

ARCHITECT

MIDDLE EAST

NEWS, DATA, ANALYSIS AND STRATEGIC INSIGHTS FOR ARCHITECTS IN THE GCC

INTERVIEW

CREATING A GREEN HEART FOR DUBAI

Kamelia Zaal on sustainable solutions for a man-made oasis

26

PLUS

Doors and windows

Aesthetics and sustainability

Legislation

Building codes to be unified across the region

Mall of the World
Is design back to biggest is best?

34

Aedas split
What it means for GCC

12

PERSPECTIVES
ABU DHABI'S THE GALLERIA

22



Download the FREE **Architect Middle East** and be the first to read the latest issue on your mobile devices.

 App Store
  Google play
  amazon.com kindle



EMIRATI VISION OF A GREEN LIFESTYLE

Kamelia Zaal on creating Al Barari, a wooded and floral oasis in the desert on the outskirts of the city of Dubai

WORDS BY NICK AMES
PHOTOGRAPHY BY AUSRA OSIPAVICIUTE

Creating an architectural vision which preserves and celebrates Emirati culture was the goal of the Zaal family, when the ambitious concept of a man-made oasis in the Dubai desert was first contemplated.

And in order to promote sustainability the project was designed in accordance with the Environmental Impact Assessment produced by Dubai's authorities.

Measures included use of treated waste water for irrigation, high density planting for shading and to minimise evaporation and introduction of threatened species for the waterways and wooded areas.

Villas, aimed at the top end of the market with prices starting from around \$4m, have eaves for shade, skylights and courtyards to maximise natural light. Advanced wall insulation as well as an underground waste storage

and recycling system which separates organic and inorganic waste are all part of the design.

"We looked hard across Dubai to find a place for our family to settle down after travelling the world," said landscape designer Kamelia Zaal, who remains part of the vision.

"But we couldn't find anywhere. So we decided to create our own."

Literally meaning "wilderness" Al Barari occupies of more than 4,000,000m², with 80% green space enveloping 189 villas.

Themed gardens all interconnect and more than 16km of linked lakes, pools streams, cascades and waterways make it resemble a botanical gardens rather than a residential development.

"Everywhere people with influence created green spaces," said Kamelia. "Hyde Park in London, New York's Central Park – we feel that this is the green heart of Dubai."



FIGURES
1,806 PLANT
SPECIES
STUDIED

544 FOUND
SUITABLE

380,000
PLANTS IN
GREENHOUSES

38 HECTARES
FOR PLANT
CULTIVATION

4.5 HECTARES
UNDER SHADE



WE DECIDED TO GO IT ALONE. I CREATED MY DREAM AND I NEVER LOOKED BACK – ZAAL MOHAMMED ZAAL



Kamelia Zaal who studied landscape design in the UK has seen her Al Barari gardens attract international attention and widespread acclaim.

Godwin Austen Johnson provided the original concept with Woods Bagot undertaking the masterplan. Architects 10design worked closely with the Zaal family on realising the vision.

“We needed like-minded people to come on board and do the work and we found them,” said Kamelia. “High-rise developments do not really allow for that, but communal areas, shaded garden and walkways are ideal for people to interact. You can walk through Al Barari through all the greenery without having to use any of the streets.”

Zaal Mohammed Zaal is founder and chairman of the Zaal Group of Companies. He said: “Eight years ago I presented my plans to my bankers and back-

ers. They loved the dream - the question was in their mind and in reality, why would anyone build 300 villas with large gardens [and] swimming pools. In their

calculations they thought of profits and the bottom line, I thought the other way. I thought of creating value through quality of life and quality of your home. So we decided to go it alone. I created my dream and I never looked back.”

The large number of plants means Al Barari has a microclimate up to five degrees cooler than the surrounding countryside, as vegetation cools by providing shade as well as evapotranspiration – the evaporation of water from plant leaves.

The tree canopy also absorbs solar radiation and reflects it back into the atmosphere, further cooling the ground where pathways made of concrete are white in colour to reflect the sun. Any water run-off is collected for irrigation.

Ashjar – Arabic for trees - is a feature of the development which consists of low rise buildings set amidst a woodland environment.

Lower floors look out into the tress while the top rooms have views above the forest canopy and out toward Dubai's towering skyline.

Zaal Mohammed Zaal said: “Trees - or Ashjar - outlive humans, civilisations, architecture and societies. The formation of trees and the nature that surrounds them to me is how communities should work. Trees love being together and love each other, understand each other's space and respect each other and have dignity - all values we should try and emulate.

“Those are the values of life that we should follow. This is why I created Al Barari. It's a dream come true from my love of trees.”

Kamelia Zaal designed the six completed gardens of Al Barari which have the themes of Balinese, contemporary, Mediterranean, renaissance, water and woodland.

A team of more than 100 gardeners tend to the maintenance of greenery such as 100 year old olive trees.

The plants themselves are grown and nurtured in a complex of greenhouses on the site and then transplanted.

Horticulturalist Bruce Pedersen has been a major part of the project because of his knowledge of what plants flourish in an arid climate.

He explained: “Over the last eight years we have examined 1,806 plant species and narrowed this down to 544 plants, trees, shrubs, cacti and succulents and there are two main flowering periods, spring and autumn.

“The greenery has attracted animals and birds, we have seen green parrots, falcons, bats, desert foxes, hares hedgehogs and snakes.

“There is abundant insect life which is food for the birds and the fish in the many watercourses.”

Jones explained how the project is irrigated. He said: “The watercourses on site use treated irrigation water which comes from Dubai Municipality.

“This serves all the channels, streams and ponds. It is gravity fed from the top of the site to the lowest point and then recirculated with submersible pumps. Water levels are monitored daily and topped up when required. The water bodies are rich with wildlife, insects, fish, birds which enrich the flourishing ecosystem.”

The water is taken from the Dubai Municipality Sewage Treatment Plant and then fed into an on-site plant which removes impurities, using a process called “reverse osmosis” which uses a membrane to extract pollutants.

In order to reduce the quantity of water used for plant growth the level of density of vegetation has been maximised to keep the ground cooler and reduce evaporation

Irrigation is controlled by an on-site system which is linked to the development’s own weather station. Smart technology monitors its flow so that there is no overwatering of plants, flooding or blockages. The waterways are lined to prevent run off and a vegetation buffer planted to the southwest and northeast to reduce dust clouds in high wind.

Aquatic plants have also been introduced to add oxygen to the watercourses and provide habitat. The streams are stocked with Arabian Kilifish – a species which was on the verge of becoming extinct before being introduced to Al Barari.

The second phase of the project will see Al Barari being expanded with a hotel being constructed, along with further residential villas and top-end retail facilities. Work is scheduled to take place over the next five years.



←
Waterways are part of the integrated design and connect the gardens and recreation areas.

↓
Villas are enveloped by trees to ensure privacy and keep temperatures down by shading.



EMIRATI CULTURAL TRADITIONS WERE CENTRAL TO THE PROJECT. – KAMELIA ZAAL