

# Case Study: Operations & Maintenance

## 1.0 Facts

### Services

#### Operations & Maintenance

#### Related Services

Engineering, Project & QHSE Management,  
Tendering, Procurement & Financial Support, Offshore  
Construction Support and Client Representation.

#### Summary Scopes Completed

Operations & Maintenance:  
Interconnectors: BritNed, NordLink, NorNed  
Export Cables: DolWin, HelWin  
Wind farms: Amrumbank, Butendiek Thornton Bank.

## 2.0 Introduction

Primo Marine has extensive expertise, in-depth knowledge and experience to provide independent Operations & Maintenance solutions tailored for the requirements of the offshore Dredging, Oil and Gas, Renewable Energy and Power sectors. Solutions designed to ensure limiting risk of cable damage or failure during their lifetime and additionally improving response strategies in order to reduce the time and cost of repairs.

## 3.0 Scopes

Primo Marine has provided independent Operations & Maintenance expertise into many of Europe's largest installation projects, from interconnectors i.e. BritNed, NordLink, NorNed, to export cables i.e. DolWin, HelWin to Offshore Wind Farms i.e. Amrumbank, Butendiek and Thornton Bank.

## 4.0 Comprehensive Packages

Primo Marine offers an Operations & Maintenance expertise, either as part of an overall "comprehensive service package", in combination with Engineering, Project & QHSE Management, Offshore Construction Support and Tendering or as bespoke individual packages.

**Primo Marine provides the following Operations & Maintenance services:**

## 5.0 Installation & Protection Advisory Solutions

Primo Marine has extensive expertise and experience, to support scopes which have encountered unfortunate challenges during the offshore phase, such as:

- The conducting of complete peer reviews, including establishing and management of project risk registers. Reviews designed to incorporate all practical lessons learned from an extensive track record, as well as offshore cable industry.
- The management of multiple subsea activities including provision sum operations.
- The provision of subject matter expertise including pro-active problem solving of event, challenges and issues (including the arranging and management of third parties).
- The interfacing with all significant parties to provide technical solutions.
- The advising with project documents and the management of.
- The providing of licence management and supporting of licences, agreements and approvals.
- The translation of technical issues into contractual and permit requirements.
- The provision of onshore and offshore expertise (Engineers, Project Management and Client Representatives).

The respective solutions all include considerable practical experience & expertise, designed to overcome offshore protection and installation challenges being encountered.

## 6.0 Onshore & Offshore Cable Damage Prevention Solutions

Primo Marine has extensive expertise and experience to provide pre-engineered prevention solutions. Including operational risk mitigation scopes, designed to limit the risk profile against damage and/or development of failures, during the lifetime of cables, such as:

- Depth of Burial Surveys.
- Depth of Burial Maintenance Options.
- Bespoke GIS & AIS Data Monitoring & Management.
- Bespoke AIS subsea asset monitoring and system specification services.
- The provision of Onshore and Offshore expertise relating to management of:
  - Maintenance survey packages including specialist packages including UXO campaigns.
  - Critical offshore operations in proximity to marine and subsea assets and infrastructures.

## 7.0 Onshore & Offshore Cable Damage Preparedness Solutions

Primo Marine has extensive expertise and experience to provide preparedness solutions. The service offering is focused on ensuring organisation preparedness prior to any damage or failure developing. With solutions designed to cover either the complete organisation or key operational aspects, in order to ensure an effective response and reduce repair time and cost, such as:

- Establishing, maintaining and management of Response Systems.
- Gap Assessment and System Auditor roles.
- Tendering & Procurement.
- Project & Engineering Management.

## 7.0 Onshore & Offshore Cable Damage Response & Repair Solutions

Primo Marine has extensive expertise and experience to provide response and repair solutions. The service offering is focused on ensuring the correct managed response in the unfortunate event of damage or failure developing. The response solutions also include repair and recovery, such as:

- Conducting Emergency Repair (including fault finding, unburial, repair and reburial).
- Close-out protocols covering areas such as documentation, meetings and insurance brokers advisory services (claim management).

Primo Marine would welcome discussing in further detail the service offering in relation to cable strategies, principally covering prevention, preparedness, response and repair, such as:

- Business Continuity and Emergency Response Solutions.
- Prevention and Preparedness.
- Response and Repair.
- Operations & Maintenance.
- The provision of system tools covering preparedness and response.
- Management including full field support and supervision for all repairs including fault finding, deburial, recovery, jointing and reburial.
- Management of full maintenance and repair contracts.
- The provision of subject matter expertise including pro-active problem solving of events, challenges and issues (including the arranging and management of third parties).
- Remedial campaigns burial, dredging, rock-placement.