

Park Gate

Dubai, United Arab Emirates

ADRIAN SMITH + GORDON GILL  
ARCHITECTURE

# Park Gate

## Dubai, United Arab Emirates

Park Gate is a 5,000,000 square-foot mixed-use development, including offices, retail and a hotel that creates a visual portal into the adjacent Jumeirah Gardens park in Dubai.

SERVICES  
Architecture

CLIENT  
Meraas Development

FUNCTION  
Mixed-use

FACTS  
37 stories  
464,515 sm area

The project's six gently curving towers, arranged in facing pairs connected at the top by three vaulted canopies, surround a unique urban oasis inspired by the Middle East's ancient and modern souks—covered markets that also serve as places to rest and socialize.

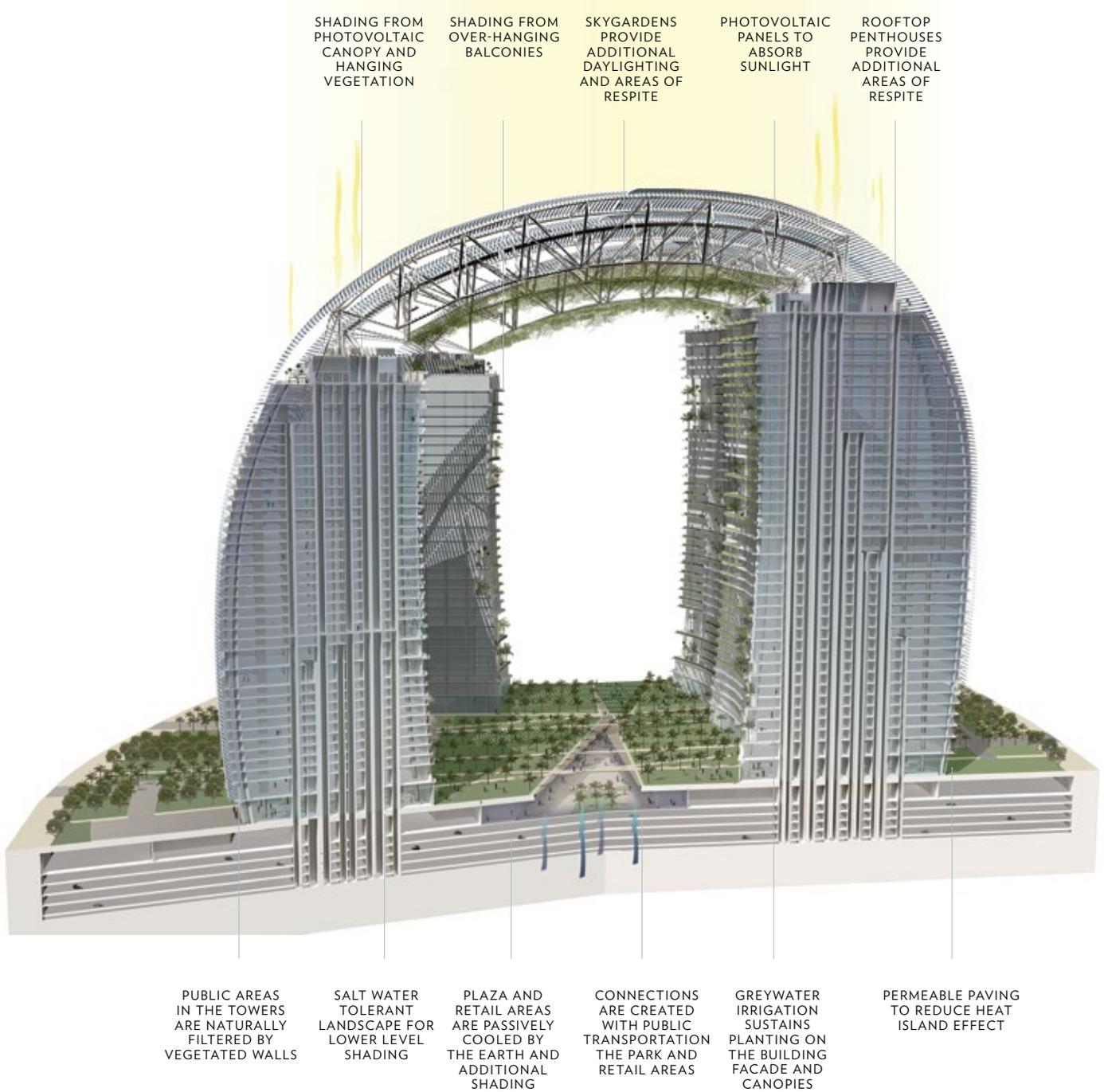
This central plaza, further protected by micro-canopies, boasts expanses of drought-tolerant greenery and reflecting pools. From balconies and sky gardens in the surrounding towers, users will enjoy inspiring overlooks of this outdoor “great hall,” which features indigenous, salt-water-tolerant plants (reducing energy needed to de-salinate water) and reflecting pools that also act as thermal sinks, absorbing heat during the day and releasing it at night.

