

El-Houd El-Marsoud, Cairo

"The City as a Forest"

The two projects presented here, and the accompanying notes, should be seen as reflecting a unity of thinking and an integral part of Mr. Halim's commitment to integrating the production of building in our time with the culture of local communities. Two very different types of gardens are represented by Halim's projects, the one a relatively small but ancient park in an urban context to be resuscitated and given modern functions; the other, Frafra oasis, belongs to the category of ancient attempts by desert dwellers to transform the desert into a garden producing pleasure and sustenance.

The philosophical orientations of his efforts can be summarised in the following four sets of interacting principles: 1). principles governing the symbolic aspects of building which he calls rhythms, 2. principles governing the formal aspects of building which he calls geometric patterns, 3. principles governing the organisational aspects of building which he calls co-ordinates; and 4. principles governing the ritual aspects of building which he terms ceremonies.

Cairo is a city of over 10 million inhabitants, and a jungle of styles, sounds and monuments. It is a "forest" of buildings with practically no trees. Thousands of buildings push for a place on the ground, struggle for a share in its sky. The unity of this giant forest is achieved by its minarets, like tall trees in the forest.

In this context building a park is an act of clearance, the transformation of jungle into a garden. The Egyptian Ministry of Culture first put forward the idea as a design competition for a cultural park for children in the Sayed Zenab district, which is a vibrant community of about 1.5 million people.

The site for the proposed park is the remains of El-Houd El-Marsoud, an historic garden dating from the Mamluk period in Egypt. Approximately four acres in size, it lies within the visual and social radius of the mosque of Ibn Tūlūn. The minaret of this mosque evokes again the analogy with a tree — this time the few real remaining trees of the old park. Looking down from the minaret into the magnificent serenity of the mosque's courtyard, with its majestic arches and compassionate shade, and one is reminded of *rāwdah*, or garden, as the image of paradise. In the middle of the courtyard is the fountain for ablutions whose water reinforces the symbolic and functional image of garden, and the metaphor between a mosque and a garden seems inescapable ...

Project Data

El-Houd El-Marsoud

Cultural park for children including exhibits, a museum, theatre, library, nursery, multi-purpose room.

Location: El-sayeda Zenab, Cairo, Egypt.

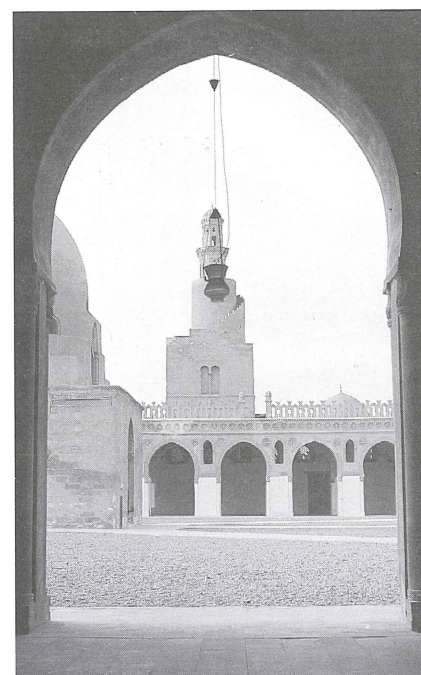
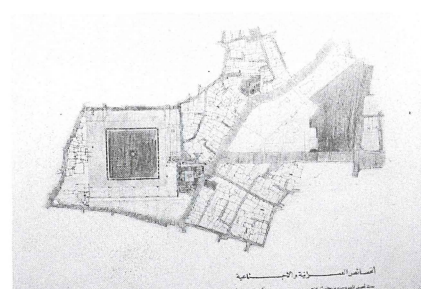
Area: 12000 square metres.

Cost: Approximately 1.5 million Egyptian pounds.

Status: Approved by the government, for design development and construction.

Architect: Halim Abdel Halim, Ph.D., Community Design Collaborative, Caravan, Cairo, Egypt.

Team: Isam Mostafa, Hassanin Abou-zid, Joseph Marais, Hisham Zani, Sherif Maamon; and Raof Farag, Ph.D.

