Craftsmanship at the Tomb of Abdur Rahim Khan I Khanan
Conservation of Tomb of Abdur Rahim Khan I Khanan c. 2014-2017

“...the architects of the Taj Mahal derived their inspiration, from two buildings at Delhi which predetermined it in certain aspects of its conformation. These are the mausoleum of Humayun and the Tomb of Abdur Rahim Khan I Khanan, ...the later one is proof that the type of architecture they represent had not been forgotten during this interval...

Moreover, in view of the fact that Rahim’s Tomb was erected only a few years before the Taj is also an indication that the style they typify was being revived and again coming into favour. On the traditions therefore of Humayun’s Tomb on the one hand, and with the experience gained from that of the Khan I Khanan’s Tomb on the other, Shah Jahan’s architects evolved the masterpiece of the builder’s art.”

INDIAN ARCHITECTURE, ISLAMIC PERIOD. PERCY BROWN, 1966

About InterGlobe Foundation

With a vision to promote India’s heritage and culture, InterGlobe Foundation sees a great opportunity in undertaking efforts in promoting India’s tangible and intangible heritage and culture. We believe that heritage conservation not only seeds a sense of identity in the communities but also fulfills our responsibility of passing on our rich heritage into the hands of generations to come. With this objective in mind, InterGlobe Foundation joined hands with Aga Khan Trust for Culture for conservation of Rahim’s Tomb and revival of his literary works through publications, exhibitions and films. The conservation initiative at Rahim’s Tomb is an endeavor to revive the art and artistry of a person of such magnified stature and to ensure a new lease of life for the grand mausoleum that inspired the Taj Mahal. We are hopeful that our collaborative efforts would garner great interest amongst the visitors and create more awareness of our past.

For more information on the project, visit: www.nizamuddinreservoir.org
For regular updates please visit: https://www.agakhan.com/heritage/ranibagh
Inquiry: info@agakhan.com/heritage@agakhan.com

In Partnership With
1627 AD
The monumental mausoleum was built by Rahim for his wife making this the first ever Mughal tomb, built for a lady. Rahim was himself buried here in AD 1627.

1923 AD
Major repair works using Delhi Quartzite stone masonry were undertaken to stabilize portions of the tomb.

1986 AD
The Delhi Quartzite stone plinth similar in design to Humayun’s Tomb was replaced inappropriately with sandstone paving at a lower level, thus compromising the structural stability of the foundation.

2004 AD
The repairs in the ancillary chambers and main hall was carried out in cement-sand plaster disfiguring the original details and patterns.

2014 AD
Commencement of conservation works on the tombs of Abdur Rahim Khan I Khanan and Asia Khan Trust for Culture in partnership with Archaeological Survey of India and InterGlobe Foundation.

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Understanding the Tomb of Abdur Rahim Khan I Khanan

C. 1598 AD

Built as a tomb by Rahim for his wife, the mausoleum is also a precursor to the Taj Mahal for its architectural style, with some innovations developed ever since the building of Humayun’s Tomb. The marble and sandstone cladding on the dome, facade, flooring of the terrace and the tomb, the parapets, lattice screens have largely been stripped of the building over the years including significant loss of fabric in the 20th century. Conservation works commenced with the financial support of InterGlobe Foundation in late 2014 following approval of the Conservation Plan by the Director General, ASI as well as approvals of the ASI Core Committee meeting held on site.
Decayed Ancillary Chambers

On account of the reservoir being used as a quarry in the 19th century, marble and sandstone blocks have been stripped from here, and the structure presents a ramshackle appearance. With the precipitous stone collapse removed from large parts of the structure, including an area in a poor state of preservation. Major repairs to perform the building have been carried out in the 20th century that have ensured preservation. These repairs are being retained as examples of good repairs.

Restoring Main Facade

The garden level arcade comprises of 17 arches on each of the four facades of the tomb. Modern cement and brick pavers are applied to the arches in the ground level arcade during 2002-2003, destroying the historic character and damaging original lime pastes. The damaged limestone on the drum has been replaced and the dome has been restored with new material. Some of the stonework has been removed or improperly restored, which has been maintained in poor condition.

Ornamental Plasterwork of Lower Arcade

The ground level arcade has a raised dado with arches with a larger surviving through voice. But all of the arches have been eaten away and new material. Some of these materials have been removed or improperly restored, which has been maintained in poor condition.

Principal Tomb Chamber

The tomb is covered with a double dome, where the outer dome would have originally been clad with marble serving as a protective layer for the underlying marble. This was dropped in the 17th century exposing the underlying marble. The inner dome is from marble and has significant damage. Following past restoration efforts, restoration works were undertaken which included cleaning, stabilization, and minor repairs. As important parts are not removed, this is also a good example of proper methodology.

