

# A GARDEN IN CAIRO

Al-Azhar Park, a Former Garbage Dump, Is a Model  
for Conservation and Development

*By Maher Stino*

**T**he Aga Khan Trust for Culture sponsored a conference in Egypt in 1984. It was called “The Expanding Metropolis: Coping with the Urban Growth of Cairo.” There was an urgent need for more green space in the city. One study had found that the amount of green space per inhabitant in Cairo, the center of the largest metropolitan area in Africa and the Middle East, was the size of a single footprint. At the conference, the Aga Khan announced his intention to finance and create a park in the city.

The task ahead was formidable. The available space was a thirty-hectare site in the Islamic heart of Cairo. It was surrounded from the north and west by poor, densely populated neighborhoods dating from medieval times and noted for their mosques and other architectural treasures, and from the east the City of the Dead, a sprawling fifteenth century cemetery. The site had been a rubbish dump since the late Mamluk period; indeed, over hundreds of years, the accumulation of garbage and building debris was nearly forty meters deep in some areas. After six years of work, Al-Azhar Park opened in 2004 to international as well as local acclaim. The initiative includes not only a vast green space for the people of Cairo, but the restoration of Islamic historical sites, revival of ancient crafts and revitalization of adjacent neighborhoods. “The result is an urban vision that is startling in its scope,” wrote *New York Times* architecture critic Nicolai Ouroussoff, who praised the project for “reversing a trend in which unchecked development has virtually eradicated the city’s once-famous parks.”

▷ *Aerial view of  
Al-Azhar Park,  
Cairo, Dec. 6, 2006.  
Gary Otte/Aga Khan  
Trust for Culture*

The context served as a challenge to revitalize the heritage of Islamic Cairo and use it as a catalyst for cultural, social and economic development. In other words, it was clear that the construction of the park should act as a stimulus for the rehabilitation of the Al-Darb Al-Ahmar neighboring district



and its 200,000 residents. The Aga Khan Trust for Culture (AKTC) initiated projects that would uplift the living conditions in the vicinity of the park. However, Egypt's notion of environmental improvement was new, untested and limited to planting trees in a few streets. The government was skeptical about the project even after granting approval for the site.

Other challenges included the lack of environmental awareness and understanding of the profession of landscape architecture in Egypt: even today, there are no Egyptian academic institutions offering a degree in landscape architecture. The building industry does not supply quality products for use in outdoor space. In addition, there are no specialized contractors that are qualified to execute proper landscape works.

### **Design and Construction**

The design of Al-Azhar Park was initiated in 1998. To form the main guiding principles for the park design, AKTC worked with several design firms including Sasaki Associates of Boston. Sites International was appointed as the lead consultant to take on the central organizing role in the development of the final master plan and landscape architecture design of the park. There were several design and construction challenges: the historical context of the old city and Islamic monuments; the serious geotechnical limitations of a soil unsuitable for planting or construction; the existence of three water tanks on site supplying water to Cairo; and the lack of local commercial plant materials and landscape products. Recognizing these challenges, our vision was to develop a paradigm shift in public space design and education in Egypt.

The first visit to the site was a nightmare; hills of garbage and construction debris were all over the site. Soil would reach up to your knees as you walked. The historical wall to the west was buried under the garbage, and the scene of three large concrete water tanks, each eighty meters wide, was depressing. There were no signs of life on site; no plants and no birds.

During the earthwork of the site's western slope descending toward the Al-Darb Al-Ahmar district, crews uncovered the Ayyubid wall built by Saladin in the twelfth century to defend the city from the Crusaders. The 1,500-meter wall represented the new urban edge for the project after being restored from rubble. The existence of the wall fostered the notion of utilizing the park as a panoramic platform from which to view the heritage of old Cairo, and to create a historic wall promenade along the park's perimeter.

The geotechnical survey revealed a soil profile of thirty to forty meters of garbage, construction debris and highly toxic/salty soils unsuitable for construction or planting. Over 765,000 cubic meters of soil were removed and 160,000 cubic meters were

used as a fill elsewhere on the site. A further 605,000 cubic meters were geotechnically treated and mixed with 60,000 cubic meters of special sand and topsoil. Soil replacement created a layer of good soil ranging from a half to two meters deep. An impermeable clay layer 0.5 meters thick, placed two meters beneath the top soil, was added to prevent irrigation water seepage and soil settlement. Raft foundations or pilings were used beneath buildings. Roads and paths were built on structural fill ranging in depth from one to two meters.

Earlier in the planning stages of the project, the General Organization for Greater Cairo Water Supply announced its intention to install three underground water reservoirs on site. Each reservoir is eighty meters in diameter. The reservoirs had to be placed on significant piling. Furthermore, the insertion of such a system increased the constraints and risks to the infrastructure. This also prompted the landscape architects to provide maintenance access to the reservoir tanks and distribution lines. The authorities prepared a set of design guidelines for common areas between the park design and the reservoir system. Landscaping the three water tank tops required careful and detailed consideration of the tanks' structural limitations and waterproofing.