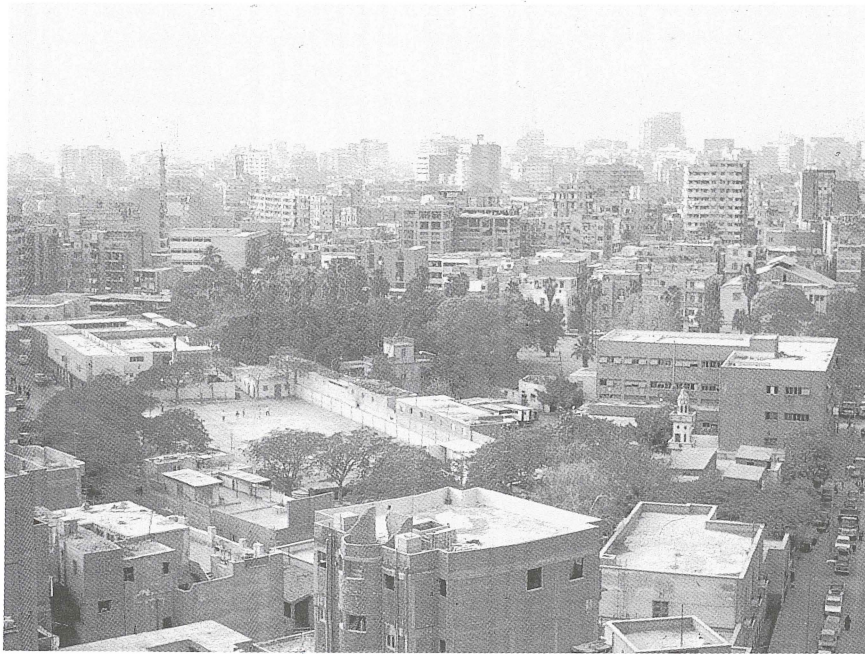


Right, top: Skyline of Cairo.

Right, above: Plan of Sayeda Zenab neighbourhood with mosque of Ibn Tūlūn (left) and site of park (right).

Right: Court and minaret of Ibn Tūlūn mosque.

Text and photographs by
Halim Abdel Halim.



Yet, when one looks down from the minaret in the direction of the park, the terrible imbalance in the present structure of the community is striking, for the park is suffocating. It is surrounded by buildings on all sides.

Clusters of the original trees remain, with groups of palm trees, eucalyptuses, giant *bangali* and ancient Egyptian trees called *gomeze*. The environment resembles a jungle from the outside, and a wasteland from the inside. Use of the park by street gangs generates a sense of danger, thereby alienating the community and contributes generally to the generalised decay of the physical environment. Occasionally a few children gather to play there, without any real support from the environment, and usually the scenes of amusement are located along the borders of the park; thus, they are more related to street-life than to the life of the park.

The annual festival in honour of Sayeda Zenab, the woman saint for whom the whole neighborhood is named, brings people and activities momentarily back into the park, transforming the place and revealing the real potential for development.

As outlined in the programme for the proposed transformation of the park, facilities were to be created specifically for children including a theatre for 400 persons, exhibition spaces for artwork, a museum for children, a library, a video room and multi-purpose spaces. These areas were not to exceed 12% of the site, the rest of which would be renovated as gardens. Such constraints stimulated our thinking on four questions:

Firstly, we asked ourselves what children and gardens have in common. Our premise was that if we could discover the unifying feature(s) between the two, this

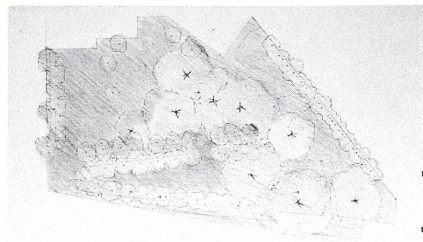
Above: View of terrain (not including open space at left) for proposed park in Cairo.

Right, top: View of the park (with minaret of Ibn Tūlūn in background) during the festival of Sayeda Zenab.

Right, above: Sketch plan of existing garden and trees in Sayeda Zenab.

would lead to the birth of an architectural solution. We speculated that it is the idea of growth which is shared by the garden and children. Moreover, in the present community nothing is more powerful as a formal expression of the idea of growth than the minaret of Ibn Tūlūn. Its form, a helix, moves upward towards oneness with the sky. This could be the point of departure for designing the architecture of the park.

