

2011

# Batashewala Complex

## CONSERVATION & LANDSCAPE RESTORATION

### TASK:

- Securing the Batashewala Complex.
- Preparing a detailed conservation proposal for the conservation of Batashewala-Mughal tomb complex towards implementing conservation.

### PURPOSE:

- Reversing the disfigurement of the historic character by the Bharat Scouts who occupied this area for several decades
- Conservation to ensure long term preservation and possible eventual inclusion of the complex within the extended boundaries of the Humayun's Tomb World Heritage Site
- To integrate with the Sunder Nursery site for seamless access by future visitors to Sunder Nursery.

### ACTION TAKEN:

- Several years of effort by AKTC ensured that the land was transferred to the ASI allowing an opportunity to carry out urgently needed conservation and landscape restoration.
- Detailed architectural documentation, condition mapping and the landscaping proposal for the 17 acre complex has been prepared.
- Conservation Plan was approved by the Director General, ASI in early 2011. This was further discussed at Core Committee meetings.
- ASI carried out demolition of over 100 structures built by Bharat Scouts within the complex and used for carrying out illegal activities.
- Conservation works commenced in November 2011 with scientific clearance of earth to reveal the foundation of missing portions of the enclosure wall.
- The entire extent of the enclosure wall has been established though foundations in certain sections were missing as new structures were built over these, thus destroying even the foundations discovered at eight feet depth.
- The Outstanding Universal Value of the Humayun's Tomb World Heritage site is understood, amongst other factors, to be an ensemble of 16<sup>th</sup> century tomb-gardens. Thus the reconstruction of missing portions of the enclosure wall that defined the significance of the complex will enhance the historic character.



### NEXT STEPS:

Conservation work now will start on the monuments and the enclosure wall

2012

# BATASHEWALA ENCLOSURE

Standing north of the Humayun's Tomb-garden stands a 17 acre complex comprising two 16<sup>th</sup> century tomb-gardens. After persistent efforts of the project, the land was transferred to the Archaeological Survey of India allowing urgently needed conservation works to commence.

Reconstruction of collapsed portions of the enclosure wall as well as restoring the ornamentation - to the extent of available evidence - on the three monuments of national importance that stand here and landscaping the complex are some of the planned works over a three year period following which visitor access from the adjoining Sundar Nursery will be possible.

In keeping with the OUV of the World Heritage Site, within the buffer zone of which this structure stands, the conservation works aim at restoring the structural integrity as well as the original appearance of the structures.

As part of the larger project it is proposed to link the Batashewala Complex - Mughal tomb to the adjoining Humayun's Tomb complex and Sundar Nursery monuments, creating a heritage zone, of unmatched scale, value and visibility in the city of Delhi.

Humayun's Tomb ▼



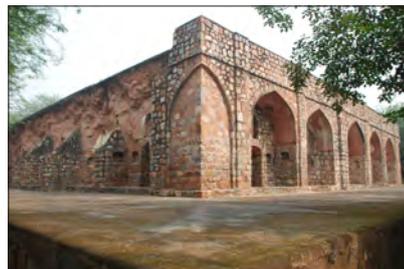
Unknown Mughal Tomb ►



Chota Batashewala Mahal ►



Bara Batashewala Mahal ▲



**Batashewala Tomb - Garden : Proposed**  
*Watercolour illustration by Himanish Das ▲*



## RECONSTRUCTING THE ENCLOSURE WALL

### Batashewala Tomb - Garden

*On the demolition of the 150+ illegal structures built on this land by the Bharat Scouts & Guides the southern enclosure wall was revealed. The entire stretch of the wall was also visible in early 20<sup>th</sup> century photographs taken from the roof of Humayun's Tomb. To respect the Outstanding Universal Value of the Humayun's Tomb World Heritage Site, which lies in the complex being an ensemble of 16<sup>th</sup> century garden-tombs, it was agreed to reconstruct missing portions of the enclosure wall.*



▲ On the north-east corner of the enclosure walls a historic well was discovered and this has been desilted to its original depth, conserved and enclosed within the enclosure

