



NEW SUEZ CANAL PROJECT

A LOGISTICS JOURNEY



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INTRODUCTION

The original Suez Canal was opened in 1869 and it was and still remains one of the greatest feats of the maritime industry. The canal allowed ships to travel more directly between Asia and Europe by reducing the sea voyage distance by about 7,000km (4,300 miles). It was wide only for one-way traffic.

About 150 years later, the Egyptian government realised the need to increase capacity in the canal. On August 5, 2014, Egyptian President Abdel Fattah el-Sisi and the Suez Canal Authority (SCA) unveiled new plans for an additional lane to allow the transit of ships in both directions over a greater length of the canal.

The New Suez Canal Project was aimed at improving the country's economy. The second lane would reduce waiting times for transiting ships, facilitate traffic in two directions and increase the number of ships allowed in the waterway. SCA expects revenues to increase from US\$5.3 billion at present to US\$13.2 billion by 2023 due to the additional lane.

The client had one major stipulation – all the works had to be completed within a year. Due to the tight project deadline and

the sheer amount of work, the contract was awarded by SCA to six dredging companies from two consortia. The Challenge Consortium comprised of National Marine Dredging Company (NMDC) from Abu Dhabi; Dutch dredging companies, Royal Boskalis Westminster (Boskalis) and Van Oord; and Jan De Nul NV (subsidiary of Jan De Nul Group) from Belgium. The second consortium comprised of Dredging International NV (an operating company of DEME Group) from Belgium and Great Lakes Dredge & Dock Company (GLDD) from the US.

The work was divided into six lots to be carried out from 51.4- 122.4km of the length of the canal. The SCA undertook the work on Lot 1. The Challenge Consortium carried out the works on Lots 2 to 5 (from 58.2 - 92.6km). The final Lot 6 was completed by the consortium of Dredging International (DI) and GLDD.

The consortia completed their dredging works within a year, by August 6, 2015. Though the work was not unique in itself, the deadline for the project was. As such, it required a herculean effort in logistics and operations management. The contractors had to ensure that mobilisation of dredging vessels was carried out smoothly during

the duration of the project. Moreover, accommodation, daily logistics and other important issues such as health and safety had to be addressed.

TITANIC EFFORT IN MOBILISATION

The contractors had to ensure that they could mobilise their vessels immediately after the contract was signed so even during the tender phase, they started looking into the availability of equipment and people. Detailed planning was done to ensure swift mobilisation. Also, as vessels and equipment could only be utilised depending on their availability, mobilisation was an ongoing activity for the dredging companies throughout the project. Furthermore, the vessels were being mobilised from across the globe.

The Challenge Consortium signed the contract on October 18, 2014. NMDC's cutter suction dredger (CSD) *Al Mirfa* was the first to arrive on site, just 10 days after the signing of the contract. Van Oord's CSD *Hercules* was the second vessel to arrive. It was on its way back to Rotterdam from Brazil and was immediately re-routed to Suez. The first vessel of Boskalis started sailing a day after the signing of the contract and was on



site by early December. Boskalis's last vessel was at the site in the beginning of July 2015, three weeks before completion.

Jan De Nul started working on its mobilisation plans around September, 2014. It sent a total of 7 CSDs, including 20km of land pipeline and 3km of floating pipeline – two vessels came from Dubai, two from Vietnam, and one from Singapore. The last two, one from Panama and one from Belgium, were mobilised during the course of the project.

NMDC mobilised its equipment immediately after the contract was signed and its units were mobilised from two locations in Abu Dhabi – Port Khalifa and Mina Zayed. The dredging company sent a total of 20 units that included 5 CSDs for the project.

In total, the Challenge Consortium sent 28 units and over 40 pieces of auxiliary equipment, which is the largest number of dredgers ever utilised in a project.

Besides dredgers, the Challenge Consortium employed around 2,000 crew and staff that included local labour force for the work at Suez. The local labour force were hired for various duties such as operators for sand bulldozers and pipefitters for fixing landlines. Van Oord sent about 250 employees while Boskalis sent 80 staff and 320 crew members for the project. About 600 employees from Jan De Nul and about 580 people from NMDC were sent to work in the New Suez Canal.

The work on Lot 6 was to deepen and widen the western branch of the Suez Canal at Great Bitter Lake, Deversoir Reach and Kabreet Reach. The DI-GLDD consortium signed the contract in October, 2014. The partners divided the work with DI carrying out 75% of the dredging works while GLDD did 25%.