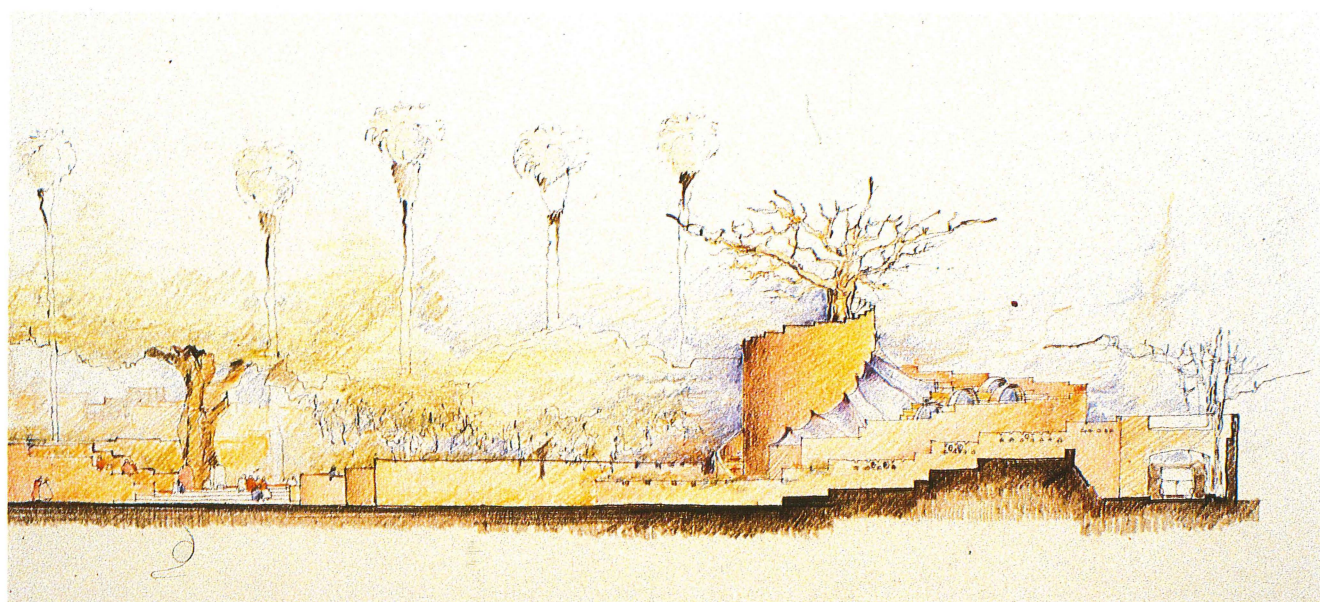
Secondly, we asked how this symbol could be transformed into an organising principle which, on the one hand, preserved its original power and on the other, gradually unfolded in the context of our project. The objective would be double, to reveal the lessons contained by the original symbol of the minaret and to provide an order in the development of various elements and activities of our project. We were compelled to ask questions about what was changing and what was constant in both contexts. The spiral of the Ibn Tūlūn minaret, which moves upward to symbolise the growth of consciousness through the act of prayer, has been transposed in our project to a spiral moving horizontally, spreading across the site. Whereas the minaret is a solid, ours is a void; the act of praying is a kind of ascending, whereas the child will run through the spaces of the helix. The intervals of the palm trees were taken as the modality, or the pitch by which the spiral grows. The symbol became a geometric system in which every tree is a



pole, a point in a matrix; the whole is turned into a field of energy activated by the power of the transformed symbol of the Ibn Tūlūn minaret.

Thirdly, we asked how life can be infused into this system of geometry. We had to reflect upon the magnificence of community gardens in Islamic tradition, free of the constraints of city life. In the case of our garden, palm trees form the main axis of the site, the beginning of which is a point having real potential, the beginning of the helix. The beginning point for geometric order is also a place for water, a fountain, upon which all life in the garden depends; the end point is a lone tree at the other extremity of the palm tree axis. The site is then organised in stepped platforms following the geometry created by the spiral. The platforms move upwards toward the middle of the site to form an arena-like park, then they turn in the opposite direction forming a downhill arrangement towards the end of the site where the museum is located. The theatre is situated at the turning point of the two movements. These three elements, water point, children's museum and theatre, are the main poles around which sets of activities, and hence meanings, are created within the realm of a park.

Fourthly, we asked ourselves how to build this park. We conceived it as being built in stages; each begins with a scenario in which the overall form is shaped by the scaffolding. The precise shape of any stage is defined as the work progresses. Each phase is itself a seed for the following phases. As an example, the entrance is the seed of the theatre. The building process itself is organised as a series of events; each combines technical work with cultural aspects of that particular operation.



The Entrance: Water Source

Around the water source a helix grows in an inverse direction to that of the Ibn Tūlūn minaret. This space, which makes the entry to the garden, is a void in which the original lesson of the minaret reverberates with the movement of children at play, climbing up and down, penetrating its rules and secrets. The entrance walls are also mirrors reflecting the life and vitality of everyone who passes. Mural paintings or other exhibits can also be accommodated on the walls.

