



FEATURES

Client	Indian Navy, assisted by the consultant firm Aecom.
Project	Underwater drilling and blasting, part of Seabird Phase II project
Location	Karwar, India
Period	October 2018 – April 2019
Contractor	Consortium formed by Larsen & Toubro Ltd and International Seaport Dredging Pvt Ltd
Subcontractor	Boskalis Smit India LLP cooperation with Terramare Oy and Rock Fall Ltd

A View of Terramare’s drilling towers installed on the barge.

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SCOPE

The underwater drilling and blasting included in the Seabird Phase II expansion project was implemented by six Terramare hydraulic drilling towers and other equipment, which were installed on the deck of a locally leased work pontoon. The underwater drilling and blasting project was the responsibility of the local company Boskalis Smit India LLP, which implemented the project in cooperation with Terramare Oy, Rock Fall Ltd and parent company Boskalis. Blasted rock was removed by the Boskalis backhoe dredger Magnor.

UNDERWATER DRILLING AND BLASTING

Blasted rock	63,811 m ³
Worksite area	86,550 m ²

MAIN PLANT

Hydraulic drilling towers with accessories (Terramare)	6 pc (12-metre-high masts each)
Work barge (Leased)	76.2 m x 24.38 m
Backhoe dredger (Boskalis)	Magnor (2,312 GT)



INTRODUCTION

Terramare has participated in the major Seabird Phase II expansion project on the west coast of India. The site is located in Karwar, Karnataka, where the Indian naval base INS Kadamba opened in 2005. In the Seabird Phase II project, launched in 2017, a new kind of naval base is being developed by expanding existing harbour structures. The expansion will enable the more efficient stationing, operation and maintenance of fleet vessels. Seabird Phase II is a project of national significance for India. The project has been commissioned by the Indian Navy, assisted by the consultant firm Aecom.

TERRAMARE’S DRILLING TOWERS

The expansion of the major Seabird Phase II project included underwater drilling and blasting, which was implemented by six Terramare hydraulic drilling towers and other equipment, which were installed on the deck of a locally leased work pontoon. The main contractor in the overall project is L&T – ISDPL JV, which is a consortium formed by the companies Larsen & Toubro Ltd and International Seaport Dredging Pvt Ltd (ISDPL). The international team of underwater drilling and blasting personnel included professionals from Finland, the UK, Portugal and India.

The underwater drilling and blasting was implemented in an area of 86,550 m², from which a total of 63,811 m³ of blasted rock was removed. The blasted rock was removed by Boskalis’ large 72-metre backhoe dredger Magnor (2,312 GT), which has a bucket capacity of up to 40 m³.

GLOBAL UNDERWATER DRILLING AND BLASTING

Terramare’s Indian projects represent an opening to the global drilling and blasting business. Until now, the company’s underwater drilling and blasting service has been restricted mainly to the Nordic countries and the Baltic region, and from time to time elsewhere in Europe.

INS KADAMBA NAVAL BASE, KARWAR, INDIA
SEABIRD PHASE II PROJECT
UNDERWATER DRILLING AND BLASTING



- B** Terramare’s hydraulic drilling towers and accessories can be transferred to any site worldwide.
- C** The six drilling towers and other underwater drilling and blasting equipment were transported to Karwar from an earlier site in Mumbai.
- D** The blasted rock was removed by Boskalis’ large 72-metre backhoe dredger Magnor (2,312 GT).