

Nakheel: Environmental innovation at work

1. Across Nakheel's development projects, state-of-the-art technology chiller plants are being installed for district cooling to reduce power consumption by 35% compared to conventional, de-centralised air conditioning systems.

2. Nakheel projects deliver up to a 50% reduction in the use of irrigation water through the application of soil amendment technologies that increase the soil water holding capacity resulting in less water demand. For example at Nakheel's Jumeirah Islands this results in savings of up to 7500 cubic meters of irrigation water each day.

3. Irrigation on Nakheel projects is regulated by a Central Control System. This system has a computerized link with a smart weather station so that the control of irrigation exactly compensates for the evapo-transpiration of the plants. The responsiveness of the system to the immediate weather conditions leads to minimal water wastage. As an additional source of saving, pipeline breaks are automatically detected and isolated, preventing excessive water loss.

4. On The Palm Jumeirah a number of state-of-the-art sewage treatment plants have been built at discreet points on the island. Employing a vacuum rather than a gravity based system, the technology ensures the highest efficiency, and no odour; all sewage is treated to the highest quality, and recycled for irrigation purposes or supplying water for district cooling.



5. The rocky breakwaters of the Palms and The World are the largest artificially created rocky reefs in the world, and the first curved breakwaters ever created. As well as functioning as defensive structures to protect reclaimed islands and prevent erosion, they also provide an important ecological resource for marine life. Natural rock was deliberately used because it provides a better surface for colonisation.

6. The monorail will integrate with the Dubai Urban Rail Transit System, "The Dubai Metro", serving to alleviate traffic congestion on the roads of Dubai and reduce dependence on cars in Palm Jumeirah. Offering an environmentally friendly, quiet, smooth and reliable transport system, the Palm monorail will be driverless, although an attendant will be on board at all times. The track will stretch 5.4km along The Palm Jumeirah, and have an initial capacity of 2,400 passengers per hour per direction (pphpd), increasing to a maximum of 6,000 pphpd.