The Children's Museum: A Tree Place

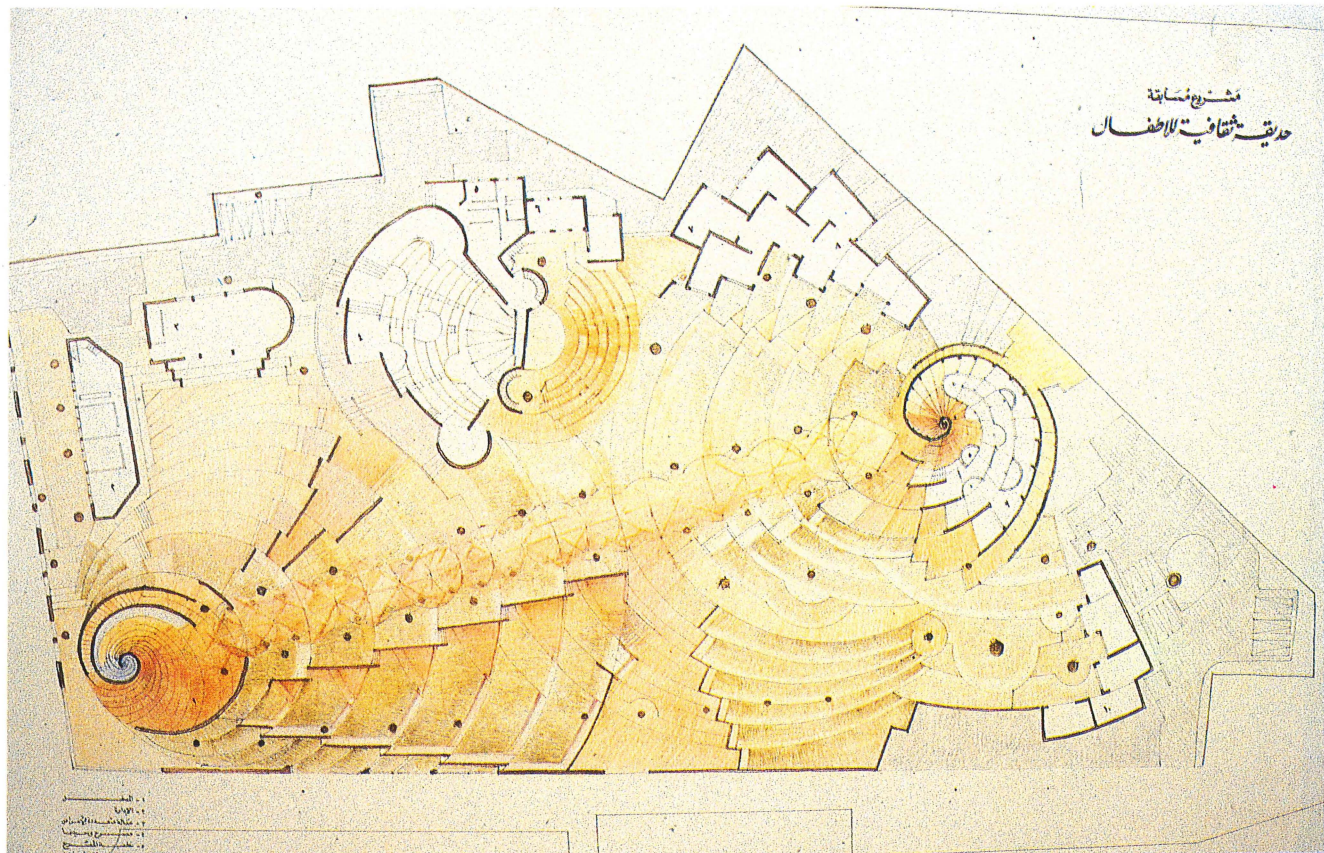
At the opposite pole from the entrance is a children's museum constructed around a single tree standing alone on the site. The helix form, in the opposite direction from that of the entrance, is made up of a series of walls moving progressively upward, creating stepped platforms around the space of the tree. The museum space reflects the permanence of the tree and contrasts with the changeability of the entrance.

Top: Sketch of new park proposal. Entrance is at left, children's museum at right, and children's theatre at upper centre.

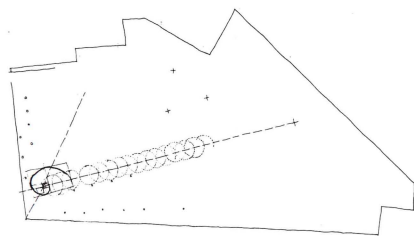
Above: Portion of a longitudinal elevation of the park and the children's museum.

