



This issue of Manzar journal was published with a delay. In the meantime, the sad news of the decease of Professor Mohammad Shaheer, the distinguished Indian landscape architect affected the professionals of his field profoundly. Professor Shaheer, who has written articles for Manzar journal on the restoration of historic gardens of India and Afghanistan, has had a significant role in updating and activating Persian garden in today's life. His experiences in landscape architecture and restoration of Persian gardens are precious remnants for the youth. May God bless and rest his soul in peace...

Working In Paradise with the Master, Mohammad Shaheer

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Abstract | Landscape Architect Mohammad Shaheer (1948-2015) was the principal consultant in the restoration of several historic gardens in India and Afghanistan. This article presents his particular approaches and methods in three landscape restoration projects: Humayun's Tomb gardens and Sunder Nursery central axis in Delhi, and Babur garden in Kabul. Shaheer had a deep understanding of Persian Garden and was the Master, discerning the design intention of the Mughal builders. Restoring the authenticity of these historic gardens is the result of this understanding and also his special attention to details. Restoration of water flow and planting in these projects is carried out based on historic description also considering local tradition with the aim of bringing the garden back to the state of a flourishing orchard.

Shaheer's thorough understanding of local cultural context and his special style in design_ simple yet to great effect_ has ensured modern functions are incorporated in the historic gardens and turned them into major tourist attraction sites.

Keywords | Mohammad Shaheer, Restoration, Humayun's Tomb, Bâghe Babur, Sunder Nursery.



Pic 1: Humayun's Tomb garden.
Photo: Narendra Swain, Source: Aga Khan Trust for Culture.

Introduction | Landscape Architect Mohammad Shaheer (1948-2015) was the principal consultant to several of the Aga Khan Trust for Culture garden restoration projects in India and Afghanistan from 1997 until his untimely and sudden demise on 28 November 2015 – just on his return from a site visit to the Qutb Shahi tomb complex in Hyderabad. He was without doubt the Master, discerning the design intention of the Mughal builders while planning to ensure modern functions are seamlessly incorporated in the historic gardens.

Also working for the Aga Khan Trust for Culture, I had the privilege for 18 years to work in the master's shadow, understand Shaheer's vision and oversee the implementation of his detailed drawings. Though I cannot possibly explain the depth of his thinking and the extent of his vision, in this article I share some of my learning from him over three key projects being undertaken by the Aga Khan Trust for Culture.

Humayun's Tomb Gardens: Restoring Flowing Water

In 1993, while recommending the designation of the site on the World Heritage list, ICOMOS had recommended that the enclosed gardens be restored. In 1997, on the occasion of the 50th anniversary of India's independence, His Highness the Aga Khan gifted to India the garden restoration of the Humayun's Tomb World Heritage Site. This was to become the first ever scientifically carried out garden restoration at any of India's national sites and in implementing it in partnership with the Archaeological Survey of India, the Aga Khan Trust for Culture was to similarly become the first private agency to undertake conservation works on any of the country's monuments of national importance.

The Humayun's Tomb gardens are a perfect Char-bâgh with the tomb in the centre and the garden divided into four quadrants. Each of the principal pathways with water channels in their centre and the four pathways in the

cardinal directions adorned with large square water tanks with a fountain in their centre. Each quadrant further subdivided into eight plots representing the eight gateways or spaces of Quranic paradise (Pic. 1).

The garden, built with the tomb in the 1560's was one of the earliest gardens built on the plains where it was without doubt challenging to ensure flowing water. The garden plots were lower than the pathways with water channels to ensure irrigation by flooding from the water channels was possible. Though Humayun's Tomb remained a place of veneration for the early Mughals, with the decline of the Mughal Empire from the 18th century onwards, the gardens no doubt were left in a state of neglect. In the mid 19th century, the British changed the formal, geometric layout of the western half of the garden to a more English layout with changes including introduction of circular flower beds to replace the square Mughal tanks.

