

# Underwater gardening in the BVI

Developing Mainsail Resort Marina & Spa on Scrub Island in the British Virgin Islands (BVI) has required above average environmental awareness. In addition to ensuring the 230-acre tropical paradise remains unaffected by construction and operation of the resort, consultants took a green approach when clearing the marina basin.

Inspired years back by a long evening of good conversation, food and camaraderie with the family who own and operate Donovan's Reef Restaurant on remote Scrub Island, Joe Collier of Mainsail Hotels realised the location

Development Group, in conjunction with Scrub Island Development Group LLC., broke ground in October 2005 on a US\$70 million development to include luxury residences, a boutique hotel, spa and 67-slip marina.

Just a mile away from Beef Island/Tortola and its airport facilities, Scrub Island is a private island with white sand beaches, lush tropical foliage and beautiful accessible waterways. Painstaking efforts are being made to protect the natural beauty of the island and its peaceful ambience while creating the first new resort development in the BVI in over 15 years. The resort will not exceed more than 200 residents or guests at any given time, even

after full development, and the primary form of transportation on the island will be by golf cart.

## Planning and design

Mainsail retained US company Applied Technology & Management (ATM) to provide comprehensive planning and conceptual design services. The final concept includes a 67-slip fixed pier marina for vessels up to 150 feet, marina utilities and breakwater protection, as well as barge landing and coastal improvements. The site caters for sport fishing enthusiasts as the marina will be the closest full-service facility to the famed North Drop, the location of the Virgin Islands' best billfishing. It will also be the first marina in the BVI to offer charter fishing services. Approximately ten of its slips will be reserved

for charter fishing boats and the remainder available for rent to resort property owners and guests.

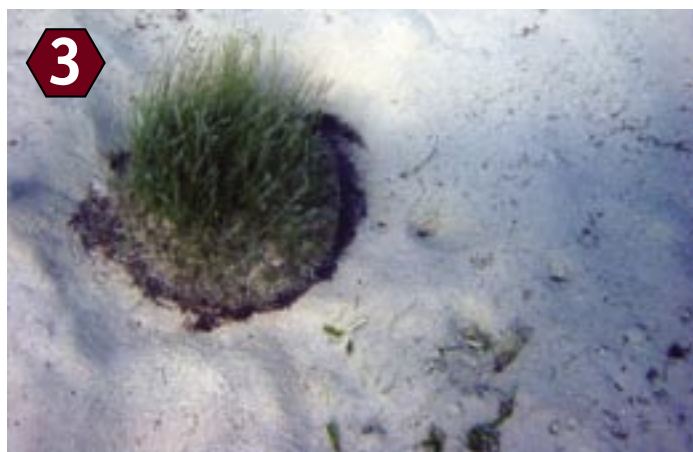
ATM completed an Environmental Impact Assessment (EIA) that included: terrestrial and marine biological characterisations; bathymetric and oceanographic surveys and geotechnical investigations; hydrodynamic, wave and water quality modelling; quantification of potential environmental impact; and monitoring and mitigation planning. The company also gave support for the public consultation processes.

## Coral and seagrass

The project called for a marina basin on the sheltered western shore of the island, an area that contained areas of seagrass and coral that would be affected by the development. After consultation and site investigation, a mitigation plan was devised and presented to the government. In devising this, ATM not only came up with a workable way of solving the problem but also met government's goals for preservation of natural resources.

The plan included transplanting the most dense and viable seagrass beds to adjacent barren areas of similar depth and conditions, as well as some off-site receiver areas. The coral in the work footprint was to be removed from two sites and moved to three nearby locations.

When given the go-ahead, ATM personnel experienced in successful coral and seagrass relocation techniques performed on-site training for the local workforce who were assisted by other divers experienced in coral and seagrass restoration.



1. Sea grass harvested using a plugger designed by ATM's Bill Fay.
2. Sea grass plugs replaced and 3. replanted.
4. Coral being relocated.
5. Coral reattached with mortar mix.

was prime for an exclusive luxury resort. After more than a decade of planning, Mainsail