Opposite hand plasterwork has been stripped elsewhere.

Tensile stresses in a double height domes lead to severe cracks along the structure. The outer dome’s thickness and marble layers are thick enough to sustain such stress. The inner dome has not been restored with marble but with concrete.

Upper Plinth

The sandstone on the upper plinth was possibly stripped in the 19th century and replaced with cement blocks. Based on the evidence of stone thickness and existing cracks, the plinth will not require restoration. The sandstone plinth has been replaced with an alternate water-tight mechanism to reduce water that enters the tomb. Further explorations have revealed a human in the blocked areas and further studies on the water mechanism are ongoing.

Stone & Plasterwork Restoration

The inner chamber of the tomb and the drum chamber are plain with decorative molded plasterwork. Modern cement and brick pavers are applied to the arches in the ground level arcade during 2002-2003, destroying the historic character and damaging original lime pastes. The damaged limestone on the drum has been replaced and the dome has been restored with new material. Some of the stonework has been removed or improperly restored, which has been maintained in poor condition.

Original fabric of Lower Plinth

The ground level arcade has a raised dado with arches with a larger surviving through voice. But all of the arches have been eaten away and new material. Some of these materials have been removed or improperly restored, which has been maintained in poor condition.
Rahim’s Tomb
Conservation Process

Before any practical work starts, a project must be prepared on the basis of said research and must be submitted to a group of experts for joint examination and approval.

- The Florence Charter, 1981, Article 15

The conservation works on Rahim’s Tomb have been guided by national and international charters but especially with the 2014 National Policy for the Conservation of Monuments and the Manual on Conservation by John Marshall – both of the Archeological Survey of India. Writing the Conservation Manual for the ASI in 1985, John Marshall stressed that “repair’s attempted only in cases where its advisability is undoubted, and where special funds can be provided for the purpose”. In 2014, InterGlobe Foundation generously offered to fund the conservation of the mausoleum as well as an associated cultural programme. All conservation works are being undertaken at Rahim’s tomb utilizing ‘available traditional craftsmanship in the country and the use of traditional building materials and skills as an integral part of the conservation process’. All repairs have focussed on imparting ‘stability and to prevent loss of original material’. The conservation effort have primarily aimed to “prolong the life of the mausoleum while preventing any further ‘damage and deterioration’ by ‘minimising the impact of external agents of decay (natural and human induced) on its setting, structure and material’. All efforts to conserve Rahim’s mausoleum will aim to “retain its value and significance, its authenticity and integrity, its visual connections to and from the monument, and to sustain a truthful representation of its original historic appearance.”

1. Identify the Place
2. Documentation & Research
3. Statement of Significance
4. Conservation Philosophy
5. Peer Review
6. Conservation Plan
7. Implementation
8. Supervision
9. Completion Report & Publication

3D Laser Scanning of the tomb
Before the commencement of any conservation and rehabilitation process of the monument and documentation is initiated. One of the key aspects of conservation works is a detailed high resolution photography of all stages of conservation works, prior to commencement of works. Later Scanning is used for accurate architectural documentation and condition mapping and detailed 3D representation of the monument. Laser scanners are employed on site but to create an accurate and complete data set which is used to create solid 3D models and accurate 2D drawings.
India still has a long established building craft traditions which can play an important role in the conservation of Monuments. Employment of crafts persons should be for restoration and reproduction of geometric designs as well as restoration and reproduction of designs of historic interiors.

— ASI National Policy for Conservation, 2014

Supervision
A team of engineers experienced in conservation works and conservation architects monitor, supervise and guide the craftsmen on a daily basis to ensure quality and appropriateness of the conservation works. The 1923 ASI Conservation Manual explicitly forbids any conservation work if experienced supervisors are not available.

Incised Plasterwork
The central chamber and five ground level arches on each façade are ornamented with intricate incised plaster patterns. Original patterns were carefully conserved, noted and preserved before removing the 30th century cement layers and restoring missing portions in lime mortar.

Restoring Decorative Motifs
Careful cleaning
Layers of soot and lime-wash had obliterated the 17th century patterns in most parts of the structure but especially in the main tomb chamber. In order to ensure no damage occurs to the underlying plaster patterns, craftsmen took over a year to clean the domed ceiling with soft and moist toothbrushes — with spectacular results.

Stone Craftsmanship
Master stone carvers used traditional tools and building crafts to carefully match the work of their forebears. At Rahim’s Tomb, each of the 66 arches on the ground level have a different carved motif on each side. Where one was missing, these motifs were restored as per the original design.

Cleaning the Main Hall

Reparing structural failure
Stitching the Cracks:
Unequal settlement in the crypt had led to serious structural cracks all the way to the top of the dome. Master craftsmen using traditional building techniques repaired the cracks over a long period. This required significant underpinning of the foundations and lime grout in the masonry.

