor compared to Hong Kong where the ASTA is less than 10 hours. Interestingly, a privatised port in India (Jawaharlal Nehru Port Trust) performs relatively better with an ASTA of little less than 2 days. It is clear that increased private participation in port development and operations will be critical going ahead. The Karaikal Port is a right step in this direction. **CWI**