#### ACTION TAKEN:

- Following the land being transferred to the ASI, 150+ structures built here since the 1980's were demolished. The ASI auctioned material and except for cement concrete blocks all material was thus removed by contractors.
- On the approval of the Conservation Plan for the Batashewala Complex by the Core Committee and the same being forwarded to the Judiciary works here commenced by removal of debris to reveal 560 m of the foundation of the enclosure wall.
- It was discovered that the walls were not a perfect square/ rectangle as clearly the orientation depended on other, earlier enclosed gardens that were built here, including that of the 'Unknown Mughal tomb' abutting the enclosure to the east.
- Any trees found to be standing over the wall were allowed to remain; this occurred both in the northern section and in the south-eastern corner.
- On the north-west corner, the excavated foundations, found only in parts, had a significant offset and after much deliberation, it was agreed to follow the alignment of the discovery with the priority being to restore a sense of enclosure for the Batashewala complex.
- The northern stretch of the enclosure wall has been rebuilt in Delhi quartzite random rubble masonry in lime mortar by master craftsmen using traditional building techniques.

## RECONSTRUCTING THE ENCLOSURE WALL

### Unknown Mughal Tomb Garden

*Abutting the Batashewala complex to its east stands a domed tomb on a raised platform and known simply as 'Unknown Tomb'. Archival photographs and descriptions led us to believe that this was formerly an enclosed garden-tomb and clearance of debris revealed the entire northern, western stretches of the wall as well and a majority of the southern section. In keeping with the OUV of the World Heritage Site, within the buffer zone of which this structure stands and to provide security from encroachments which had occurred to the north, it was agreed to reconstruct the enclosure wall.*

#### ACTION TAKEN:

- It was discovered that the Delhi Development Authority fencing was built almost on top of the western enclosure wall, this was demolished and the extensive vegetation and removal of debris was done to reveal the alignment of the 16<sup>th</sup> century wall.
- The standing portions clearly revealed the plan of the wall including the depth and profile of the arcade. This was scientifically documented.
- A grand staircase in the centre of the southern side and aligned with the tomb chamber was revealed as well as a gateway in the western wall, again aligned with the tomb.
- It was discovered that the enclosure wall of the Batashewala complex meets the enclosure wall of the unknown tomb, thus establishing that the unknown tomb predates the Batashewala complex.
- The profile of the arch in the elevated platform of the tomb was replicated for the enclosure wall as the profile of the two arches, in plan, were found to be similar.
- The reconstruction of the enclosure wall is now ongoing with the western stretch largely complete. This is carried out on the original foundations which have been strengthened by lime grouting.
- The stretch on the northern side required a retaining wall to be built outside the enclosure as the ground in the area has paved considerably.
- The profile of the arches and coping of the southern section discovered to be standing under the modern buildings was used for the entire wall stretch.

#### NEXT STAGE

**Batashewala Tomb - Garden:** The reconstruction would continue to the eastern, western and finally the southern section where a modern brick wall would require to be demolished to rebuilding the stone wall.

**Unknown Mughal Tomb - Garden:** The wall reconstruction will continue through 2013, especially on the eastern side where the wall needs to be raised from a depth of over 5 m in some sections.



▲ The enclosure wall of the Unknown tomb complex has been reconstructed thus restoring the setting of this 16<sup>th</sup> century structure.

2013



## CONSERVATION OF ENCLOSURE WALL

*Archival photographs from the 20<sup>th</sup> century clearly show the complete extent of the garden enclosure walls of which only half the southern side had remained standing with most portions having been demolished in the 1980's when Bharat Scouts constructed almost a 100 'temporary' structures roofed with geodesic domes.*

