

AGA KHAN DEVELOPMENT NETWORK



NIZAMUDDIN URBAN
RENEWAL INITIATIVE
ANNUAL REPORT - 2014

Cover Image: Craftsman undertaking conservation of the tiled medallion on Bu Halima's Gateway. Under 5% of tiles were missing and were restored, thus closing the cavities.

Nizamuddin Urban Renewal Initiative demonstrates a prototype for urban revitalization with a non-profit People Public-Private Partnership model. An enhanced level of partnership between the Public and Private Parties in their mutually shared objectives of carrying out a model project leading to conservation based urban development, improved quality of life for local communities and improved access to basic urban facilities.

Partner Agencies:



ARCHAEOLOGICAL SURVEY OF INDIA



SOUTH DELHI MUNICIPAL CORPORATION



CENTRAL PUBLIC WORKS DEPARTMENT



AGA KHAN FOUNDATION



AGA KHAN TRUST FOR CULTURE



Nizamuddin Urban Renewal Initiative

a *People Public - Private Partnership*

Archaeological Survey Of India - South Delhi Municipal Corporation - Central Public Works Department

Aga Khan Foundation - Aga Khan Trust For Culture



This year's annual report includes video interviews with various professionals and members of the project team. To view these, visit: www.nizamuddinrenewal.org/annualreports or Scan the Code

*For more information on the project, please visit: www.nizamuddinrenewal.org
or Like Us on www.facebook.com/NizamuddinRenewal*

Aga Khan Trust for Culture is grateful for co-funding* received from:



Ministry of Tourism, Government of India

Tata Trusts



Norwegian Ministry of Foreign Affairs



InterGlobe Foundation



Ford Foundation



US Ambassador's Fund for Cultural Preservation



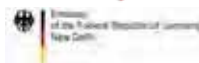
Delhi Urban Heritage Foundation of Delhi Development Authority



State Department of Archaeology, Government of NCT Delhi



World Monuments Fund



Embassy of the Federal Republic of Germany



Titan Company



US Embassy, India



Housing & Urban Development Corporation



National Culture Fund



JM Kaplan Fund



GSRD Foundation



Ministry of Culture, Government of India



Australian High Commission, India



SDV International Logistics Limited

** Please refer to Page 162 for details of the project component funded by these agencies*

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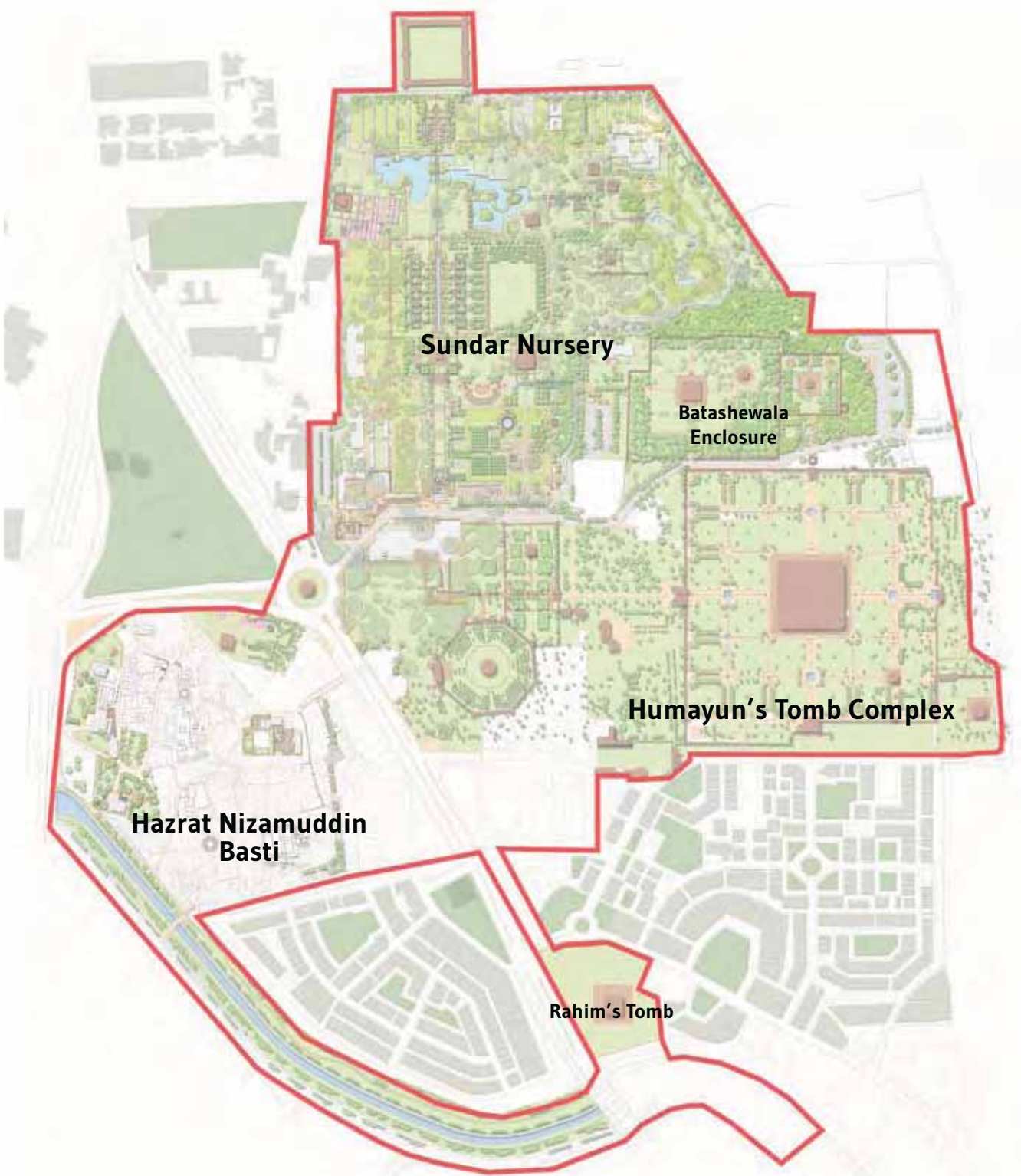
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Nizamuddin Urban Renewal Initiative:
PROJECT AREA



EXECUTIVE SUMMARY

People - Public Private Partnership

2015 marks the eighth year of this ten year initiative; in 2007, following over two years of discussions and consultations when the MoU to commence this urban development programme was signed, it was not envisaged that the project would address such a variety of issues that come up in an urban environment.

Though case studies for rural development are aplenty in India, there has been no precedent for any non-profit public-private-partnership that addresses heritage conservation, socio-economic development and environmental issues, amongst others in the Indian Urban context. Working in a densely populated historic district or heritage zone of the capital city, the project has demonstrated that:

- Heritage conservation in the Indian context can benefit from the living craft traditions employed in India for over 3000 years.
- Conservation, to follow the Urban Landscape approach and ensure the setting of the site is as significant as the site itself requires joint action on the part of several government agencies, in this case, the ASI, CPWD and the South Delhi Municipal Corporation.
- Urban conservation can be coupled with socio-economic development measures. In the Indian context it is important that conservation is seen to improve quality of life for the city's inhabitants.

Demonstrating '***culture as a tool for urban development***', the Nizamuddin Urban Renewal Initiative has led to over 30 monuments being conserved, almost 150 acres sensitively landscaped, over 2000 individual craftsmen employed and clocked over 500,000 man-days of work, 20,000 trees planted, almost 300,000 patients treated at the polyclinic, community toilet complexes built and managed by established resident groups, 2750 jobs have been created in the Hazrat Nizamuddin Basti fulfilling major government objectives, 400 children from the Basti taught English in a 2 year intensive course, several SHG's created, an increase of 1000% in visitor numbers, amongst other

To replicate the model in other historic centers, a partnership of civil society organizations with government agencies is needed as well as a multi-disciplinary team to implement the project. The Aga Khan Trust for Culture team on the project now numbers in excess of 200. Receiving co-funding for project components from a host of trust, governments and corporate has certainly been a key factor in ensuring objectives are achieved, surpassed and effectively implemented.

The building of a state-of-art Interpretation Centre/ Site Museum for the 2 million annual visitors to Humayun's Tomb World Heritage Site with the support of the Ministry of Tourism, Government of India is the principal future objective. The architectural design has been finalized and statutory building approvals are now being sought. When built, this underground facility should also serve as a model facility at all monuments where visitor experience requires to be enhanced.

Moving forward the principal challenges that lie ahead are to ensure financial sustainability of project components and ensure world class management of created assets without drawing on government funds. The formation of a Management Trust—to be created in keeping with the 2007 MoU has been under discussion since 2011. Once finalized, facilities to ensure financial sustainability will require to be built.



(Above) Left to Right: Dr. Lalit K. Panwar, Secretary (Tourism), Dr. Mahesh Sharma, Hon'ble Minister of Tourism & Culture, Mr. Ravindra Singh, Secretary (Culture) releasing the manifesto for Adarsh Monuments

01 Humayun's Tomb, Adarsh Monument

In December 2014, Shri. Mahesh Sharma, Hon'ble Minister of Tourism and Culture, Government of India announced a list of 25 'Adarsh Smark' or model monuments, including Humayun's Tomb. For these sites, facilities promised will include WiFi, security, signages, encroachment free area, interpretation centre, short film screenings amongst others.

Action Taken:

To meet the requirement of the model monument tag, AKTC has pledged to undertake the following at Humayun's Tomb:

- Build a Site Interpretation Centre that bridges the three segregated sites of Humayun's Tomb, Sundar Nursery and Hazrat Nizamuddin Basti.
- Commission a film to be screened at the South Gate and eventually at the Interpretation Centre
- Build appropriate parking for the expected increased visitor numbers.
- Install appropriate signage
- Ensure access across the gardens for the differently-abled and ensure appropriate measures at the interpretation centre.
- Ensure resident communities residing at the adjoining Hazrat Nizamuddin Basti benefit economically from the conservation effort.

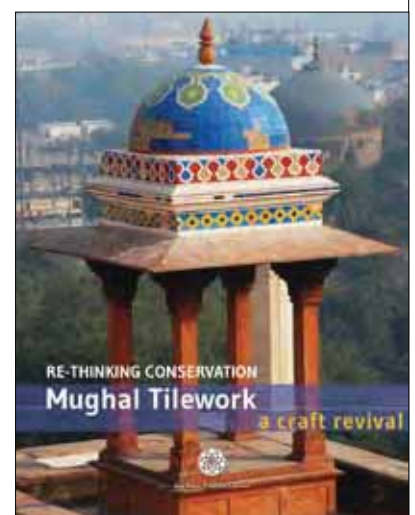
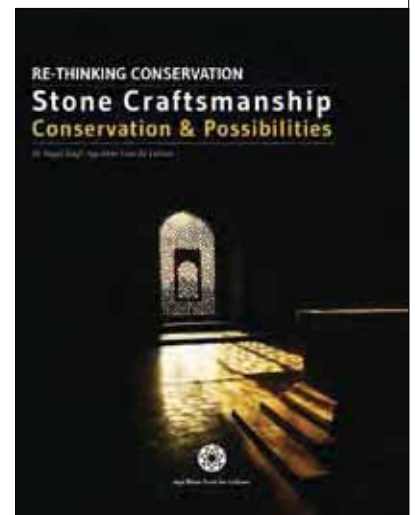
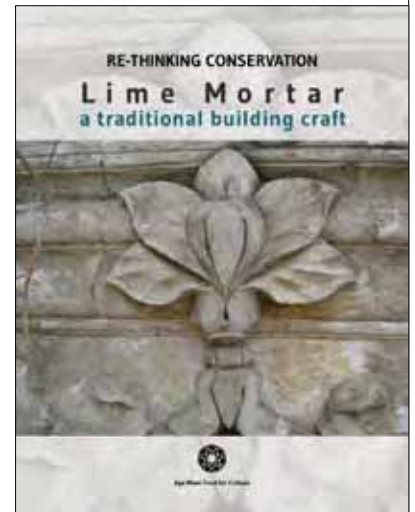
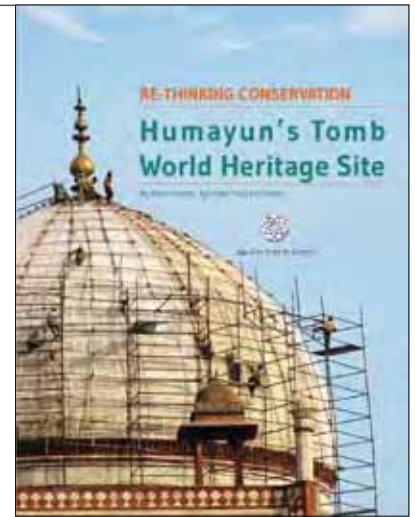
02 Rethinking Conservation: Outreach

The Outreach Plan's objective is to use the experience and learning of the Humayun's Tomb conservation to promote and increase the general awareness of the benefits of heritage conservation amongst the general public, decision and policy makers. The films and publications will be accessible to all future visitors at the Humayun's Tomb Interpretation centre.

Action Taken:

- **A long-duration film** on the topic of Humayun's Tomb will be made as part of the project component Rethinking Conservation for India. Discussions are underway with various TV channels like the Discovery Channel and National Geographic for a wider outreach of the film. It is hoped one of the channels will agree to produce and telecast the film.
- **Technical Documentaries & Publication** each for Stone Craftsmanship, Tile Restoration, Use of Lime Mortar and **Conservation Philosophy** are under preparation with first draft now written out. Similarly the technical documentaries that accompany the Stone, Lime and Tile publications are now under production.
- Documentry film on Tile is 80% complete and all the publications along with the publications will be complete by the end of August. Discussion are ongoing with MAPIN to print and distribute the books.
- The output of the project will be to produce a huge database in terms of Films and publications which will disseminate the huge knowledge that is accumulated over the years during the process of Humayun's tomb Conservation. This database will inform conservation professional throughout the Country of technical knowledge and specification, conservation philosophies, methodology and approaches used in the conservation works of this project.
- Films will be created for screening at the proposed Humayun's tomb Interpretation centre and more than one million annual visitors will be better informed of the site through the film.
- The 30 minute film will also be screened by TV channels such as Discovery/ National Geographic. The set of publications and there documentray will be made available for sale at the Humayun's tomb publication counter.

(Right) To spread learning's from the projects amongst students of architecture, archaeology, history, art restoration, conservation studies, urban planning and to inform the general public, a series of publication & short documentaries are planned on various subjects, with the support of Tata Trusts.



Planning studies commenced to determine the most appropriate site to serve visitor needs as well as enhance interest in the Nizamuddin area – without disfiguring the historic character of the area or damaging any underlying archaeology and mature trees. The entrance zone was considered most appropriate as this would enable the Museum to serve as a bridge between the (presently) segregated sites of Humayun's Tomb, Sundar Nursery and the Hazrat Nizamuddin Basti. Ground-penetrating radar surveys (GPRS) confirmed the results of the archival research that showed that no archaeological remains existed on the site. AKTC commissioned a heritage impact assessment on the design prior to seeking planning approvals.

Humayun's Tomb Site Museum

Co-Funded by the
Ministry of Tourism, Government of India



*The architecture of the Museum has been inspired by the
▼ tradition of geometric forms in Mughal architecture*



03 Humayun's Tomb Site Museum

A site museum is now proposed to create a significant visitor facility that enhances the visitor experience to the World Heritage Site of Humayun's Tomb and bridges the adjoining areas of Sundar Nursery and Hazrat Nizamuddin Basti. Expecting over a million visitors a year, this Site Museum will include a significant permanent exhibit, temporary exhibition areas, a multipurpose hall for film screenings and lectures, souvenir shop, facilities and café amongst other functions. The exhibits will allow a more informed visitor experience while also generating increased visitor numbers to Humayun's Tomb and Sundar Nursery.

Action Taken:

- Following approvals of the Concept Plan by the Delhi Development Authority (DDA), National Monuments Authority (NMA), Central Public Works Department (CPWD), South Delhi Municipal Corporation (SDMC) detailed design for the Site Museum commenced in 2014.
- The Ministry of Tourism, Government of India pledged to fund the construction costs of this ASI facility to the tune of INR 49 Crore US\$ 8 million).
- Delhi-based architectural firm - Vir Mueller Architects have been engaged to design the Site Museum building and Shaheer Associates are designing the landscape around it.
- After many revisions requested by various statutory authorities, the design of the Site Museum has been finalized and submitted to various government bodies for requisite approvals.
- In the last quarter of 2014, AKTC received formal approvals from the Land and Development Officer of the Ministry of Urban Development (MoUD), DDA and the NMA.

Next Stage:

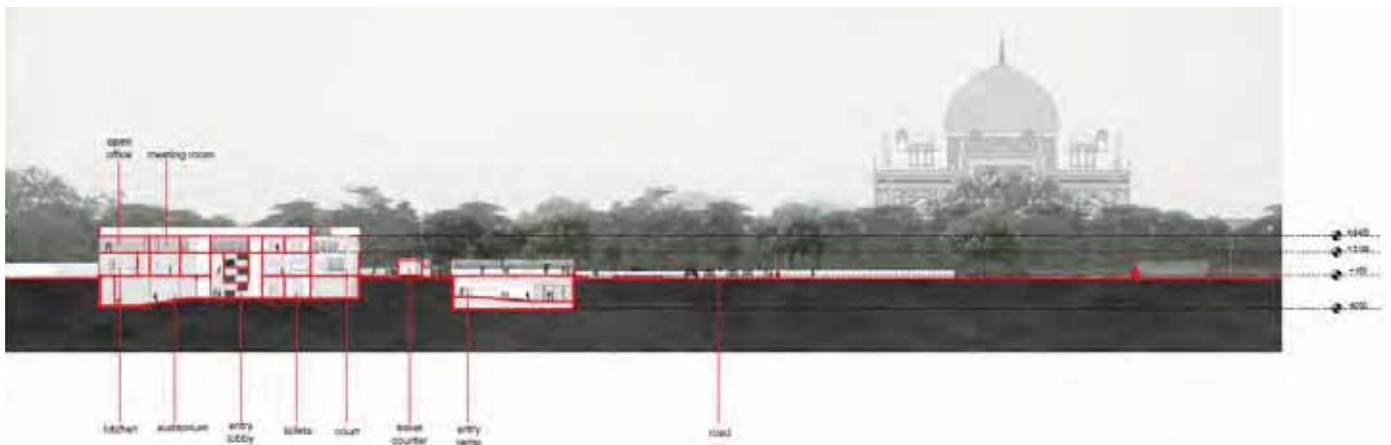
- AKTC is awaiting approvals from the Delhi Fire Service. Following which the approvals from the South Delhi Municipal Corporation and the Delhi Urban Arts Commission will also be applied for.
- Commencement of construction is planned to start in the first quarter of 2015.

Architectural Design:
Vir Mueller Architects

Landscape Design:
Shaheer Associates

Structural Engineering:
Himanshu Parikh

(Below) Sectional Elevation of Humayun's Tomb Site Museum which is sunken in order not to disturb visual linkages between monuments such as Sabz Burj, Isa Khan's Tomb and Sundarwala Mahal.





CRMO CONSULTING ARCHITECTS
 ARCHITECTS OF PAKISTAN
 ARCHITECTURAL DIVISION OF AREA
 M-1 BENTLEY STREET PAKISTAN
PLAZA LEVEL PLAN
 0m 5m 10m 20m
Humayun's tomb interpretation centre
 irf muhammad architects
 november 17, 2014



Ground Level



Permanent Gallery



Vestibule Gallery

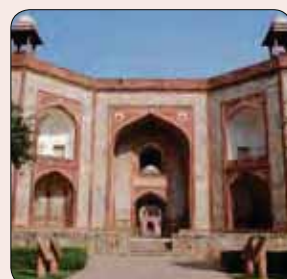


Final Gallery

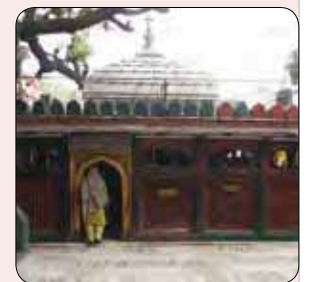
▼Entry Plaza



CONSERVATION



1 of 9
2 0 1 4



04 Humayun's Tomb Finial

On 30th May 2014, during a thunderstorm of unprecedented velocity the 18 feet tall finial at Humayun's Tomb snapped and collapsed to the roof below. No human causality occurred though the storm, with wind velocity – at ground level- exceeding 150 km/ hr caused widespread damage across the city.

Action Taken:

- Immediate site inspections were carried out by the top leaders from Archaeological Survey of India (ASI) including Director General, Director (Conservation), Director (Monuments), Regional Director (North), Superintending Archaeologist (Delhi Circle) as well as officers of the ASI Science Branch and a repair strategy was finalized – to be based on a condition assessment of the damage caused by the fall. AKTC was requested to immediately re-install the lightning conductor on the top of the dome which was done on 4th June 2014 after required repairs to the conductor.
- On 26th June 2014, AKTC was requested to prepare a report with the restoration proposal towards 'restoration of the finial to Humayun's Tomb as per original design and profile'. This report is in response to the attempts to record the damage as well as analyse the cause of the wooden core snapping. The report examines every piece of the finial individually, analyzing the damage on it and proposing a restoration plan for the finial.
- A study of archival records was made which revealed that extensive works on the finial, including the replacement of the wooden core was undertaken in 1912 AD. The date '1952' inscribed on the finial as well as cement plaster and concrete discovered over the dome and around the wooden core respectively suggests that significant repairs – including possibly dismantling the finial - were also undertaken in that year. Archival researches were made where the ASI annual reports and archival files have been referred. The major file recordings from 1912 with regard to the finial have been transcribed to the extent possible, although the original text had faded in parts, and archival photographs have been studied.



(Left) Collapsed portions of finial immediately after the storm damage on 30th May 2014; and (Right) inspection by the ASI - AKTC team on 31st May 2014





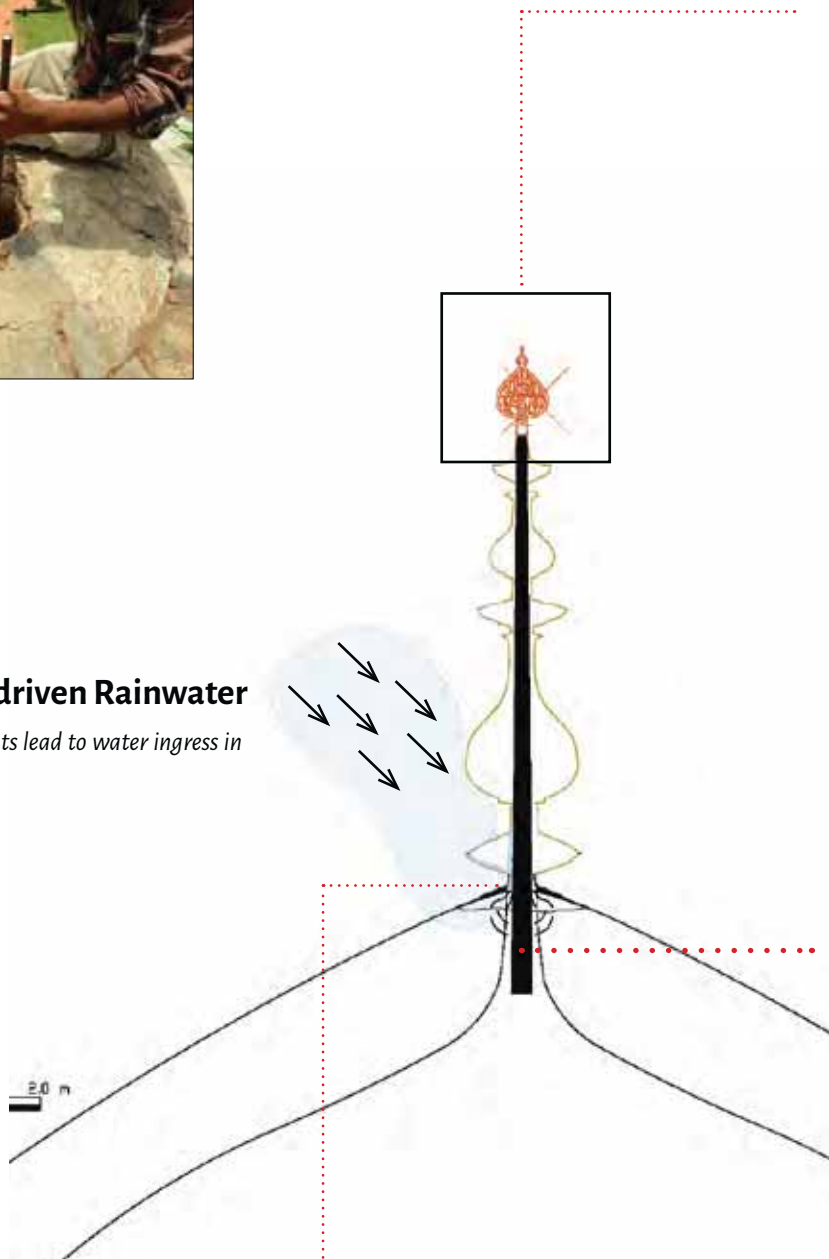
Water entered the vessels and was retained due to the cement that was applied over the marble surface of outer dome in the late 20th century



Inscriptions on the crown of the finial

Wind driven Rainwater

Open joints lead to water ingress in the vessel



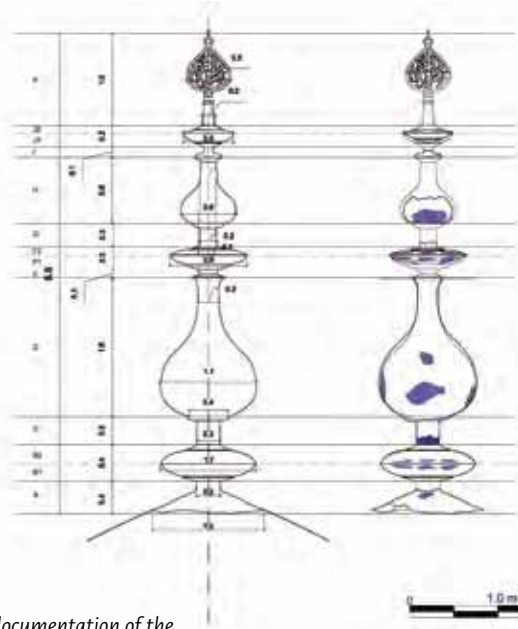
The wooden core at its point of snapping



Base of wooden core visible from below the dome



Craftsmen use hand tools to remove deteriorated wooden section and cement concrete laid here during a past 20th century repair



- A = 24 kg
- B1 = 18kg
- B2 = 19 kg
- C = 5 kg
- D = 62 kg
- E = 1 kg
- F1 = 13 kg
- F2 = 11 kg
- G + H + I = 16 kg
- J1 = 5 kg
- J2 = 5 kg

Weight of each piece of finial

3D Laser Scanning, Architectural documentation of the finial listing out all the vessels and and Assessing the extent of damage on the finial due to the collapse

Physical documentation of vessels including measuring weight of each vessel, calculating surface area and density of the finial

- The scientific analysis of the material was carried out, which revealed the material composition of the finial vessels. It was discovered that the vessels are made with pure copper and covered with gold leaf. Samples of the vessels and crown pieces were submitted to the laboratory for tests for their composition and gauge.
- All the available pieces of finial were studied carefully for any shrinkage due to the collapse, inscriptions, past repairs and joinery as part of the visual analysis. The available vessels were compared with the original profiles, through the photographs and the drawings which were prepared with the help of 3D laser scanning data done in 2009.
- Wooden core was physically examined for its type of wood, dimensions and condition. Alternate wood of matching quality was procured and allowed to cure. All the possible dimensions from each copper vessel have been taken and on the basis of visual and physical analysis, the percentage of damage was estimated. The construction/ joinery method of the finial including for each vessel was discerned. The weight of each piece was taken with the help of weighing machine to figure out the entire weight of the finial.
- A team from AKTC, comprising of engineers and conservation architect, visited metal workshops in Hyderabad, Moradabad and Delhi to assess capabilities of workshops prior to commissioning alternate piece matching the original. The AKTC team visited craftsmen at workshops in all three cities. The craftsmen explained their past and current works along with workstations and tools used for the construction of copper pieces.