This consortium mobilised a large amount of equipment for the project – 4 CSDs, 6 trailer suction hopper dredgers (TSHD), 42 auxiliary vessels from DI and 2 Middle-East based CSDs ('Ohio' and 'Carolina'), 1 TSHD (Sugar Island) and other auxiliary equipment from Great Lakes.

DI's biggest cutter, 'D'Artagnan', was immediately mobilised at the time of the signing and she was on site on November 26, five weeks after the contract signing. DI's vessels came from myriad countries such as Belgium, the Netherlands, the UAE, Singapore and Australia. Also, DI sent around 950 people (crew and staff) for the project.

HANDLING DAILY LOGISTICS

With work being carried out 24/7, it was essential that all contractors provided good accommodation for their staff and crew. In addition, contractors had to supply other necessities such as food and water as well as fuel for the ships.

Besides hotels to accommodate crew and staff, the Challenge Consortium used four accommodation barges and a cruise ship, Ocean Majesty. Furthermore, due to the work location, the barges and the cruise ship were positioned at a central point for each working zone to cut down the transfer time of personnel. Transfer vessels were used to ferry crew back and forth from the work sites within 10 to 30 minutes.

Though most vessels had their own accommodation, DI rented a houseboat, Rossini. The company had also rented hotels and villas for its staff and these villas were located on the left side of the Great Bitter Lake. Some of these rented villas also served as offices for the DI-GLDD consortium – one office for general management, one for operational management and one for GLDD.

The dredging companies also needed to address the issues of water, food, waste and fuel. At the peak of the dredging works, the Challenge Consortium had a team of about 150-200 site supervisors and operations personnel handling these issues. Also, various local suppliers were contracted for services such as catering and cleaning. Water was supplied by water trucks and supply barges, while food, suited to various workers' cultural needs, was provided daily. Barges also collected garbage to be sent for disposal.

Dredging International had its own supply ships but it also had contracts with local suppliers for food. The contractor had over 40 auxiliary vessels and they were used for purposes such as fresh water, fuel, garbage, sewage and sludge.

Fuel for all ships was efficiently provided for by the client throughout the duration of the project and not a single vessel ran out of fuel.

A HEALTHY AND SAFE WORK ENVIRONMENT

Health and safety were major priorities for the dredging contractors during the project and they had to keep in mind the strategic nature and importance of the Suez Canal area.

All crew and staff from the consortia and local workers from Egypt needed approval for work for security reasons from the Egyptian Army. In addition, the Egyptian Army provided the work sites with tight security and the crew could only leave the premises in close contact with the consortia's security officers.

Due to historical reasons, the consortia had to take into account the possibility of unexploded ordnance (UXO) in the Suez Canal area. The Challenge Consortium encountered UXO in the disposal areas and consultants were flown in to map the risk of UXO. The Egyptian Army was in charge of removal and disposal of any found objects. DI also came across a few UXO after the company had conducted various

investigations but did not have any incidents.

Health was a major concern and DI-GLDD consortium had doctors on standby while the Challenge Consortium engaged the services of the Travel Clinic of the port hospital in Rotterdam. The clinic advised the Challenge Consortium to have nurse stations on all accommodation vessels and offices. There was also a hospital on board Ocean Majesty.

Ultimately, the New Suez Canal Project proved to be a logistics and operational success for not only the dredging companies that undertook the work but also the client as it was completed within a year as stipulated. Just as the original Suez Canal turned out to be a maritime marvel, so did this project.

ABOUT THE AUTHOR

René Kolman is the secretary general of the International Association of Dredging Companies (IADC). Mr. Kolman studied at the Nautical School in Rotterdam and holds a degree in Economics from the University of Groningen, the Netherlands. Before coming to IADC, he worked for the Dutch Landscaping Contractors Association, the last three years as the deputy managing director. He joined IADC in 2008 and as of 1 January, 2010 assumed full responsibilities as secretary general. He is in charge of developing and managing the dissemination of information about dredging and its positive role in society. Through seminars, publications, presentations at conferences, as well as participation in working groups with sister organisations such as IAPH, PIANC and WODA, IADC offers support to port authorities, developers and stakeholders on diverse subjects such as technology, environment and climate change.

ABOUT THE ORGANISATION

IADC stands for the International Association of Dredging Companies and is the global umbrella organisation for contractors in the private dredging industry. As such, the IADC is dedicated to not only promoting the skills, integrity and reliability of its members but also the dredging industry in general. IADC has over a hundred main and associated members. Together they represent the forefront of the dredging industry.

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