

66
2009

Landscape Strategies

USA SHELBY FARMS PARK AND DETROIT RIVER WILDLIFE REFUGE • **NORWAY** NANSEN PARK • **NETHERLANDS** LANDSCAPE PLAN DRENTSCHE AA AND BLUE ISLES • **JORDAN** DEAD SEA MASTERPLAN • **DUBAI** PALM ISLANDS • **BOLIVIA** SALT FLATS • **MOROCCO** URBAN AGRICULTURE • **ITALY** URBAN AFFORESTATION • **JAPAN** TOKACHI MILLENNIUM FOREST • **CHINA** WOLONG MASTERPLAN • **VIETNAM** HANOI EXPANSION PLAN



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Imaging Dubai's Palm Islands

The Construction of Land and Representation through the Satellite View



The image and the coastline of Dubai are constantly changing with the creation of the different artificial island projects such as Palm Jumeirah, Palm Jebel Ali, Palm Deira and The World (page 46). The construction of Palm Jumeirah (below) began in June 2001.



Strongly bound to cities, images are the instruments through which subjects make sense of their environment and transform it. Since 1999, Dubai has been engaged in planning and building three artificial island formations off its coast. Promoted as the “largest man-made islands visible from space” and self

declared as “the eighth wonder of the world,” the Palm islands take the form of date palms in silhouette adding more than 520 kilometers of reclaimed coastline to existing shores of approximately 72 kilometers. The developer, Nakheel, had engaged the palm motif not only because *Nakheel* means “palm” in Arabic but also because

such a shape for the reclaimed land naturally extends coastline without expanding land area. Both the construction on the ground and representation of these new island developments are made possible through high-resolution satellite imagery technology, whether through a Differential Global Positioning System (DGPS) for

precisely dropping sand and rock from the dredging boats, or through virtual globe software such as Google Earth for the visualization and global circulation of Dubai's promotional images.

The creation of the Palms is presented as the vision of the ruler Mohammed Bin Rashid Al-Maktoum for the future of the city. As it appears in the developers' presentations, the builder is the ruler who spells out an Arabic poem "written in stone" on water. But the gigantic iconic interventions are mainly made possible through the technology of satellite imaging. The GPS guides both the ships that spray sand dredged from the bottom of the Persian Gulf as well as the cranes that lay the breakwater rocks on the outer edge of the Palm's encircling crescent. When the government-owned company, Nakheel Properties, was considering land reclamation in the 1990s, the dredging contractor Van Oord was invited to tender. Realizing that the situation demanded something more than the usual landfill project for a harbor, Van Oord demonstrated to Nakheel that land reclamation could generate terrific revenues with a calculated result of 15 millions beach visitors per year.

Combining images of sand, waterfronts and exotic travel destinations, the iconic form of the Dubai Palm places the city on the global tourist network and real estate market. Too vast and stretched too far out into the sea, the Palm islands can hardly be encompassed from a single viewpoint on the ground and its iconic form is best appreciated via aerial or satellite views by a subject flying above the city or surfing its web pages. Thus, the image of the Palms takes primacy over

its physical place. Widely circulated via the web, the Palms are more visited and marketed in virtual than in physical space. For the virtual subject, the web-based Palm sales offices enable the potential investor to visit the showcased properties throughout the various island layouts. In the global tourist industry, the Palm as logo brands the city as an inviting destination. Intermixing the real and virtual, the Palms portray a paradoxical relationship between a material infrastructure, a virtual presence, and physical repercussions of such an image on the financial investments and tourism industry of the city.

The image and land of Dubai are constantly changing with the planning and implementation of the different Palm projects: Palm Jumeirah, Palm Jebel Ali and Palm Deira. Between an existing condition and a projected vision, the city is reproducing its first Palm Jumeirah island to attract more investments and visitors. The creation of the Palm islands began with Palm Jumeirah (25 square kilometers) in June 2001. Shortly thereafter, the Palm Jebel Ali (37 square kilometers) was announced and reclamation work began. The Palm Deira development (46 square kilometers) began in 2003 and its reclamation phase will presumably be completed in 2015. Today, the first palm is occupied by 3,000 families, the second is starting urban development phase, while the third is still in reclamation phase. Although the three islands are similar in shape, they present significant differences amongst each other as they operate at different scales, programs, and context condi-

tions in relation to the existing Dubai hinterland. It is interesting to examine the relation between these three developments and their corresponding city districts: Palm Jumeirah to the very dense residential area of Dubai Marina; Palm Jebel Ali to the mixed zone with many large scale infrastructures such as the Jebel Ali Port Harbor; Palm Deira and its relation to the oldest part of the city and the different traditional markets.