The Children's Theatre

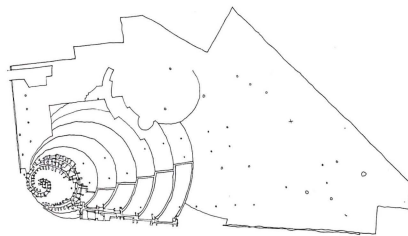
Three giant trees form the seating area for the theatre. The theatre itself is a series of platforms rising upwards in a spiral manner, allowing children to see each other while watching the actors.



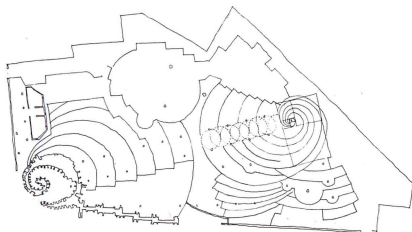
Above: Sketch plan of the entire park, including plans of the museum, theatre and utility buildings.
Left: Sketch plans showing the three phases of construction.



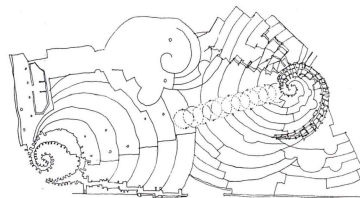
Phase I
Sketch of entrance to the park, showing the coordinates which generated the solution.



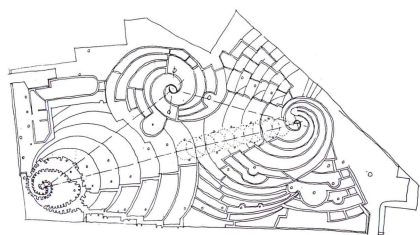
Sketch representing construction with scaffolding for entrance indicated.



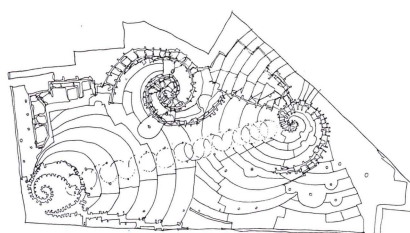
Phase II
Sketch of site geometry and development of the museum.



Scaffolding for construction of the museum.

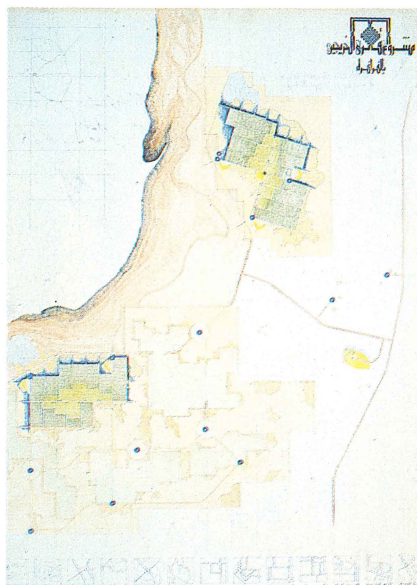


Phase III
Sketch of foundations in place for the theatre.

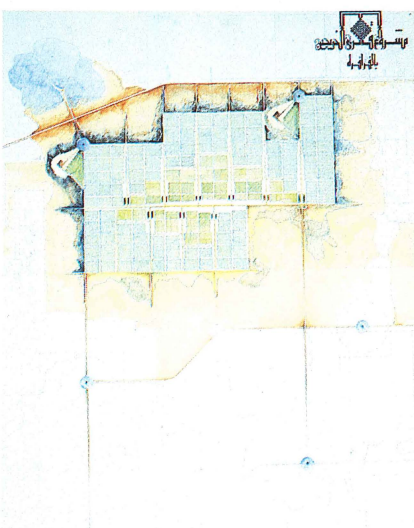
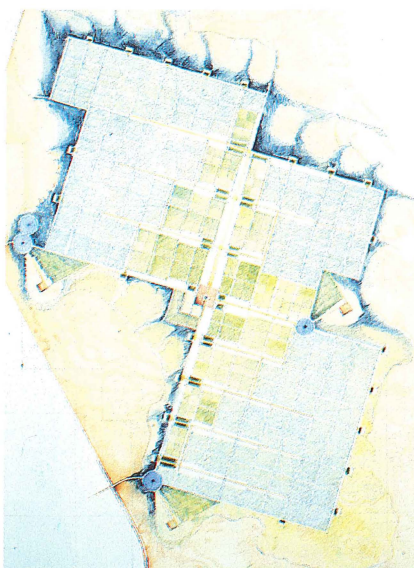


Scaffolding for the theatre under construction.

Frafra Oasis Project, Egypt



Top, below and bottom: The housing group is made up of 5-10 dwellings with each rabat. These have their own gates and gardens and share a water tank.



