Marina Development
Monkstown Marina,
Strand Road, Monkstown, Co. Cork

Marina Development
Foreshore & Design Report

Date: *10 June 2008*

Job No: *C/285*

Client: *Monkstown Bay Marina Company Limited*

Cronin Millar Consulting Engineers

Civil
Marine
Structural
Environmental

Marina Foreshore & Design Report

1.0 Introduction

The proposed marina development at Strand Road, Monkstown is an all tide access marina suitable for the full range of power and sail craft in Ireland today. The marina design and specifications have been prepared in accordance with BS 6349 "British Standard Code of Practice for Maritime Structures", as well as Irish, UK, European & US marine leisure facility guidelines.

A planning application for the proposed marina was granted on 13 May 2008 (Planning Reg. No: 08/5544)

2.0 Marina Layout & Protection

The marina will be protected by the outer array of proprietary floating concrete breakwaters. These breakwater units will be 4.25m wide with 1.8m deep concrete skirts. Navigation lights will be installed at the extreme corners of the array in accordance with the requirements and specification of the Commissioner of Irish Lights and the Marine Survey Office.

The berths have been oriented in a north east - south west alignment to match the predominant tidal and river flow direction. This alignment will aid vessel manoeuvring and minimise tidal drag on the berthed vessels and marina structures.

The main navigation channel within the marina has a minimum width of 15.8m to allow for the safe passage of vessels.

The primary walkway, which will connect with the floating breakwater will be 2.65m wide.

There are 2 no. secondary walkways. These walkways will be 2.65m wide proprietary floating concrete pontoon units.

Floating concrete finger pontoons are positioned perpendicular to the secondary walkways to accommodate the double berthage of vessels. The widths of the double berths vary according to the size of vessel and allow for the safe manoeuvring of vessels into and out of berths. The length of the finger pontoons varies from 6m to 12m. The finger pontoons are between 1.2m to 1.5m wide.

The fairway widths are large enough to accommodate the safe turning and manoeuvring of the expected design vessels when entering/exiting their berths.

3.0 Berth Sizes & Vessel Accommodation

The proposed marina will provide for 82 No. vessels ranging in sizes from 6m (Class I vessels) to 15m (Class IV vessels). 1 no. services berth is also provided. 8 no. dedicated visitor berths will be provided in the marina.

The internal layout of the marina has been designed to accommodate the largest expected vessel.

4.0 Marina Access

Access to the marina from the sea will be via the south west end of the breakwater array, giving protection to vessels manoeuvring within the marina.

Landside access to the marina will be via a galvanised steel platform. A galvanised steel access gangway will connect this platform to the floating primary walkway. The top of the gangway will attach to the access platform with a pin joint and the bottom will attach to the floating pontoon with a roller system. The roller/pin system allows the gangway to move freely, accommodating the rise and fall of the tidal cycle. The maximum slope of the gangway will be 1:6, which will only occur at Mean Low Water Springs (MLWS). The gangway has a clear width of 2.4m.

5.0 Pontoon & Anchorage System

The proposed pontoon system is the SF marina system, which is a high quality modular concrete pontoon marina system.

The marina will be anchored using the Seaflex anchor system. This Seaflex system incorporates rubber hawsers connecting the ends of the floating pontoons to concrete anchor blocks. The system has no visual impact to the marina as it is all underwater.

6.0 Marina Water Depths & Dredging

The tidal range in Cork Harbour is 3.7m (MHWS to MLWS) or 4.6m (HAT to LAT)

Vessels will have access to berths at all tides. There is no dredging envisaged within the marina basin.

7.0 Marina Services, Lighting & Safety Equipment

High quality stainless steel service bollards will be located throughout the marina. There will be a minimum of one bollard per four berths, with the larger berths having one bollard per two berths. The service pedestals will provide 240V electricity and lighting for the marina. Additional lighting will be provided along the primary walkway and the gangway.

Navigation lights will be provided at the eastern and western extremities of the outer breakwater units, in accordance with the requirements and standards or the Commissioner of Irish Lights.

Fresh water will be available from the water hoses strategically positioned on the pontoon arms. Water will be provided from the existing Monkstown public water mains via a flexible connection along the gangway/pontoon structures. A water pump will pressurise the system to ensure that water is available at all points on the marina.

A "Pump Out" unit, the location of which is indicated on drawing C285/F/4/A will provide facilities for vessels with foul water holding tanks to discharge their waste water from their vessels. This unit will pump the waste water into the existing Monkstown public foul water system.

Fire extinguishers (6kg dry powder units) will be provided at a minimum ratio of one unit per fifteen berths.

Lifebuoys will be provided at a minimum ratio of one per 30 berths.

Escape ladders will be provided at a minimum ratio of one per 30 berths.

A first aid kit will be provided at the services berth.

The proposed locations for all of the above equipment and systems are detailed on the "Services Layout" drawings No. C285/F/4/A.

8.0 Archaeology

There is no dredging envisaged for the proposed development. Archaeology will not be affected

9.0 Ecology

The proposed development will have little, if any impact on any potential marine species at the site as it will not involve any dredging and the form of construction of both the marina and access platform will have a minimal footprint of the seabed (see additional information section of application form). Foul water pumped from the pump-out unit will discharge directly to the existing public foul sewer serving the Monkstown area.

10.0 Landside Facilities

Carpark

The proposed marina will include the development of 23No. roadside car park spaces.

Welfare Facilities

The proposed marina will utilise the toilet and shower facilities at the Monkstown Sailing Club building.

Other

The following landside facilities will be provided as part of the marina redevelopment:

- Waste Reception Facilities (recyclables, refuse and hazardous)(on access platform).
- Dock Cart Storage Area (on access platform).
- Weather Board and Information Station (on access platform).