(Left) Physical documentation of vessels including measuring weight of each vessel, calculating surface area and density of the finial

- The finial vessels were finally prepared by a team of master craftsmen from Old Delhi. All the drawings and measurements were shared with the craftsmen and regular inspections were made at the workshop. The vessels are manually beaten to arrive at the required sizes. All the 15 copper vessels were made in three months including procurement of matching metal sheets.
- After the preparation of the vessels, gold leaf embedding will be carried out to complete the construction of the finial. The scientific tests suggested that the vessels had gold leaf on it. A lot of workshops were visited to find about the crafts and skilled craftsmen for gold leafing. It was found that the process of gold leaf embedding is a very old and scientific craft.
- AKTC has submitted a detailed analysis and conservation proposal to the Director General, Archaeological Survey of India on 16th July 2014. The Archaeological Survey of India approved the report on 31st December 2014.

Next Steps:

It has been agreed to replace the existing finial which, following required repairs, will be showcased at the Humayun's Tomb Site Museum. The replacement finial will be restored to the dome and efforts will be made to seek sponsorship for the gold required which will be applied using traditional methods that continue to be used in India.

(Left) Scaffolding being installed on the dome to undertake the restoration works; (Top Right) Installing the lightening conductor on the oculus of the dome on 4-June 2014 ; (Bottom Right) Several metal smiths working in different parts of the country have been consulted



05 Arab Serai Gateway

This 48' high gateway served as the southern entrance of the Arab Serai - built to accommodate the 300 Persian craftsmen whom Hamida Banu Begum, had brought with her on her return from pilgrimage to Mecca. These craftsmen were involved in the building of Humayun's Garden-Tomb. The integrity of the whole complex is now disturbed as the major portion of the Arab Serai is today the Industrial Training Institute and is inaccessible to visitors. Over the last century the portions of this lofty gateway had collapsed including the domed entrance chamber thus severely compromising the structural stability of the remaining structure like front façade, portions on the upper levels etc. The collapsed portions of the gateway suggest that half of the entrance chamber was not able to bear the load of the dome which should be uniformly transferred to the piers. Conservation works includes conservation of the main wooden doorway, conservation of the Stone façade, reconstruction of the partially collapsed entrance chamber, conservation of the chambers at ground floor, reconstruction of the upper chambers and providing adequate flooring.

In keeping with the conservation policy of the Nizamuddin Urban Renewal Project master craftsmen, using traditional materials, tools and building techniques have undertaken conservation works. The conservation works when completed will significantly enhance the historic character of the World Heritage Site.



Arab Serai Gateway: after conservation. Conservation works on the Arab Serai Gateway were undertaken with a grant from the **German Embassy**.

The Stone façade

Action Taken:

- Documentation of the condition of each stone was done individually, as a precursor to any repair/ replacement as part of this conservation project.
- The condition of the individual stones of the entire façade is marked on the images and the drawings. Following the condition assessment each stone to be replaced had been marked itself for evaluation, discussion and site preparation works.
- The major defects identified are de-lamination, erosion and splitting of the stone members. At other places the stones are replaced to ensure long term preservation by replacing damaged stones or those used inappropriately in twentieth century repairs. Stones which are replaced are mainly severely decayed stones which were beyond repair, single stones replaced with multiple stones and inappropriately repaired stones such as wrong sectional specifications and material.
- A minor proportion of stones, fewer than five per cent of the total stones were proposed to be replaced with new stone as these stones were considered to be beyond repair. Furthermore most of these stones replaced in the late twentieth century by inappropriate sized pieces.
- The hard cement mortar was raked out and was replaced with lime mortar pointing.
- Rusted iron clamps binding the sandstone to underlying masonry were replaced with new stainless steel clamps.
- Following a stone-by-stone documentation, stones have been replaced on the lower part of the façade.
- Stone replacement is now complete. The conservation works including cleaning, stone replacement, restoration of tiles and lime plastering is also complete on the projected *jharokhas*.



(Right) Following a stone-by-stone documentation, decayed sandstone was replaced by new stone pieces by carefully matching the original.





Entrance Chamber

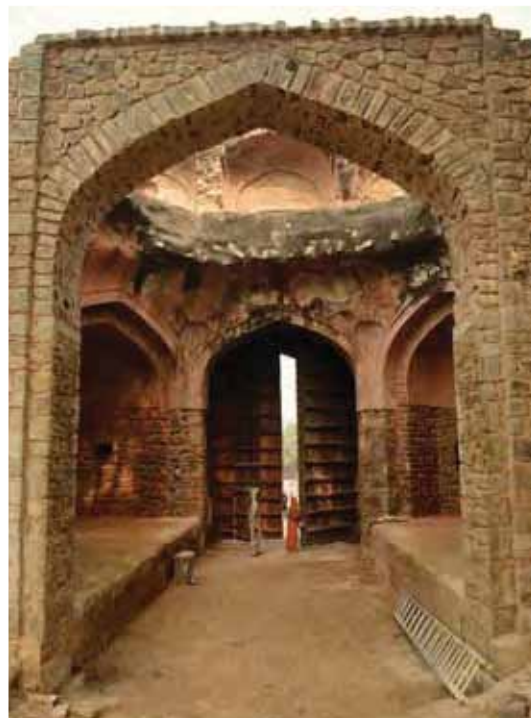
Action Taken:

- Over the last century the portions of this lofty gateway had collapsed including the domed entrance chamber thus severely compromising the structural stability of the remaining standing structure.

(Above) Over the last century the portions of this lofty gateway had collapsed including the domed entrance chamber thus severely compromising the structural stability of the remaining structure like front façade, portions on the upper levels etc. The façade was recorded to be dangerously tilting.

- The tall façade was found to have a significant tilt – leaning outwards – and possibly on the verge of collapse as has occurred in the Sher Shah Gateway west of Purana Qila. It was thus considered necessary to reconstruct some of the collapsed portions to tie the façade back into the masonry.
- Following the collapse of the dome, the southern half of the gateway had largely collapsed and portions required to be reconstructed on the basis of the northern portion that had remained standing.
- The existing remains of the walls, dome and the arches were analyzed carefully to work out the original structural details of the partially collapsed chamber.
- It was determined that the battlements of the enclosure wall of Bu Halima's Garden - Tomb, to the west of the Arab Serai gateway were visible even below the Arab Serai Gateway walls indicating an earlier date for the Bu Halima's garden enclosure. This would negate the belief that the Arab Serai was built to house Persian craftsmen who came to build Humayun's Tomb.
- Clearance of earth was carried out to expose the original foundation of the collapsed wall of the south façade. Missing masonry wall was reconstructed over the original foundation using similar materials and construction techniques.
- The missing arch of the south façade is reconstructed to match the northern arch.
- The two missing arched alcoves on the east and west sides are reconstructed as per existing two alcoves on the same façades. Existing profile of the alcoves were traced and transferred to the new construction to maintain the original architectural detail.
- The existing alcoves are also repaired including removal of the cement plaster and other cement works. Layers of cement and inappropriate repair works are dismantled carefully. Also the arches are lime plastered as per original profiles and shapes.
- The raised platforms of the entrance chamber have also been provided with the sandstone flooring.

(Right) The east and west sides are reconstructed as per existing two alcoves on the same façades. Existing profile of the alcoves and transferred to the new construction to maintain the original architectural detail.



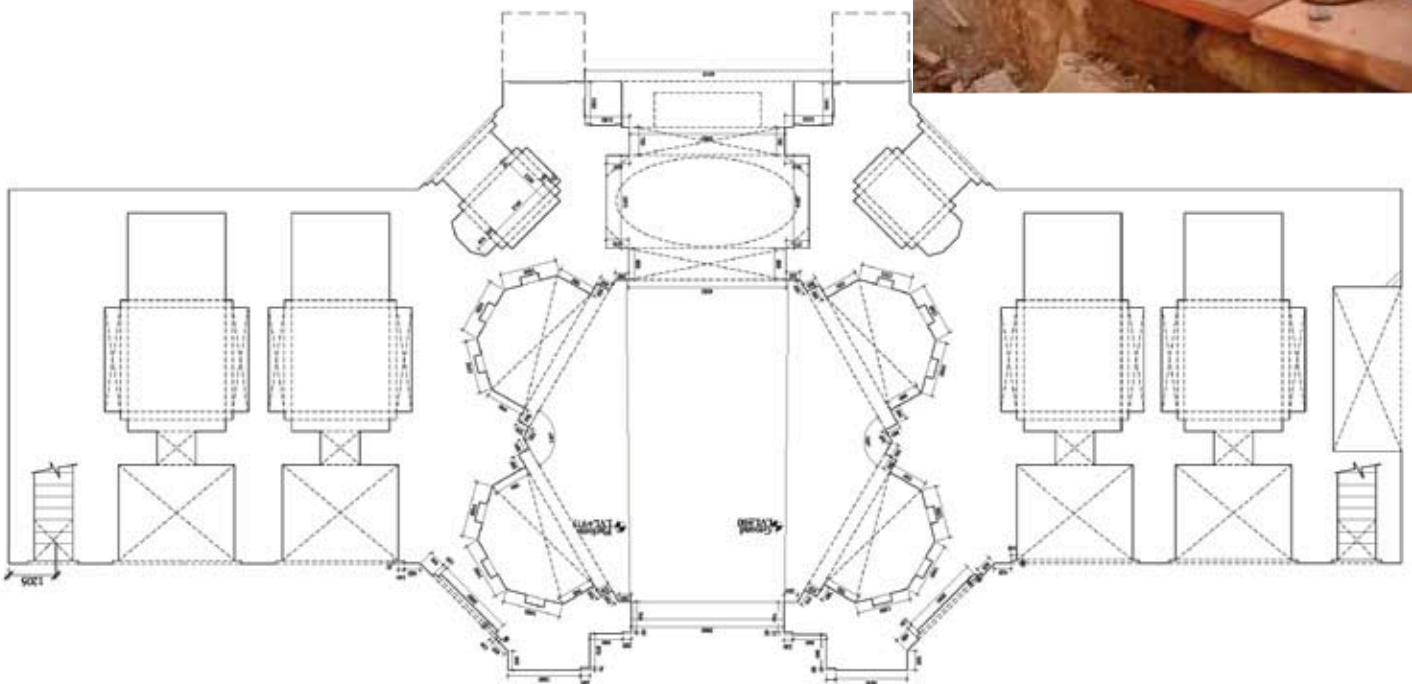
Vaulted Chambers

Action Taken:

- The monumental gateway includes two vaulted chambers on either side of the principal entrance chamber; both of these were in an advanced state of deterioration requiring major conservation works to repair collapsed portions of the vault..
- The arched chambers on both the sides of the entrance chamber were in extremely dilapidated condition posing a great threat to the structure above.
- The external arched chambers had collapsed over the years due to a combination of vegetation damage, neglect, and structural failure.
- The wall surfaces were cleaned to remove later repair-works and other deposits. The cement and dead pointing works were raked out and replaced with lime mortar. The consolidation of the existing masonry was done using the lime based grouting.
- The structural repairs include stitching of the cracks, grouting and anchoring took place.
- The inappropriate past preservation works on the southern façade was carefully dismantled followed by reconstructing the arched profiles on each of the six bays. The wall surfaces were built on the original foundations that required to be strengthened by grouting of lime mortar.
- The red sandstone flooring is also provided in the chambers.
- All the conservation works have now been completed using lime plaster.



(Above) All chambers on the eastern and western side of the main gateway were in various states of collapse; (Right Top) Architectural documentation of the Gateway



The Upper Chambers

Action Taken:

- The structure on the second and third floor levels had almost completely disintegrating thus all supports to the ornamental facade were lost. Conservation works on the upper chambers have aimed at restoring support and structurally tying the facade to the chambers here.
- The Arab Serai gateway consists of two upper levels. The arched openings on both the sides of the entrance chamber have staircases leading to the first level. The central chamber rises till the upper level where the external walls of this chamber is punctured with the arched niches.
- The original profiles of the upper chambers were determined on the basis of the archival images, existing remains of the walls, domes and arches.
- It was found that a vaulted corridor runs around this wall on both the sides where there is a staircase in the end giving access to the second level. Detailed documentation of the first level was carried out. The cement concrete flooring was then removed to expose the remains of the walls that once existed, over which the restoration of the vaulted chambers were undertaken.
- Partially collapsed chambers were completed to the extent that it provides structural stability to the monument as well as to revive the lost architectural integrity of the monument.
- The existing staircase, arches, walls etc. have been conserved. The construction of parapet is complete.
- The terracing works on both the levels required complete removal of cement concrete and laying a traditional lime concrete terracing to original slope.
- The existing remains of the central dome is now repaired to the possible extent as per original construction details and profiles to provide the structural stability to the monument.

Due to the collapse of portions of the gateway, its top member had become structurally unstable. With the chajja tilting on the facade, this would have resulted in toppling of the entire gateway towards the frontal lean. As part of the conservation efforts, when the arcade and chamber was restored (Below) on the upper floor, they also provide much needed additional support and tie-in to the gateway from rear side. Restoring the corner chambers also resulted in the decrease of the slenderness ratio of the structure, lending the Gateway more stability



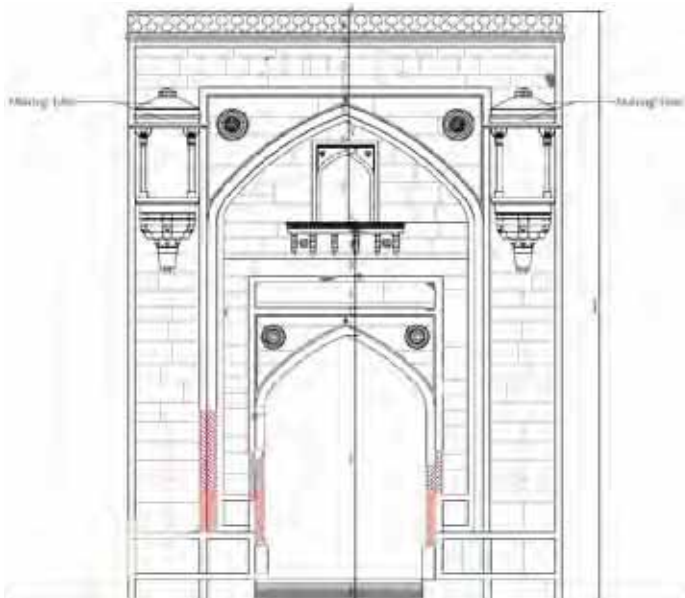


Glazed Tilework on *Jharokhas*

Action Taken:

- The domed *jarokhas* or projecting balconies of the top level are adorned with turquoise and yellow tiles and bordered with white tiles. The tiles had mostly come loose and a significant proportion of tiles were missing.
- After detailed analysis and documentation of the *jarokhas*, the quantification of the tiles took place.
- The patterns of the tiles were traced manually and thus the entire pattern and tile sizes were deciphered.
- Restoration of the tiles on the *jarokhas* commenced in April 2014, and the restoration works of the tiles are now complete.
- Restoration of tile-work was coupled by carefully pointing the loose joints in the tile work with lime mortar to ensure no further loss of tiles took place.
- In keeping with the philosophy adopted during the restoration of tilework on the canopies at Humayun's Tomb, no existing tile was removed from the dome even where these had lost their glaze.
- Approximately one thousand flat tiles of different shapes and colours are now restored on the entire *jarokhas* as per original patterns.

(Left) Following a detailed condition assesment and architectural docuementation of the Gateway, tilework on the canopies was restored, thus putting the finishing touches to a conservation effort that has without doubt ensured that a Mughal era structure stays standing in its original grandeur.



MATERIALS TO BE PLASTERED SURFACES		MATERIALS TO BE PLASTERED SURFACES		MATERIALS TO BE PLASTERED SURFACES	
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	Plaster		Plaster		Plaster





Glazed Tileworks

Action Taken:

- Portions of exquisite glazed tile work on the Bu-Halima Gateway (Above) were still present on the eastern façade in the form of tiled medallions in the spandrels of the central large recessed arch, tile inlay work in the panels of chamfered surfaces and on the parapet.
- The extensive documentation of the tile remains, of the large medallions comprising of small pieces of tiles beautifully put together, were carried out and the shapes and sizes of missing tiles were comprehended.
- The tiles were then prepared using the original materials and techniques.
- The tiles were then arranged in the original position by the craftsmen and now tile restoration work is completed on the Bu-Halima Gateway.
- The spandrels of all the arches and parapet were then finished with the Red polychromy work.

(Above) Tilework and polychromy works at Bu Halima's Gateway suffered deterioration; (Left) Following detailed architectural documentation and condition assesment, tilework, where missing was restored (Below)





Lime Plasterwork

Action Taken:

- The rubble masonry gateway, finished in plaster, is a simple structure when compared to the gateways it stands amidst. The eastern facade is chamfered at the corners and the centre portion treated with a large arched recess which encloses a slender arched opening in the centre of the facade

with *jharokhas* and an arched opening of similar size repeated on the lower level. The western, southern and northern sides have wider arched openings repeated on both levels in the centre of the façade.

- The plaster on the lower half of the façade was mostly lost and has been re-plastered in cement on at least two occasions since 2001. This inappropriate conservation work on the monumental gateway first required the cement and other modern plastered portions on the façade and the interior spaces to be carefully removed.
- After completely removing the added cement layers, the plastering works were commenced. The plastering layers included coarse lime mortar for the base layer and fine lime mortar for the top layer. The plastering works were then finished using a coat of 1 mm fine layer of Lime punning comprising of 1:1 ratio of lime and marble dust.
- The parapet ornamented with the *kangura* motif, which had collapsed in portions and poorly rebuilt, are now reconstructed and tiles are laid where they were missing.
- The Lime plastering work is complete on the external and internal surfaces.
- The internal chambers had ornamental plasterwork on the ceilings and medallions, though much of it is lost due to neglect over the years.
- These decorated surfaces were repaired in plain cement plaster which leads to the loss of most of the decorated plasterworks.
- After careful documentation of the existing remains, the original patterns were discerned and the restoration works were carried out by the master craftsmen by replicating the existing patterns.
- These decorative patterns are then finished with Lime punning and application of red polychromy.

(Above) The Gateway walls had been covered with cement plaster which was required to be removed; (Right) Restoration of historic lime plaster on the walls and arches





Sandstone Lattice Screens

Action Taken:

- After the inspection of the building it was found that in the earlier conservation attempt the sandstone screens have been replaced with cement screens. Such interventions have severely disfigured the historical significance of the structure.
- The careful documentation of all the opening sizes and shapes was carried out and the lattice screens were then hand crafted by the master craftsmen.
- All the lattice screens are now prepared and installed in the arched openings of the structure.
- After the inspection of the building it was found that most of the beautifully carved sandstone lattice screen parapets were missing from the structure which severely disfigured the historical significance of the structure and made it unsafe.
- The existing parapet screens were studied for details like sizes and shapes of the parapet. The screens were then hand crafted by the master craftsmen.
- All the parapet lattice screens are now prepared and installed in the arched openings of the structure.

(Above) Sandstone jaalis which were replaced with concrete jaalis (Bottom Left), were re-installed after a detailed documentation. Bu Halima's gateway after restoration of sandstone jaalis (Bottom Right).



LEGEND									
STRUCTURE	PLASTER	PAINT	ROOFING	FOUNDATION	DOOR	WINDOW	MINIATURE	SCULPTURE	OTHER
Brick	White	Red	Green	Grey	Red	Green	Yellow	Black	Blue
Concrete	White	Red	Green	Grey	Red	Green	Yellow	Black	Blue
Plaster	White	Red	Green	Grey	Red	Green	Yellow	Black	Blue
Paint	White	Red	Green	Grey	Red	Green	Yellow	Black	Blue
Roofing	White	Red	Green	Grey	Red	Green	Yellow	Black	Blue
Foundation	White	Red	Green	Grey	Red	Green	Yellow	Black	Blue
Door	White	Red	Green	Grey	Red	Green	Yellow	Black	Blue
Window	White	Red	Green	Grey	Red	Green	Yellow	Black	Blue
Miniature	White	Red	Green	Grey	Red	Green	Yellow	Black	Blue
Sculpture	White	Red	Green	Grey	Red	Green	Yellow	Black	Blue
Other	White	Red	Green	Grey	Red	Green	Yellow	Black	Blue



Sandstone Flooring

Action Taken:

- On the lower level, alterations to the plinth had been carried out in the past to prevent water ingress once earth levels on the west, north and south of the gateway had increased significantly due to earth in-fill. The inappropriately built internal platforms were broken to understand the original levels; and it was found that the original floor level is about 50cm lower than the existing level.
- The levels of the internal platforms were then restored by lowering the platform and it was finished by providing sandstone paving on these platforms.
- This allowed the central portion to be widened by about 60 cm on either side thereby significantly enhancing the historical character of the space.

Lime Concrete Terracing

Action Taken:

- After completely removing the added cement layers from the terrace, the terracing work started using the lime concrete comprising lime mortar and brick aggregate. Traditional organic additives such as Bael Fruit pulp, jaggery were added to make the surface water tight and as per original slopes and details.
- The terracing works are now complete.

(Above) A detailed condition assesment of the structure was carried out as a precursor to conservation works and included listing all works required to be carried out; (Below) Cement concrete from the roof was manually removed and replaced with a traditional lime concrete based flooring. This required over 100 cu. ft. of lime concrete to be lifted to the roof.





(Above) Removal of dead cement pointing and stitching the cracks in the enclosure wall and bastion chambers was followed by pointing with lime mortar.

07 Bu-Halima Complex: Enclosure Wall

Removal of Cement Pointing

Action Taken:

- The Outstanding Universal Value of the Humayun's Tomb World Heritage Site is recognized as this being the densest ensemble of the Mughal era Garden-Tombs. Each of the tomb complexes was enclosed in masonry enclosure walls and therefore the enclosure wall is as significant as the monuments sitting within these complexes.
- The joints of the masonry enclosure wall were finished in cement which lead to the deterioration of the original historic fabric.
- The cement joints are raked from the enclosure wall and after the completion of raking of joints, the wall surfaces were rubbed to ensure the complete removal of salts from the wall surfaces.

Re-Pointing using Lime Mortar

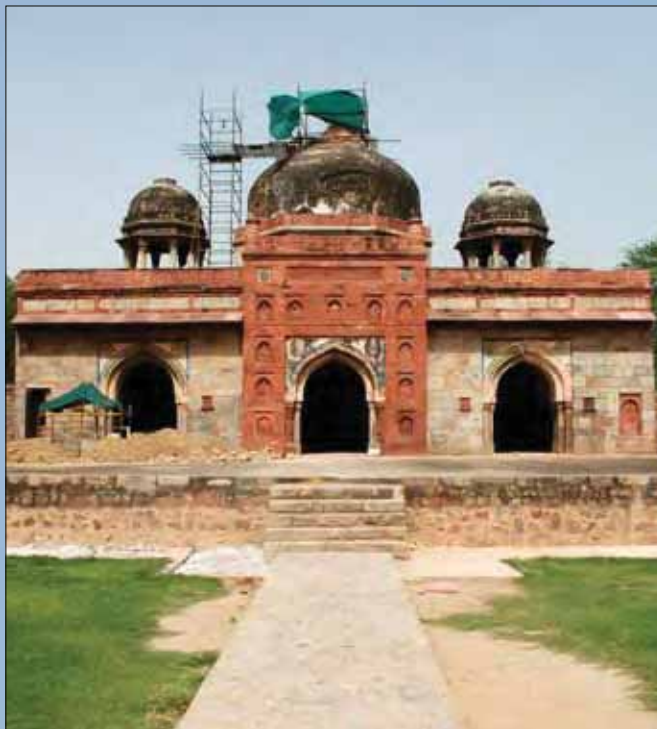
Action Taken:

- After raking out the cement from the joints in the enclosure wall, they were then re-pointed in lime. The wall surfaces were cured with clean water after the re-pointing works dried.
- The plinth protection of the enclosure wall was finished in cement as a previous intervention.
- The cement concrete was removed from the plinth protection of enclosure wall and the conservation works were finished with the restoration of the sandstone plinth protection along the entire length of the enclosure wall.
- The works on the enclosure wall are now complete.

Stitching of Cracks

Action Taken:

- The enclosure wall and the chambers in the Bastion suffered from deep structural cracks due to neglect over the years.
- The cracks are repaired with the help of grouting
- It was also found that the arched entrances in the Bastion chambers were in an advanced state of disrepair. These arches were repaired with the help of brick shuttering which was made as per the original sizes.
- The walls and ceilings of the Bastion chamber are then finished with the application of base and fine layer of lime.