In the early 20th century, Lord Curzon, Viceroy of India, directed the restoration of the Mughal layout – enthusiastically adding channels even to pathways where none had existed in Mughal times. Several further changes were then carried out through the 20th century – a major planting in 1916 when palm trees were inappropriately introduced on the four corners of the mausoleum and tamarind trees on the platforms used by the Mughals for tents. Additional plantings neither used plant species favoured by the Mughals nor planting patterns. Three failed attempts in the 20th century to restore flowing water preceded the 1997 garden restoration and of these the 1984 effort was the most destructive with the Mughal stone bedding ripped out and replaced by the more familiar and favoured 20th century material – cement concrete!

Even before the official MoU for the garden restoration was signed, M. Shaheer wrote a concise note defining the objectives, in his typical simple yet profound manner. His note was to become the foundation of the six year effort.

To him it was obvious that the project was to commence with restoring the levels of the 32 garden plots so methodically trenches were dug on all four sides of each plot to determine the original levels revealing how levels varied from plot to plot and could be determined both by the depth of the pathway edging but also by the levels of the water outlets into each plot from the channels. His attention to detail led him to provide individual levels for each garden plot but also specific slopes for levels within each plot to ensure accumulated rainwater quickly taken to the aquifer through the four rain water harvesting pits provided in each plot. Most other architects I know would have been satisfied recommending a single plot level for at least each quadrant if not for the whole garden – but by ensuring even a 10 mm difference was respected Shaheer not only achieved authenticity but also considerably reduced the required work.

Each garden restoration effort requires consideration of not only the 'built' portions of the garden – the pathways, platforms, tanks, waterfalls – but also the vegetation. The Mughals left no drawings and Shaheer's proposed layout was required to be based on historic descriptions but also the modern functions of the World Heritage Site attracting almost 1 million annual visitors. The significance of the tomb-garden for the Mughals and the levels of the garden played a role in determining the planting layout. As did the presence of existing trees; Shaheer would never permit the removal of an existing tree – taking great pains to alter design in a manner that would save any vegetation – yet here historic considerations required for the transplanting of 72 Ashoka trees – inappropriately planted over the decade preceding the garden restoration to serve as a visual barrier for large portions of the gardens which were unkempt.

The final planting layout for the tomb-garden was stylistically Shaheer – simple yet to great effect. The peripheral pathways were planted with tall trees – mango and neem – both recorded in Mughal chronicles and the canopy of which was eventually expected to be visible from over the 6 m tall enclosure walls.

The three garden plots in each of the four corners had the pathways perpendicular to the enclosure walls planted with one row each of orange and lemon – fruits said to have been favoured by Humayun. Later, with us at the Aga Khan Trust for Culture returned to the site in 2007, Shaheer suggested that the entire area of the three corner plots be planted with orange and lemon in an orchard layout. The ends of these plots towards the enclosure wall were planted with a grove of flowering shrubs – hibiscus – recorded to have been planted here during Mughal times and the sweet smelling Harsingar. Similarly the intersections of the pathways in the center of the quadrant were planted with the lowering Motia and Mogra. Finally, an orchard of pomegranate was planted along the western edge of the sunken eastern side of the garden.

The Humayun's Tomb garden was probably the earliest garden built on the plains with flowing water channels and ensuring the flow of water would have been a major challenge. Flowing water was also a significant element of the garden and it was essential for the project to restore flowing water. Originally used for irrigation, the flowing water in the channels was no longer required for irrigation and as such it was not considered necessary to restore flowing water to the peripheral channels and to those in the south-west quadrant – where channels had in fact been introduced in the 20th century where none were built by the Mughals. The Hydraulic engineering firm MKG was finally engaged and in many channel sections a 1:4000 slope was required.

In the 1980's much of the water distribution network at Humayun's Tomb was dismantled and destroyed in an



Pic 2: Humayun's Tomb garden.
Photo: Narendra Swain, Source: Aga Khan Trust for Culture.

otherwise well meaning attempt to restore flowing water by making the bed 'water tight' by using cement. These 1984-5 works needed to be dismantled and a traditional masonry with lime mortar bedding restored to the channels while providing the required slope. Over 2 kilometers of sandstone edging had to be prepared – hand chisled by traditional tools by the stone carvers. On amongst the first few channels fixed in this manner, the stone was provided a mortar edging – rounded off – this upset Shaheer Sir enormously and was one of my first lessons in seeking perfection – it was an inappropriate detail not thought through and the work had to be reversed and the pathway levels changed to provide the required stability to the stone edging (Pic. 2).

