1.0 Introduction

1.1 Jetties in General

**Jetties** vary in size and shapes and may cater for vessels ranging from small canoes to ocean going travellers. Jetties may be constructed in concrete, timber, steel, plastic and other proprietary materials. Generally minimalist unobtrusive infrastructures are preferred, with small footprint and negligible impact on the marine environment.

**Steel** is a suitable material for use in the construction of jetties, particularly where design loads are high. However, it is vulnerable to corrosion (see Figure 1.1) and it is necessary to consider appropriate systems to protect and maintain the steel members, including methods for installation and connection of steel members to prevent damage to pre-applied protection systems. Consideration has to be given to the selection of steel members to allow ease of application and maintenance of protection systems and not simply based on the most efficient size or shape with regard to strength.

![Figure 1.1: Jetty with Steel Members](image)

The deterioration of **concrete** is predominately caused by the corrosion of steel reinforcement and can be minimised by designing durable concrete structures and limiting concrete crack widths. Crack widths are generally limited by designing structures with low stresses in the
reinforcement. Care must be taken by designers in specifying high strength concrete, that is concrete with a characteristic compressive strength above 50 MPa (Kee, 2012) in order to improve durability.

Timber is often used in small craft facilities such as jetties due to its ease of workability. The deterioration of timber is usually by rot or attack by living organisms. Timber durability is dependant predominantly upon the wood species chosen in the design.

As regards to plastic jetties, care should be taken in selecting pontoons to ensure that the material has sufficient strength and resilience to cope with the likely loading as well as boat impact over the design life and does not degrade in sunlight or due to chemical spills or aquatic growth.

Floating jetties made of HDPE are ideal for deep or fluctuating water conditions. A big advantage of a floating docking system is that it stays at a constant height above the water which is ideal to keep a boat moored to it. The straight simple design allows for multiple mooring locations and keeps cost and complexity to a minimum.

1.2 Background on this Project

The promoter, Candock Marine Club Ltd, is proposing to install a floating jetty at Grand Baie. The promoter is well experienced in the installation of floating jetties, having completed a number of projects in Mauritius and abroad as per Table 1.1 (also see Figure 1.2 below).

Table 1.1: List of Completed Candock Projects

<table>
<thead>
<tr>
<th>Clients</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mauritius</td>
<td></td>
</tr>
<tr>
<td>Government of Mauritius, National Coast Guard</td>
<td>2014</td>
</tr>
<tr>
<td>Haute Rive Ltd - Azuri</td>
<td>2014</td>
</tr>
<tr>
<td>New Mauritius Hotels – Victoria Hotel</td>
<td>2012</td>
</tr>
<tr>
<td>Sun Resorts – Touessrok Hotel</td>
<td>2012</td>
</tr>
<tr>
<td>Port Chambly</td>
<td>2008</td>
</tr>
<tr>
<td>International</td>
<td></td>
</tr>
<tr>
<td>Marina, Italy</td>
<td>2013</td>
</tr>
<tr>
<td>US Navy, Japan</td>
<td>2012</td>
</tr>
<tr>
<td>Gabon Army</td>
<td>2012</td>
</tr>
<tr>
<td>Marina, France</td>
<td>2009</td>
</tr>
</tbody>
</table>
Candock Marine Club Ltd has contracted the services of Sustainable Resource Management Ltd to carry out an Environmental Impact Assessment (EIA) study with a view to producing an EIA report to support their EIA licence application for the proposed development at Grand Baie. The Environmental Impact Assessment Report aims to prevent environmental degradation by giving decision-makers and the promoter better information about the consequences that the development project could have on the environment. The stipulations of the EPA of 2002 and EPA (Amendments) of 2008 have been closely followed during the study in view of achieving total compliance to all environmental requirements prescribed by regulations in the Republic of Mauritius.

1.3 The Promoter

Candock Marine Club Ltd was incorporated on the 29th day of April 2014 as per the certificate of incorporation in Annex 2 and is represented by the Project Director, Mr Wim Dewulf. All correspondences in relation to this project should be addressed to him as per details below.

Mr Wim Dewulf
Candock Marine Club Ltd
Morcellement Boucan
Grand Baie
Tel: +230 5 255 4013 Fax: +230 263 5520
E-mail: natam@intnet.mu
1.4 This EIA Report

This present EIA Report is submitted to the Ministry of Environment and Sustainable Development as supporting document for obtaining an EIA licence.

The following persons have contributed to the EIA study:

1. Dr Revin Panray Beeharry (PhD, Chemical Engineering - SRM Ltd)
2. Mr Wim Dewulf (Project Director - Candock Marine Club Ltd)
3. Mr Yannick Ayacanou (Candock Marine Club Ltd)
4. Mr Daksh Panray Beeharry (BSc Chemistry, Botany and Zoology & BSc (Hons) Marine Zoology - SRM Ltd)

This report is prefaced by a Non-Technical Summary which summarises the major findings of the study. The report then unfolds as follows:

Chapter 1 provides a general introduction on the project and the promoter,
Chapter 2 outlines the environmental policy, institutional and legal framework under which the project’s environmental impact analysis has been carried out and a description of the site environment,
Chapter 3 outlines the method of assessment of environmental impacts,
Chapter 4 identifies the stages of the proposed project and the significant environmental impacts which would potentially occur as a result of implementing the proposed project and also proposes appropriate mitigation measures.
Chapter 5 identifies the Residual Impacts associated with the proposed project,
Chapter 6 describes the Socio-Cultural and Socio-Economic Impacts of the proposed project, as well as the meeting for consultation held in the context of the project planning exercise,
Chapter 7 contains the proposed Environmental Monitoring Plan (EMP),
Chapter 8 proposes enhancements to the project area,
Chapter 9 analyses the alternatives to the project, and
Chapter 10 presents the conclusion of this study as well as a summary of environmental outcomes.

In addition to the above,

Annex 1 contains a copy of letter from the Ministry of Environment and Sustainable Development
Annex 2 contains a copy of certificate of incorporation of Candock Marine Club Ltd
Annex 3 contains the floating jetty layout plan
Annex 4 contains the Candock brochure
Annex 5 contains the Candock manual
Annex 6 contains the ecological survey report
Annex 7 contains a copy of letter from the Ministry of Fisheries
Annex 8a contains the list of stakeholders present during meeting for consultation
Annex 8b contains the supporting letters from potential members of Candock Marine Club
Annex 9 contains the Material Safety Data Sheet of detergent used for boat cleaning