Stressing how subjects mentally organize their sensory experiences, Kevin Lynch has highlighted such reciprocity between the production of urban images and a frontal perception of the modern city. As urban imagery is tightly linked to modes of visualization, new media developments and particularly satellite mapping are changing our image of the city and how we perceive, experience, and design it. Differently from cities such as Boston described by Lynch for their readability from the ground, Dubai lacks orientation elements from such a perspective. Nabyl Chenaf, a local architect and professor at the American University of Dubai, explains that while Dubai has four times more landmarks than Boston, wayfinding is confusing to the street user. On the other hand, GPS and mapping software are not bringing solutions to the problem because of the speed of the construction process. In fact, streets are continuously created, modified, extended preventing any reliable mapping revision. Using mobile communication technology, people have developed alternative strategies to navigate the city. Someone on the streets of Dubai would connect through the mobile phone to get directions in real time from somebody on the other end of

The gigantic interventions are made possible through the technology of satellite imaging. The GPS guides both the ships that spray the sand dredged from the Persian Gulf as well as the cranes that lay the breakwater rocks on the edge of the Palm's encircling crescent.



the line surfing the web. While mobile telecommunication today is still more efficient than visualizing media like satellite images or mapping software, this situation is likely to change as the monopoly of real-time visualizing media by the military is progressively ending. Given the deep penetration of the mobile telecommunication

technologies, one can imagine how real-time satellite viewing can create a revolution in our perception and navigation of the city.

Both as image and new land, I argue that the emergence of Dubai on the map is related to satellite technology. Is the construction of artificial islands a new urban strategy or model? The Persian

Gulf reveals a new regional rivalry on the most iconic artificial islands where palms, world maps, pearls, sea horses, crescents compete to get media attention. Less than 20 years after the first Palm project was discussed, a few countries outside the Gulf region are already following the trend. For its 2014 Winter Olympics, Russia is constructing the

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The rivalry to be the most iconic artificial island and the competition to get international media attention leads to new gigantic artificial projects like The World.



Sochi artificial islands in the Black Sea, a micro replica of the map of Russia on 330 hectares. The project was presented in 2007 by the firm Erick Van Egeraat to President Vladimir Putin. Also in 2007, Prime Minister Balkenende exposed to the Dutch parliament the possibility of building a Tulip Island of 60,000 hectares to showcase its engineering technology, and protect its shores against storms. In the same year, China expressed the desire for an artificial island of 2,800 hectares in the form of a dragon in Kuming.

What makes the Palm islands significant is their ability to create a new world, and particularly to extend the city onto the water. The sea as a frontier in the Gulf region is starting to be invested and a whole new urbanity is about to be shaped. The Palms bank on their simultaneous proximity and distance, connectedness and detachment from Dubai, on context and absence of it. While these islands are anchored to the mainland, close to shores, and on shallow water, they present a critical distance with the rest of the city. The Palm islands take advantage of the tension between the virtual and the real, between their cyber-presence and the tons of rocks and sand that form their foundation onto the sea.

Environmental scientists at Nakheel explain that they have discovered many new species such as seagrass meadows in the channels between the fronds and along the crescent of Palm Jumeirah. According to them, the richness of flora and fauna taking advantage of the habitat offered by the new projects exceeds the diversity previously found on the site. However, looking



at the scale of the new projects relative to the Gulf, this shift in the species composition is rather minor and localized and most unlikely to have an effect on the broader marine environment. The ecological question facing any megaproject using the land reclamation technologies has to be addressed in a systematic way wherever

it is applied in the Middle East, Asia or Europe. Dubai is undoubtedly feeling the global economic downturn, and a number of projects have been postponed or slowed down. This is naturally affecting the Palm projects. Today, the Palm Jumeirah artificial island is painfully nearing its full completion. The Palm Jebel Ali and Palm

Deira projects will continue at a slower pace. But for the dredging engineers of Van Oord, the Middle East and the Gulf in particular will remain an important market for a long time, and the long-term world market prospects in the land reclamation sector are enormous because there is a growing demand for new coastal lands.