Using Lime Mortar
Lime mortar, prepared from limestone, returns to its natural chemical composition and thus is long lasting with only the minimum maintenance and effort. However, preparation of lime mortar requires several weeks and stringent conditions. Additives such as flux-olp, lentil, jaggery ensure that patina to lime mortar returns within a few years of its application.
World Heritage Site of Humayun’s Tomb
EXTENDED
C. 2016 AD

Humayun’s Tomb and the other contemporary 16th-century garden tombs within the property form a unique ensemble of Mughal era garden-tombs. The monumental scale, architectural treatment and garden setting are outstanding in Islamic garden-tombs. Humayun’s Tomb is the first important example in India, and above all else, the symbol of the powerful Mughal dynasty that unified most of the subcontinent.

With the 2016 recognition that “Humayun’s Tomb and the other contemporary 16th-century garden tombs within the property form a unique ensemble of Mughal-era garden-tombs,” AKTC in 2016 proposed, through the ASI, to UNESCO, for 16th-century garden tombs standing in Sunder nursery, such as Lukkarwala Burj, Sunder Burj, Mirza Muhammad Husain’s Tomb, Sundarwala Mahal, ‘Unknown Mughal Tomb’, Chota Bataashwala Tomb and Nila Quibad’s garden setting, to be included in a further extension of the World Heritage Site boundaries and Rahim Khan-i-Khanen’s tomb be included within the Buffer Zone.

2016
Humayun’s Tomb World Heritage Site:
1. Bara Gumbad Tomb
2. Nila Gumbad Garden-Tomb
3. Atiaiwala Tomb and Mosque
4.‘Bur-halima’s Garden-Tomb
5. Is a Kiara’s Garden-Tomb
6. Asa Sarai Bazaar
7. Mirza Muhammad Husain’s Tomb
8. Chotta Bataashwala
9. Mughal Tomb
10. Lukkarwala Burj
11. Sundarwala Mahal
12. Sunder Burj
Every conservation effort should be supported by independent peer reviews. This need is however much greater for prominent, significant buildings and where major repairs are planned to be undertaken. It is planned to conduct at least 50 independent peer reviews during the course of the conservation effort - seeking opinion of diverse stakeholders - archaeologists, conservation architects, engineers, administrators, historians, authors, amongst others, 30 such reviews have already been held and have helped inform the conservation effort.

(Photos by: Saumya Jambhekar, Former Director-General of Archaeological Survey of India with the project team reviewing the conservation approach and works at Ramabai's Tomb)

"Ramabai's tomb gets back its cheeky glory, a sane and tasteful treatment of the red and white sandstone facing of the facade and the cleaning of the almost floral decoration of the inner face. We can now see again and marvel about the wonderful patterns which decorate the walls and the dome. Your work changes our perception of Mehal's monuments. - Prof Elida Kisch, Mathura Historian"

"Adular Rahim in his own person was the confidante of two different cultural traditions. His father is Tamil and Central Asian background and through his mother a Mevlevi verwegen. Thirteenth since the early 20th century his moral euphoria celebrates the simple virtues of everyday living have been a model of good living in primary and middle schools in North India. I commend the ongoing project for the attention it is paying both to architectural and historical detail and for the high standard with which it is deftly executed. - TCA Raghavaiah, Diplomat & Author of 'Mandlaan Lords, Baram Khati and Adular Rahim, Courtiers and Poets in Mehal India"

"The work at Khan-i-Khanna's tomb is most exciting... a monument far more damaged has turned into a thing of beauty... I have passed the crumbling skeleton of the obelisk and always regarded it as something of a waste... yet now it stands as one of Delhi's most beautiful interiors competing among some of the city's finest decorative buildings. - William Dalrymple, Author"

"A visit to the tomb is an eye-opener! The first thing one is aware of is the use of the monument for a wide variety of purposes... It is a remarkable blend of architectural and historical elements... The tomb appears to be in a state of preservation. - Neil Gazcho, Conservation Architect"

"The pool system on the platform is a remarkable feature and every effort needs to be taken to protect this by a well-arranged plan. It will be a great attraction to the finest tombs. Similarly, the remains of the existing cantilever do not appear worthy of the place of its significance. The opportunity should be taken to provide a sympathetic and clearly contemporary indication of the original, reflecting the 18th century and his wife. - Ben Trindall, Trustee, National Trust for Scotland"

"The project has given much of a sense of hope. Nidad Rahim Khan-e-Khanna's resting place emerges from its chrysalis - as not an ordinary mausoleum of a baffled soldier but as the beautiful monument that he dreamed up for his wife. - Prof Narasimha Gupta, Historian"