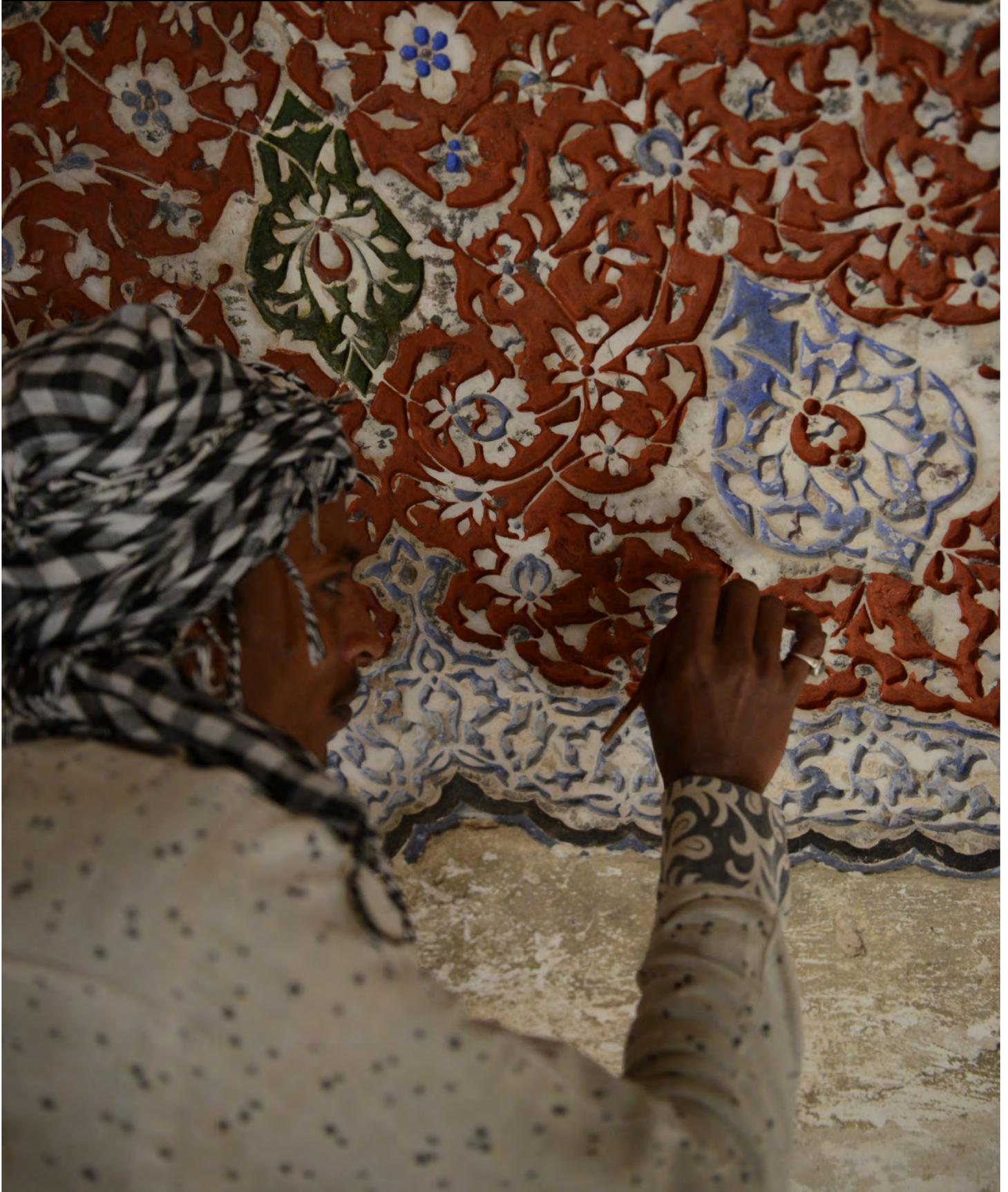
### ACTION TAKEN:

- The Outstanding Universal Value of the Humayun's Tomb World Heritage site is understood, amongst other factors, to be an ensemble of 16<sup>th</sup> century Tomb-Gardens. The Batashewala complex stands within the Buffer Zone of the World Heritage Site. Thus the reconstruction of missing portions of the enclosure wall that defined the significance of the complex was considered necessary.
- Protection of the original context and boundaries of the complex along with the open spaces revive the original context of the Batashewala Complex. The protection of the whole complex and restoration of the historic and architectural character will strengthen the case for a potential World Heritage Site extension to include this land.
- Conservation works commenced in November 2011 with scientific clearance of earth to reveal the foundation of missing portions of the enclosure wall.
- Underpinning works were required on the southern enclosure wall of the Batashewala complex and masonry walls required to be built from a depth of 2 m.
- The entire extent of the enclosure wall has been established though foundations in certain sections were missing as new structures were built over these, thus destroying even the foundations – mostly discovered at eight feet depth.
- On the north-east corner of the enclosure wall of Batashewala Complex, a historic well was discovered.
- After proper de-silting to its original depth, the well is now conserved and enclosed within the enclosure.