Bâghe Babur: Restoring an Afghan Garden

In 2002, the Aga Khan Trust for Culture agreed to undertake the garden restoration of Bâghe Babur – Mughal emperor's favourite garden in Kabul – sad to have been created in AD 1505 and later used for Babur's burial. From the mid 19th century onwards when the aqueduct supplying water

to the garden began to dry out this significant Char-bâgh had been considerably altered. The final blow was when the Mughal layout of the central axis was replaced with a more European flower garden and Bâghe Babur opened to the public in the early 20th century.

The significance of the Bâghe Babur lies not only in its having been built by Babur but also due to its serving as the final resting space of the founder of the Mughal dynasty. Later Mughal emperors Akbar, Jahangir and Sahajahan all made additions to the garden.

The 20 year civil war that preceded 2002, destroyed Bâghe Babur. With rival commanders positioned at the top and bottom and the water pumps stolen, no vegetation survived and the enclosure walls and other buildings were destroyed by ammunition. Over three truck loads of unexploded ammunition was removed from Bâghe Babur in the de-mining exercise that preceded the surveys and documentation starting 2002.

M. Shaheer made his first visit to Bâghe Babur in late 2003 and unlike Humayun's Tomb were he would visit several times each week to oversee works – visits to Kabul had to be



Pic 3: Bâghe Babur, Kabul.
Photo: Christian Richter, Source: Aga Khan Trust for Culture.



Pic 4: Bâghe Babur, Kabul.
Source: Aga Khan Trust for Culture.

limited to a few each year. During these short visits Shaheer's genius and thorough understanding of Persian landscape principles enabled him to establish the landscape design philosophy for the Bâghe Babur restoration. His absence from Kabul while the landscape restoration was underway was compensated by Shaheer's preparation of hundreds, if not thousands, of architectural drawings carefully detailing all aspects of the landscape layout.

From the onset Shaheer proposed a specific policy for the landscape restoration which was "to follow in spirit the geometry of the garden as it exists, intervening significantly only to restore the landscape where visible remnants or historical records of its former state were evident.... the major idea of the approach was to restore the shape of the terraces and slopes with sensitive grading and then implement large-scale planting with species appropriate to Mughal preferences as well as local tradition" (Shaheer, 2015). He planned to "bring the garden back to the state of a flourishing orchard" (Shaheer, 2015); (Pic. 3).

The design catered to "four broad types of activity" which were the "contemplative area" surrounding Emperor Babur's Tomb and the Shahjahanai mosque on the upper terraces, a "busy intensely active area" at the central axis, the orchards for family picnics and the gateway serving as an "area of transition" (Pic. 4).

The top terraces of the Bâghe Babur were to be landscaped in a manner that brings attention to Babur's grave enclosure and the marble mosque built by Shahjahan; the ventral axis was carefully designed by the Mughals – centered on the flowing water channel and would need to be landscaped as per the evidence of the archaeology and the four rows of terraces on both sides of the central axis was to be planted as an Afghan orchard. Both flowing water and orchards to picnic within were considered important by the Afghan people.

Based on detailed and accurate surveys the terraces were to be carefully graded providing flat areas for the orchards and a gentle slope in between. Open channels used for irrigation



Pic 5: Bâghe Babur, Kabul.
Photo: Christian Richter, Source: Aga Khan Trust for Culture.

were replaced by a sensitive scheme wherein water was brought to each terrace with an underground pipe and thereafter open – allowing both water conservation and the aesthetic affect of flowing water to be retained (Pic. 5). Archaeological excavations of the central axis revealed retaining walls, channels, marble waterfalls and tanks at each level. Considered extremely significant the archaeology was carefully documented but then covered up and a garden replicating the discoveries built a few feet higher and westwards. The planting plan developed by Shaheer was inspired not only by archival images that show a high

density of Chenar trees but also by introducing the afghan roses bushes and other small fruit trees such as quinces and pomegranate – mentioned by Babur in his chronicles. When the Bâghe Babur conservation effort had commenced, horticulture practices in Kabul had been forgotten. In 2002-3, of the 300 trees planted (Inappropriately, on the suggestions of a British consultant unfamiliar with both Mughal practice and Afghan horticulture traditions!) only 2 saplings had survived. The saplings were said to be planted in anticipation of spring when bare twigs were used and it was only months later when it could be determined which



