

DIYAR AL MUHARRAQ GOES GREEN...

Building with the environment in mind



Mr. Aaref Hejres.



As we explore the project further, we turn our attention to the environment, a topic that is becoming increasingly important across many industries. At DIYAR AL MUHARRAQ, special strategies will be implemented to minimize the environmental impact of construction, while establishing the foundation for a sustainable future. To tell us more about the green measures in place for the big city, Mr. Aaref Hejres, Chief Executive Officer of DIYAR AL MUHARRAQ, explains how the development will reduce, reuse and recycle, both today and for the years ahead.



Gold Sponsor for the Energy & Water Conservation Expo. 2010

DIYAR AL MUHARRAQ is a Gold sponsor for the third edition of the Energy & Water Conservation Expo. 2010. The Expo will be aimed at identifying energy and water conservation techniques that could be used in the commercial and industrial sector. Environmental conservation related initiatives have always been a top priority for DIYAR AL MUHARRAQ and therefore, the Company will be actively supporting such events in the near future as well.



Materials & Resources

Construction by third party developers will be subject to adherence to the development guidelines that focus on waste reduction. These guidelines will provide guidance in the design and possible methodologies of construction. The third party developer proposals will be reviewed and where possible, potential waste reduction methods will be incorporated into their proposed method of construction. These could take the form of: proprietary shuttering which reduces timber waste; use of precast structural panels and finishing; use of precut and bent steel reinforcement; and a centralized construction waste collection site for sorting and recycling wherever possible.

During construction, close interfacing works are a prerequisite in minimizing abortive works, which could result in excess waste. Construction works will be coordinated with a central management team to ensure minimal conflicts in the works undertaken by third party developers and the civil construction team.

Plans for introducing a centralized waste collection/separation/removal and recycling concept under the control of a Facility Management Company are being studied. All developers on site will have to subscribe to this service under the control by the Master Developer.