Project Data

Frafra Oasis project: "Settlement of University Graduates in the Desert".

Size: 40,000 acres of land. Settlement for 3000 graduates.

Sponsor: Ministry of Development and Land Reclamation, Egypt.

Architect: Halim Abdel Halim, in collaboration with Guillermo Arizcovetta. Community Design Collaborative, Caravan, Cairo, Egypt.

Project Management: Inter Design, Cairo
Status: 2,000 acres being reclaimed. One village (about 90 houses) has been constructed.

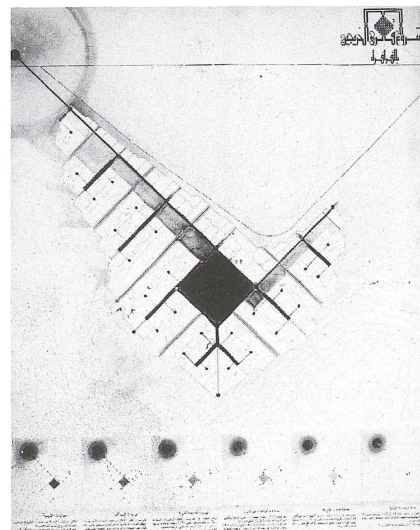
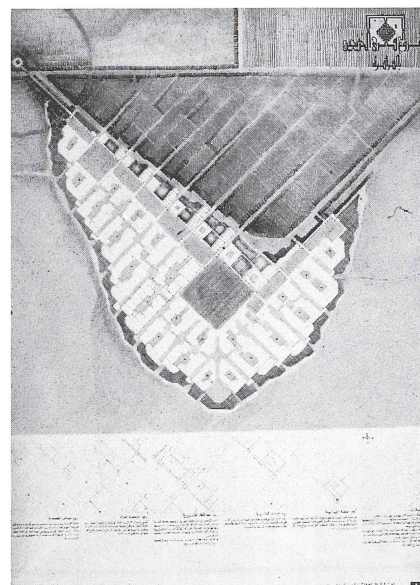
In contrast to the urban garden of El-Houd El-Marsoud in Cairo, this proposal represents a return to a much more ancient tradition of transforming the desert into a garden. It is not only different in type but also in scale: 3000 acres of land to be reclaimed from the desert and developed as an agro-industrial community for nearly 3000 young university graduates.

Frafra oasis is located 600 miles southwest of Cairo and deep in western Sahara region of Egypt. Among the most fertile, yet least populated and underdeveloped of Egyptian oases, Frafra consisted of a single settlement of 1700 persons called Kasr El-Faraha. The total population of about 2000 in the oasis has remained stable for the last 50 years and reflects the vital relationship that has been maintained between people and water, which is the source of life.

The present project is a land reclamation and settlement operation concerning only 3000 out of a total of 40,000 acres considered suitable for agriculture. As a pilot community, it will offer 10-15 acres of land, several head of cattle, and dwellings to recent graduates. We were asked to develop an overall concept for the new community, including land development, agriculture, settlement patterns, services, roads and infrastructure. So far 70 new dwellings have been built in the first phase of construction.

Oasis as a Concept for Development

Overall configuration of the two settlements is determined by soil classification. The form of the northern settlement (2000 acres) and the southern one (1000 acres) follows certain fundamental laws which governed the formation and life of the oasis. First of all, we learned that water circumscribes and defines life in the desert. The flow of water from wells determine the organisation of the community. People do not own land; they own a share in the well. The share is defined through an extremely sophisticated system: total output by the well is divided into 24 units, called *habbah*, or lots. Each *habbah* is in turn divided into