*(Left) Restoration of decorative ceiling patterns and motifs in Mirza Muzaffar Hussain's Tomb,  
(Above) Consolidation of the enclosure wall of the Batashewala Complex*

## UNKNOWN GARDEN-TOMB

*Located in the north of Humayun's Tomb, the enclosure wall of this Garden Tomb has been reconstructed and conservation works have just commenced on the Tomb structure itself.*



• Restoration of Sandstone Lattice Screens • Reconstruction of Enclosure Wall  
• Reconstruction of the Staircase • Discovery of water tank and channels in Garden

ACTION TAKEN:

- During the scientific clearance of earthwork around the monument to determine original levels, the original foundations of the enclosure wall and a staircase on the southern side were discovered.
- The enclosure wall of the Unknown tomb complex has been reconstructed completely as per the original details thus restoring the setting of this 16<sup>th</sup> century structure.
- The enclosure wall was then provided with red sandstone of 7.5 cm thick plinth protection along the entire length.
- The remains of the staircase discovered here were documented carefully and it was reconstructed using the Delhi quartzite stone with lime mortar.
- During the scientific clearance of earthwork in the immediate surroundings of the monument, a water tank and channel was discovered in the Unknown Tomb complex, to the east of the tomb structure.
- The remains were then documented prior to consolidation and were carefully incorporated in the on-going garden restoration works.
- The Unknown Mughal Tomb had an ornamented interior though much of the interior ornamentation had been lost due to neglect, water seepage and inappropriate past repairs wherein plain cement plaster was used on wall and ceiling surfaces that were originally decorated.
- After the careful documentation of the existing remains of the original incised plaster and paintwork, the patterns were replicated in the missing portions.
- The plinth of the Tomb had multiple layers of cement concrete as well as filled with construction waste during a repair in 2002-4.
- This existing cement concrete and *malba* (debris) was systematically dismantled and removed thus revealing the original floor levels. Sandstone flooring has been laid on the outer platform.
- The parapet and outer wall though largely reconstructed in 2002-3 has not been dismantled and retained as found.
- The Delhi Quartzite stone has been provided as the plinth protection along the length of the raised platform of the monument to stop the water rise.
- All the four lattice screens originally placed over the door were found removed from here, possibly for the antique market and sometime in the 20<sup>th</sup> century.
- The openings were documented and the 7.5 cm thick red sandstone decorative lattice screens prepared by the master craftsmen will be restored once the cement plaster is removed from the surface of the walls.

NEXT STAGE:

The plinth and the internal chamber will be paved using red sandstone after providing the base of lime concrete along the length of the platform. Conservation works need to be undertaken on the exterior wall surface.



2014

# Batashewala Complex

Standing to the north of the Humayun's Tomb World Heritage Site, the 11 acre "Batashewala Complex" includes two Mughal era tomb-garden enclosures within which stand three tombs, of national importance, and protected by the Archaeological Survey of India (ASI). The conservation effort supported by the US Ambassador's Fund for Cultural Preservation, since 2011, has aimed at recovering the architectural integrity of the monuments. This has been achieved with the use of traditional materials and building techniques in order to replace 20<sup>th</sup> century alterations that were carried out with modern materials, such as cement.



**Mirza Muzaffar Hussain's Tomb**  
*Before conservation in 2010*



**Chota Batashewala**  
*Before conservation in 2010*



**Mughal Tomb**  
*Before conservation in 2010*



## Conservation of Enclosure Wall

### Action Taken:

- The Outstanding Universal Value of the Humayun's Garden Tomb Complex World Heritage Site is now recognized as this being part of an ensemble of Mughal era garden-tombs. Each of the tomb complexes was enclosed in masonry enclosure walls. The large complex of Batashewala shares this value of being a Garden Tomb Enclosure and stands within the Buffer Zone of the World Heritage site.
- The tomb garden complex of Batashewala is enclosed within an enclosure wall of 796 m.
- The large portions of the enclosure wall measuring approximately 540m was completely missing. Also the existing portions of the wall were plastered in cement and devoid of any detail.
- A large portion of the enclosure wall of Batashewala Complex, measuring 740 m has been repaired, rebuilt and reconstructed. The excavations were made to find the original foundations. At some places underpinning works were carried out and the masonry wall was required to be built from a depth of 2M.
- The plinth protection in red sandstone has been provided along the entire length of enclosure wall.
- The conservation works on the enclosure wall is now complete.