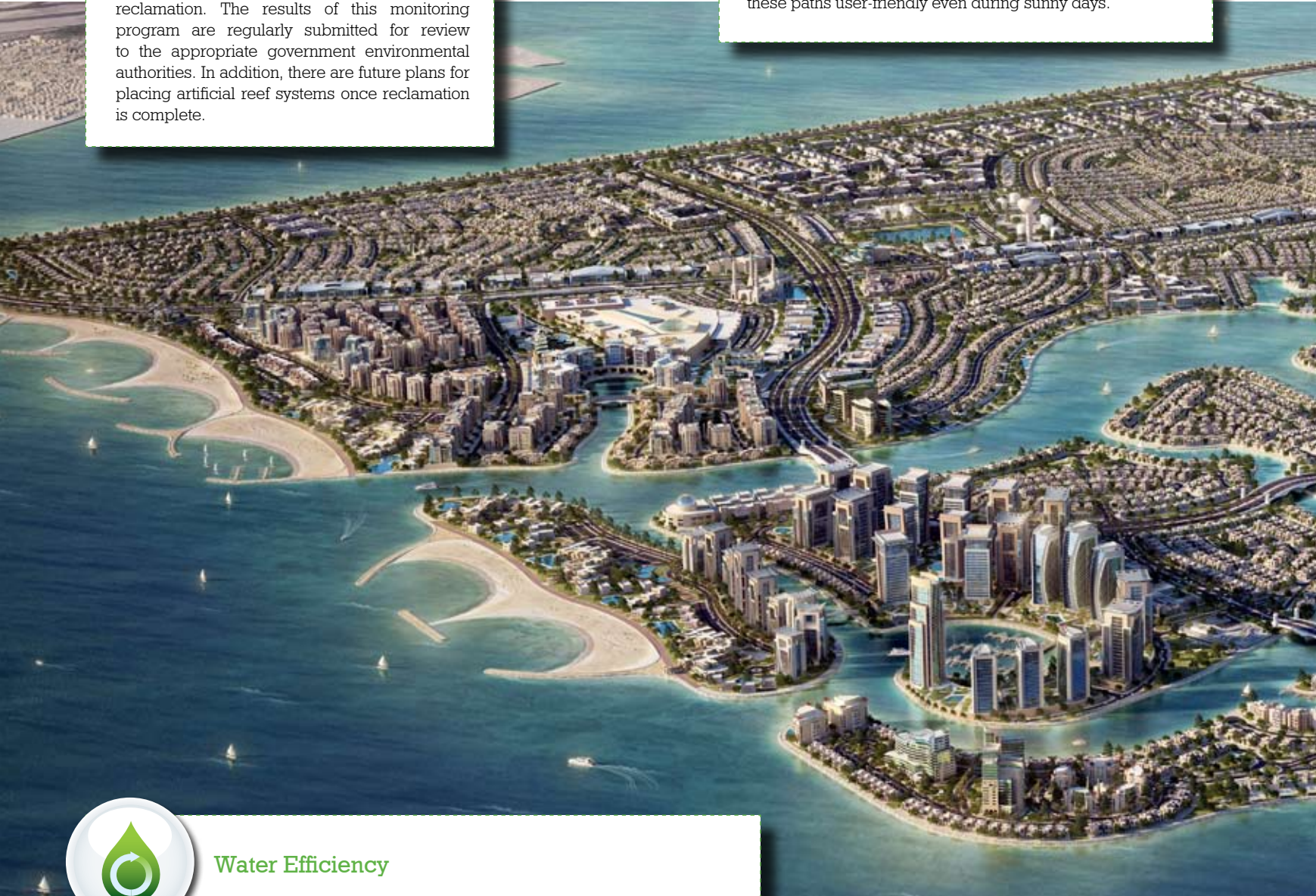
Land Reclamation

DIYAR AL MUHARRAQ will have approximately 1000 hectares of reclaimed land at the completion of both Stages One and Two. The reclamation design included an expected 0.5 m sea level rise in accordance with the development guidelines of Bahrain. DIYAR AL MUHARRAQ is the first reclamation project in Bahrain to have used a continuous monitoring program during reclamation. The results of this monitoring program are regularly submitted for review to the appropriate government environmental authorities. In addition, there are future plans for placing artificial reef systems once reclamation is complete.



Location and Community

From the very first planning drafts, connections between communities via interconnected walking paths that could be shared by pedestrians and bicyclists were integrated into DIYAR AL MUHARRAQ. This network of paths connects each of the communities to the beachfront area and the extensive waterfront corniche planned along the 200 m wide canal crossing the length of the project. The landscaping plan also includes trees along these pathways for making these paths user-friendly even during sunny days.



Water Efficiency

The advantage of starting a new development is that the latest design and construction techniques can be used right from the start of the project. During construction, rigorous testing standards will be incorporated to ensure that pipelines have no leaks. The irrigation design will incorporate the best design practices. This will have a twin pronged effect on the design. The first water conservation technique to be used will be Xeriscape planting. Xeriscape planting is not about planting species that need very little water; instead it is about planting species with the same water demand together. So plants that use a lot of water will be grouped together and the irrigation system in that particular area will water them more often than it would in the areas with plants needing less water.



Cost & Maintenance

Lower long-term maintenance targets will be achieved by providing energy efficient, low consumption electrical items such as pumps for drainage, potable water, irrigation, and sewerage to reduce the overall project demand for electricity. A strict maintenance regime will be maintained until the takeover by authorities. Sufficient spare parts for years of operation and adequate training programs will be created for operators who will eventually operate the system on completion.



Energy Saving

Compliance with an internationally recognized Green Building Rating System for New Construction (LEED-NC) will be considered for the issuance of building permits through Diyar's Technical Interface Office.

Solar orientation of buildings is being carefully considered within the master-planning process. The potential use of solar and wind energy will also be studied and evaluated for use throughout the project. The traditional use of evaporative cooling based on the wind tower concept, which also reflects a local flavor could be incorporated in building designs.

Construction methods utilizing building materials with thermal insulation that minimize heat gain will be encouraged throughout the development. In addition energy efficient methods of cooling, including district cooling is being evaluated.

The use of solar thermal water heaters, solar powered streetlights as well as a smart grid for monitoring and optimizing the energy consumption in the development is also being considered.



Regional Priority

DIYAR AL MUHARRAQ is a community for all the people of Bahrain starting with the extensive walking paths that connect the community back to Muharraq as well as connecting all the communities within DIYAR AL MUHARRAQ. The project will include beaches, parks, boulevards and other such public places where people from all walks of life will be able to freely interact with each other. These public facilities will be available to the residents of DIYAR AL MUHARRAQ as well as the general public.

DIYAR AL MUHARRAQ fully funded the construction of the Ras Raya Harbor in Samaheej. The BD3.4m project was carried out for the benefit of local fishermen. The Ras Raya Harbor is now a modern and fully-equipped fishing harbor that serves the local fishermen of Muharraq, Galali, and Al Deir areas. The harbor covers an area of over 100,000 square meters and houses nearly 200 fishing boats and 60 dhows. Modern amenities in the harbour include a dedicated electrical sub-station, fuel station, water tanks, 120 storage units and workshops. The harbor will function under the supervision of the Bahrain Fishermen Society, which has its headquarters in Muharraq. The society primarily functions in the Kingdom for the betterment and protection of rights for citizens working in the fishing industry.



Landscaping & Transportation

The selected plants will be based partially on the regionally appropriate landscaping as well as the Xeriscape principles of grouping plants of similar water demands together. This means that areas with low water demands do not require over watering. Most of the plants will be sourced from similar desert environmental locations.

DIYAR AL MUHARRAQ Master Planners are working with international transportation planners to provide regionally acceptable transportation solutions that conform to Bahrain's National Transportation Plan.

For more information:
Diyar Al Muharraq
Tel: +973 77155555
info@diyar.bh
www.diyar.bh