



## GOVERNMENT OF BERMUDA

Department of Planning

## **A Guide for Sea Walls, Revetments, Breakaways and Beaches**

The Bermuda Plan 2008 provides guidelines that apply to the whole of the island with the exception of the City of Hamilton. The Bermuda Plan 2008 has provisions that apply to development along Bermuda's coastline. In particular, Section 3, Chapter 10 outlines the general requirements for sea walls, revetments, breakwaters and beaches. This policy statement gives you additional assistance when preparing an application for planning permission for a sea wall.

### **Why do you need sea walls?**

Normal wave and wind forces cause erosion of the coastline. This is a natural condition that can worsen in times of hurricanes and gales. Erosion may result in coastal areas becoming unstable and, sometimes, in rock face collapses. Where there is danger to persons, property and / or buildings due to the threat of collapse, you may need to erect a sea wall or walls to provide support.

### **Planning Applications for Sea Walls**

In accordance with Policy COA.11 when assessing applications for sea walls, technical officers and the Board must be satisfied that:

- a) the siting of the sea wall is appropriate to its particular coastal location;
- b) the scale, design and extent of the sea wall complies with the relevant policies of Chapter 8, Design;
- c) the design of the sea wall has been approved by a registered engineer;
- d) adequate consideration has been given to the foundation, drainage, prevention of scour, effects on coastal processes, construction activities and best management practices to mitigate the impacts on the environment, marine environment, recreational activities and waterfront access and neighbouring properties;
- e) the design and materials reproduce the natural appearance of the foreshore, as far as is possible; and
- f) the grounds in support of the application as submitted by the applicant explain the need for the sea wall and justify the exercise of the Board's discretion.

### **Planning Applications for Revetments**

In accordance with Policy COA.12, applications for revetments may be permitted at the discretion of the Board if required for safety reasons to provide protection against wave damage. Prior to the approval of a revetment technical officers and the Board must be satisfied that:

## **A Guide for Sea Walls, Revetments, Breakaways and Beaches**

- a) the siting of the revetment is appropriate to its particular coastal location;
- b) the scale, design and extent of the revetment complies with the relevant policies of Chapter 8, Design;
- c) the design of the revetment has been approved by a registered engineer;
- d) adequate consideration has been given to the foundation, armour layer, toe protection, construction activities and best management practices to mitigate impacts on the environment, marine environment, recreational activities and waterfront access and neighbouring properties;
- e) the design and materials reproduce the natural appearance of the foreshore as far as is possible; and
- f) the grounds in support of the application as submitted by the applicant explain the need for the revetment and justify the exercise of the Board's discretion.

### **Planning Applications for Breakwaters**

In accordance with Policy COA.13 applications for breakwaters may be permitted at the discretion of the Board if required to provide protection to the shore against wave action and / or to create calm water for the purpose of boat mooring or recreational activities. Prior to the approval of a breakwater, technical officers and the Board must be satisfied that:

- a) the siting of the breakwater is appropriate to its particular coastal location;
- b) the scale, design and extent of the breakwater complies with the relevant policies of Chapter 8, Design;
- c) the design of the breakwater has been approved by a registered engineer;
- d) adequate consideration has been given to construction activities and best management practices to mitigate impacts on the environment, marine environment, recreational activities, waterfront access and neighbouring properties; and
- e) the grounds in support of the application as submitted by the applicant explain the need for breakwater and justify the exercise of the Board's discretion.

### **Planning Applications for Beaches**

In accordance with Policy COA.14 the creation of new beaches is not permitted. The limited replenishment of an existing beach may be permitted at the discretion of the Board.

### **General Application Requirements**

An application for a sea wall, revetments, breakwaters or beaches should include:

- a) a comprehensive report explaining the need for the feature and giving reasons for the chosen engineering solution;

**A Guide for Sea Walls, Revetments, Breakaways and Beaches**

- b) an engineering solution which keeps the height and length of any wall or feature to the minimum necessary to restore or protect the property under threat;
- c) elevations and cross-sections of the proposal; and
- d) large photographs of the existing site conditions.

In the review of an application, technical officers will:

- a) assess the evidence of threat to determine whether there is a real need for the feature;
- b) review both the environmental impact and technical aspects of the proposed engineering solutions;
- c) assess the proposal against the provisions of Section 3, Chapter 10, Policy COA.11 through 14;
- d) consult with Conservation Services and the Marine Resources Board and seek to be sure that the design and materials used reproduce the natural appearance of the foreshore as far as possible.