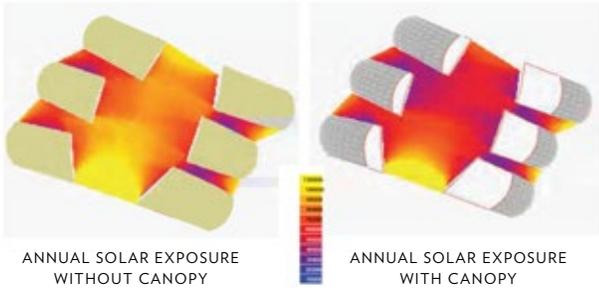
High above, the main canopies perform three sustainability functions at once: harvesting solar energy through photovoltaics on top; creating shade, which will reduce heat gain in the towers and can reduce temperatures on the ground by 10 to 15 degrees; and incorporating trellises from which hanging plants will grow in a thriving microclimate irrigated by a gray-water misting system. The canopies are semi-permeable (70 percent closed, 30 percent open) to allow dappled light through to ground level.

In the towers, whose sculpted form completes the curvature of the canopies, more sustainable design features and strategies are deployed. The towers are oriented to limit solar exposure and allow circulation of gulf breezes through the development. Landscaped sky gardens on some floors provide access to the outdoors and allow natural light to penetrate the interiors.

The towers on one side of the development are 37 stories tall, while the others are 34 stories tall, creating an asymmetrical effect. The towers are oriented to turn slightly in toward each other, heightening the sense of ensemble. Shading elements on the tower exteriors reduce solar heat gain.

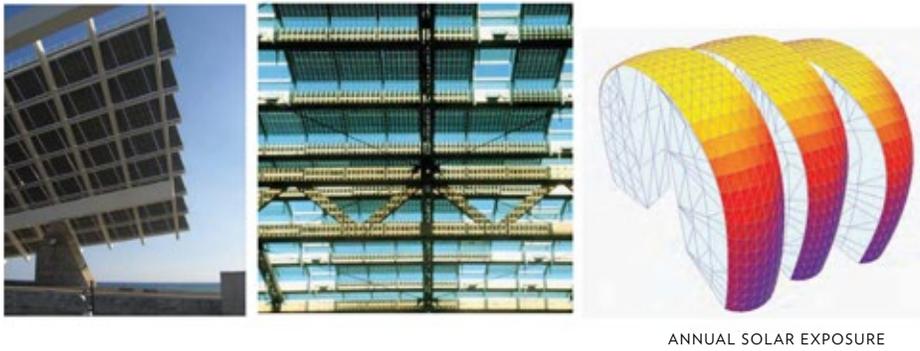






CANOPY SHADING

The climate of Dubai dictates that after air conditioning, shading is the most effective way of tempering the climate. By providing a roof covering the interior area of the site a comfortable environment is created for its inhabitants.



PHOTOVOLTAICS

It is estimated that the annual energy provided by PV in the canopy could potentially be enough to offset the entire annual lighting demand for the residential towers.



DAYLIGHT

Daylight penetration to the atria could be maximized by integrating a Heliostat system. This technique consists of reflecting direct sunlight, abundant in the UAE, via a combination of mirrors into the atria.

This strategy will not only save lighting energy consumption but also improve occupant's comfort.