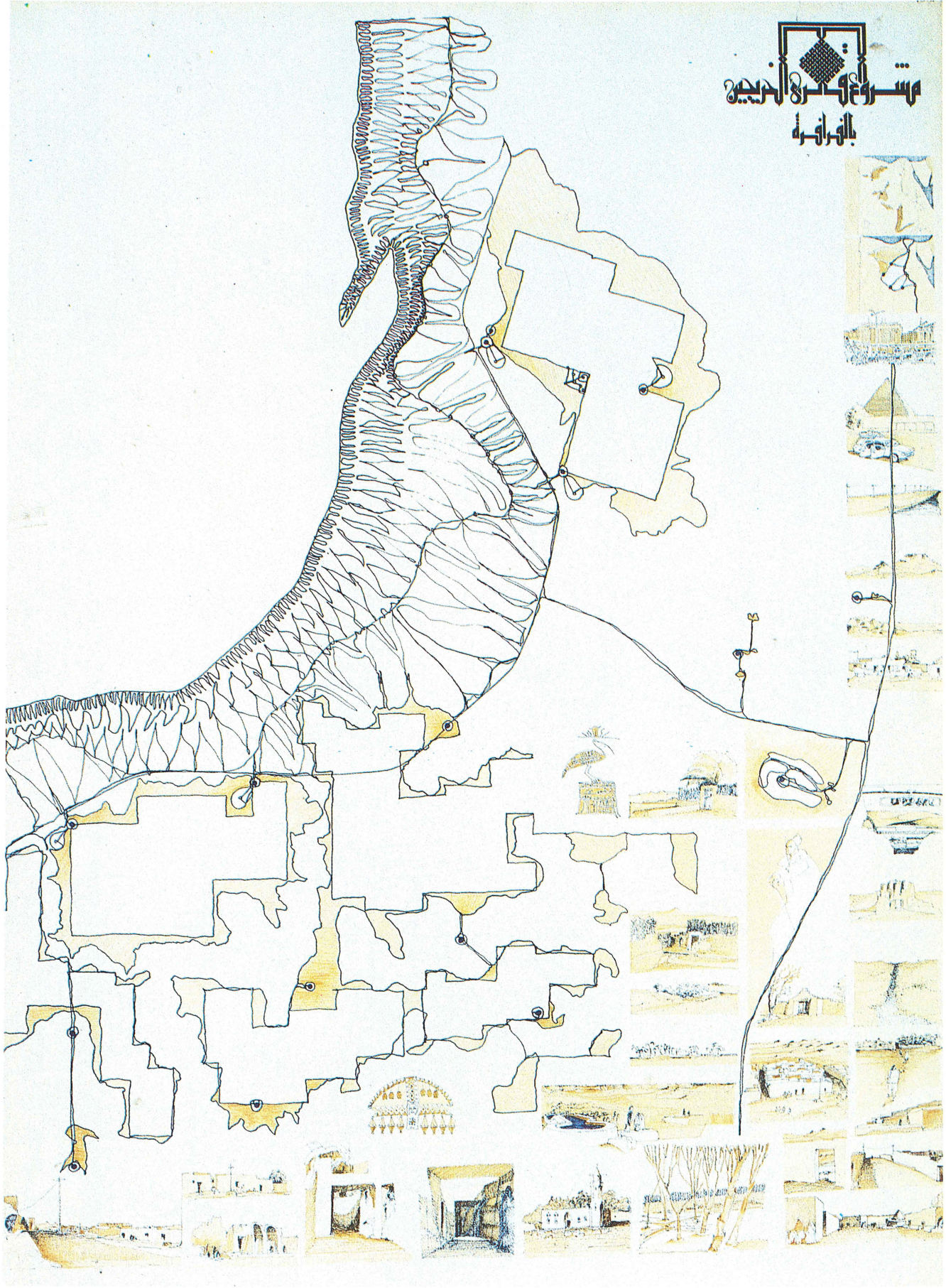
Top and above: The rabat is the essential housing cluster, formed by up to 15 houses with gardens, warehouses, guest house and services such as animal shelter and storage areas.