Pic 6: Sundar Nursery Central Axis.
Source: Aga Khan Trust for Culture.

had survived. This was clearly not sustainable so the AKTC project team tagged saplings of required species through the summer in farms and nurseries in the countryside. These were brought to Bâghe Babur before spring and planted in large barrels – from which health plants could be transplanted with the soil – without any need for removing the sapling from the earth. This process that I forced upon the Afghan horticulturists gave almost 100% success rates – much to everyone’s surprise and delight. Shaheer established the principles for the planting at Bâghe Babur – the tall walnut trees on the periphery, orchards on

the middle terraces – apple, peach and other fruit trees of similar sizes, and the tall Panja Chenar’s along the central axis with large spaces of terraces left open for the roses. Pathways across the water channels on each terrace allowed visitors access to the water. Shaheer encouraged the Kabul team to consider planting any of the selected species in a manner considered most appropriate within his concept – not insisting his involvement from afar but insisting nevertheless at the drawings being updated. Shaheer’s understanding of local cultural context and designing the landscape accordingly made Bâghe Babur a



Pic 7: Sunder Nursery Central Axis.
Photo: Vijender Nagar & Ramesh Tahlan, Source: Aga Khan Trust for Culture.

major attraction not only for world leaders visiting Kabul but also for residents of the city – 30,000 of who visit each week to picnic in the orchards. It is a pity that Shaheer could not return to Kabul over the last ten years to visit the garden but thoroughly enjoyed pictures showing the landscape maturing.

Sunder Nursery Central Axis: Inspired By the Paradise Garden Carpet

The objectives of the Nizamuddin Urban Renewal project have from the onset included conservation of the 50 or more Mughal era monuments, improving quality of life for the 15000+ people who inhabit Nizamuddin Basti but also creating city park in the 90 acre Government Sunder Nursery.

Here Shaheer's master plan envisaged a "creating a major landscape space of truly urban scale, serving inspiration from the traditional Indian concept of congruency not division, between nature, garden and utility and environmental conservation to provide for public recreation, functions and patterns of urban behaviour characteristic of Delhi" (Shaheer Associates, 2008).

While portions of the Sunder Nursery were designed to fulfil the diverse triple objectives of the landscape master-plan they were seamlessly connected with one another and at the heart of the 560 m central axis was created a garden inspired by the Persian carpet design (Pic. 6). It is here that people are expected to congregate when the garden opens to the public in 2007. Here, at the central axis, Shaheer demonstrated his excellence – working with craftsmen and engineers to create a wonderful new garden but one based in centuries old philosophy.

In Shaheer's words, "The space just north of the Sunder Burj monument is designed as an elaborate garden, contemporary in layout but evocative of mughal geometry, scale and irrigation practices. It is centred on a long water feature elevated from its surroundings, from which on either side flow very narrow water channels each culminating in a pool at a lower elevation. These pools which are in the form of Mughal jaalies are the central feature of a miniature orchard. Viewed from the plinth of the Sunder Nurj, the garden would appear to be spread like a carpet" (Shaheer & Nanda, 2015); (Pic. 7). At the northern end of the water channel is a water spiral – that drops water into a basin at the far end

– the whole bringing to life the Quranic ideal for paradise. This is the first major garden inspired by Persian design concepts to have been built in Delhi in almost a hundred years and when open will bear testimony to the patronage of His Highness the Aga Khan for urban parks across all

corners of the world and also the design sensitivities of M. Shaheer, Landscape Architect.

Conclusion | Shaheer's deep understanding of Persian landscape principles and Mughal preferences enabled him to preserve the authenticity of restored gardens while incorporating modern functions in the them and turning them to major tourist attraction sites. Following in spirit

the geometry of the garden as it exists and special attention to details, along with his thorough understanding of local cultural context and designing the landscape accordingly constitute his simple and powerful design style.

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