Sites International developed an indigenous and adaptive plant list for the park, detailing species and required sizes at installation. More than 650 species were planted in Al-Azhar Park. Palms, trees, shrubs, citrus groves and ground covers play a functional, visual, aesthetic and environmental role. For example, the palms contribute in defining the linear space and orienting pedestrians toward the impressive view of the Citadel; *Cassia nodosa* trees with their flowering canopies were used to mark the major walkway to the Citadel View restaurant. Greening the site posed some unique challenges as chemical property tests confirmed low levels of nutrients, high levels of alkalinity, very high levels of salinity and Ca CO<sub>3</sub> content. Thus, the need for appropriate soil conditioning was a major issue for some plants to survive. Drought tolerance, soil stabilization and erosion prevention were key plant selection criteria, and complete subsurface drainage was needed to protect the historic wall from any runoff.

Most plant materials were not commercially available in Egypt, in either the required quantity or size. Thus, a limited on-site plant nursery was established for horticultural testing and a larger off-site nursery was established to support the main stock. The off-site nursery was created in early 1998 on a twenty-hectare plot. It yielded all the required species and quantities needed for the park.

Almost everything for the park—furniture, lighting, bollards, seats, trash receptacles, drinking fountains, playground equipment, pergolas—had to be custom designed by the landscape architect and manufactured by local artisans. In the process, artisans reclaimed some old techniques in stone work that had almost died out.

The strategy of AKTC and Sites International was to divide the work into two parallel tasks. First, to address the site limitations, including the poor soil, the historical wall, the concrete water tanks, in addition to addressing the issue of poor supply of plant materials, especially trees, in local nurseries. Another immediate issue was the poor quality of local site furniture and lighting. The second task was the detailed planning and landscape design. This included creating several alternatives, obtaining approvals and testing prototype areas on site. This would be followed by preparing complete construction documents for the park design.

Given that all this was pioneering work with many unknowns to be encountered, it was agreed that the design could evolve and change over time to adapt to constraints and opportunities.

The design intent was to provide green open space for the residents of the adjacent districts and the greater Cairo population, and to utilize local artisans and laborers in the construction of the park as an effort to improve their economic status. The design theme was derived from the contextual historical Islamic heritage of old Cairo, a distinctive interpretation of the Islamic garden design criteria. The design was equally keen to protect and incorporate the historic wall into the park.

The main pedestrian spine is the key feature of the park, running north-south. It is characterized by sophisticated geometric pavement patterns, accentuated by various water features; fountain bowls, and narrow water runnels. The axial boulevard also incorporated rows of palms, aromatic plants and shade trees. On both sides of the main spine are secondary walkways with secluded sitting areas as well as sunken gardens and citrus orchards. The series of geometric, sequential gardens blend meaningfully with the curvilinear and rolling topography of the site, creating an oasis-like feeling of freshness and greenery.

Since the planning theme of the park was derived from the heritage of old Cairo, the main spine is directed to a view of Cairo's Citadel and Mohammed Ali Mosque. To further integrate the context, original gates of the Ayyubid wall served as a major entrance to the park from the Al-Darb Al-Ahmar district.

AKTC created a local Egyptian company, Aga Khan Cultural Service of Egypt, to maintain and operate the park, the idea being that the park be economically sustainable. Furthermore, AKTC aimed to implement the Islamic endowment system, using income to sustain the running of public facilities. Thus, income generated from tickets, parking and restaurants in the park is used in maintaining the facility and helps support urban rehabilitation projects in the adjacent neighborhood. A large staff was hired including personnel for security, gardening, irrigation, fountains and food outlets. Al-Darb Al-Ahmar residents were given priority in hiring.

### **Achieving Harmony**

The success of the Al-Azhar Park is the result of the environmental revitalization of the land in addition to the rehabilitation of the adjacent district. The project is a physical translation of cultural, social and economic development.

The park is considered an urban intervention that successfully addressed the context of the Al-Darb Al-Ahmar district. It saved the surrounding urban fabric by giving it a future and creating jobs for residents of the neighboring district. Furthermore, the surrounding cultural monuments and homes were renovated with the aim of improving the overall urban fabric. At the micro level, the community prioritized a list for refining the district; training programs were developed, houses were rehabilitated, micro projects were financed. At the macro level, Al-Azhar Park is viewed as a green oasis serving the Al-Darb Al-Ahmar district, old Cairo's historic sites and indeed the city at large.

Despite the numerous green areas of the park, it conserves water resources. A water irrigation system optimizes the use of water and arid plants that consume far less water than lawn areas were used.

The park is a recreational space for the community and the Cairene society to gather and perform activities in a welcoming green space. It has become a destination for tourists and an educational botanical garden visited by students from planning, architecture and agriculture schools. It provides a wide range of activities in its playgrounds, gardens, walkways, restaurants and amphitheater. The park has proved to be a success and a source of pride for Egyptians.