*(Left) Isa Khan's Mosque in 2011, before conservation;
(Right) Various stages of tilework restoration on canopies
and finial*



08 Isa Khan Garden - Tomb Enclosure

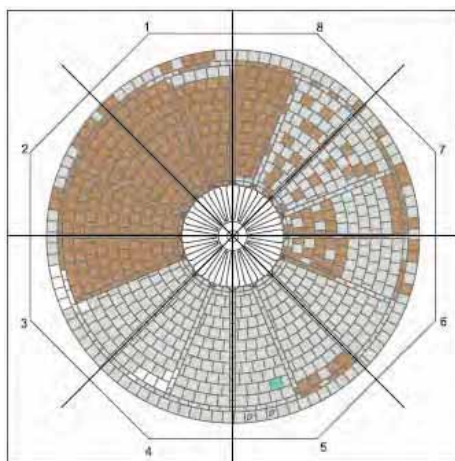
The Isa Khan complex comprises of a walled enclosure within which is located a mosque and an octagonal Tomb. The borders of arches and medallions are beautifully ornamented by decorative plasterwork and glazed tiles of different colours. In the tomb, parapet above the chajja has extensive tile work on the *ḳanguras* (battlements) and borders. The eight *chattris* or canopies supported by columns of red sandstone were all covered with glazed tile work. The portions of original tile decoration are still preserved on the east façade of the Mosque with blue, yellow and green as the most prominent colours. The profuse ornamentation is a significant element and a clear demonstration of the development of architectural style for an octagonal mausoleum used by Sayyids and Lodhis.

Restoration of the Tilework at Isa Khan Mosque

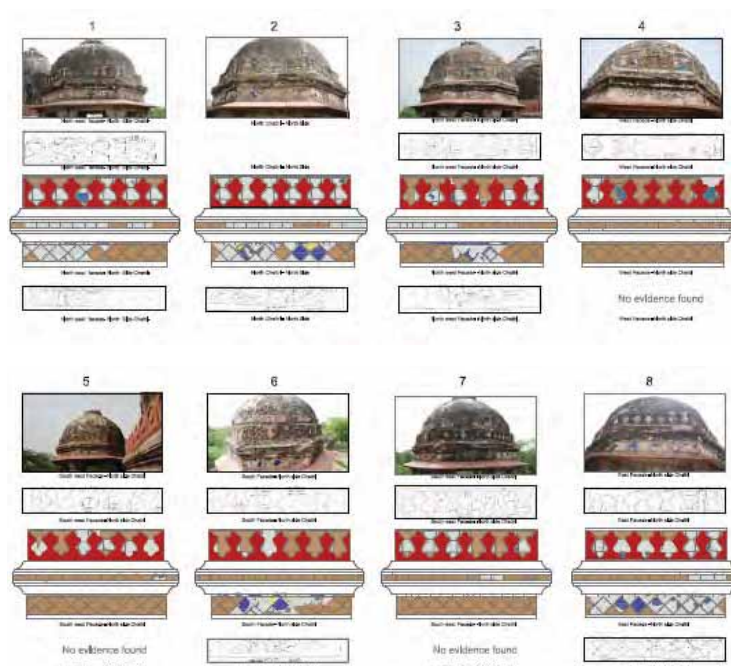
Action Taken:

- The tile research project was started by AKTC in 2008 after it was determined that each of the monuments in the project area were adorned with tilework to some extent. After years of extensive research and experimentation, matching glazed tiles are now prepared in-house.
- After the extensive conservation works were completed at the Isa Khan's complex in 2013, a detailed documentation and condition mapping, covering each tile remain was done to understand the original layout as well as the current status of the glazed tile work.
- Each tile pattern was manually traced in situ and then converted into working drawings. A detailed photo documentation record was also collected.
- The conservation philosophy of retaining the maximum historic fabric was followed and the tiles will be put back where they are completely missing.
- Based on this, a precise quantification of the tiles was done and required materials were procured.
- The tile restoration works were carried out on the canopies of Isa Khan Mosque and they are restored by master craftsmen under the full time supervision of Engineers and art conservator.
- The tile restoration works on the canopies and façade of the mosque is now complete.
- The estimated number of tiles required for the tile restoration in Isa Khan Tomb is approximately 12000 and approximately 50% tiles have already been prepared. The tiles vary in shapes and sizes and therefore most of the tiles are individually prepared. The new tiles will exactly match with the original tile in colour, texture, sectional specifications, mineral specifications, shape (floral, triangle, flower etc.) and size.

(Right) Detailed documentation of all canopies to carefully record existing tiles and discern original patterns



Northern Chattri Dome Top View:
Existing Condition



Procedure

Tungpote tiles have been created to replace those tiles that were missing from the arches. Any tiles, either colored or just the base, that still exist on the arches prior to the conservation work will not be removed or replaced. Only missing tiles will be replaced. Also, the current plan has been taken from the base plan to be conserved.

Area Measurement	
Area of Conservation	13.75 sq. m
Area of Existing	13.75 sq. m
Area of Missing	13.75 sq. m
Area of Existing + Missing	27.5 sq. m
Area of Existing + Missing + Conservation	41.25 sq. m
Area of Existing + Missing + Conservation + Conservation	55 sq. m
Area of Existing + Missing + Conservation + Conservation + Conservation	68.75 sq. m
Area of Existing + Missing + Conservation + Conservation + Conservation + Conservation	82.5 sq. m
Area of Existing + Missing + Conservation + Conservation + Conservation + Conservation + Conservation	96.25 sq. m
Area of Existing + Missing + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation	110 sq. m
Area of Existing + Missing + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation	123.75 sq. m
Area of Existing + Missing + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation	137.5 sq. m
Area of Existing + Missing + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation	151.25 sq. m
Area of Existing + Missing + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation	165 sq. m
Area of Existing + Missing + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation	178.75 sq. m
Area of Existing + Missing + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation	192.5 sq. m
Area of Existing + Missing + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation	206.25 sq. m
Area of Existing + Missing + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation + Conservation	220 sq. m

Legend

	Case
	The Base Existing
	The Base Existing + Tungpote
	The Base Existing + White
	The Base Existing + Colored Base
	The Base Existing + Green
	Complete Tile Loss - Clear Concrete Surface
	The Base Existing + Yellow
	Complete Tile Loss - Clear Concrete Surface
	Complete Tile Loss - Clear Concrete Surface
	Complete Tile Loss - Clear Concrete Surface
	Complete Tile Loss - Clear Concrete Surface
	Complete Tile Loss - Clear Concrete Surface
	Complete Tile Loss - Clear Concrete Surface
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	Complete Tile Loss - Clear Concrete Surface



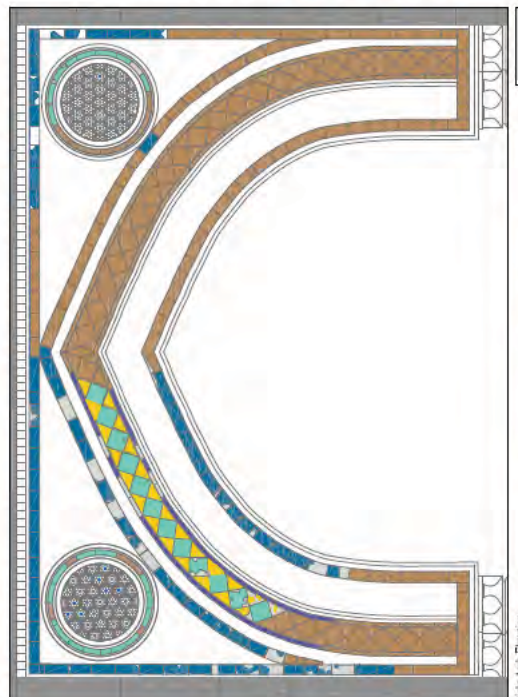
Isa Khan's Mosque (Key Elevation)

ARCHAEOLOGICAL SURVEY OF INDIA
 ISRAELIYAH
 AGA KHAN TRUST FOR CULTURE

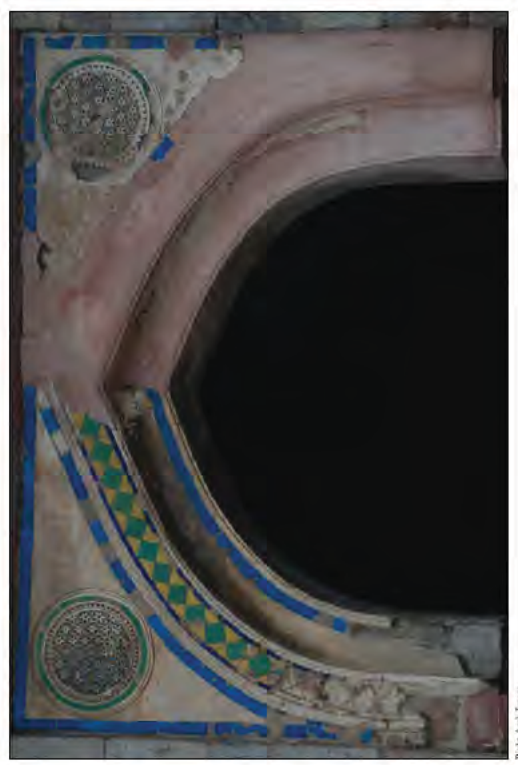
HUMAYUN'S TOMB - SUNDER NURSERY - NIZAMUDDIN BASTI URBAN RENEWAL INITIATIVE DELHI, INDIA

Isa Khan's Mosque
 Glazed Tile Work
 Condition Assessment
 Right side Arch

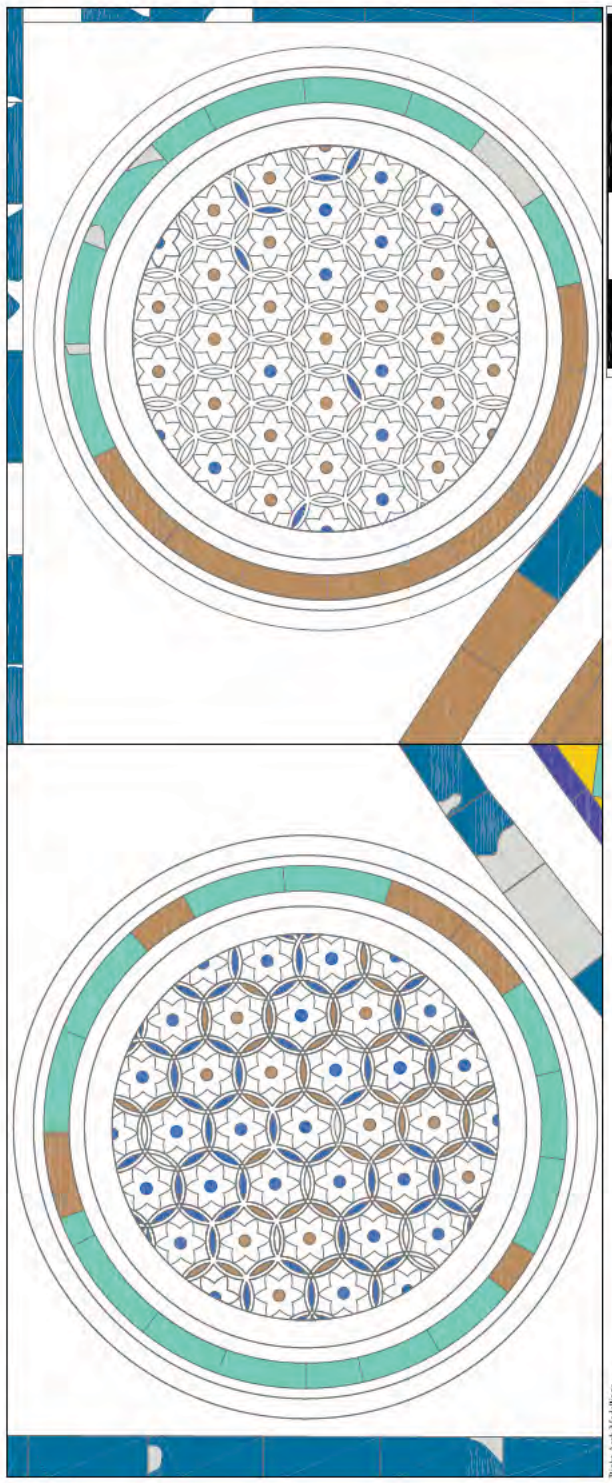
Scale: as/shown
 Date: Documented by: ARTC
 Jan. 2012
 Dwg No.: IKM/CA/01A



Right Arch Elevation



Right Arch Elevation



Right Arch Elevation

10 Nila Gumbad Road

In the 1980's Nila Gumbad, Delhi's earliest Mughal structure was segregated from the Humayun's Tomb when a trunk sewer line was laid. Restoring the linkage required years of negotiation and discussion with over a dozen agencies. Over 200 squatters were relocated and AKTC had to build an alternate 1 km road. Almost four decades later it is a matter of great satisfaction that the integrity of the World heritage site has been restored.

Action Taken:

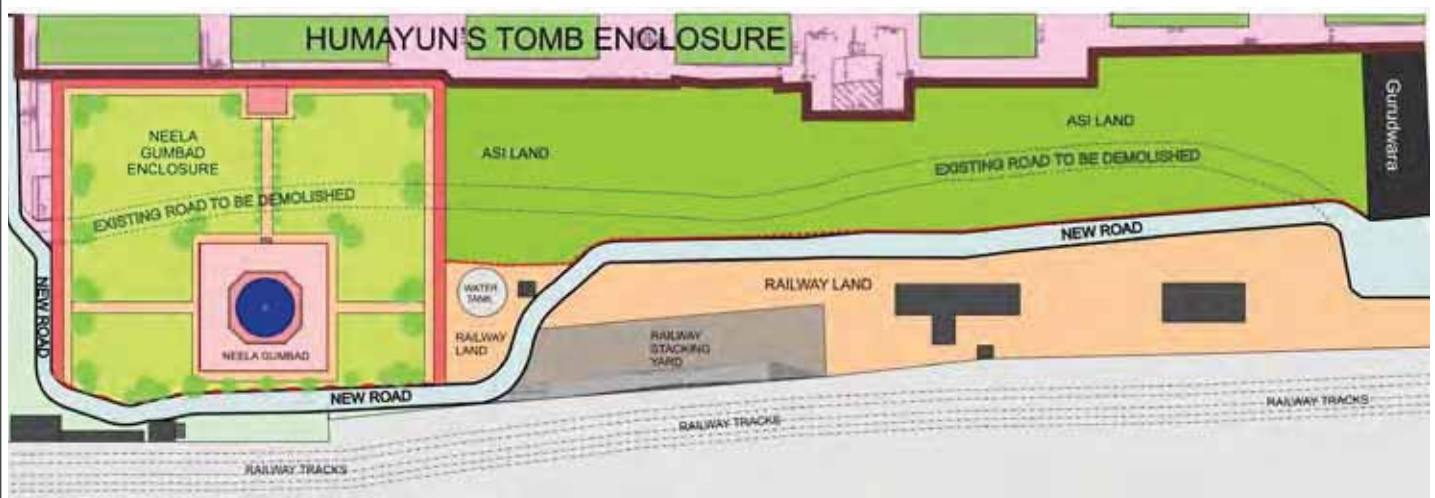
Construction of the alternate road that re-routes traffic behind the Nila Gumbad has been completed in mid 2014. After long negotiations since 2013, the Indian Railways has agreed to demolition of an abandoned toilet block that was located on the route of the proposed road. The new road is currently being used in parallel with the existing road by vehicles. After repeated requests, the Indian Railways have also moved all the railway sleepers and construction materials from the ASI land. The material is now stacked on the railway land along the sides of the road.

Construction of an eight feet high and 400 meter long boundary wall along the western side of the road has been completed by December 2014. The boundary wall has been made in stone masonry and mild steel grills.

Next Steps:

AKTC to demolish the old road so that the landscape works can commence which will allow visitors to Humayun's Tomb to also visit the Nila Gumbad monument.

(Below) Following over 10 years of discussion with all stakeholders including the Railways, over 200 squatters at Nila Gumbad were relocated by the ASI and the road bifurcating Nila Gumbad and Humayun's Tomb was agreed to be shifted east of Nila Gumbad.





Reinstalling Sandstone jaalis and paving

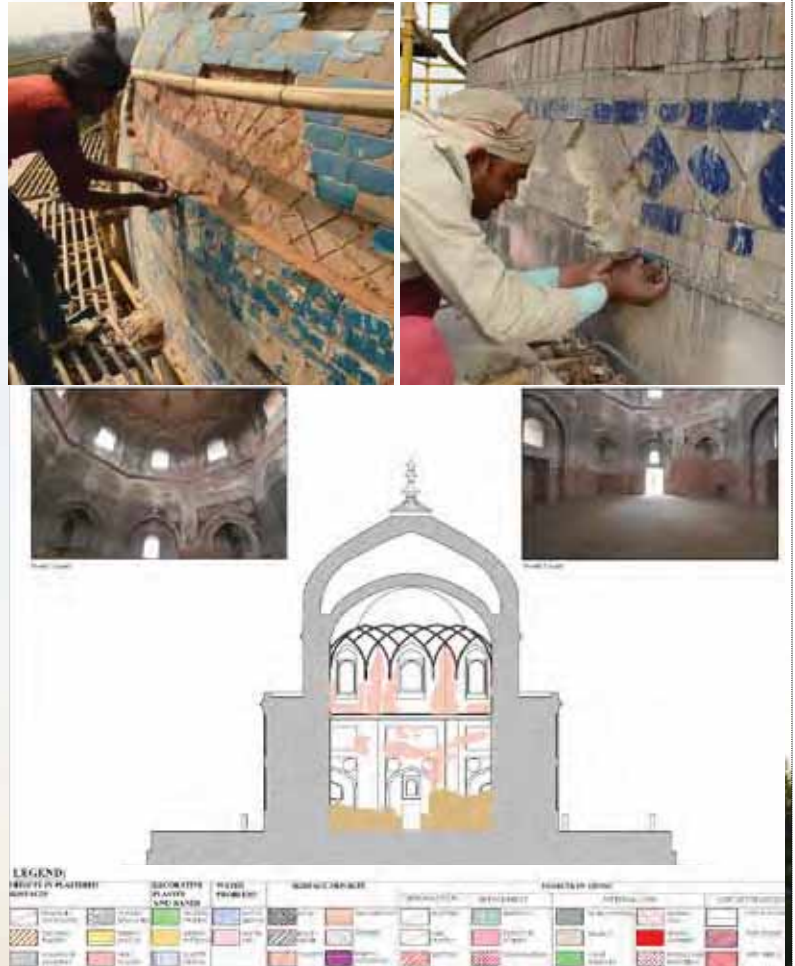


Restoring historic plasterwork



Removing cement concrete from terrace, plinth and main hall

Restoring glazed tilework on the dome, drum and facade



Shifting the road to include Nila Gumbad in the World Heritage Site of Humayun's Tomb Complex



11 Sundarwala Mahal

The Outstanding Universal Value of the Humayun's Tomb World Heritage Site is due to this area being an ensemble of 16th century garden tombs of which Sundarwala Mahal is a prominent example. Conservation works on Sundarwala Mahal, which is a nationally protected monument included repair and rebuilding the western façade, restoring decorative plasterwork in the muqarnas and ornamentation, reinstallation of jallies, internal and external flooring, restoration of parapet wall.

Action Taken:

Dismantling existing cement concrete flooring to bring it to original level:

- It is understood that the structure originally had only lime-concrete flooring that got disintegrated over the years.
- The task of dismantling existing concrete flooring included removal of cement concrete from the floor using non abrasive methods which helped in revealing the original floor levels.
- The red sandstone of required quantities for the internal chambers have also been procured and this will be provided once the plastering works are complete in the internal chambers.

Dismantling random rubble masonry alcoves on the western façade:

- Sundarwala Mahal is a square structure with corners chamfered accommodating an opening on all the four sides. Repairs carried out to the western façade about a decade ago inappropriately altered the profile of the half-domed vaulted chambers to simple pointed arches. This resulted in altering the original architectural style of the monument.
- In order to reverse the damage and ensure integrity, the modern repairs on the structure were dismantled.
- During ongoing conservation works the inappropriate reconstruction on the western façade was carefully dismantled followed by reconstructing the original profiles on each of the five bays.

(Below) The western façade, reconstructed by the ASI in 2001-03 was required to be demolished as half-domes had been rebuilt as arches. The structure has four identical façades.





(Left) Dismantling existing cement concrete from flooring; and (Middle) terrace and (Right) laying lime concrete. The final phase of conservation works at Sundarwala Mahal are supported by HUDCO through NCF

Reconstruction and consolidation of alcoves as per original shape

- The walls were built on the original foundations that also required to be strengthened by grouting of lime mortar.
- A brick shuttering was provided with the help of mud mortar matching with the original, to give proper shape to the openings. On its drying, rubble masonry including preparing wedge shaped stones, were provided using lime mortar (1:1:2) (1 - lime, 1- surkhi, 2 - sand) mixed with organic additives such as jaggery and belgiri.
- The five half-domed bays on the western façade are now reconstructed, raising the wall levels by 300mm.
- The works are now complete.

Providing decorative red sandstone lattice screen in the arched opening

- Three archways on each façade have an arched opening over the doorway, these originally held lattice screens that seem to have been removed from here in the 20th century. These are not only important architectural elements but also serve to prevent the entry of birds.
- After careful inspection and documentation of each arched openings, it was found that the opening sizes were disturbed during earlier repairs and these varied considerably in size.
- New lattice screens prepared individually by the master craftsmen using traditional tools have now been prepared and installed in the arched openings.



Plastering the internal surface

- The wall surfaces were cleaned to remove later repairworks and other deposits. The cement and dead pointing works were raked out and replaced with lime mortar. The consolidation of the existing masonry was done using the lime based grouting.
- The structural repairs include stitching of the cracks, grouting and anchoring took place.
- The internal surfaces were then plastered using traditional mix of lime mortar, sand and surkhi along with organic additives.
- The plastered surfaces are then rammed to cure shrinkage cracks.
- 10% of the plastering works are now complete.

Dismantling of existing cement concrete terracing

- 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.
- The cement layers on the terrace layer have been removed which exposed masonry and original levels on the roof.

Laying of lime concrete terracing over the roof (of average thickness of 125 mm).

- 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.

Restoring sandstone flooring

- After dismantling existing concrete, base layer using lime, surkhi and sand was provided.
- 75mm thick red sandstone of required quantities for the flooring had been procured and the red sandstone flooring was provided in the internal chambers.
- 20% of the flooring works are now complete and the works will be completed December 2014.

Next Stage:

Conservation works on the Sundarwala Mahal are planned to be complete by mid-2015.

(Below) The interior wall surfaces were required to be re-plastered in lime mortar



12 Lotus Pond

Within the Sundar Nursery area stand several Mughal-era structures. Conservation works on Lakkarwala Burj, Sunderwala Burj, Mughal Pavilion, Arched Platform, Grave Platforms were completed in earlier years. In 2014, conservation works have focused on the completion of conservation works on Sundarwala Mahal and Lotus Pond.

Action Taken:

- Lotus Pond is located to south of Sundarwala Mahal. The structure was found in a dilapidated state with western quarter of masonry completely collapsed.
- During detailed documentation of the pond it was found that it comprises of two courses of masonry. Bottom course of masonry is formed of 8 petal shaped cusps followed by a 16 sided articulate floral pattern in top course.
- The internal surface of the Lotus Pond was lined with lime concrete. Nine troughs, holding sweet earth and lotuses, have been added in an arrangement echoing fleuron of pond boundary

Next Stage:

Conservation works on the Lotus Pond are complete.

Following restoration of the foliated lotus pond with nine pits, lotus was planted here in mid-2014.



LIME CYCLE

return to traditional building crafts

When used in conservation works, H₂O (water) from lime mortar evaporates and CO₂ from the atmosphere is absorbed, allowing lime to go back into natural state of Lime stone (CaCO₃).



Limestone is burnt in kilns to produce building lime or 'quicklime'. Quicklime is then slaked in water for several weeks before mixing with various additives in a mortar mill to produce lime mortar.

Lime putty is mixed with sand and organic additives such as jaggery (gur) and Belgiri in a mortar mill to create lime mortar. The compaction of all these additives allows bonding required for lime mortar in conservation works.

Quicklime is slaked in water – absorbing water – creating Ca(OH). This process is exothermic generates heat and lime is kept slaked for at least three weeks allowing lime particles to break down.

Additives Used



A wide variety of organic additive are added to historic lime mortar, in pairs or in combination of others to improve the quality of the mortar. These organic additives are selected as per local climatic condition. Bel fruit, Jaggery, pulses, milk and milk products, egg whites, flowers, oil and fats and jute fibers are the most common organic additives used in the historic lime mortar.

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 20th 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

13 Tomb of Mirza Muzaffar Hussain

Popularly known as Bara Batashewala Mahal and built in AD 1603, Mirza Muzaffar Hussain's square tomb stands on a raised platform with five half-domed arched entrance bays on each side. Parts of the striking plaster ornamentation have survived on some of the internal wall surfaces, providing the evidence required to restore missing portions. Ornamental plaster medallions and intricate *muqarna* patterns on the half-domed arched entrance bays symbolise the highest craft traditions of the period. The central grave chamber, several feet below the ground, is surrounded by eight rooms, making this an example of the "hasht-bihist" plan, representing eight spaces of paradise as described in the Quran.

Restoration of Lime Plaster

Action Taken:

- The internal wall and ceiling 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 plastered in cement mortar.
- Trained art conservators carefully removed the cement patches, exposing blocked openings in four instances. Similarly, using water and soft brushes the wall surfaces have been cleaned off all soot.
- The surfaces are now plastered with lime mortar as per original patterns.
- The Tomb had a profusely ornamented interior though much of the interior ornamentation was 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 a careful documentation of the existing remains of original incised plaster work, restoration work of the decayed decorative patterns was undertaken.
- Completion of the restoring the decorative plasterwork included decorative lime plastering along with lime punning.
- The external façade of the monument had ornamented alcoves, medallions and *muqarnas*, though much of the ornamentation was lost due to neglect over the years. These decorated surfaces were repaired in plain cement plaster which leads to the loss of most of the decorated plasterworks.
- After careful documentation of the existing remains, the original patterns were discerned. The restoration of the incised plasterworks was carried by the master-craftsmen and the restoration of the decorative plasterwork includes decorative lime plastering along with the lime punning and application of red polychromy.



(Right) Mirza Muzaffar Hussain's Tomb is symmetrical along its central axis and thus any half facade is repeated 8 times. Conservation of the collapsed western facade was largely carried out on the basis of the standing eastern arcade.