## Restoration of the Garden

- After the completion of all the conservation works, the works of garden restoration started in Batashewala Complex.
- All the sandstone pathways are now laid and Mango tree plantation is in progress.

*(Bottom Left) Stretches of the garden enclosure walls, were demolished in 1989 by Bharat Scouts and Guides. The foundations of missing portions were excavated in order to guide the reconstruction of these sections as per the design and structure of standing portions to restore the tomb - garden enclosure.*

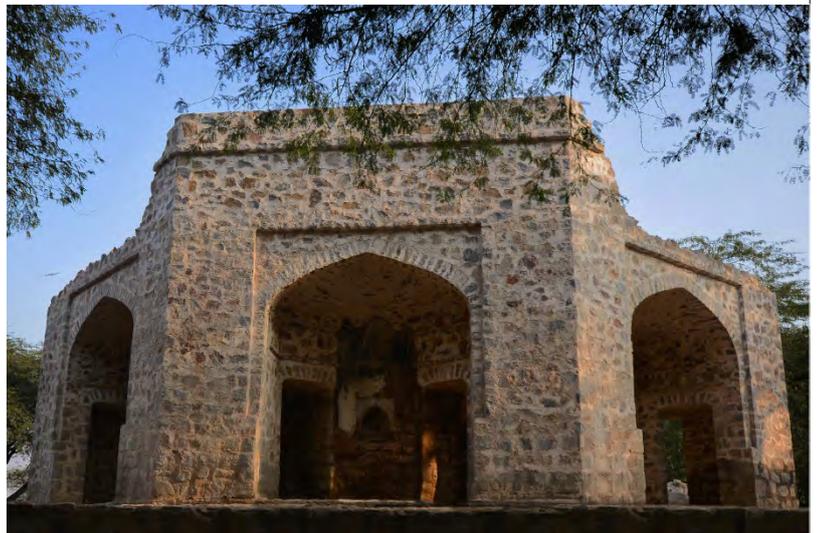


The ASI protected monument known as Chota Batashewala, seems to have largely collapsed following the leveling of land, by Bharat Scouts and Guides, in its immediate setting in 1989 to build the structures for the Bharatiyam event. This as the structure seems to have had no foundations and with the leveling of the mound on which it stood all its foundations were exposed.



#### **Action Taken:**

- The remains on the site were found to be either raised or consolidated in cement concrete as past repair. It was also found that the entire surface area of the plinth was covered by 20 cm of cement concrete. The first conservation task was to remove all the cement concrete from the entire plinth and the remains of the walls of the tomb.
- During earthworks near the Chota Batasha, it was found that platform stood directly over the earth. The stabilization of the structure required a support from all the sides.
- To counter this problem, an earth mound is designed all around the structure which provides stability to the structure.
- The mound rises till 1M and has a 900 mm wide DQ masonry wall to a depth of 900 mm wrapping all around it.
- The remains found on the site were carefully studied and the details of the structure were discerned. On the basis of these remains, archival texts and images, the reconstruction proposal was made.
- Detailed drawings and model was made to understand the structure.
- As per the evidences and archival images found, it was decided that only the portions that were visible in the archival records will be reconstructed and the roofing system in the internal chamber will not be conjectured.
- Thus three bays have been partially reconstructed on the basis of archival photographs from the 1980's to allow visitors an understanding of this After receiving the approvals from the Archaeological survey of India to reconstruct collapsed portions, the conservations works started where the three bays out of eight are reconstructed.
- The works are now complete.



## Mughal Tomb - Garden Enclosure

This lofty domed Mughal-era tomb stands on an elevated stone masonry plinth, giving it a fort-like appearance. The domed, decorative tomb, which is visible from afar, affords spectacular views of, and from, Humayun's Tomb. The structure had suffered from inappropriate repairs in the 20th century. Careful interventions were required to restore the architectural intentions of the Mughal builders, including rebuilding the lower platform and removal of cement plaster, which was used here extensively.