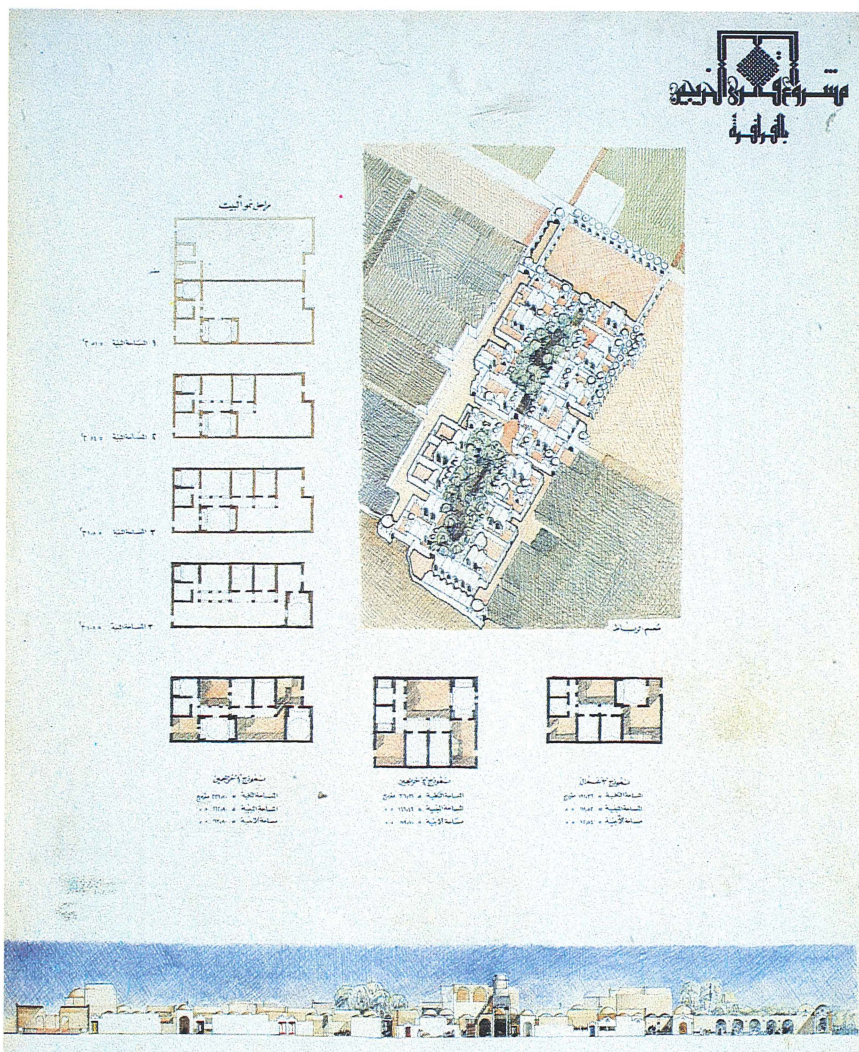
Right: General plan of the Oasis.

60 *katrah*, which literally means drops. Water flows from the well 24 hours a day, which corresponds to the *habbah* scale and then to the *katrah* scale. A person or a family may own one or more *habbah*, or less. Clearly, this determines how much land can be cultivated, primarily as gardens or else what are called *hettia* or small settlements. A settlement as a whole, therefore, is organised around water sources. Each well delimits a domain of agricultural and gardening land, and hence the location of a village.

Secondly, we learned that the balance between irrigation and drainage lies at the heart of sedentarised life in the desert. Large drainage lakes are placed adjacent to each *hettia* (garden) so that water will not penetrate the soil, increasing its salt content and thereby causing decay. Location of the

مستورع الكبرياء الخبيث
بالهوانة





Houses are built incrementally. The settlers arrive in groups and reside initially in the guest house. Gradually, individual habitations are built, primarily of mudbrick.

drainage lake is at the lowest point on the northwest side of settlements.

Thirdly, we came to realise that an oasis takes the shape of a boat floating against the wind; in other words, its shape resists the forces of desertification: wind and the movement of sand.

The Settlements

The pattern of the settlement, or oasis, as a whole is determined by the above three realisations. Plants are the fundamental elements by which a settlement takes on a specific configuration. Wind breaks are always planted along the borders, in rows perpendicular to the direction of the wind. Fruit trees, such as orange, peach and pear trees, as well as palms are located along the periphery of villages as a screen for protection against the wind. The shape of these orchards leaves a triangular space in the heart of the settlement for food crops such as corn and wheat. Thus, the centre of an oasis is open and the periphery is dense and solid.

The Village

Villages are shaped by the same forces which shape the overall pattern. A system of co-ordinates, starting from the water source, depicts the essential traits of the village, taking into consideration soil conditions, wind orientation and the forces of desertification.

The two villages of the Frafra project are organised around a principal axis which is a wall connecting the village to the water source. In fact, the wall is an aquaduct carrying an elevated waterpipe from the well to the houses. The elevated water guarantees that any leakage will be spotted immediately. This is especially important since the Frafra soil is composed of shale, an absorbant soil, which swells when it becomes wet — causing fatal damage to buildings when it occurs underground. Houses are grouped in clusters (called *rabat*), each of which is organised around an inner garden with a water tower in the centre. The *rabat* is linked to the village wall by a square whose proportions are defined by the size of the *rabat*. Each *rabat* has its own vegetable and fruit garden — located on the other side of the village wall/aquaduct.

Acknowledgement

I wish to acknowledge the support given to the children's cultural park by the Minister of Culture Mr. Mahmoud Radwan, Dr. Fawzy Fahmy, Head of Centre for Children's Culture, and Ms. Nawal Amer, assemblywoman for the Sayeda Zinab community.

Halim Abdel Halim is an Egyptian architect, trained in his country before going to the University of California, Berkeley, where he worked with Christopher Alexander and obtained his doctorate. In addition to his private practice in collaboration with a group of young architects he teaches at the University of Cairo.