Reconstruction of Missing *Kangura* Patterns

Action Taken:

- The southern and western façade repair works included reconstruction of all the 12 incorrectly built half domed bays as per original constructional details till parapet level.
- As part of this reconstruction, the *kangura* patterns on the parapet were reconstructed by replicating from the existing patterns and finished in red polychromy and turquoise tiles.
- The *kanguras* on the north and eastern façade were broken at many places and the conservation works required consolidating the *kangura* patterns. After consolidation of these patterns, the works were completed by application of red polychromy and tile works.



Restoration of Terrace

Action Taken:

- Manual removal of the added layers of the concrete to a depth of 20cm from the terrace. This removal exposed masonry and differential levels on the roof of which there was no earlier indication.
- 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.
- Red sandstone water spouts have now been hand chiselled and four have been fixed on each of the four façade.

(Above) Tiles, where missing, on the parapet were restored as per the original design and specifications

(Left) Cement concrete layers on the roof of the tomb were found to be of poor strength and inappropriately laid, therefore allowing water percolation; (Right) This was carefully and manually dismantled and lined with a traditional layer of lime concrete with brick aggregate and traditional additives and adequate slopes



Restoration of Sandstone Lattice Screens

Action Taken:

- After careful inspection and documentation of each arched openings, it was found that the lattice screens installed during earlier repairs varied considerably in size and are poorly crafted. Furthermore, the opening sizes were also disturbed. New sandstone lattice screens prepared individually by the master craftsmen using traditional tools have been installed in the arched openings.
- After the installation of all the hand chiselled lattice screens in the arched openings, the sandstone door frames were provided in all the central openings of all the four facades.
- Wooden doors were then installed in these openings.
- The remaining eight openings are provided with metal screens to prevent the entries of dogs and pigeons while permitting ventilation.

Restoration of Flooring

Action Taken:

- It included dismantling existing concrete and preparing base using lime concrete which 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.
- The flooring works have now been completed.
- A 3m wide Delhi quartzite plinth protection is provided around the entire length of the platform. After laying the foundation, a lime concrete base was provided over which the Delhi Quartzite stone was laid.
- The Plinth protection works are now complete.

(Below) Sandstone screens, visible in archival photographs had been removed from the monument – possibly for the antique market. These have been restored as has the traditional sandstone flooring.





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.



14 Chota Batashewala

Within the enclosed garden and standing just east of the Mirza's tomb, the remnants of an octagonal tomb once stood. It is said to have been profusely ornamented and known as Chota Batashewala. Described in the 20th century texts as "...standing on a platform some 3 feet high. It consisted of a central octagonal chamber, with a surrounding arcade containing an arched opening on each of the eight sides. The central apartment was provided with four doorways, three of which were closed by stone jalli screens. The domed ceiling of the central chamber, as well as the walls inside, is ornamented by floral and geometrical patterns intermingled with Quranic inscriptions in incised plaster".

01: A vaulted tomb chamber was discovered and the earth in-fills placed inside were removed; 02: Architectural models created to understand the structure in detail; 03, 04 & 05: Restoration works on the structure as per the evidences, archival images found



Using archival images, the effort here has been to raise standing portions of the structure to complete just one portion of the facade in order to indicate to visitors the original scale and profile. A rubble masonry wall has been built all along the periphery to provide support to standing portions in lieu of the shallow foundations of the structure.



Chota Batashewala with Mughal Tomb in the background

1930 A.D. ▲

1955 A.D. ►



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.



15 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:

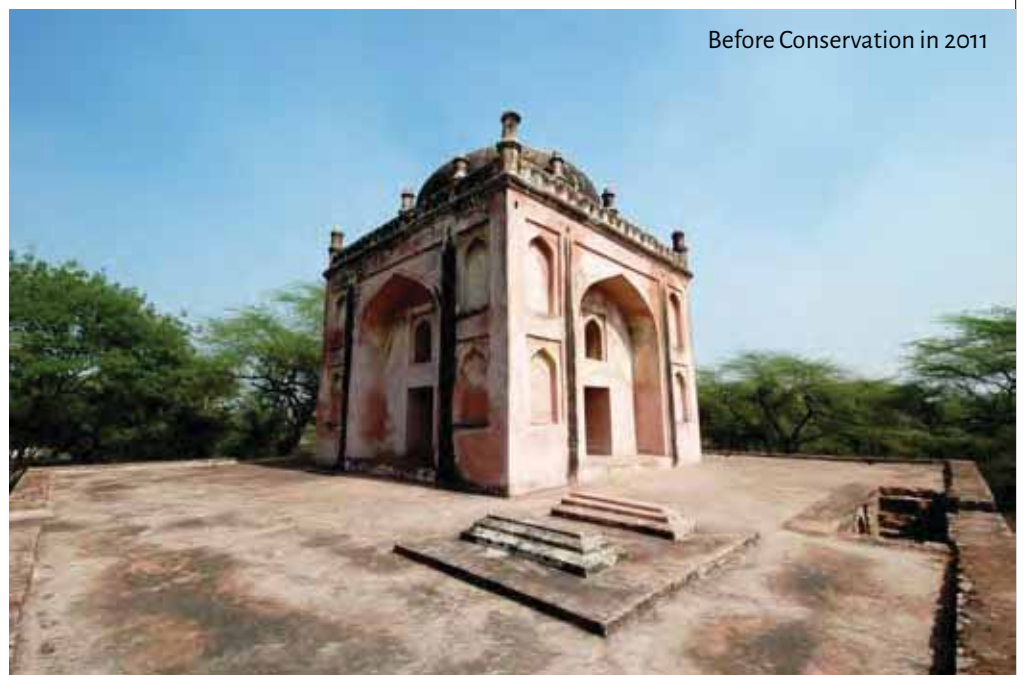
- The plinth of the tomb had multiple layers of cement concrete which added a lot of weight on the foundations of the tomb structure.
- This existing cement concrete is systematically dismantled which has also helped in revealing the original floor levels.
- After dismantling existing concrete, the base 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' 21st century cement plaster, restoration of lime plaster layers as well as the sandstone lattice screen that seems to have been removed in the 20th 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 21st 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.



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.

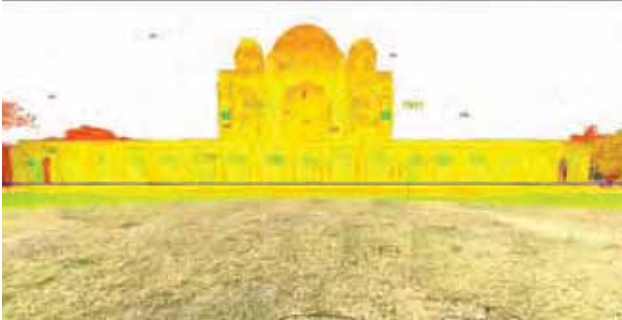
- The Florence Charter, 1981, Article 15

1. Identify the Place

The need for extensive conservation and landscape works in Abdur Rahim Khan E Khanan's Tomb was felt necessary to ensure long term preservation, enhance visitor understanding and experience of the Tomb and cultural heritage of Rahim .

2. Documentation & Research

Through 2014, exhaustive recording, documentation, condition assessment, surveys and research exercise was carried out by the multi-disciplinary project team as a precursor to the Conservation Plan that forms the foundation for the project.



3. Statement of Significance

Prior to outlining the conservation philosophy it was considered essential to define the significance as is understood by the project team. This is to be read in conjunction with the Statement of Outstanding Universal Value as per the nomination dossier.

4. Conservation Philosophy

The conservation works preceded by high standards of recording to be undertaken are focused on restoring the '*spirit and feeling*' of the space with an emphasis on craftsmanship, interpretation and supervision.

5. Peer Review

Evaluation of the importance of the elements involved and the decision as to what may be destroyed cannot rest solely on those in charge of the work. Additionally, being a related place to the WHS, it is considered essential that the conservation works are on a regular basis reviewed by independent experts in addition to ASI Core Committee and AKTC officials.

6. Conservation Plan

Following the approval from the ASI core committee this Conservation Plan (text, photographs and drawings) will be available on the Project website and thus accessible worldwide.

7. Implementation

Conservation works will commence only on adequate financial resources being available for the successful implementation of this project. The project has access to technical staff, national and international experts. In order to ensure quality of craftsmen, no conservation works will be tendered – all works being carried out by master-craftsmen employed by the project. Similarly traditional materials – sandstone & lime – are already being procured and prepared with quality assurance.



8. Supervision

Conservation works will be carried out in keeping with the Conservation Plan and be guided by experienced engineers and conservation architects. A conservation architect and a Jr. engineer will be present at all times during conservation works and be assisted by field supervisors.

9. Completion Report & Publication

Six monthly progress reports will be prepared for record and donor reporting. On the completion of the project a publication on the project will be published. In addition the annual report will document works carried out each year.

16 Khan I Khanan's Tomb

Built as a tomb for Rahim's wife, the mausoleum is also known as a precursor to the famed Taj Mahal for its architectural style, with some innovations developed even since the building of emperor Humayun's mausoleum. The marble cladding on the dome, façade, flooring of the terrace and the tomb, the parapet's, lattice screens all seem to have been removed and though reported to have been used at Safdarjung's tomb – there seems to be no evidence to confirm this.

Action Taken:

- Owing to past plunder as well as repairs Rahim's Tomb poses a significant conservation challenge. Following several months of architectural documentation, condition assessment and discussions with officials of the Archaeological Survey of India, a conservation strategy for the mausoleum was formalized.
- This was formally approved by the ASI Core Committee following which detailed documentation was carried out leading to commencement of conservation works in late 2014.
- The monument is documented in detail to understand the Mausoleum. As part of the documentation, scientific methods are adopted. The entire monument is scanned using 3D laser scanning for documenting the site and preparation of elaborate drawings like detailed plans, section, and elevations.
- Also walkthrough for the building and site will be produced and will be used as part of the project film.
- 95% scanning works are completed and the remaining will be completed by the end of January 2015.
- Major section of the conservation works on Rahim's tomb is to restore the stone façade where either the stone are completely missing or are in an extremely dilapidated condition.
- The works of restoration of the lower arcade of the facade has started. The sandstones which are completely damaged and have large cracks will be removed and new stone matching with the cross sectional detail of the original will be put back.
- Also the medallions in the spandrels of these arcades are replaced where they are completely eroded. The medallions are traced manually and then the master craftsmen prepare the medallions.
- The procurement of materials such as Delhi Quartzite required to replaced the plinth protection that is visible in archival images is ongoing.
- It was agreed that the 1923 repairs to the mausoleum will be retained.

Next Steps:

The major conservation works on Rahim's Tomb for 2015 will be to carry out Emergency repairs & stabilization, and investigation to determine the strategy for Interior repairs and landscape restoration and Façade and remaining areas.

(Right) Conservation works at Khan I Khanan's Tomb are being funded by InterGlobe Foundation.



DOCUMENTATION

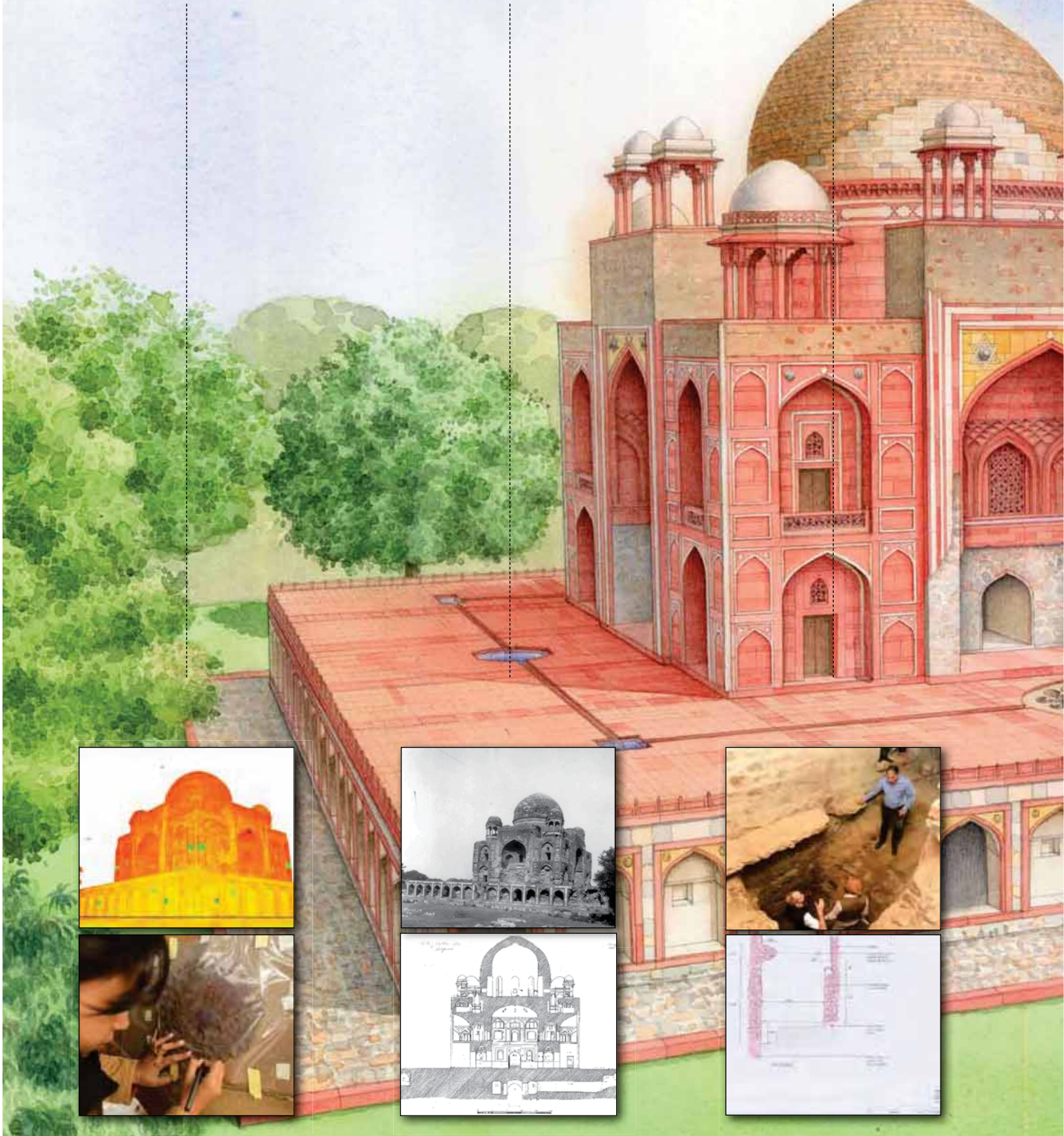
3-D Laser Scanning of structure in mid-October, which will be used in creating accurate architectural documentation and condition assessment drawings for the structure.

ARCHIVAL RESEARCH

Through archival research, archaeology, documentation of the structure the conservation and landscape initiative will lead to a better understanding of the mausoleum which has been severely altered in the 18th century.

STRUCTURAL ASSESSMENT

Investigative 'tell-tales' installed at various locations on the building to assess any movements. Detailed structural analysis was carried out of the building at the crypt, plinth, foundation, chambers and dome.



CRAFTSMANSHIP

As part of return to craft-based approach to conservation, all conservation works undertaken at Rahim's tomb utilise *'available traditional craftsmanship in the country and the use of traditional building materials and skills as an integral part of the conservation process'*.

PERIODIC REVIEWS

The Core Committee appointed by the Director General, ASI will be held on a monthly basis while conservation works are carried out. Additionally, being a it is considered essential that the conservation works are on a regular basis reviewed by independent experts.

CULTURAL REVIVAL

Documenting, studying Rahim's cultural contributions and disseminating this collected knowledge through publications, films, music recordings, heritage walks, Apps and exhibitions—leading to a greater interest amongst visitors especially school children.



17 Conservation of Azimganj Serai

Azimganj Serai is the earliest Mughal period Serai in Delhi currently standing within the boundary of Delhi Zoo and located in the north of Sunder nursery. It is a square structure with a huge courtyard of 111 meters x 111 meters with arcaded chambers all around. All the four corners of the monument have elegant octagonal Bastions. The square plan consists of 104 arched cells which are in an advanced stage of deterioration. The Serai clearly stood along the historic grand trunk road with its grand fort like appearance is of high historical and architectural significance.

The Serai stands in isolation within dense vegetation and not easily accessible for the visitors. Its ruinous remains clearly visible from Sunder nursery depict the original context and connectivity of the monument with the old grand trunk road. Azimganj Serai is just 600 meters away from the boundary of World Heritage Site of Humayun's tomb. The Project Outcome

Conservation works on the Azimganj Serai aim to revive the lost cultural significance and architectural integrity of the monument. The monument has seen significant loss of the architectural features such as chambers, arches and masonry walls in last fifty years due to loss of the connectivity and no maintenance. Conservation works will use traditional materials and craft techniques and also serve as a platform for training opportunities. It is expected that conservation works will require at least 250,000 man-days of craftsmen's work thereby generating significant employment.

Once conserved and collapsed portions are reconstructed, the Azimganj Serai will further enhance the Mughal cultural landscape of the Humayun's Tomb setting, making a significant case to expand the WHS boundaries to include the Serai.

(Below) Azimganj Serai: before conservation in 2010. Conservation works on this monument, protected by the Department of Archaeology, Government of Delhi are also being carried out with their co-funding.



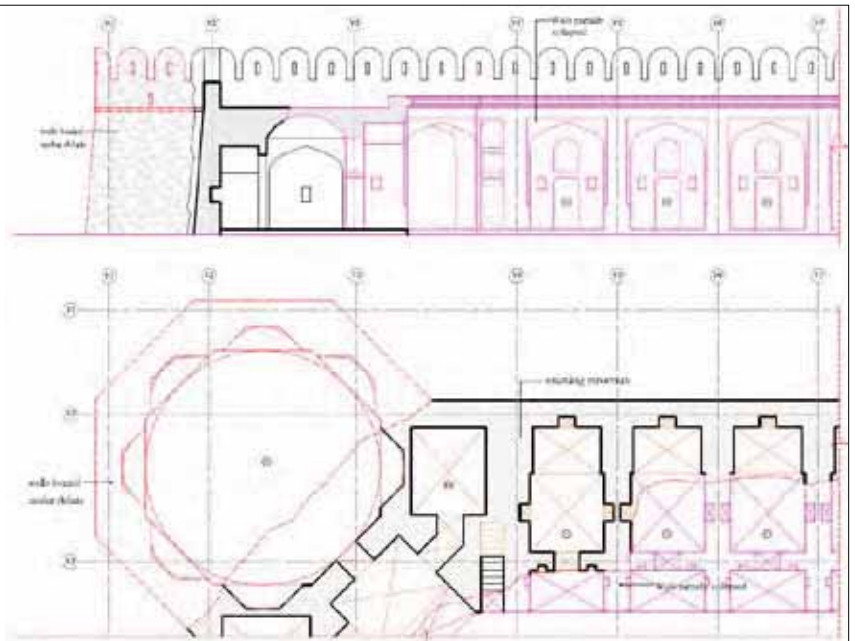
Conservation of Arched Cells

Action Taken:

- Documentation of the condition of the monument was done, as a precursor to any repair/ replacement as part of this conservation project.
- Excessive vegetation which lead to collapse of significant portions of the building with a large majority of the vaulted cells having collapsed. This unwanted vegetation was carefully removed under the supervision of experienced team of a conservation architect and engineers.
- 100 cubic meters of debris were carefully removed without damaging the historic structure.
- Scientific excavation was done at several locations within the monument to determine the original floor levels as intended by the Mughal builders.
- Deep filling was done to repair the structural cracks in the random rubble masonry to consolidate the existing structure.
- Conservation of six chambers on the south and three on the east side is ongoing. This required great precision and patience as nearly 40% of the structure had collapsed making the structure vulnerable to collapse.
- Customised scaffolding was made for conservation of arches, close inspection of each arch was done by team of conservation architect and engineer along with the craftsman.
- After the completion of conservation work the chamber walls were lime plastered using tradition tools and technique.
- The lime pointing of random rubble masonry on the exterior facade is also being carried out.
- The conservation process is an immense challenge for the on-site team as most of the architectural features such as chambers, arches and masonry walls have collapsed.

Next Steps:

Conservation works will continue up till 2017 and will include conservation of the remaining chambers, arches, Bastions and gates on both eastern and western wings of the monument.



(Above) Condition Mapping and architectural documentation of the monument was carried out prior to commencement of conservation works;
(Below) Site clearance and restoration work of chambers underway.





(Left) A ceramic tile finial was found under the cement plaster on the dome. This will be displayed at the proposed Humayun's Tomb Site Museum.

18 Barah Khambha

Conservation works on this prominently sited Lodhi period monument at Hazrat Nizamuddin Basti, New Delhi have been carried out with the support of the Delhi Urban Heritage Foundation of the Delhi Development Authority. 'Bara Khambha' built in 15th -16th century and so called on account of the 12 pillars on the four façade's.

Action Taken:

- Conservation works have aimed at ensuring long term preservation of this monument of national importance by removing inappropriate 20th/ 21st century layers and using traditional materials and architectural craft techniques to restore the design intention of the original builders.
- Detailed architectural documentation including condition assessment of the monument was done, as a precursor to conservation works.
- 200mm thick layer of concrete causing severe damage to the monument was removed from the terrace and new lime concrete prepared with traditional additives was laid as per original levels and slope.
- Repairing of domes which included removal of multiple layers of inappropriate cement plaster, applied in 2002-4 and replacing it with new lime plaster including conservation of architectural elements followed by a 2mm thick layer of protective lime coat.
- Damaged lime concrete flooring from the inside the monument was removed and new 50mm thick red sandstone flooring was laid here.
- The missing or damaged Delhi quartzite eave stones (*Chajja*) were replaced to ensure long term preservation.
- Delhi quartzite stone steps have been provided in the centre of the northern and eastern side where the principal access pathways leading to the tomb are situated.
- On the removal of the cement plaster from the principal dome, a ceramic finial base was uncovered though shattered. This has been removed for safe keeping and will be eventually displayed at the Humayun's Tomb Site Museum.

Next Steps:

Conservation works at the Barah Khambha will be completed by mid 2015.





19 Barah Khambha Park

The prominently sited Delhi Development Authority Park within which the Barah Khambha monument stands was landscaped to provide an appropriate setting for the monument.

Action Taken:

- The landscape design aimed to enhance the visual and physical access to the monument while retaining existing vegetation and incorporating existing pathways wherever possible.
- The landscape works were also an opportunity to provide an access to the park from the Hazrat Nizamuddin Basti while closing access from points not utilized by the public and hence taken over for inappropriate usage.
- 600 cubic metres of debris was removed to clear the area for landscaping of the park.
- 13000 square feet of 50mm thick red sandstone paving has been laid enhancing the historic setting of the monument.
- Plazas or sitting areas have been developed which will provide for significant pause along the walk and acts as contemplative spots too.

Next Steps:

- Lime plastering of internal surfaces including conservation of exquisite geometric motifs and mouldings.
- External lime plastering which includes undoing the inappropriate 20th century repairs.
- Landscaping works which includes leveling of the open area and plantation.

(Below) The DDA Park is being landscaped to provide an appropriate setting for the monument as well as allow shaded spaces for use of visitors to the area and residents of Hazrat Nizamuddin Basti.





20 Khilji Mosque/ Jamaat Khana Masjid

The Khilji mosque is the earliest mosque in Delhi that continues to be used for worship. Built by Khizr Khan, son of Sultan Alauddin Khilji (Khilji Dynasty) in 1315-1325 AD, the mosque is the largest structure in the Dargah enclosure. Each of the three bays has a domed roof with the central one being the largest, as is the practice. Marble finials adorn the top the domes. The central bay and the entrance

archway are embellished with bands of exquisite geometric motifs and Quranic inscriptions. Following the request from Mutawali Khilji Masjid “Janab SMI Nizami” AKTC signed an agreement to undertake conservation works over a three year period at the mosque. Subsequent to the conservation of Fatehpuri Masjid at Chandni Chowk being undertaken by the Archaeological Survey of India, this would be the first ever conservation effort at mosque in worship in Delhi and possibly in India.

Action Taken:

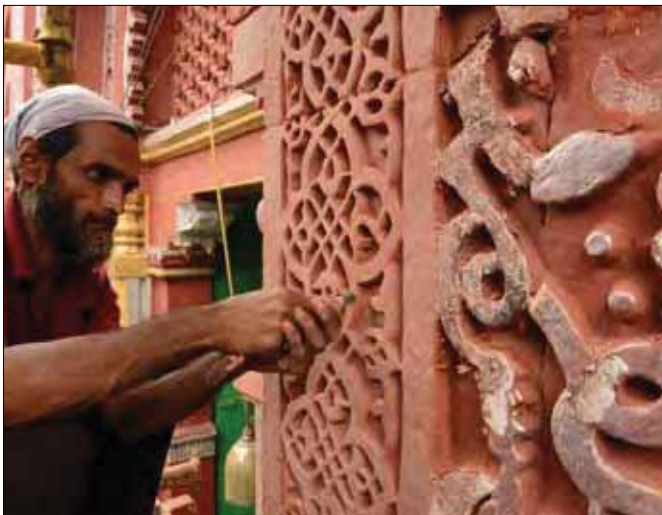
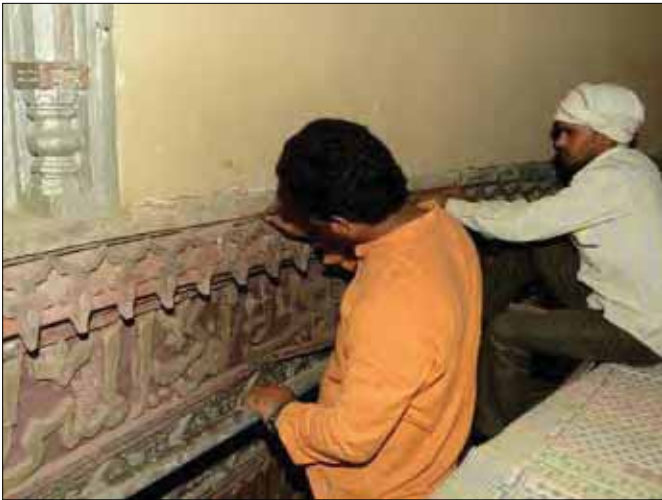
- Architectural documentation and condition mapping of all the damaged stones, motifs and architectural elements was carried out over a three month period prior to the signing of the agreement with the Dargah committee.
- Following the erection of scaffolding, close inspection was carried out by a multi-disciplinary team of experts comprising of master stone carvers, conservation architect and engineers.
- The religious leadership was informed in detailed discussions of the intention of the conservation effort and the duration of time this was likely to take. This was important as 20th century paint layers and other inappropriate alterations were required to be removed. Also, in a phased manner, while the conservation works are underway, each of the three bays of the mosque will not be available for offering of prayers.
- Scrapping of multiple layers of lead paint from the internal surface of the central bay which includes geometric motifs and Quranic inscriptions commenced soon after signing of the agreement. This is a laborious work that requires great amount of precision and was carried out by craftsmen under strict supervision. .
- Conservation of red sandstone geometric motif band below the red sandstone dome is on-going.
- Missing and damaged floral pattern red sand stone arch stones have been replaced with new stones as per original details.
- The decayed and damaged ornamental parapet stones or *kangura* stone were documented and are being made by the master craftsman. On an average, it takes 25 man-days of work to complete one 400mm X 600mm *kangura* stone.
- Conservation of decayed *kangura* stones on the central dome drum is also underway.