"I would like to congratulate the conservation team for the great efforts that are being undertaken to conserve this monument and set an example for conservation in India. - Benny Kurose, Conservation Architect"

"This work has been completed so far in an example of dedicated coordination and interface between the traditional skill resource and modern architectural methodologists. - Salim Bag, Member, National Monument Authority"

"This project, with its sincere and meticulous research, preparation and planning and consistently high professional standards, is already making an insatiable contribution. This is one of the projects that prove that things can not only get better but can inspire." - Gillian Wright, Historian & Author

"The monument is significant in account of the association with a great personality of Rahim - a minister, commander and poet... I appreciate the conservation philosophy which is strictly based on the Ministry of National Park of Conservation notified in 2015... and the 'archaeological approach' adopted here... in carrying stone by stone documentation and analysis. - Gautam Seth, Former Director-General (ASI)"

"Indeed the Ramabai Khan-e-Khati tomb has been given a new lease of life. - Ramesh Arora, Former Director-General (ASI)"

"The main tomb chamber exterior and interior need of conservation work. It is essential to provide missing red sandstone from scoured sides and on the walls to protect and support the swinging pieces and architectural members. It will provide the strength to the fabric and appropriate look... The conservation measures indicate that the life of the structure and I complement ASI and other authorities. - Prof. R. C. Arawala, Partner-Joint DG, ASI"

"As an archaeologist, I really appreciated the incredible attention to historical detail, rigorous documentation and state of the art restorations... Unfortunately, the project is facing a lacking impact on the culture of the suburb. The current restoration, which is making and magnifying restoring the main tomb at the centre of the tomb, such as pavilions and statues, is immensely salutary as it tends to reinforce the impression we form of Ramabai through that text. - Rupesh Liddle, Convener, WITCOM (Dharm)"

"One hopes the `modern conservation project` will bring a new lease of life to this grand monument to one of India’s oldest saints; in the process it draws attention to the fact one can only rejoice. For surely it is for Ramabai to step out from the shadows of long-forgotten history and to take its rightful place among the great poets of Hindistan. - Rahitandha Jall, Historian & Author"

"Traditional Craft Based conservation approach is being followed by utilizing the skills of the traditional craftsmen to restore the architectural and art details on the monument based on the scientific evidence gathered. The approach is perfect in the Indian context where traditional crafts are still practiced and heritage is very much part and parcel of the local community. - Mohd Sayyid, President, IICMOS (India)"

"As this structure has major structural issues of differential settlement and cracking were solved, it seems to be quite able to aid the most important aspect of the project is that it is helping in working the traditional skills and materials which are actually missing in the conservation movement. - Uday Shankar, Conservation Architect"

"After the restoration, the Tomb will get a large number of visitors. I am happy to know that an alternative suitable entry point is being identified and the plantation is going on along the perimeter to get rid of the heavy traffic... This will be a good work being done with a sense of purpose... it will bring about all that was hidden by decades of contact in the tomb, I will watch the progress with interest." - DR. V. Koshy, Former Member Parliament"

"It is heartening that all works are being carried out by master craftsmen using traditional tools and techniques... noteworthy for the careful and considered approach." - Satish Dada, Founder Dalit Aurat Pari Sant"

"The museum had reached this sorry state because many years ago it had been vandalized, stripped of its sandstone and mortared leading and left exposed to the elements. The restoration carried, therefore, be a routine affair. The roof of the crypt had settled unevenly and was threatening to bring down the entire structure. The Orangery were falling off, the baluster was gone and replaced floral pattern on the columns of the arches and clerestory were also lost. The voids and it is not merely a routine job of restoration - and astonishing other decay..." - Jalal Hashim, Historian"

"The conservation work is being undertaken by ASI and JICM and its team is extremely challenging. - Shekhar Pande, Conservation Architect"

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Rahim’s grand mausoleum would have been a garden tomb as with Humayun’s Tomb and Taj Mahal. Scientific clearance of earth was carried out in an effort to reveal any foundations of enclosure walls, remains of garden pathways, water features etc. Having found no archaeological evidence of the same, and in view of this a minimal charbagh has been proposed. Though the original landscape setting has been lost, an indication of how grand the northern gardens would have been is provided by the revelation of rooftop tanks. Rahim, who is known to have built elaborate water lifting structures in Burhanpur would have no doubt incorporated such a system here. In the space available a small formal garden is to be created to allow visitor movement and views to the monument. The garden will be planted with a citrus orchard and other plants known to have been favoured by the Mughals.

(Top) Excavation of Delhi Quartzite lower plinth revealed the original garden levels; (Bottom) Volunteers from InterGlobe Foundation participating in tree planting at the site

**Tomb of Abdur Rahim Khan I Khanan:**
**LANDSCAPE PLAN**