

# Shepherd Offshore Offshore Supply Base

## DESIGN LOADINGS of SOUTH END OF QUAY

### 1.0 Quay Superimposed Loading

#### 1.1 Uniform Distributed Load

The structure is designed for a UDL of 25kN/m<sup>2</sup>

#### 1.2 Vehicular Loading

- 1.2.1 80t Mobile crane: Lifting or travelling anywhere on new structure.
- 1.2.2 400t Mobile Crane: Lifting or travelling anywhere on new structure.
- 1.2.3 200t Crawler Crane: Lifting or travelling anywhere structure.
- 1.2.4 HB Vehicle: Restricted to 45 units of HB loading, equivalent to a 450t vehicle.
- 1.2.5 Reel carrying truck: Restricted to carrying loads up to 300t.
- 1.2.6 16t Fork Lift Truck: Lifting or travelling anywhere on new structure.

#### 1.3 Cable reel loading

The quay structure was designed to allow the storage of full cable reels, provided that the reels are supported on typical reel shoes.

Weight of full reel	300 tonne
Diameter of reel	9.1m
Width of reel	5.8m

### 2.0 Berthing and Mooring

#### 2.1 Design Vessels

Max design vessel	20,000 tonne displacement
Min design vessel	5,000 tonne displacement

It was assumed that 90% of the vessels using the quay will be in the range 100 to 250 overall length.

#### 2.2 Mooring requirements

50t Cast iron bollards are provided along the front of the new quay at approximately 20m centres.

Wind, wave and current loads on berthed vessels were assessed in accordance with BS6349 to determine the maximum storm

mooring forces. To provide safe berthing during storm conditions, one 150t and two 200t storm bollards are provided at the rear of the quay.