Conservation on this Khilji-era mosque is the first scientific conservation of an unprotected, living mosque in India and was preceded by several stakeholder meetings.



Next Steps:

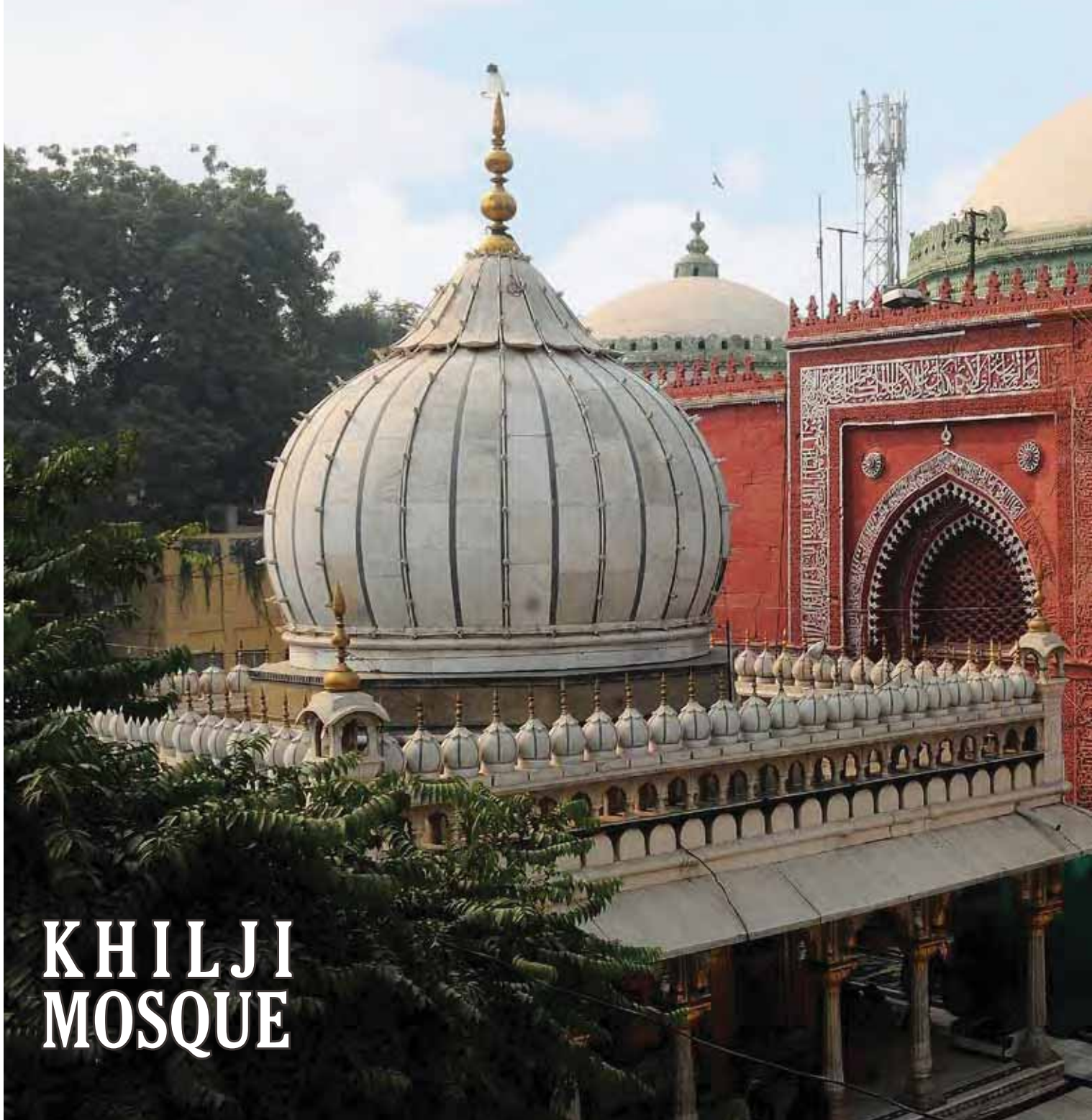
- Scrapping of multiple layers of lead paint from the geometric motifs and Quranic inscriptions.
- Conservation of damaged and decayed red sand stone motifs and missing Quranic inscriptions.
- Removal of unplanned 20th century modern interventions and organizing existing cables in the building in an aesthetic manner.
- Removal of terrazzo flooring from the north and south bays.
- Lime plastering of side bays which include conservation of central motif on the domes.
- Conservation of damaged facade stones and arches.
- Fixing of missing and decayed red sandstone *kanguras*.



Conservation works at the 14th century Khilji mosque required scrapping of several dozen paint and cement layers prior to repair or replacement of the damaged sandstone elements.



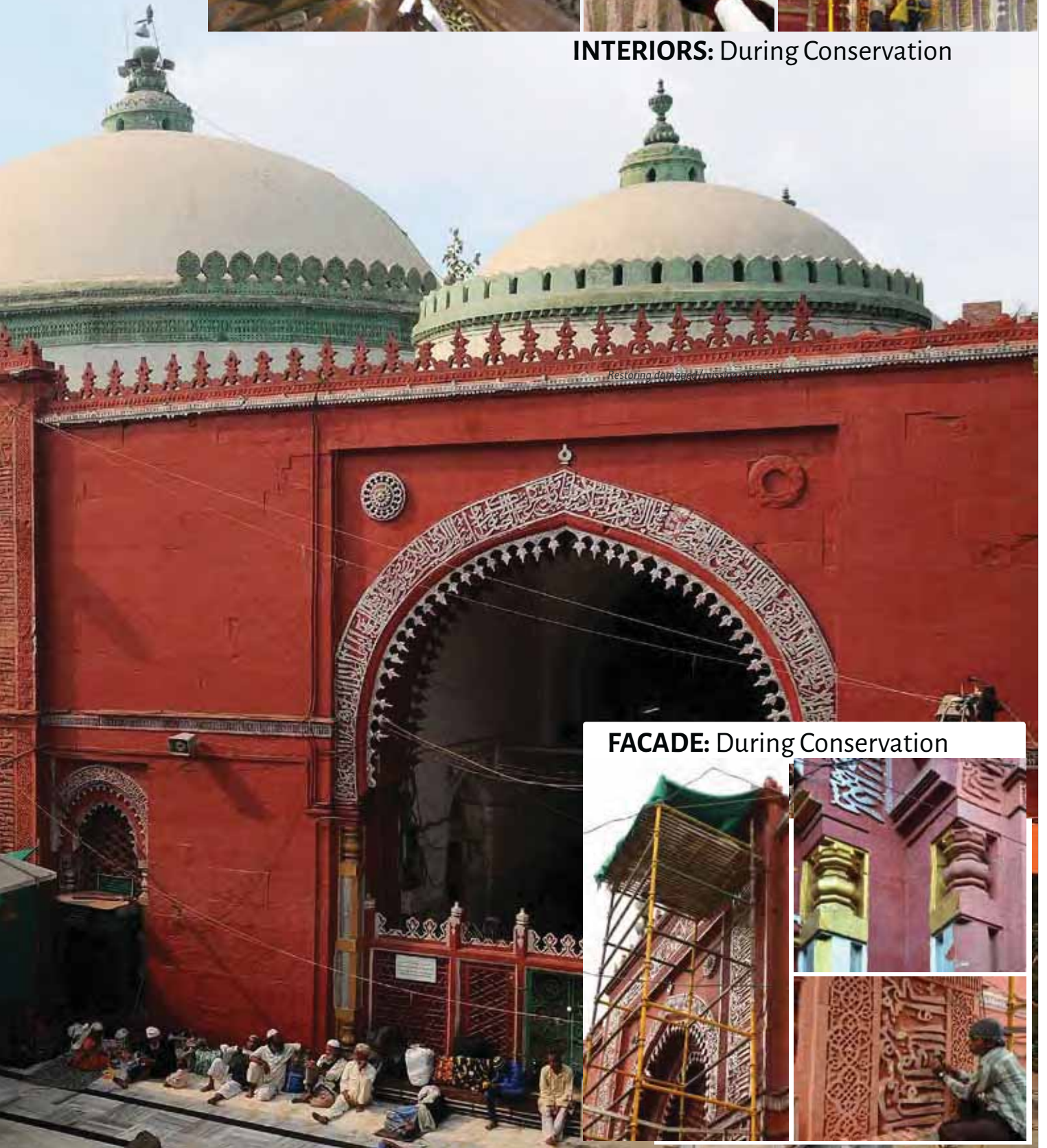
Archival Research



KHILJI MOSQUE

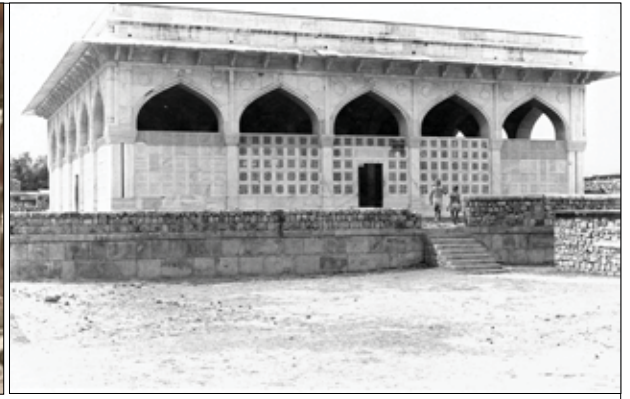


INTERIORS: During Conservation



FACADE: During Conservation





21 Chausath Khamba

Chausath Khambha was built in AD 1623 - 24 to serve as a tomb for Mirza Aziz Koka, foster brother of the great Mughal Emperor Akbar. It is so called on account of the 64 (chausath) monolithic marble pillars (khambha) and stands in close proximity to his father, Atgah Khan's tomb, at the edge of the Dargah of Hazrat Nizamuddin Auliya.

The study of the structure revealed that over 80% of the stone blocks had severe cracks and past repairs had inappropriately only filled up burst portions of stone blocks with white cement – masking the damage but allowing the deterioration to accelerate. In view of the unique architectural design, construction techniques of the Chausath Khambha as well as the fact that each stone itself was unique in shape and size, it was agreed that all original stone was required to be retained.

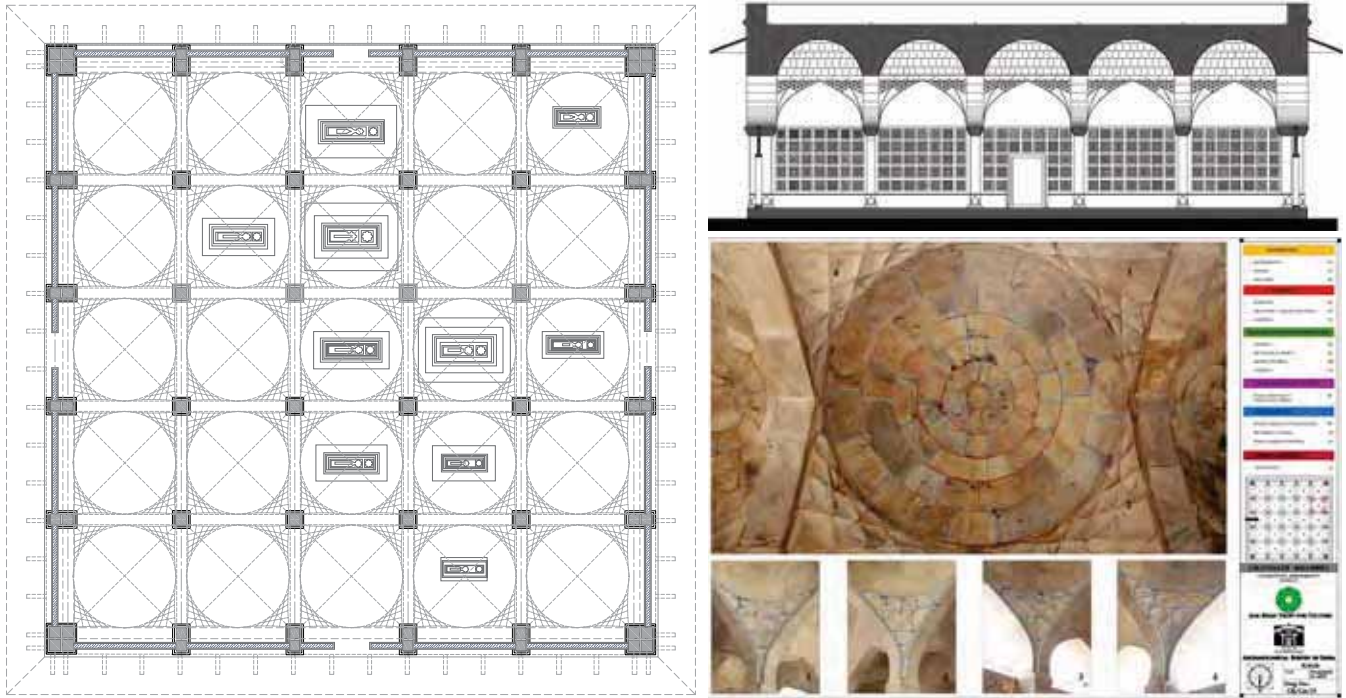
Before Conservation

The marble blocks of the 25 domes were tied to one-another and embedded in the brick masonry over the domes with iron dowels. The rain water spouts from the inaccessible roof got blocked resulting in large quantities of rain water collecting on roof. This resulted in the rapid deterioration of the roof and large scale water ingress from the roof leading to the corrosion, rusting and expansion of the iron dowels. The significant pressure from the expanding iron dowel led to bursting of the marble blocks in all parts of the mausoleum – domes, arches, facade, pendentive and even the column capitals – threatening structural failure and collapse of the structure.

Prior to commencement of conservation works, studies were carried out to achieve better understanding of the historic fabric of the building and its relation with one of oldest precinct in Delhi. Architectural data was collected from Zafar Hasan's – "Monuments of Delhi (Vol. 2) DELHI ZAIL listing", Carr Stephen's - "The Archaeology and Monumental Remains of Delhi" and Ebba Koch's - "Mughal Architecture" and classified for further referencing timeline of the monument was established and all archival paintings and images were collected and compared for evidences (*Above*).



Material Deterioration due to past repairs in white cement – masking the damage but allowing the deterioration to accelerate; Chipping of Marble elements like domes, arches, facade, pendentive, jaalis and column capitals; Rusting of iron dowel due to water seepage led to bursting of the marble



Documentation

A high definition survey, using 3D laser scanning technology, was carried out on the structure as a precursor to conservation works. This was followed with a stone-by-stone assessment of the entire structure to map the profile and defects on each individual stone coupled with photo and video documentation. To complete a structural analysis pits were dug to study the foundations – which were surprisingly found to reach a depth greater than five metres.

Archival research revealed sketches dating from the early 19th century, descriptions and a continuous record of photographs from the mid 19th century. Stone-by-Stone condition assessment of the domes, exterior and interior façades of the monument was done manually on the images by visual inspection of each stone its defects and its causes. Past, yet recent, repairs at Chausath Khambha included filling cavities created by broken marble edges with white cement. This needed to be carefully removed.

The conservation works at Chausath Khamba were co-funded by the Embassy of the Federal Republic of Germany. These works were extremely complicated and dangerous as it was required to dismantle each of the 25 domes to repair marble blocks and cracks in the masonry prior to re-fixing stone blocks on their original location.

Each stone was closely inspected to list required repairs by indenting or to assess if it is not possible to repair and requires replacement.



Conservation Philosophy

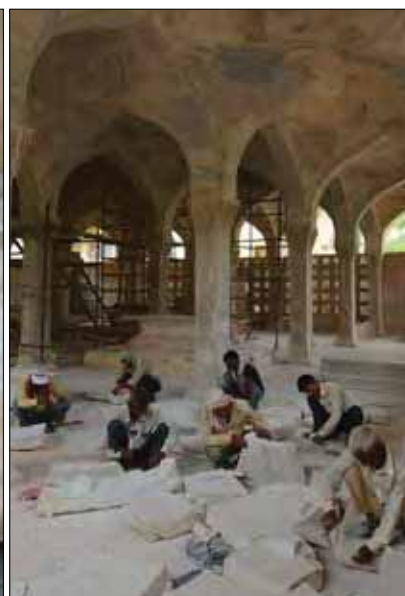
The study of the structure revealed that over 80% of the stone blocks had severe cracks and past repairs had inappropriately only filled up burst portions of stone blocks with white cement – masking the damage but allowing the deterioration to accelerate.

In view of the unique architectural design, construction techniques of the Chausath Khambha as well as the fact that each stone itself was unique in shape and size, it was agreed that all original stone was required to be retained. However, steps needed to be taken to replace iron dowels with non corrosive stainless steel dowels of matching size. Roof repairs to halt water penetration were also urgently required.

The forecourt – largest open space in Hazrat Nizamuddin Basti – was to be landscaped to create a performance venue for the Qawwali musicians residing in the historic neighbourhood

Craftsmanship

The manner in which this complicated conservation work is being undertaken bears remarkable tributes to Indian master craftsmen. The stone carvers, using traditional tools and building techniques took eight months to successfully repair the first dome – on the northwest corner – thus establishing the repair methodology for the mausoleum. The stones are dismantled ring-by-ring under careful supervision and stacked as per their numbers and respective ring. Traditional material and manual techniques of stone dressing and indenting are being used to maintain the authentic interior appearance of the domes.



DOMES NO.	% OF WHITE CEMENT FILLING (mm)	% OF WHITE CEMENT FILLING (mm)	NO. OF CRACKS	NO. OF REPAIRS WITH HURTING
1	5.5	5.8	28	8
2	4.4	2.2	18	2
3	3.2	2.4	4	6
4	2.9	5	8	3
5	2.8	5.4	4	-
6	4.1	3.1	1	-
7	4.1	2.2	3	1
8	1.5	1	3	2
9	5.12	2.7	13	3
10	2.9	2.8	25	7
11	3.3	1	23	15
12	6.4	3.1	4	3
13	2.8	1.6	3	2
14	2.6	1.3	2	2
15	4.1	4	4	3
16	3.5	1	3	-
17	1	1.1	2	-
18	2.8	1.3	7	-
19	3.1	1.7	5	-
20	1.5	2	8	4
21	2.5	1	9	8
22	1.1	1	2	5
23	2.2	2	2	3
24	2.4	1	3	1
25	1.1	1	7	1



The Conservation Challenge

The preservation of Chausath Khambha was possible only if the iron dowels could be removed and thus it was necessary to commence a conservation programme that required dismantling each of the 25 domes. Such an effort had never before been undertaken anywhere in the world.

The multi-disciplinary conservation team comprising experienced engineers, craftsmen and conservation architects could only access the iron dowels from below as the documentation had revealed over 1m thick masonry above the marble domes. Each stone was thus required to be numbered and mapped.

Terrace

The masonry above the domes had 1 metre deep and 4" wide cracks through which the water was seeping inside the building. These cracks were required to be repaired urgently to stop further deterioration. The 230 mm thick layer of cement concrete from the roof was removed without disturbing the underneath structure and pressure grouting was done to repair the network of cracks in the roof which were approximately 2 meters in depth. A new layer of lime concrete with additives like Jaggery and Bael fruit pulp (Belgiri) was laid maintaining the original slope levels. Clogged water spouts were opened to avoid rain water from stagnating.

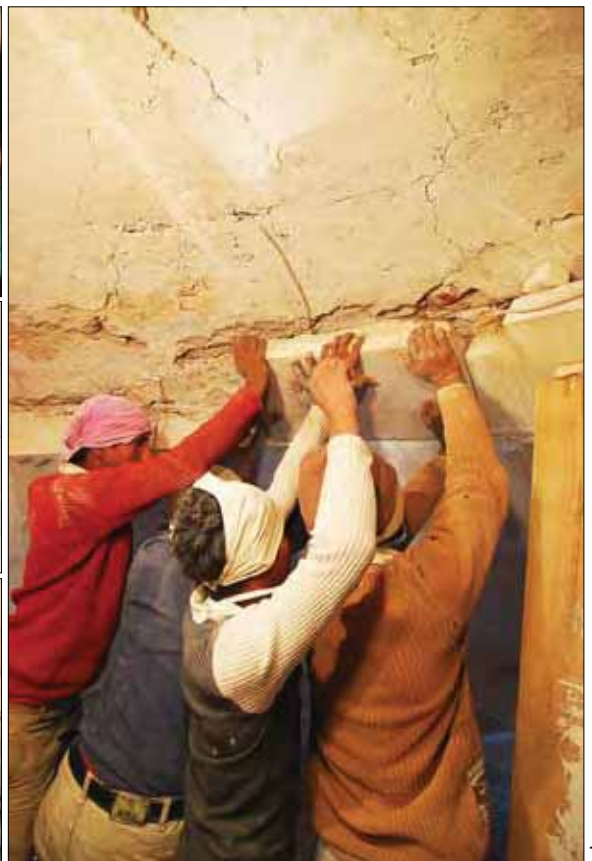


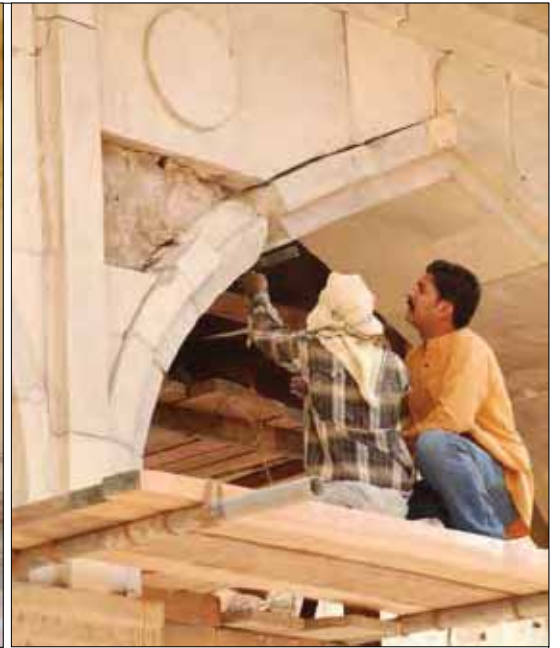
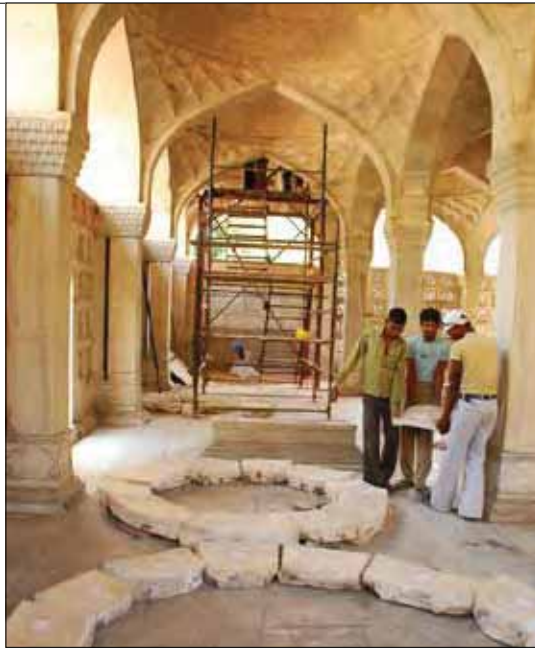
During Conservation

After removing the white cement from the broken joints, tell tails were fixed over the joints for structural monitoring for further observation by trained conservation architect and engineers.

Each stone weighs from 200 to 350 kilograms and requires 4 to 5 persons to remove and stack the stone. The stones being structural stones and are interlocked with each other. Proper precision needs to follow while removing the stone without damaging the stone. Shifting of stones from the scaffolding has to be done with great care with the help of rope and requires 4-5 persons without damaging the edges of the stone. The corroded Iron dowels are then removed carefully without damaging the stone and then replaced with stainless steel dowels. The process was constantly supervised by conservation architect and site engineer.

Various stages of conservation of one dome: Numbering each stone; Dismantling the marble blocks and repairing of cracks in the masonry; and Repair of marble blocks with indents of matching stone where these had burst by master craftsmen using tools, techniques used by the original builders and Re-installation of marble blocks in the original location.





The removed stones are further closely inspected before indenting repair. After examining, the stone decision on repair methodology is taken. The process is time consuming as each stone is unique in terms of its size and curvature on both the axis.

Creating Economic Opportunities

The conservation effort at Chausath Khambha created at least 25,000 man days of work for traditional stone craftsmen and allowed training younger craftsmen. Youth from Hazrat Nizamuddin Basti have been trained to serve as heritage volunteers guiding tourists, pilgrims and school children through the seven centuries of built and living heritage of Hazrat Nizamuddin Basti.

At the onset of the Nizamuddin Urban Renewal Initiative, baseline surveys revealed that under 1% of the women residents had any kind of livelihood. Self Help Groups established here have been trained to make souvenirs in paper and textiles with motifs from Chausath Khambha and Humayun's Tomb.