### Action Taken:

- The plinth of the tomb had multiple layers of cement concrete which added a lot of weight on the foundations of the tomb structure.
- This existing cement concrete is systematically dismantled which has also helped in revealing the original floor levels.
- After dismantling existing concrete, the base using lime concrete was applied and this helped in revealing the original floor levels.
- The red sandstone of required quantities for the platform had been procured and the red sandstone flooring was provided along the length of the platform and in the internal chambers.
- A number of structural cracks were present on the tomb walls, arches and domes.
- This task included removing all the cement concrete from the structure; the cracks were treated with the lime water techniques.
- After this lime concrete was grouted in to repair the cracks.
- Following the repair of the cracks, surfaces were plastered using coarse and fine layer of lime plaster.



At the Mughal Tomb, a sandstone plinth replaced the earlier cement plinth (Below) which was found to have been laid over construction rubble. The sandstone is long lasting, especially in view of the large number of visitors expected to visit here in future years.

*'In places where there is much wear and tear to concrete flooring, it is sometimes advisable to substitute composition blocks or stone-slabs in place of the concrete, and so save frequent repairs and the cost incidental to them.'*

**John Marshall**, *Conservation Manual*  
Clause 116



Before Conservation in 2011



Before Conservation in 2011

(Left) The domed ceiling of the Mughal tomb required removal of cement, restoration of sandstone lattice screens in the four openings and a final 1 mm layer of lime plaster prepared with marble dust.



- The Mughal tomb had an ornamented interior though much of the interior ornamentation had been lost due to neglect, water seepage and inappropriate past repairs wherein plain cement plaster was used on wall and ceiling surfaces that were originally decorated.

- After the careful documentation of the existing remains of the original incised plaster and paintwork, the restoration of the decayed decorative patterns were undertaken on the internal ceiling and the works are now complete.

- The wall surfaces were found to be covered with soot, algae, and lime wash thereby disfiguring the historic appearance and accelerating the decay process. Portions of the wall surfaces had also been re-plastered in cement mortar.

- Trained art conservators have carefully removed the cement patches from the external walls. Water and soft brushes are used on the wall surfaces to clean off all soot.

- The plastering layers included coarse lime mortar for the base layer and fine lime mortar for the top layer.

- It was finished using fine layer of Lime punning works.

- It was found that all the four lattice screens originally placed over the door were removed from here in the 20th century. Moreover, the doors were also found to be missing from the openings.

- It was decided that the all the rectangular openings but one will be sealed by sandstone lattice screens, which will allow proper light and ventilation in the internal chamber.

- All the 7 lattice screens (4 small, 3 rectangular) were prepared by the master craftsmen and are restored on the tomb after removing the cement plaster from the surface of the walls.

(Below) The north face of the tomb chamber. Conservation works required the complete removal of the 'pinkish' 21<sup>st</sup> century cement plaster, restoration of lime plaster layers as well as the sandstone lattice screen that seems to have been removed in the 20<sup>th</sup> century for the antique market.



Before Conservation in 2010



After Conservation in 2014



*Broken portions of the finial were found collapsed on the roof. Master craftsmen prepared matching finial pieces to restore on finial on the dome.*

- During the on-going conservation works the inappropriate past repairs carried out on the terrace like undulating multiple layers of cement concrete were manually removed and surface prepared for providing traditional lime based terrace.
- After completely removing the added cement layers from the terrace, the terracing work has been started using the lime concrete comprising lime mortar and brick aggregate. Traditional organic additives such as Bael Fruit pulp, jaggery are added to make the surface water tight and as per original slopes and details.
- In the absence of water spouts, rainwater was percolating into the masonry as well as causing deterioration of the wall plaster.
- Hand chiselled red sandstone water spouts have now been provided on each of the four façade and plinth to ensure proper disposal of rain water.
- The finial was found collapsed on the roof and in broken fragments and has since been restored to the dome.

