Ynys y Big Harbour Enhancement

Method Statement

Overview

The Harbour at Ynys y Big is to be adapted to enable the long term mooring of the Jewson Family Yacht.

This will involve 2 distinct changes

1. Installation of floating pontoon
2. Installation of fixed boat cradle

Preparatory works

It will not be necessary to make any changes to the site in advance of the installations

Use of plant

No plant will be used in either operation

All materials will be positioned and fixed manually

Exported Materials

No materials other than a small quantity of stone dust generated by small-scale, local drilling of the Harbour Wall will be disturbed or removed

Imported Materials

Only the structures themselves (in component form) and resin anchors to secure column fixings will be imported.

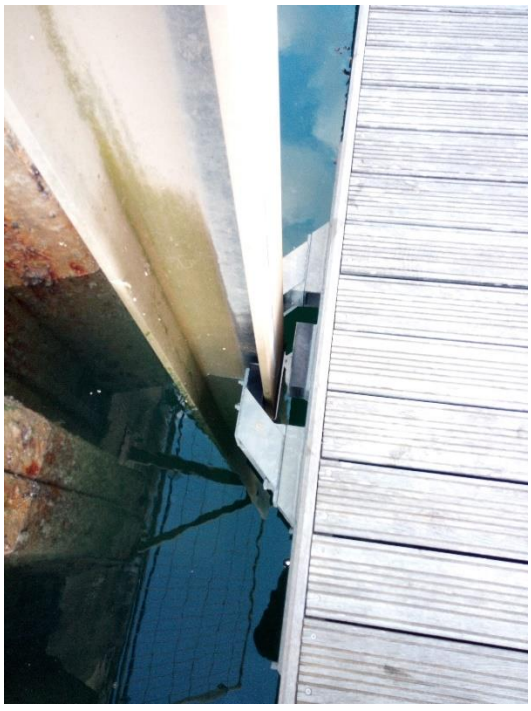
Materials used in Structures

A. Pontoon

The Pontoon consists of 2 elements

1. Fixing Columns

These are steel beams. They will have a galvanised finish. They will be installed vertically. Their lower end will rest on the rocky bed of the Harbour. They have a shaped end to ease their penetration through surface silt (Typical depth 100mm) They will be fixed to the face of the harbour and the top of the harbour with studs retained by resin anchors.



This image of the column shows a different pontoon deck from that proposed. The appearance of the pontoon elements is best seen on the image on the following page.

2. Floating tanks

These are the standard moulded tanks extensively used to create marinas. They link together to form flat stable floating platforms.

The illustrated pontoon is wider and shorter than the one proposed

The method of attaching the pontoon to the dock is different from that in our proposal.

The tanks are made from High-density polyethylene (HDPE)
They are high chemically stable and are the preferred material for food grade storage.

B. Yacht cradle

The Yacht Cradle is a steel fabrication made largely from Square Hollow Section.

It has a galvanised finish.

This combination has been shown to work exceptionally well in the North Sea Oil Industry.

It is made in man portable modules which bolt together.

It has “legs” in the same material which are adjustable to accommodate variations in sea bed level. Once inserted to contact the sea bed they are pinned in place.

Working Method

Pontoon Installation

The beams to be used to restrain the pontoon will be carried into position on top of the harbour wall, manually.

They will be carefully lowered into approximate position.

These operations will be carried our in accordance with Manual Handling Regulations and Loler Regulations.

They will be manually manoeuvred into the precise position and restrained in that position.

Arrangements for safe Working at Height will be made.

The beams will have fixing holes and holes will be drilled into the harbour wall through these. Studs will be inserted through the steelwork into the drilled holes and these will be retained by resin anchors

Straps will also be fitted using the same method into the top of the harbour wall.

This operation will be repeated for the other two beams.

The tanks which make up the pontoon are designed to be fastened together to allow the finished pontoon to be slightly articulated. They will be assembled on the dry harbour bed and the assembled pontoon with be fixed to the beams using brackts designed to slide up and down the beams as tide level changes.

Boat Cradle Installation

The Boat Cradle will be brought to site in man portable modules.

These will be carried onto the dry harbour bed next to the pontoon which will be resting on the harbour bed at low tide.

The modules will be bolted together to form a single structure.

The assembled unit will be levelled and chocked in place.

Legs, designed to slide through tubular sections of the Boat Cradle, will be inserted and these will be hand driven into the harbour bed to accommodate variations in level. The legs will be pinned permanently, in place once the desired degree of levelling has been achieved.

Chocks will be removed.

The plastic shielding plates will be fitted.

Proving

At the next high tide the yacht will be brought to the harbour and moored over the cradle.

The performance of the cradle will be evaluated as the tide falls and if necessary small adjustments will be made at the next low tide in daylight.