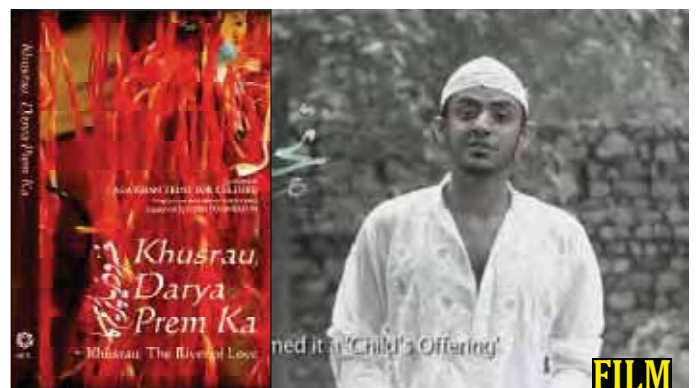
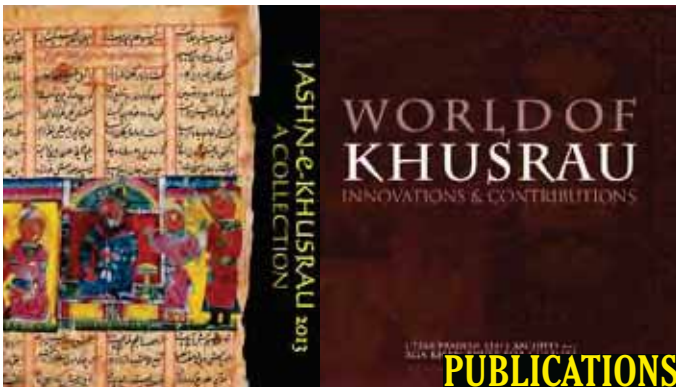
The Nizamuddin Urban Renewal Initiative has aimed to create a model for urban conservation in the Indian context by also improving education, health, and water and sanitation infrastructure. The Quality of Life for local residents and visiting pilgrims has been enhanced by diverse project components ranging from building community toilets, landscaping neighbourhood parks, housing improvement, vocational training opportunities, early childhood care and development, cultural revival, amongst others.

(Below) German Ambassador Mr. Michael Steiner was the Guest of Honour on the completion ceremony of Chausath Khamba on 16-November 2014



CULTURAL revival

2 of 9
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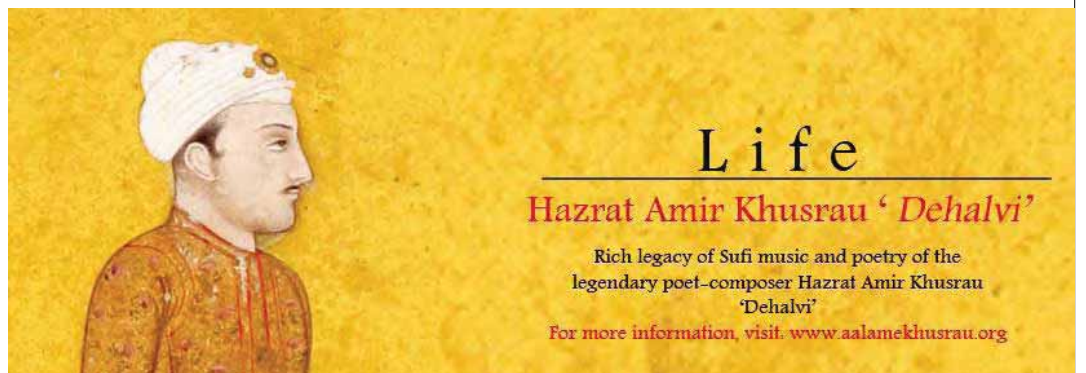
22 Aalam e Khusrau

At the culmination of a four year programme to document and disseminate the musical legacy of Hazrat Amir Khusrau, compilation and production of a resource base of the data amalgamated and dissemination of the collection through new media.



Action Taken:

- As part of spreading the legacy of Amir Khusrau, a 36-minutes documentary film titled '**Khusrau Darya Prem Ka**' has been produced. Directed by Yousuf Saeed in Hindustani and Persian language with English subtitles, the film explains the 14th century poet-composer, Amir Khusrau '*Dehlavi*' in today's context. Besides using the dramatic technique of *dastangoi* (traditional storytelling in Urdu) to tell the story of Amir Khusrau, the film also uses some renderings of Khusrau's popular poetry in the voices of traditional *qawwals*, as well as in beautiful forms of Urdu-Persian calligraphy.
- The music archive has a collection of more than 500 tracks ranging from *qawwali* to Hindustani classical and folk music which includes both concert and studio recordings. Part of this grand collection has been disseminated through the release of music CDs.
- Several projects implemented under Aalam E Khusrau banner have been compiled and uploaded for greater dissemination. These include over 150 videos of concerts, studio recordings, audio and video documentation of interviews and discussions, research papers and academic discussions, of which 90 videos have been uploaded to the web.
- The digital resource has over 2000 illustrated folios obtained from various individual, national and international collections. Some of them have already been used for the publications under the project.
- The research findings and documentation carried out on the legacy of Hazrat Amir Khusrau in different states of India such as Uttar Pradesh, Punjab, Jammu and Kashmir, Rajasthan, West Bengal and Maharashtra are compiled to form the main content of the website. Research papers, interview with scholars and musicians, academic discussion proceedings, festival clippings in audio visual format are made available through this web portal. A discography, anecdotes, bibliography, riddles, biography and chronology of events during the lifetime of Amir Khusrau, digitized copies of manuscripts and other resource materials related to Amir Khusrau are uploaded on www.aalamekhusrau.org





· The first-of-its kind mobile application - **Aalam E Khusrau** - integrating music, life and works of Amir Khusrau with self-guided tours in the historic neighborhood of Nizamuddin have been created for free download in iOS and Android phones. The apps also include the living culture of Nizamuddin area is presented through five different walks relating to its monuments, cuisines, poetic and Sufi heritage. The music app presents a representative sample collection of *qawwali*, folk and classical genres of music ascribed to Amir Khusrau. They are grouped into two categories—genre and artist—allowing the user to create playlists as per their choice.

· Travelling exhibition with the theme “**World of Amir Khusrau**” was organized in collaboration with the Institute of Persian Research, Aligarh Muslim University (AMU). The exhibition presented the rich and diverse range of Amir Khusrau’s work in the extended context of their content—which addresses the many facets of Indian history, culture, science and art. Besides providing a comprehensive understanding of the time of Amir Khusrau, the exhibition elaborated the foundation of a vital chord of our heritage, history and culture which has produced an amazing range of works of art from architecture to music.

· In conjunction with the exhibition, a three day international seminar was also organized which had participation from India, Iran, Canada and Tajakistan. The papers presented by the distinguished scholars were in Persian, English, Hindi and Urdu on the literary and cultural dynamics of Khusrau’s thought and art. 33 manuscript and 40 publications from the collection of AMU on the works of Amir Khusrau were on display for the first time in conjunction to the exhibition and seminar. Cultural evenings were organized for the participants during the three day seminar.

· The exhibitions organized in Rampur Raza Library, Uttar Pradesh State archive, National Museum and National Archive and Aligarh Muslim University were video documented extensively and are put together for an information kiosk. The multimedia kiosk enables the visitor to have a cultural experience of the world of Khusrau. Interesting facets of Khusrau’s life, works and timeline are presented with interactive graphic description.

· Two books were published in association with Mapin Publishers. The lavishly illustrated **World of Khusrau** exemplifies the innovations and contributions of Amir Khusrau with a vast array of rare manuscripts, objects and images from the collection of several national and international museums and libraries. With diverse and insightful references, the book fully expands his works in the fields of science, art, literature and religion, as they contribute to the making and continuity of Indo-Islamic Cultural heritage. This book is accompanied by a music CD, with repertoire of Jashn concerts.

Disseminating the vast research on Hazrat Amir Khusrau’s music, life and works through various online media like website (Top), smartphone Apps (Middle) and travelling exhibitions (Bottom)

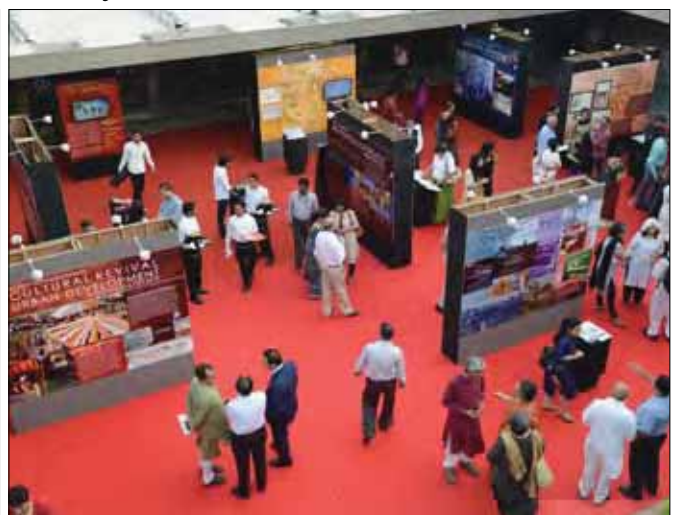


· **Jashn e Khusrau 2013: Celebrating the Genius of Amir Khusrau** is the compilation of the proceedings of month long Khusrau festival organized in March 2013. The book provides for the first time, a comprehensive understanding of the era of Amir Khusrau; the beginning of Indo-Islamic art and culture of the medieval era; and their continuity into present day India. The book has 10 research articles and three music CD's with 22 tracks covering *qawwali*, light classical and Hindustani classical music genres. The compilation is divided into three sections, each supported by an introductory essay as well. This volume is a follow up of the first publication *Jashn e Khusrau: 2010*.

· The publications were released by Shri Ravindra Singh, Secretary, Ministry of Culture at an event organized to mark the completion ceremony for Ford Foundation grants (2008-2014) in April, 2014. A multimedia exhibition was curated displaying all the projects completed under the larger cultural revival programme supported by the Ford Foundation. Altogether there were 19 panels of 8X12 feet, out of which 7 had audio visual units fixed on to them. Besides all the reports, films, mobile applications, craft products, multimedia kiosks, publications and audio CD's produced and published in last few years with support from Ford Foundation were displayed and distributed on complimentary basis. The event culminated with a musical performance by Ustad Eltaf Hussain Sarahang, singing Khusrau in tradition of Indo-Afghan classical music.

(Top) Jashn E Khusrau - 2013 Celebrating the Genius of Khusrau: The publication was unveiled by (Right to Left) Mr. Ravindra Singh, Secretary, Ministry of Culture, Ms. Kavita Ramdas, Ford Foundation, Mr. Bipin Shah from Mapin Publishing, Dr. Ravina Agarwal, Ford Foundation, and Mr. Shakeel Hossain, curator of Aalam E Khusrau programme, AKTC

(Below) Completion ceremony of Aalam E Khusrau - the cultural revival programme co-funded by the Ford Foundation since 2008 aimed to demonstrate that culture is an effective tool for the development of our historic city centres.





23 Poets Within : Ghalib

The poets within element of the programme include work on other cultural icons and poets like Mirza Ghalib who is also buried in the vicinity of the Dargah Hazrat Nizamuddin Auliya.

Action Taken:

- On the 217th birth anniversary of Mirza Ghalib a two day event (15-16 February) was organized in collaboration with Ghalib Academy, Ghalib Institute and Anjumann E Taraqqi Urdu. School children were taken for a heritage walk at the Mirza Ghalib complex and a poetry recitation competition was organized which had students participating from Urdu, English and Hindi medium schools. An international seminar held on the occasion had 23 research papers reviewing the *kalaams* of Ghalib followed by a *mushaira*. The event ended with Begum Muneer Khatoon, rendering the Persian *ghazals* of Mirza Ghalib.
- The Museum dedicated to Mirza Ghalib at Ghalib Academy, Nizamuddin has hundreds of objects representing the life and times of Ghalib without any inventory. A team constituting of museum professionals and research scholars have completed the documentation of 550 art objects including paintings, coins, seals, and stamps in a specific format with number, title, date, provenance, description, dimensions, and language with photo of each object. Preparation of status report of paintings has been completed.

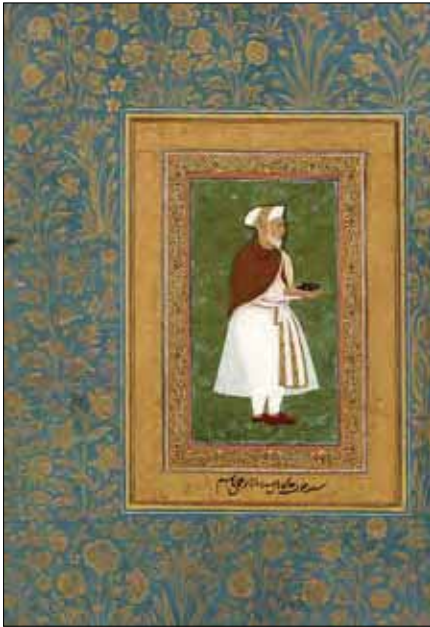
Next Stage:

Discussions are ongoing with Ghalib Academy to undertake an upgrading of the exhibit/museum on Ghalib as well as carry out renovations to this important public facility.

Mirza Asad Ullah Khan Ghalib (1797 – 1869) is acknowledged as the greatest literary figures of the modern age. Given the captivating spell and extreme quotability of his poetry, Ghalib today ranks with the best and undoubtedly qualifies as a world class poet. He spent the majority of his life in Delhi at a time when the city saw great change and turmoil. Deeply affected by his surroundings, he served as a chronicler of the city and the events that changed it, including the revolt of 1857 and the displacement of the Mughals by the British.

The team has catalogued over 550 art objects in the Museum at Ghalib Academy consisting of paintings, coins, seals, stamps capturing the essence of the life and times of Mirza Ghalib.





24 Poets Within: Rahim

Abdur 'Rahim' Khan I Khanan or popularly known as Rahim, as one of Emperor Akbar's navratans, a reputed military commander and a world renowned poet whose couplets continue to be taught even today, was one of the Mughal era's most respected personalities. Together with Hazrat Amir Khusrau and Mirza Ghalib, both of whom lie buried in close proximity, Rahim is counted amongst India's foremost poets. His mausoleum thus has great historical significance. The conservation initiative will thus be coupled with research and dissemination of Rahim's contribution to the development of Hindustani culture and will lead to a greater interest amongst visitors especially school children. Co-funded by InterGlobe Foundation, the Rahim's Tomb project include an exhaustive conservation initiative accompanied with a three year programme on documenting, studying Rahim's contribution to culture and disseminating this collected knowledge through publications, films, music recordings, heritage walks, phone Apps and a permanent on site exhibit – leading to a greater interest amongst visitors especially school children.

The project outcomes of the project will include not only the conservation of the mausoleum and compilation of Rahim's literary works for dissemination but also to enhance our understanding of the tomb structure and its setting thus allowing scholars to interpret its influence on the construction of the Taj Mahal as well as justify its inclusion within the extended Humayun's Tomb World Heritage Site. The proposed project centred at Rahim's Tomb has multiple objectives, prime amongst which would be to undertake a model conservation project ensuring a new lease of life for the grand mausoleum that inspired the Taj Mahal. Through archival research, archaeology, documentation of the structure the conservation initiative will lead to a better understanding of the mausoleum which has been severely altered in the 18th century.

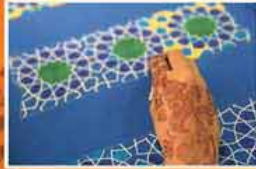
Next Stage:

- Design a well-scripted heritage walk to include Rahim's Tomb of 90-minute duration accompanied with activities which will be carried out with over 30 Delhi schools
- Identify musicians with Rahim repertoire and engage with historians and scholars to create an exhaustive biography and bibliography of works by and on Rahim.

Impact:

Conservation efforts will be coupled with providing urban linkages with efforts to seek a possible extension of the World Heritage Site to include Rahim's tomb, reviving interest in Rahim's poetry, particularly the doha's or Hindi couplets of which he is said to have written 700.

AGA KHAN DEVELOPMENT NETWORK



*Celebrating cultures and histories
of Hazrat Nizamuddin Basti*

Mela

*Open activities and displays signifying
the richness and diversity of the
oldest settlements in Delhi*

SAIR

Heritage & Sufi Walks

*Meander through 700 years history
as it stands woven in the architecture
and culture of the place. Conducted by
Sair-e-Nizamuddin: Daily at 10:00 AM*

Sufi Trail: Daily at 4:00 PM
Guided rickshaw tour to the serene
and unexplored local Sufi Shrines

Zaiqa-e-Nizamuddin

Learn to cook local cuisine from the Master
Chef Naseem of Hazrat Nizamuddin Basti
16 Nov, 2:30 PM

*Meeting Point: Registration Desk, Mela Ground
(Limited - Pre registration required)

Apni Basti Mela 2014

Mela Inaugurated by:
Shri Balvinder Kumar
Vice Chairman,
Delhi Development Authority

14-16 Nov

(9:30 AM - 4:30 PM)

at DDA Park, Lala Lajpat Rai Marg
Hazrat Nizamuddin Basti
New Delhi

Sham-e-Mehfil (CULTURAL EVENTS)

**Venue: Chausath Khamba,
Hazrat Nizamuddin Basti**

14 Nov, 6:00 PM
Classical Vocal by Ustad Abdul Rashid Khan

15 Nov, 6:00 PM
Dastan Amir Hamza Aur Amar Ayyaar Ke Bachpan Ki
Performed by: Aamir Ahmad & Affan Siddiqui
Directed by: Mahmood Farooqui

15 Nov, 6:30 PM
Musical Narrative: When Stories Meet Songs
by Ankit Chadha, Vedanth Bharadwaj,
Bindhumalini Narayanaswamy & Ajay Tipaniya

16 Nov, 6:00 PM
Qawwali by Humsar Hayat Nizami & Group

Supported by: Ministry of Foreign Affairs, Norway

In association with: Delhi Development Authority | Archaeological Survey of India | South Delhi Municipal Corporation of Delhi



Nizamuddin Urban Renewal Initiative
Archaeological Survey Of India - South Delhi Municipal Corporation - Central Public Works Department
Aga Khan Foundation - Aga Khan Trust For Culture

25 Apni Basti Mela

The annual fair, Apni Basti Mela, celebrates more than 700 years of history and continuous living culture of Nizamuddin through showcasing craft skills, built heritage, music traditions, food and oral history of the local communities.

Action Taken:

- The fourth annual Apni Basti Mela, promoting the living heritage of Nizamuddin through showcasing craft skills, built heritage, music traditions, food, and oral history of the local communities was organized for a period of three days from 14-16 November 2014.
- The event was inaugurated by Shri Balvinder Kumar, Vice Chairman of Delhi Development Authority.
- Spearheaded by the community, the Mela had specially designed workshops, activities and cultural evenings to generate awareness amongst the community and visitors and develop interest to revive, preserve and enhance the cultural experience of the neighborhood.
- An exhibition on the project with live craft demonstrations was installed on all project components and guided walk was given to interested participants for their better understanding of the larger objectives of the project.
- The historic and cultural resources of Basti were arranged in thematic fair like atmosphere – parks (Mela Ground), *Chowks* (spot fixing), monuments (heritage walk, performances), Streets (street play, cleanliness drive) and through various activities and workshops.
- The Mela provided an opportunity to the craft and food based SHG's from Basti, created as a part of the livelihood component of the project, to exhibit and sell products directly to customers and get first-hand feedback.
- On the occasion of the Mela, evening performances had Ustad Abdul Rashid Khan singing rare *bandishes* of Hazrat Amir Khusrau and Abdur Rahim Khan I Khanan, Dastangoi by Basti youth Aamir Ahmad and Affan Siddiqui, Musical narrative on the relationship between Hazrat Nizamuddin Auliya and Hazrat Amir Khusrau performed by Ankit Chadha, Vedanth Bharadwaj, Bindhumalini Narayanaswamy and Ajay Tipaniya. Humsar Hayat Nizami from Delhi enthralled the audience with his *qawwali* performance on the last day.
- While the evening performances had around 3000 audiences, the Mela ground had around 9000 visitors over a period of three days.
- Around 400 students from 7 different schools and 45 visitors participated in the heritage walk, while 55 people experienced the Sufi trail in cycle rickshaw to five Sufi shrines around Nizamuddin like Patte Shah Dargah, Dargah of Imam Firdausi, Dada Peer and Chillah Sharif, conducted by the volunteer group Sair E Nizamuddin.
- This year Mela was co-sponsored by Ministry of Foreign Affairs, Norway and was organized in association with the Delhi development Authority, Archaeological Survey of India and South Delhi Municipal Corporation.

Through efforts such as the 'Apni Basti Mela', the project has attempted to restore the cultural identity of the Basti and instil a sense of pride in the residents. The event also provides an opportunity for many first-time visitors to the Basti.



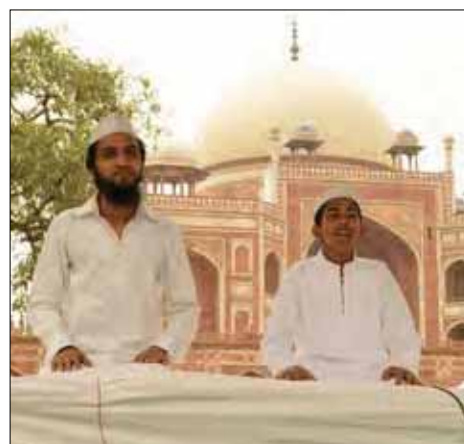
26 Heritage Awareness

Implement a heritage awareness programme for school children led by youth residents of Hazrat Nizamuddin Basti.

Action Taken:

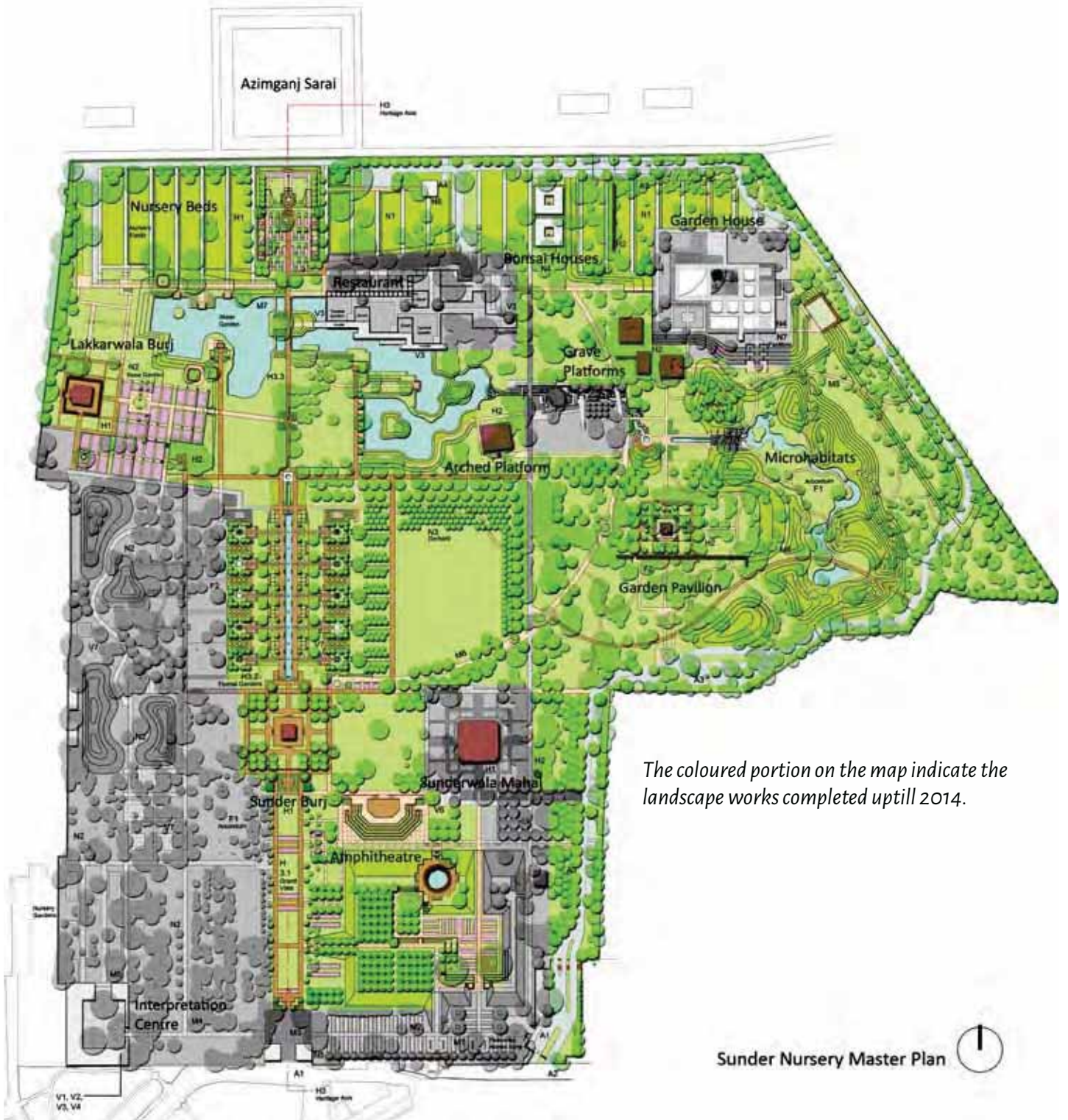
- The **World Heritage Day** was celebrated at Humayun's Tomb with 700 school children from 14 different schools being given a guided heritage walk by a group of trained youth volunteers from the community. The walk was followed by quiz and painting competitions.
- The **World Heritage Day** event ended with a *dastangoi* (story-telling) performance staged by two youth from Nizamuddin Basti who have been trained in this rare art form as part of the project. The youth performed dastan of Amir Hamza and Amar Ayyar and their childhood pranks.
- In 2014, a total of 3080 students from various schools of Delhi and NCR have participated in heritage walks conducted by the youth group of heritage volunteers. Of these, 500 walked through Nizamuddin Basti.
- A total of 303 visitors have participated in the heritage walk conducted by the community volunteers through Nizamuddin and Humayun's Tomb complex.
- Other delegation visit at Humayun's Tomb facilitated by the community volunteers include district Governors from Afghanistan and government officials from Maldives attending a training course organized by Indian Institute of Public Administration (IIPA), teachers from Centre for Cultural Resources and Training (CCRT), architecture students from University of Koln (Germany), Chou University (Japan).
- The community volunteers organized an Iftar Walk: a unique experience on an auspicious occasion during Ramadaan to explore the centuries old heritage and living tradition at the Basti. The walk was followed by breaking the fast, "IFTAAR"- the most important part of the day during the holy month of Ramadaan with the larger community.
- 32 children from Nizamuddin Basti participated in an intensive month long theatre workshop organized in collaboration with Urdu Academy. The final performance of the play Gadbud Jhaala was staged at Chinmaya Mission. The play was based on a folk story compiled by Vijay Daan Detha. The summer theatre workshop in its fourth successive year is keenly awaited by the community children.
- Quarterly newsletter Anmol Basti highlighting the issues of common concerns at Basti are compiled by the community groups. The eight pager newsletter is published both in Hindi and Urdu and is distributed to about 1500 household in Basti.
- Out of the Dastangoi training that was conducted for Basti youth by professionals in the field has achieved great results as two of them have excelled in the training and are performing Dastangoi shows, which included their performance at the Book fair organized by the National Book Trust in association with New Delhi Municipal Corporation.