*Hand carved sandstone screens were restored to three of the ground level openings and to each of the four arches over the doorways, The pinkish 21<sup>st</sup> century cement layers were replaced with traditional lime plaster.*



**Before Conservation in 2010**



**After Conservation in 2014**



## Garden

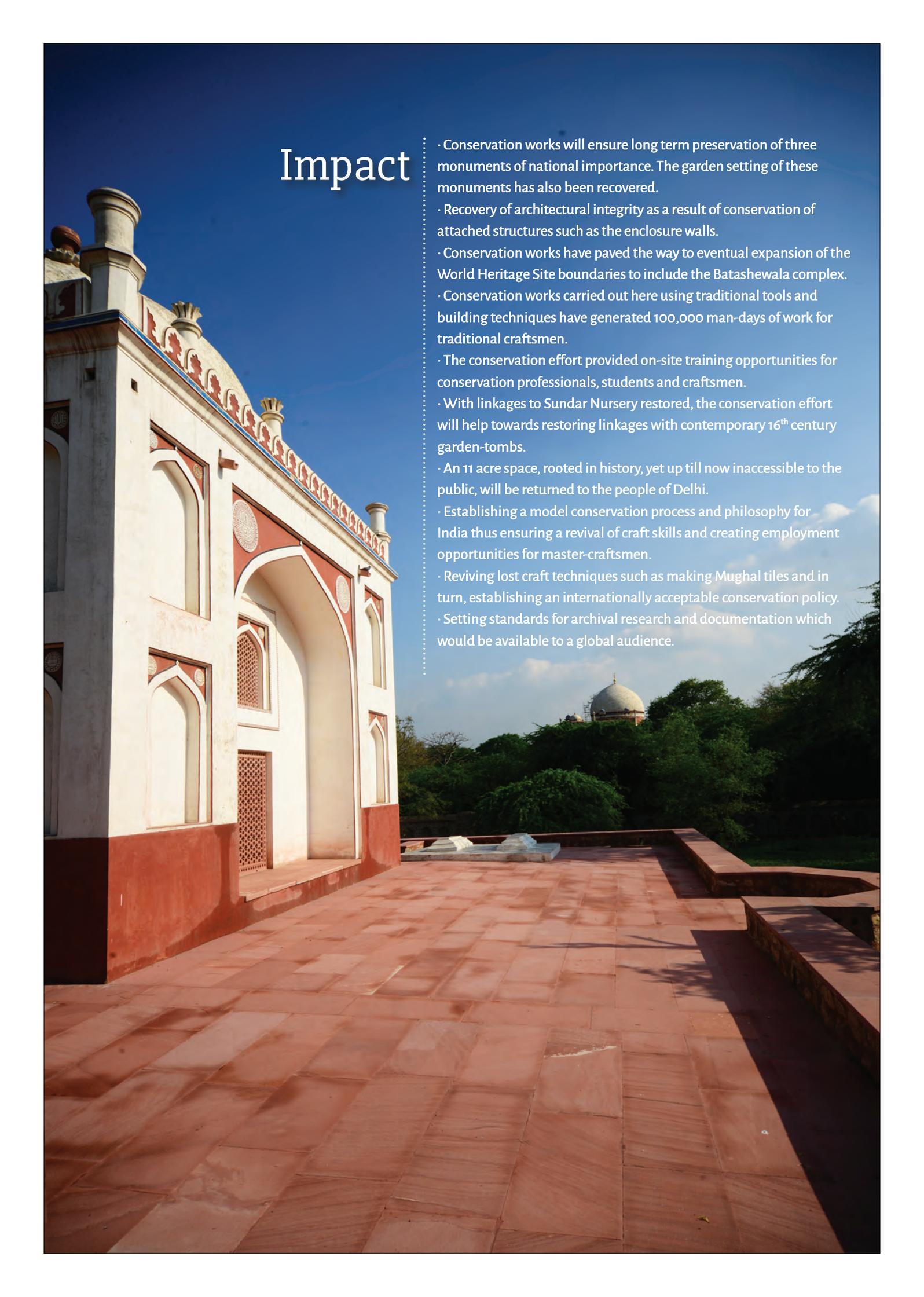
### Action Taken:

- The red sandstone of 7.5 cm thickness has been provided as 3M plinth protection along the length of the enclosure wall of the monument.
- A water channel and tank discovered to the east of the tomb was exposed and repaired.
- The Delhi Quartzite stone was provided as 4.5 M plinth protection around the entire Plinth.
- Completion of all conservation works was then followed by garden restoration where sandstone pathways were laid and Neem trees were planted.