Through heritage walks, street theatre, dastangoi performances – all led by youth from Hazrat Nizamuddin Basti, the project has informed thousands of school children about the historical significance of the Nizamuddin Area, its cultural and architectural heritage.



3 of 9
2014

ENVIRONMENT development



The coloured portion on the map indicate the landscape works completed uptill 2014.

SUNDAR NURSERY
Ecology | Nursery | Conservation

27 Central Axis

The 600 m long Central Vista follows the route of the Mughal-era Grand Trunk Road and begins at the entrance Sundar Nursery shares with Humayun's Tomb. The Sundar Burj stands in the centre of the Central Vista and on either side of which the landscape design is similar but distinct. The landscape design of the northern half of the central vista is inspired by a Persian carpet design with a central water body with marble fountains forming the heart of the central vista. As with Humayun's Tomb gardens, the systems are designed to re-circulate water. Over 100 sandstone lights erected along the central vista not only illuminate but also frame the view of the formal gardens.

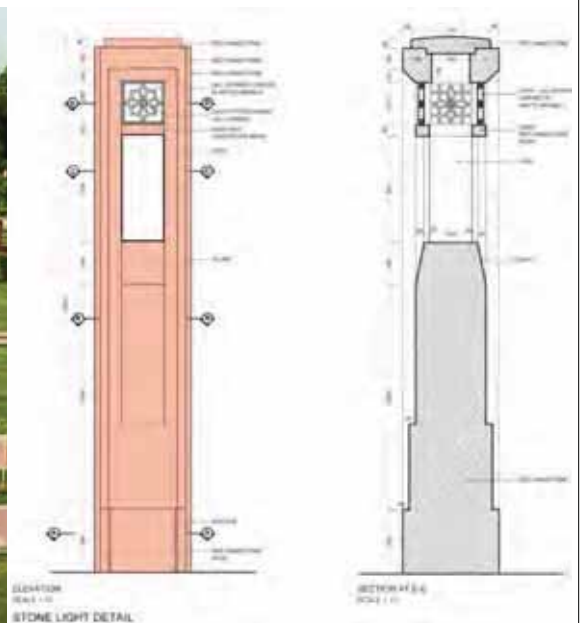
Action Taken:

- Through 2014, works have continued towards completing the paving along the Central Vista.
- At the northern end, the underground filtration and pumping room has been built and a seating platform across it to retain symmetry along the central vista. Both these are clad with sandstone. Access to the facility is provided with quartzite paved paths lined on either side by flower beds.
- The lamp and fixture for the hand-carved stone lanterns have also been manufactured to specified design details.
- The ornate sandstone parapets have been built on the bridges that pass over the lake.
- Plantation of several varieties of annuals, no longer seen in Delhi, such as hollyhock, poppy, cornflower, cosmos, flocks dahlia, matricaria, candytuft, dimorphotheca and pansy have been planted on the Central Axis. Southern half of the heritage corridor is planted with shrubs like Golden duranta and Chandni.
- Previously developed areas along the Central Axis are being regularly maintained and growth of plantation in previous years is being closely monitored.
- Relevant signages have been erected at various locations on the central axis.

Next Stage:

Northern water bodies need to be finished with stone cladding and the sandstone paving is proposed to be hand chiseled.

(Below) Central Axis in 2014; (Right) Details of sandstone lights installed along the pathway



28 Entrance Zone

Zone Southern section and raised tree nursery

In 2014, emphasis of landscape works has been on the east of the Central Axis east of the shared entrance with Humayun's Tomb and west of the proposed vehicular entrance. Here, the objective has been to integrate the Garden Amphitheatre and the Mughal-era Lotus Pond, creating access to the Batashewala Complex, as well as provide future visitors, especially groups and school children tranquil spaces.

Action Taken:

- The western half of the area was raised to be at level with the top of the Mughal-era Lotus Pond discovered here. As such a 2500 sq. m area has been raised by over a meter. Slope on the western and southern sides have been graded and grassing completed in 2014.
- A 100 m long path, 2.9 meters in width, runs through the width of this raised plain, in the east-west orientation connecting the Central Vista and south-eastern corner of nursery. This path is now complete with a finish of sandstone grit wash.
- As per CPWD request for a 'tree nursery' to supplement trees for replacement in the New Delhi Zone, a tree nursery for the avenue trees of New Delhi such as arjun, khirni and imli has been created here with 90 trees now planted.
- The CPWD transplanted 50 Cycas Palms from the southern zone in mid 2014 to allow construction of proposed pathways to be completed by early 2015.
- Stone edging of 16 planting beds has been completed in 2014.

An amphitheatre on 1/3rd acre would serve as a venue for school groups and cultural performances in a garden setting.



29 Sunken Garden & Lotus Pond Plaza

Action Taken:

- The base of the Lotus Pond has been laid in two layers of lime concrete to provide a water-tight tank. As per original design, each of the eight foliates have been provided with a corresponding pit for a Lotus Pond and a ninth pit in the centre. Lotus were planted here in late 2014.
- A sunken garden created at the southern edge on either side of the pathway leading to Sundarwala Mahal has been the focus of civil works including understructure of paths, stone paving and Delhi quartzite stone retaining walls.
- Secondary paths in the sunken garden will be paved with stone tiles in herring-bone and basket weave patterns. These tiles are produced out of small pieces of sandstone, left over from cutting of larger blocks.

Next Stage:

Completion of stone paving of paths in south-east corner will be followed by laying of a grid for water supply to garden hydrants, laying of electrical cabling, preparation of lawns and planting annuals in beds. Installation of landscape lighting is also scheduled by the end of 2015.

In order to restore original levels around the Mughal-era Lotus Pond while retaining existing trees, a sunken garden was created.



30 Rivulets

The north-eastern quadrant of Sundar Nursery is treated as a micro-habitat zone to display plants historically found in the Delhi region on the ridge, along the rivers as well as in marshy areas. This is expected to be of interest to both plant lovers as well as school groups. Creating these spaces is also expected to attract additional species of birds to the Sundar Nursery

Action Taken:

- Creation of mounds with large stone blocks to mimic the Delhi ridge environment was completed earlier and these have been appropriately planted.
- For the 'Rivulets', a layout of edges of the profile was carried out as a first step that allowed a series of reviews and careful adjustments in keeping with site conditions.
- The digging out of the rivulets up to an initial depth of 1-1.5 m was carried out.
- Based on the nature of construction, rivulets can be divided into four different sections:
 - A part of rivulets is dug into stable ground where a continuous section of concrete has been laid to act as an impervious vessel for holding water.
 - Second section of rivulets is a composite system using concrete and masonry.
 - This is followed by an area which allows percolation of water through geo-textile lined floor and allows birds such as kingfishers to burrow in the ground to nest.
 - Final section of rivulets is comprised of a combination of stone lined rectilinear and circular pools culminating in larger water body which forms a part of the larger lake body.
- During review sessions, a number of revisions were adopted in order to merge this stream with its immediate surroundings. Edges of the water body have been revised to avoid steep slopes and encourage edge vegetation. Similarly, depth of the channel was increased to ensure deeper soil base for aquatic plantation to prosper.
- Construction of a reinforced concrete basin is ongoing and area succeeding it is being prepared for laying of masonry for edge profile and concrete basin.

Next Stage:

Primary focus in the area remains on completion of entire length of rivulets till the lake by the end of 2015. Construction of weirs at regular intervals along course of the stream will also be carried out in order to maintain proposed depth of running water throughout the streams. Few of these weirs will also be used as crossovers and will be connected to larger network of trails spread across the microhabitat area. Basin of the stream will be landscaped with half a meter deep sweet earth and boulders of varying sizes. Aquatic plantation and other water grasses along the edge are planned after completion of entire channel. A water recirculation system will ensure that the water is recycled and a series of outlets are also planned along the stream to feed rivulets at various locations mid-stream.



31 Pathways



Action Taken:

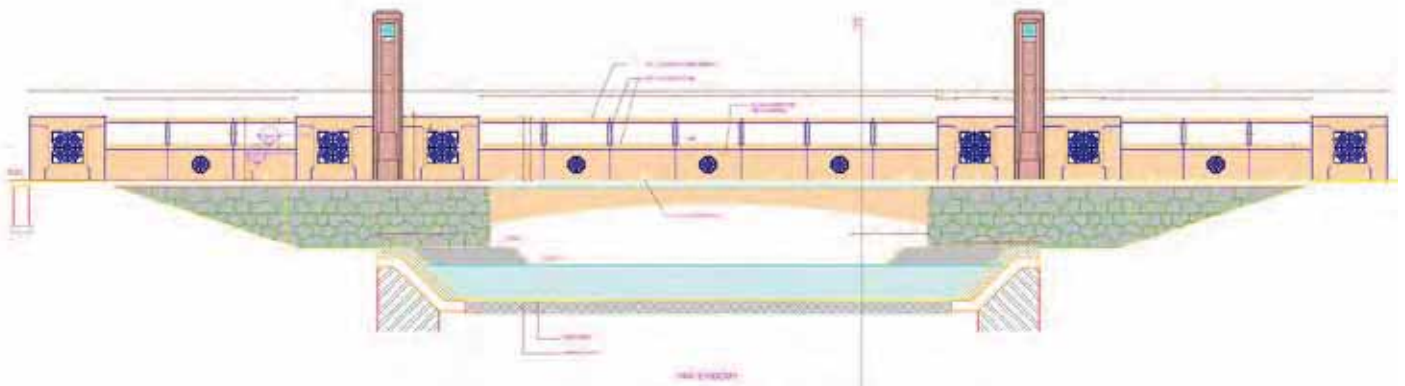
- Construction of a pathway from the Bonsai Houses in the North till the southern end of the sunken court has commenced in the last quarter of 2014.
- Construction of the understructure of the path marking eastern edge of the flower show area was completed in 2014.

Next Stage:

- Completion of works on all pathways mentioned above in 2015.
- Construction of pathways around the Sundarwala Mahal will commence in early 2015.
- Construction of pathway leading from the Arched Pavilion till the Central Vista will also commence in 2015

All pathways built in Sundar Nursery have been provided with 3 feet deep foundations to ensure long-term preservation.





32 Lake

A lake serving as a water reservoir, a rainwater catchment basin as well as a significant landscape element has been created in the northern section.

Action Taken:

Construction of the concrete lining of the lake bed commenced in December 2014. The installation of this liner over an area of more than 6500 square meters will ensure that water from the lake does not seep into the ground below.

Next Stage:

Paving and planting along the edge will be carried out. Two pavilions will be constructed at the edge of water. These gazebos will be approached through stone paved pathways. In area between Lake B and C, it is proposed to build an underground Pump House for recirculation of water within the lake.

A Lake has been created in the low-lying area. This will also serve as a holding tank for water required for irrigation; (Below) View of the area in 2010 and Now





33 Western Nursery Beds

At the request of CPWD core committee for 11 acres of additional active nursery areas (totaling 20 acres within Sundar Nursery), a proposal for development of west nursery was submitted in 2013.

Focus of proposed landscape scheme is to strengthen nursery operations. To this effect, a series of greenhouse structures have been proposed with a cumulative footprint of over 3000 square meters. Location for these structures had to be carefully planned on the footprint of existing structures due to the presence of several mature trees in the area.

Action Taken:

- Following the survey and physical tagging of all trees in Sundar Nursery, the plantations on the mounds were mapped on the GIS.
- The entire GIS database for the nursery was updated and zone-wise identities were developed for all the trees. This would enable, continuous updation and addition of trees within the demarcated zones as new trees are planted or mature.
- A number of thematic maps have been generated using this GIS data. These maps have proven to be powerful tools for easy communication of complex data and analysis. Generation of several of these maps based on tree families, species, girth, height, flowering season, flower colour etc. will be used to interpret the variety and volume of natural heritage of Sundar Nursery to visitors.

Next Stage:

- It is planned to develop a geo-referenced virtual model of nursery linked to GIS data. A web based application is also being discussed in an attempt to make tree data accessible to visitors.
- Incorporation of site infrastructure in GIS to facilitate site management is also planned for 2014.
- Annual updation of tree database to add new trees into this system.



34 Parking

In addition to the car parking spaces provided alongside the peripheral road, an additional parking for 80 cars has been built to serve visitors to Sundar Nursery – Batashewala complex.

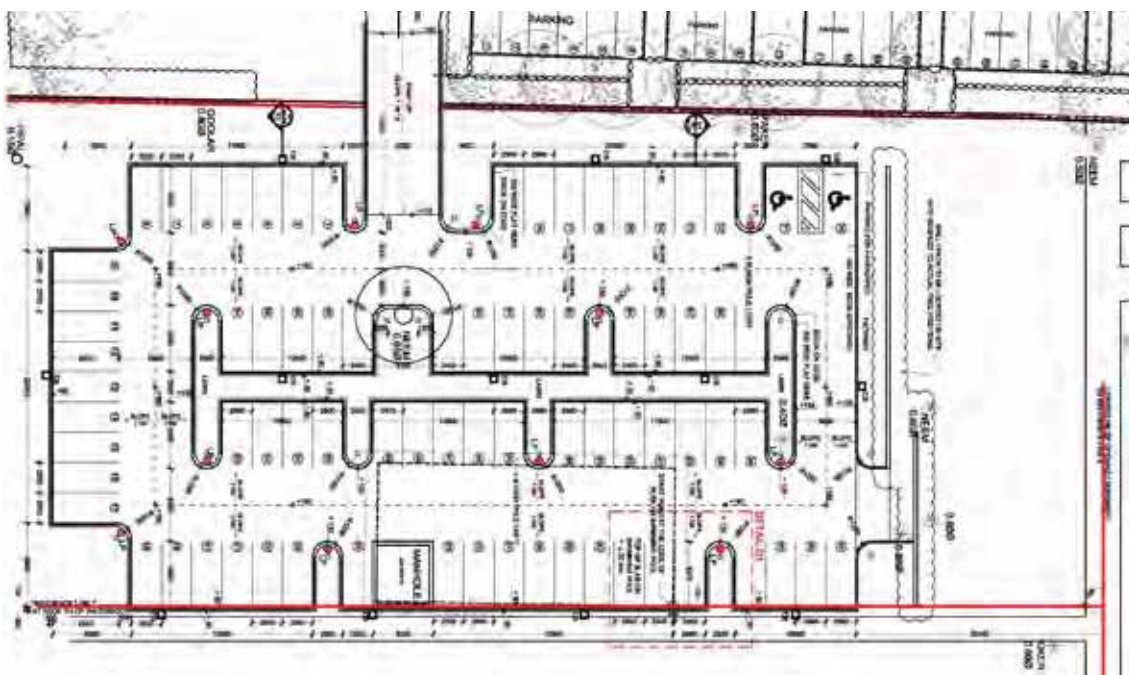
Action Taken:

- Parking facility has been meticulously designed to incorporate existing trees at site. More trees of the same species have been added around the periphery and the central median.
- The parking has been designed in a way that all surface water from the parking and the nearby catchment area will be stored in an underground tank under the parking. This collected water is used for irrigation of nearby areas.

Next Stage:

Connecting the parking area to the Sundar Nursery peripheral road in early 2015 as per approval received in August 2014 at a meeting held under the chairmanship of Secretary, Ministry of Urban Development.

(Below) Civil works in progress of creating parking space in Batashewala Complex



35 GIS Mapping

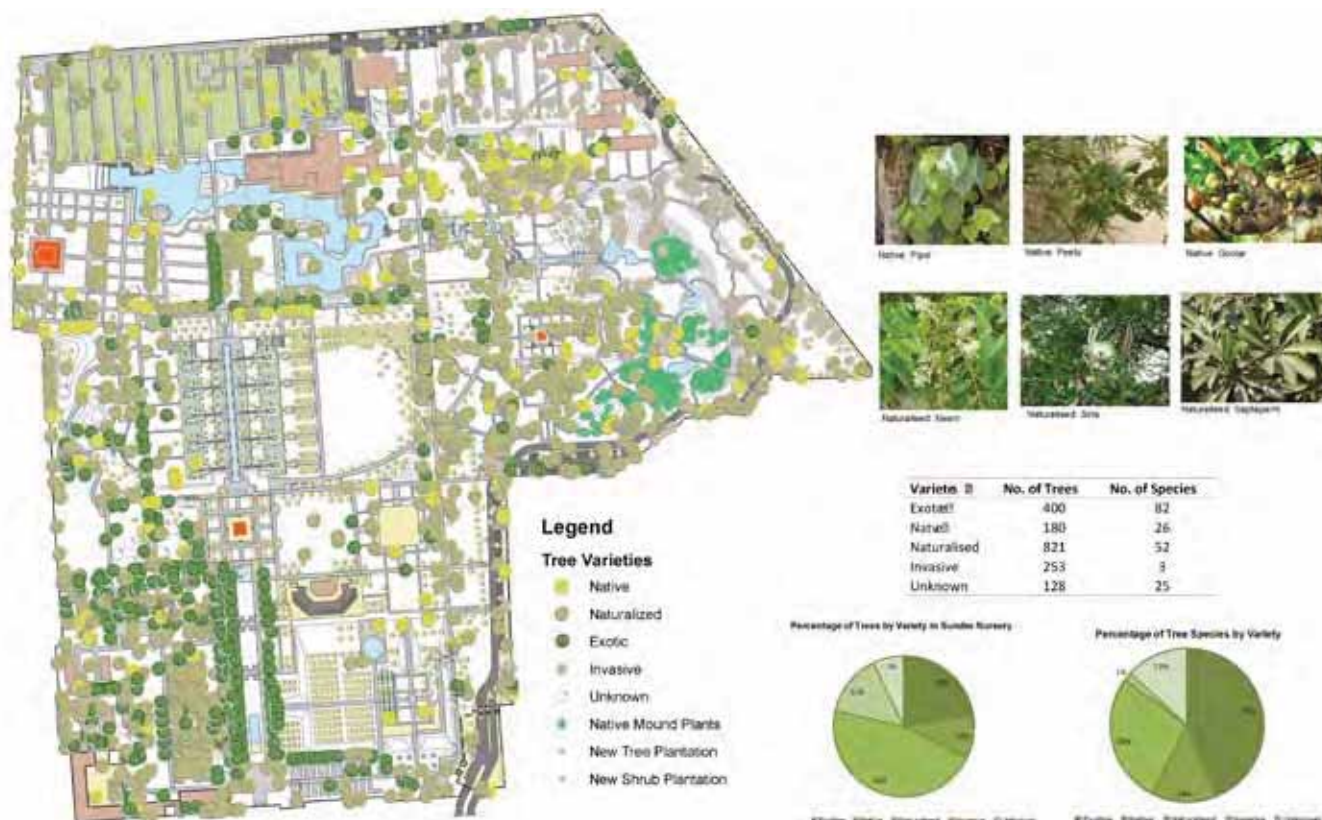
Several years of effort has gone into creating a model Geographic Information System (GIS) mapping at Sundar Nursery. In future years, this will enable graphic mapping and monitoring of trees as well as provide valuable insights for planning nature walks and associated smartphone applications.

Action Taken:

- Following the survey and physical tagging of all trees in Sundar Nursery, the plantations on the mounds were mapped on the GIS.
- The entire GIS database for the nursery was updated and zone-wise identities were developed for all the trees. This would enable, continuous updation and addition of trees within the demarcated zones as new trees are planted or mature.
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- Annual updation of tree database to add new trees into this system.



36 Bird Habitat Area

Sundar Nursery, together with Humayun's Tomb, Delhi Zoo, DDA Millennium Park and the Purana Qila, forms a significant green belt along Mathura Road in Delhi. This region is a rich repository of avifauna and presents an opportunity to conserve and exhibit Delhi's biodiversity.

Action Taken:

- Over 10 acres of area have been planted as exclusive zones for ground nesting birds and with vegetation or fencing will be made inaccessible to dogs in the future.
- A contiguous region of thick plantation with fruit bearing trees has been created which runs along the width of site.
- Careful planting of native shrubs and trees has been carried out to enhance its carrying capacity.
- An area locked between Sundar Nursery and Batashewala Complex, measuring nearly 6 acres is being cleared of rubble and plantation of over 500 trees has been carried out in 2014.
- Continuous bird mapping has now resulted in the identifying of 77 bird species in Sundar Nursery. In 2014, several rare birds including the Ultramarine Flycatcher – never before recorded in Delhi, were sighted in Sundar Nursery.

Next Stage:

A large portion of 6 acre bird habitat will receive dense tree plantation following clearing of rubble. New plantations will be duly marked and updated in GIS database.



Rare birds return to Sundar Nursery

Neha Lakshani
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New Delhi: A little off the beaten track, adjacent to Humayun's Tomb and next to a busy railway station is Sundar Nursery. Typically, one would expect to go there to buy plants but the 70-acre urban oasis is nowhere close to an ordinary nursery. This garden complex is replete with old trees and dotted with monuments dating back to the Mughal era. And it's after years of conservation work, the nursery originally known as Azim Bagh, is back to its magnificent self.

The revival of Sundar Nursery was taken up in 2007. Most of the land was hidden beneath tonnes of debris. The work of landscaping the nursery along with restoration of 13 monuments, was taken up in 2009 by the Aga Khan Trust for Culture (AKTC) in partnership with CPWD.

The nursery was established by the British in 1913 to grow and develop plants for the new city of Delhi. It was taken over by the CPWD in 1945. At present, it houses the largest collection of tree species found in capital, including some rarities.

The focus is also on developing a wide range of habitats within the nursery. It is fast becoming a fascinating site for birdwatching. Officials said the project aims at ecological restoration too.

The landscape master plan was developed by architect M Shabeer and includes zones for a variety of functions. It has an exclusive zone



for ground nesting birds such as peafowl. The complex used to be a key bird habitat till 1970s, but large-scale dumping of construction waste ruined the area. Our aim was to redesign it with native flora and fauna. At present, the nursery has 1,800 large trees now mapped on a GIS system. Additionally, 5,000 tree saplings of over 200 native species have been planted. These species are mostly fruit bearing and have been planted to

attract more birds," said an official.

To develop it as a micro-ecosystem of Delhi, efforts are on to replicate the ridge biodiversity along with khadar (riverine), bungalow (arboreal) and shabir (marshy) zones. And since birds have started returning to the nursery, one can spot the black kite, grey heronbill, woodpecker, yellow-billed green pigeon, spotted owl, Indian roller, white-throated kingfisher,

Eurasian hoopoe, Indian grey heronbill, hyacinth-headed barbet, copper-smith barbet, Hume's leaf warbler, common tailorbird, oriental white-eye and green bee-eater.

Cormorants and painted storks – with their habitat at nearby Delhi Zoo – too frequent the nursery even though many major water bodies are yet to be developed. "Water bodies are being developed to attract more birds. The south embankments

along the water bodies are already seeing kingfishers. In addition to that, densely-planted zones have been established for ground nesting birds such as peafowl and francolin. These will provide a habitat secure from stray dogs," the official said.

Currently AKTC has 77 species of birds, including ultramarine flycatcher and Eurasian golden oriole, on record in the Sundar Nursery area.

Source: Times of India

37 Land-use Change

In late 2013, the Planning Department of the Delhi Development Authority (DDA) informed that the landuse of Sunder Nursery is presently 'agriculture/ Green belt and water body'. This was in contradiction to several earlier clarifications from DDA that the landuse of Sunder Nursery in the Master Plan and Zonal Plan is 'District Park'.

Action Taken:

- It was brought to the DDA's notice that in response to the letter of Under Secretary, Ministry of Urban Development, No. k 13011/9/2008-DDIB dated 13th October 2008 to Commissioner (Planning), DDA of the subject 'Change of land use of Sunder Nursery at Humayun's Tomb from Green Belt to District Park', the response of Joint Director (MP), DDA via letter F.11(18)/2008/PLG/c&d/ 206G on 27 October 2008 conveyed that '*...the parcel of land on which Sunder Nursery falls is Recreational (District Park) as per Master Plan for Delhi 2021 and approved Zonal Development Plan of Zone D*'.
- Letter No. F1(72)2011/MON/HORT/H FILE/227 DATED 24 Nov 2011 written by Chief Engineer (HQ), DDA to ADG, ASI also clarified that 'the land use of the site under reference is Recreational (District Park) – Historical Monument as per MPD 2021 land use plan and approved Zonal Development Plan of Zone D'.
- Similarly, letter dated 1 March 2013 no. F.1(4)2013/Dir.(Plg.)/ Zone D/D-49 of Assistant Director (Planning), Zone D to Chief Architect (NDR), CPWD also stated that '*the land use of the site u/r is 'Recreational (District Park) – historical Monument as per MPD 2021 and approved Zonal Development Plan of Zone D prepared under MPD 2001*'.
- Furthermore, MPD 2021 under District Park use zone, list of permitted activities includes 'plant nursery area'. Thus it is understood that within the District Park that stretches from Purana Qila to Humayun's Tomb includes Sunder Nursery.
- Meeting was held with Commissioner Planning, DDA on 29th April 2014 and several meetings thereafter including with the Vice Chairman, DDA.
- The process of formal land use change was required to commence again.

Next Stage:

The formal land-use change is awaited.

38 Garden House

Development of Sundar Nursery is envisaged to act as a model project towards combining heritage and ecological preservation along with serving a greater role of spreading awareness amongst different strata of society. Garden house combines these values and offers interactive spaces conducive to learning.

Action Taken:

- CPWD approved blueprints of sanction drawings have been submitted to various government bodies for requisite approvals for construction of the Garden House.
- Simultaneously, corporate fundings to bear the construction costs of the Garden House are being sought.
- A few trees that are required to be felled for construction of Garden House have been marked at site and site inspection was carried out by CPWD officials.

Next Stage:

Works to commence as soon as building plans are sanctioned. CPWD will seek necessary approvals for felling of trees on the site of the Garden House.

With the Garden House, Sunder Nursery will serve as the ecological hub for the city of Delhi, which though has 13000 parks, it has not a single arboretum, where Children can be made aware of the city's rich natural heritage.