*(Left) The Mughal Tomb Complex, before landscape restoration in 2011; and (Right) during landscape restoration in 2014.*



2015



# Impact

- Conservation works will ensure long term preservation of three monuments of national importance. The garden setting of these monuments has also been recovered.
- Recovery of architectural integrity as a result of conservation of attached structures such as the enclosure walls.
- Conservation works have paved the way to eventual expansion of the World Heritage Site boundaries to include the Batashewala complex.
- Conservation works carried out here using traditional tools and building techniques have generated 100,000 man-days of work for traditional craftsmen.
- The conservation effort provided on-site training opportunities for conservation professionals, students and craftsmen.
- With linkages to Sundar Nursery restored, the conservation effort will help towards restoring linkages with contemporary 16<sup>th</sup> century garden-tombs.
- An 11 acre space, rooted in history, yet up till now inaccessible to the public, will be returned to the people of Delhi.
- Establishing a model conservation process and philosophy for India thus ensuring a revival of craft skills and creating employment opportunities for master-craftsmen.
- Reviving lost craft techniques such as making Mughal tiles and in turn, establishing an internationally acceptable conservation policy.
- Setting standards for archival research and documentation which would be available to a global audience.

Supported by:



US Ambassador's Fund for Cultural Preservation

## Batashewala - Mughal Garden Tomb Complex

### Prior to Conservation

In the 1950s, the ownership of this complex was given to the Bharat Scouts & Guides to serve as a camping ground. This led, in 1989, to the construction of 150 structures. Enclosure walls were demolished, disfiguring the landscape and the historic character. The levelling of land required to build the buildings also led to collapse of the Chota Batashewala – a protected monument – when its foundations were exposed. Following twelve years of effort by the ASI and the Aga Khan Trust for Culture (AKTC), the ownership was restored to the ASI in 2010, allowing systematic conservation and landscape restoration to be undertaken by the AKTC.

### Post Conservation in 2015:

A grant from the US Ambassadors Fund for Cultural Preservation allowed an intensive three year conservation programme on the three monuments and their garden enclosures. On 18-April 2015, a completion ceremony of the project was presided by Mr. Ravindra Singh, Secretary, Ministry of Culture (Government of India) and held in the presence of Dr. Michael Pelletier, Deputy Chief of Mission, US Embassy.

With the completion of conservation works on this significant ensemble of sites, a proposal for inclusion of the Batashewala Complex in the expanded Humayun's Tomb World Heritage Sites will be submitted.





*(Right) Mr Michael Pelletier, Deputy Chief of Mission, Embassy of the United States of America and Mr Ravindra Singh, Secretary, Ministry of Culture, Govt. of India at the completion of conservation works ceremony on 18-April 2015.*

---

## Mughal Garden - Tomb

This early Mughal-era tomb stands immediately north of Humayun's Garden-Tomb, within its own garden enclosure. In 2003-5 the random rubble masonry plinth of the tomb was reconstructed by the Archaeological Survey of India. Also at this time, cement plaster was profusely used on the structure obliterating significant ornamentation. Thus conservation works undertaken here since 2011 have aimed at removal of the inappropriate cement plaster and its eventual replacement with traditional lime mortar.

### ACTION TAKEN:

- Conservation works were preceded by an exhaustive documentation and archival research on the structure. This allowed the team to determine all original elements.
- The principal works carried out in 2015 were on the facade and the plinth.
- On the construction rubble used as in-fill was removed and replaced by a stone in-fill. The concrete flooring of the plinth was similarly replaced with traditional sandstone flooring.
- On the facade all the cement-surkhi plaster applied here during 2002-5 was carefully removed and replaced with a traditional layer of lime plaster.
- All original lime plaster found on the structure was carefully consolidated and retained on the structure.
- Ornamental patters such as found on the neck of the dome, the parapet were carefully restored.
- A final coat of 1 mm lime: Marble dust plaster used by the Mughals to mimic marble was restored to the entire facade. Since the penultimate layers of lime plaster include organic additives such as jaggery, fruit pulp, egg white and lentil, the patina of organic growth is expected to return within a few years.



*(Right) In 2005-06, the ASI reconstructed the arcaded plinth wall of this tomb. Conservation works during 2011-15 have focussed on removing the cement plaster applied during 2005-06 on ornamental surfaces, and has employed master craftsmen using traditional materials such as lime mortar to carefully restore the Mughal-era details.*