Building approvals from DDA, SDMC and DUAC are awaited.





About The Garden House

The facility will be Delhi's first in its offering where visitors come to learn more about flora and avifauna native to this region.

The Garden House will feature several flora from other regions that would otherwise not survive in the varied harsh climate of Delhi, adding diversity to the existing variety of trees within Sunder Nursery.

The Garden House sits among the nursery planting beds taking up their rhythmic scheme in a tartan patterning for its own structural supports and overall form. Double height louvres transfer the idea of nursery propagation to the vertical plane, while shading the interiors from direct sunlight.

Visitors can enter the Garden House from the peripheral road as well as the microhabitat zone. The entrance from the driveway leads into a trellised porch for groups to gather and then into the inner realm of flora whereas, visitors approaching from the microhabitat zone have a unique trail that leads them to the facility.

As one enters, a constant play of light weaves the three zones of desert, tropical and semi-tropical flora seamlessly under the sail-like roofs. Interpretation zones punctuate spaces and one is led by a gently rising ramp onto the next floor through the dense tree-cover in the open-to-sky courtyard.



The Microhabitat Zone has Ecological Trails that will lead visitors through the rich collection of flora in a natural setting and ultimately to the Garden House. This holds immense appeal for the over 300,000 school children that visit the abutting Humayun's Tomb Complex annually.



Microhabitat Zone & Garden House

Numerous species of plants have been sourced from forests, hilly and riverine tracts on the outskirts of Delhi where these species still survive – away from the city’s urban sprawl. Over the two years of planting, the microhabitat zone continues to evolve into a beautiful zone hosting perennial plants and trees those nature lovers from the city travel great distances to see. The preservation of all existing trees during the park’s development has ensured the sustenance of a substantial bird-habitat on site. This will continue to enrich the natural environment in the area for years to come.

The proposed Garden House sits at the entrance of this zone and will host information not just on its unique collection but also on the adjoining arboretum welcoming all for learning in a natural setting providing

a tropical transition to the forest while providing interpretation for the microhabitat zone.

The Garden House aims to complete and complement the experience of Sunder Nursery as an opportunity to savour nature in a tranquil setting which is otherwise difficult to find in megapolis, such as Delhi.



To enhance the ecological significance of the region, a 30-acre microhabitat zone has been created within Sunder Nursery to simulate Delhi's once rich and now quickly disappearing biodiversity, including kohi (hilly), khadar (riverine), bangar (alluvial) and dabar (marshy) zones featuring over 100 regional tree species unique to the region.

Environmental Design:

By using recyclable materials such as steel and fabric-roofing, the building minimizes its ecological impact on the urban fabric. Sensitively designed by renowned architect, Ashok B. Lall - the building's Bioclimatic Design also uses natural lighting, ventilation and recycled water further rendering it superior environmental sensitivity.

The Garden House is designed to sit lightly on walls of stone masonry with finely dressed sandstone elements. Above, light filters through airy, glistening vaults.

The choice of materials and formal systems recall the shapes and methods of the past, yet signify and celebrate the present. The building also, while turning to modest materials for architectural expression, draws upon sound sustainable technologies to substantiate its purpose.

The overall form of the building is largely transparent to create a welcoming gesture to the visitor while visually connect the exotic flora inside to their native counterparts in the microhabitat zone.

Carbon Footprint

As the Garden House is placed in the environmentally rich setting of Sunder Nursery, special eco-friendly measures have been taken in the architectural design of the building.

The Garden House's structural assembly uses tubular steel and lightweight fabric canopies reducing the building's carbon footprint thus, minimizing its ecological impact.

Energy Efficient Daylighting + Thermal Comfort

The tensile fabric roofs diffuse natural light indoors creating a soft ambience for visitors to appreciate the presented flora.

The roofs are angled optimally to capture direct sunlight in the cold winter months to enter the interiors and help maintain desired temperatures within the building.

Cooled breezes rising from a series of underground earth tunnels escape from the tall vaulted roofs – providing thermal comfort to visitors while protecting showcased flora from Delhi's harsh seasonal variations.

These techniques for naturally heating and cooling the internal volume of the Garden House will greatly reduce reliance on conventional electrical air conditioning and heating solutions while not compromising on visitor's thermal comfort.

Recycling

The building is proposed to recycle wastewater and compost generated at Sunder Nursery site, setting the benchmark for sustainable building.

Grey water produced at site is seen beneficial for the growth of plants while also responsibly taking care of the waste.

By using minimal concrete, glass, structural steel and light-weight materials the Garden House comprises completely recyclable building materials becoming green in the truest sense.

39 Post Project Sustainability

In keeping with the MoU signed on 11 July 2007, the partner agencies are to establish a system for post-project financial sustainability and management for Sundar Nursery. In keeping with this commitment, it was agreed, in 2011, to create a management trust with AKTC agreeing to serve as Management trustee for a 10 year period during which any shortfall of revenues would be provided by AKTC. The Management Trustees will not have any right to recover investments in Sundar Nursery or claim any ownership to moveable or immovable properties. They would only be entrusted in ensuring world class standards for visitors to the site.

Action Taken:

- A special purpose vehicle for the management of Sundar Nursery was proposed in 2011. AKTC has been working in congruence with CPWD and ASI to design a special syndicate of public and private parties with the objective of installing a sustainable structure to nursery functioning.
- The proposed trust will be custodian of the park and its assets. It will be entrusted with the task of providing maintenance and security along with organizing entire gamut of cultural & educational programmes forming revenue generating backbone for the park.
- The trust is proposed to be chaired by Secretary, MoUD while representatives of CPWD, ASI, SDMC (public parties) and AKF, AKTC (private partners) will form its core.
- A draft trust deed based on above mentioned principles has been approved by CPWD's core committee.
- This document has been internally forwarded by CPWD to other concerned ministries seeking their approval.

Next Stage:

- AKTC is awaiting feedback from the concerned ministries and necessary approvals to form the Management Trust.
- Following formation of the Trust, revenue generating facilities at Sundar Nursery will be built by AKTC.

Key Principles of the Trust Deed:

Public Partners (MoUD, CPWD, SDMC, ASI) will be permanent trustees while AKTC/ AKF will serve as Management trustees to the trust for a limited period of 10 years.

Ownership of all movable and immovable assets, including those created during the project, will remain with the concerned government agency.

AKTC, will bring its international expertise to create a park operations unit, capable of managing and promoting Sunder Nursery to achieve a financially self-sustainability.

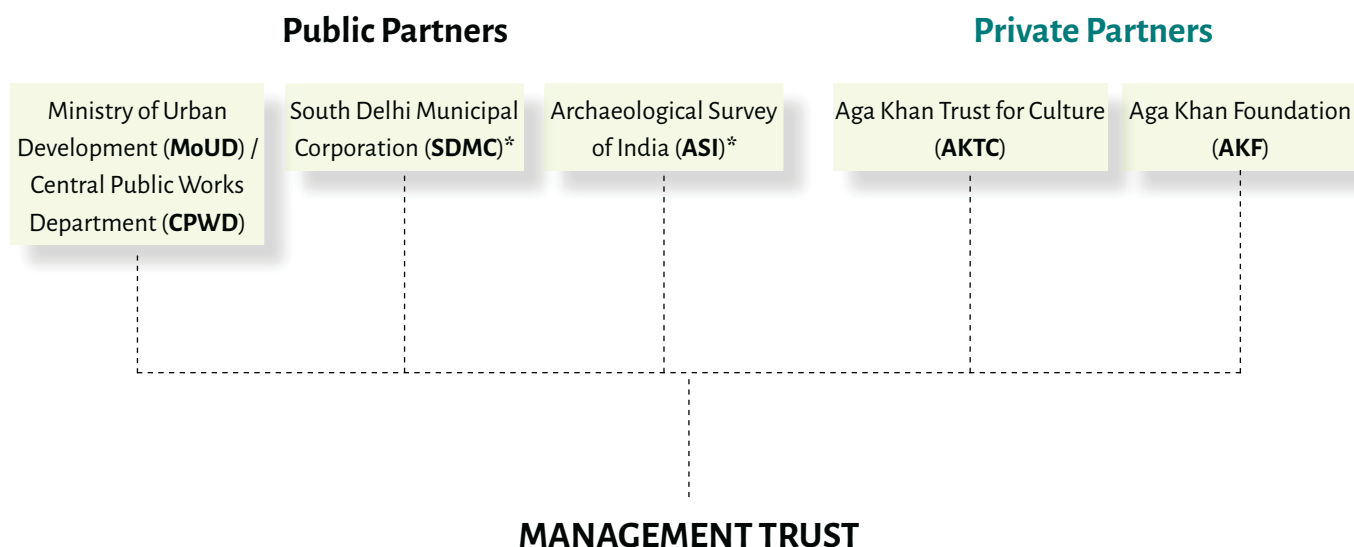
In order to ensure financial sustainability, revenue generating facilities will be built by AKTC following the formation of the Sunder Nursery Trust.

The term 'management' includes activities beyond cleanliness, civil and horticulture maintenance and security and includes conducting a successful cultural and ecological awareness programmes, fund-raising, marketing, accounting, coordination amongst government agencies, amongst others.

During its tenure as a management trustee, AKTC/ AKF will fund any annual deficit in operations, should operating expenses exceed revenue.

AKTC will not seek to recover its funds, contributed to the project up till 2017 under the existing MoU and ensure government accounting standards are met.

Special Purpose Vehicle: Trust Organization

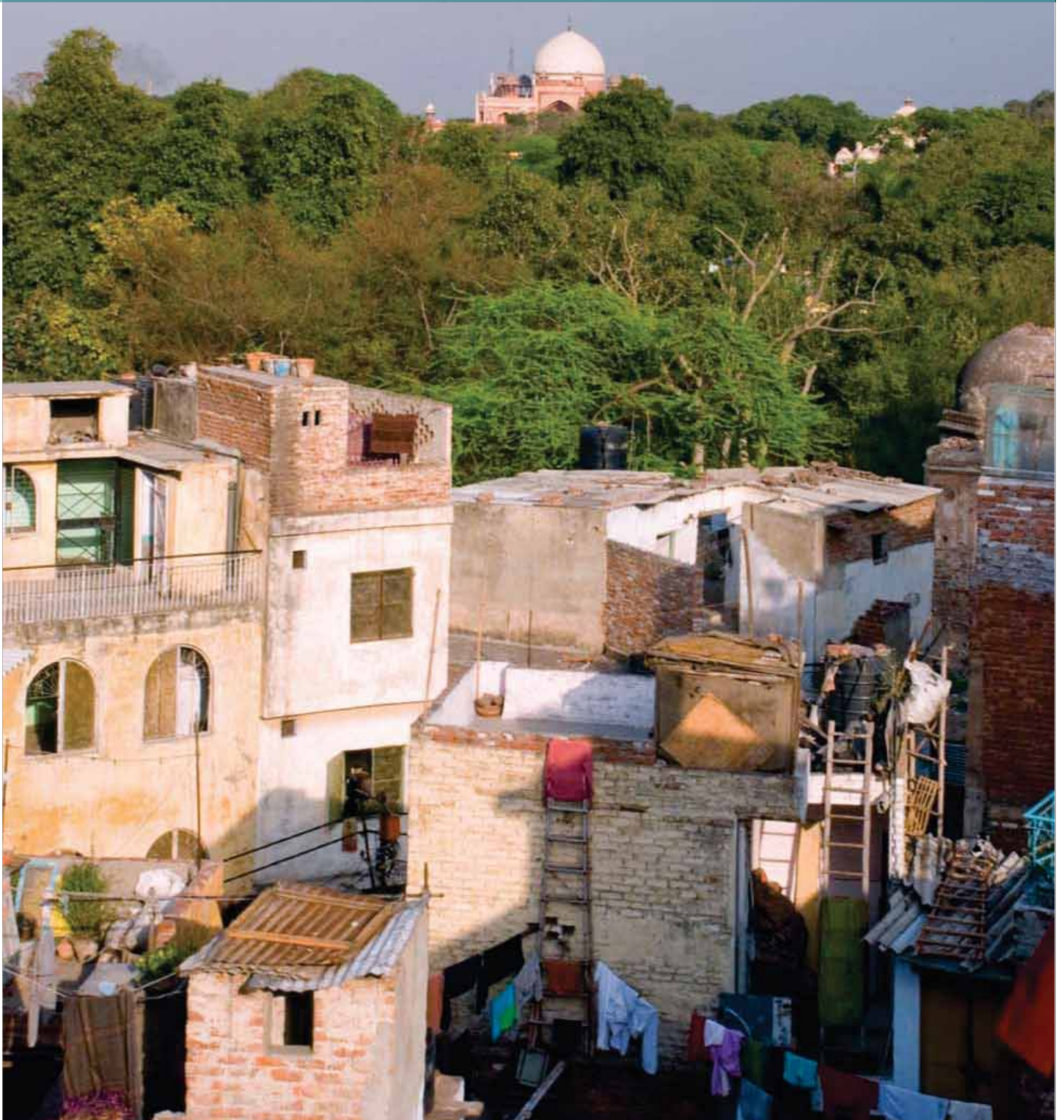


* ASI, SDMC have now conveyed their approval and comments to the Trust Deed in response to MoUD letter of February 2014.

URBAN PLANNING

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40 Archaeological Park

The Delhi Development Authority Master Plan for Delhi designates three areas in Delhi as 'Archaeological Park' – these of Tughlaqabad, Mehrauli and Sultan Garhi. An Archaeological Park is defined by the Master Plan as an area distinguishable by heritage resource, which has the potential to become an interpretive and educational resource for the public in addition to the value as a tourist destination. To secure the area extending from the Purana Qila in the North to Humayun's Tomb in the south, AKTC has been assisting the National Monument Authority and the Delhi Development Authority to secure a designation of an Archaeological Park.

Action Taken:

- The monuments standing within this 750 acre zone have been listed. These include ASI protected structures, Delhi government protected structures as well as heritage buildings listed by INTACH and notified by NDMC/SDMC.
- As per guidance of DDA & NMA, possible boundaries of the park have been identified in such a manner that no residential areas or transport corridors are to be included within the proposed archaeological park boundaries.
- VC, DDA chaired a meeting of all stakeholder agencies such as ASI, CPWD, Delhi Zoo, Delhi Government's Department of Archaeology – who have stake in the protection/ development of this contiguous green corridor.

Next Stage:

Formal approval of the Delhi Development Authority is required following which a notification of the park will be carried out. This could eventually lead to expansion of World Heritage Site boundaries. The park will provide a large urban green space for the people of Delhi.

*Sunder Nursery enjoys an important place in the urban ecological fabric of New Delhi – constituting 370 acres of green area stretching from Purana Qila to Humayun's tomb – while remaining a major flora and avifauna habitat in the National Capital Region: **700 Acres***

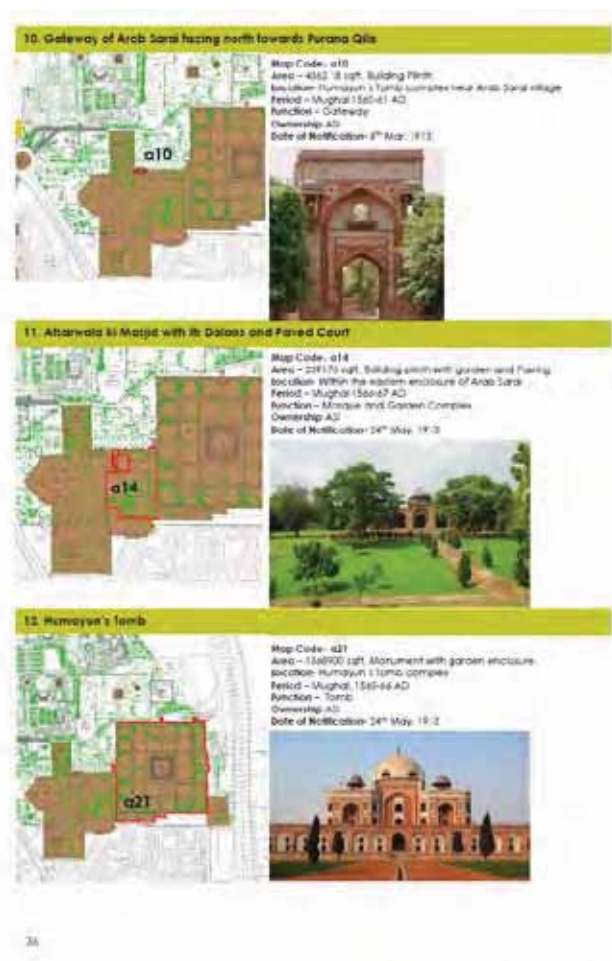
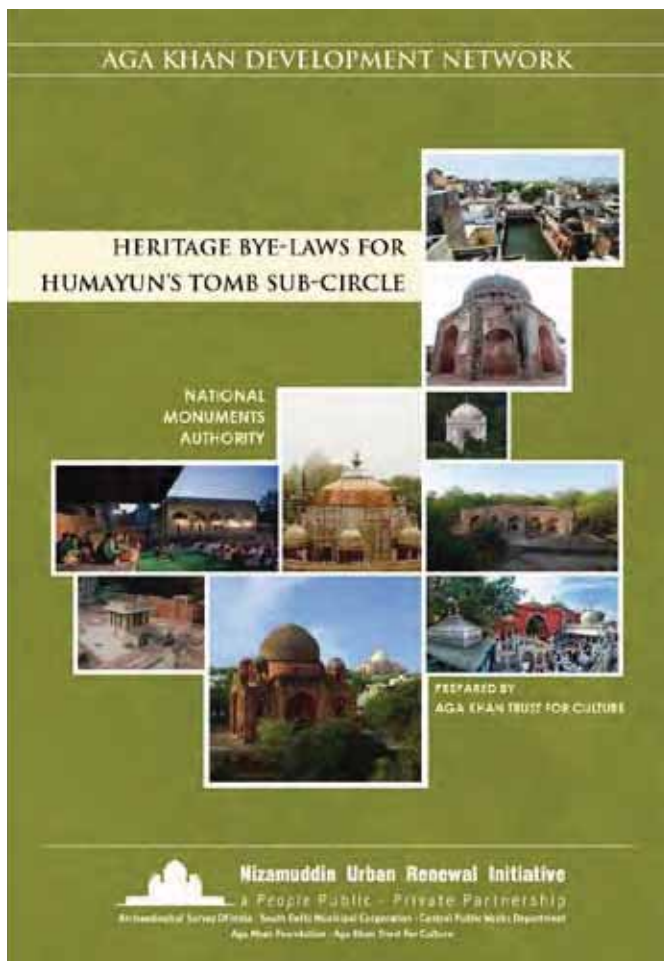


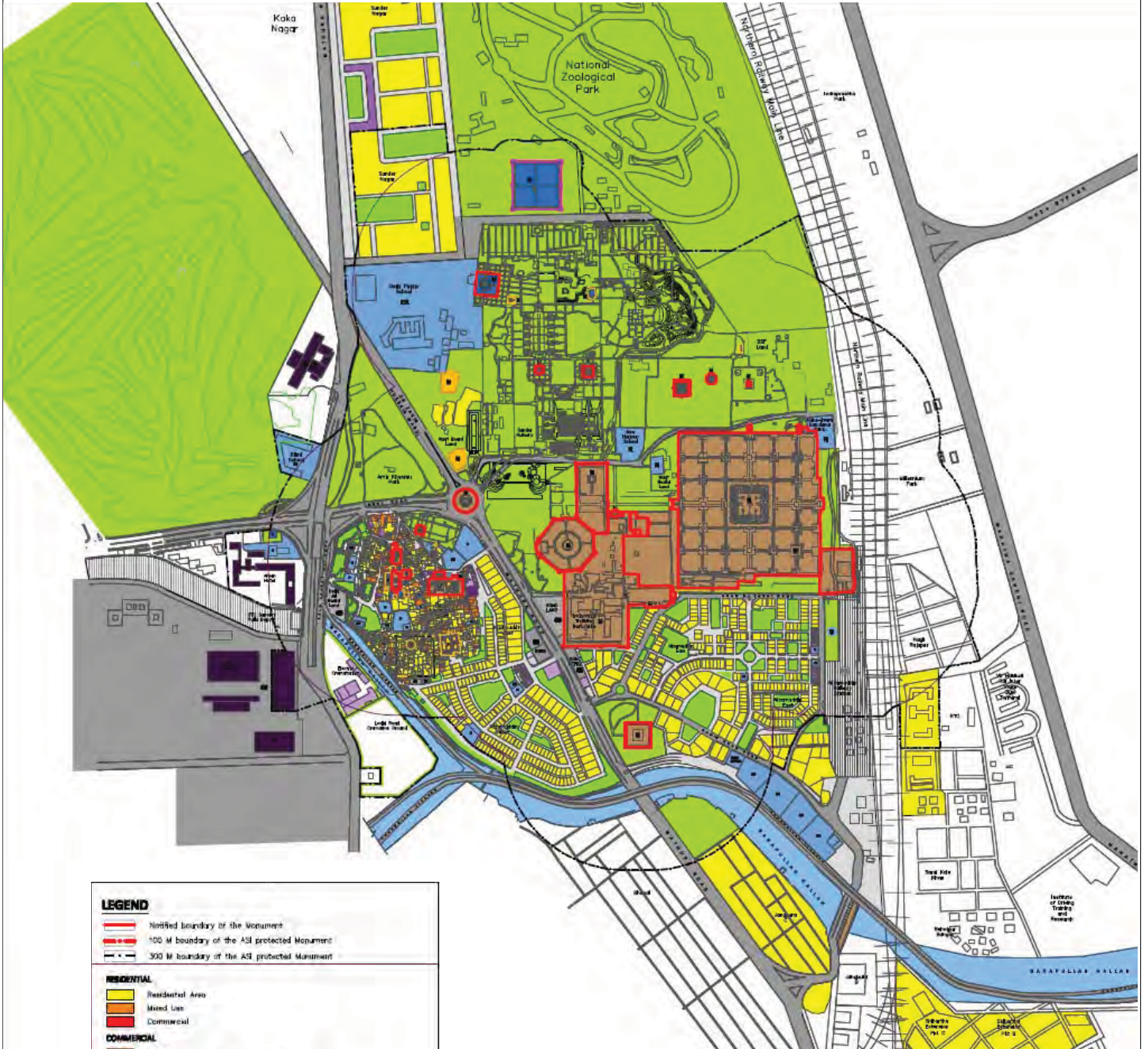
41 National Monument Authority Bye-Laws

AKTC offered to prepare required bye-laws for 28 ASI protected monuments that stand within the Humayun's Tomb sub circle.

Action Taken:

- Though the NMA rules prohibit construction within 100 m of a protected monument, AKTC aimed to define the property and this 100 m zone precisely. This required extensive surveys of almost 200 acres.
- Archival research associated with the exercise revealed that a majority of the monuments in the Humayun's Tomb sub circle did not have the protected areas notified.
- The regulated area of the ASI protected monuments formed a contiguous stretch and has been proposed to define the property boundary of the Master plan designated heritage zone.
- As another outcome of the exercise, NMA has recommended to DDA that an additional Archaeological Park be designated for Delhi stretching up to Purana Qila in the north.
- For residential areas such as Nizamuddin East & West it is proposed to limit construction to just shy of present master plan limits but freeze these. It has been suggested that basements can be permitted.
- For the Hazrat Nizamuddin Basti, where street widths are narrow, height restrictions for new construction in the regulated areas is proposed. A large portion of the Basti however stands within the prohibited zone.
- AKTC has offered to develop appropriate bye-laws for the prohibited zones where in some cases it does not seem justified to completely prohibit new construction.
- The final document was submitted to the NMA for approval in November 2014.





LEGEND

- Notified boundary of the Monument
- 100 M boundary of the ASI protected Monument
- 300 M boundary of the ASI protected Monument

- RESIDENTIAL**
- Residential Area
 - Mixed Use
 - Commercial
- COMMERCIAL**
- Hotels
 - CSC Convenience Shopping Centre (area 5.1) No.
- RECREATIONAL**
- Monument
 - City Park/Street Park/Community Park
 - Plant Nursery
 - Neighbourhood Play Area/Green Spaces
- TRANSPORTATION**
- Circulation-Rail/WRTS/Road
 - Terminal/Depot-Rail/WRTS/Bus/Truck
- UTILITY**
- Drain
- GOVERNMENT**
- Government Office/Courts
 - Government Land (use undetermined)
- PUBLIC AND SEMI-PUBLIC FACILITIES**
- Education and Research
 - Police Station
 - Religious
 - Social-Cultural, Socio-Cultural Complex/Centre
 - Hospital and other Health Facilities
 - Burial Ground/Crematorium

ARCHAEOLOGICAL SURVEY OF INDIA



Date:

NIZAMUDDIN HERITAGE ZONE

PROPOSED BOUNDARY

List of Colonies within the 100m zone:

- Nizamuddin West
- Block A
- Block B
- Block F
- Mirza Shalib Bara Khamba
- Nizamuddin East
- Block A
- Block B
- Sub Colony- Mirza Shalib Bara Khamba

List of Colonies within the 300m zone:

- Nizamuddin West
- Market
- Block A
- Block B
- Block C
- Block D
- Block E
- Block G
- Nizamuddin East
- Block C
- Block D
- Sunder Nagar
- Nagli Rajapur
- Mirza Shalib Bara Khamba



42 Urban Design Conference

Culture as a Tool for Urban Development

On the assumption that culture can be a motor of employment growth, governments the world over are directing investment toward new cultural industries and districts, including public spaces whose cultural amenities are intended to harmonize different social interests and improve the quality of urban life. In India, several centuries of colonial rule and the imposition of planning ideals from a cultural context remote to ours have today led to a situation where urban development is only synonymous with planned interventions and policy frameworks designed to tackle urban growth, distribution of land and mobility. Here, the cultural context of resident communities has rarely played a pivotal role in the development of historic city centres though it has significant potential in improving the quality of life.

Action Taken:

- The '**Culture as a Tool for Urban Development**' seminar organised by the Aga Khan Trust for Culture with the support of the Planning Commission, Ministry of Urban Development and Ford Foundation shared learning's from the Nizamuddin Urban Renewal initiative as well as from other multi-disciplinary projects in Assam, Kerala, Mumbai, Delhi, Agra, Ahmadabad, with an audience of bureaucrats including municipal corporations from countrywide locations, planners, urban architects, film makers, artists, demonstrating the need to understand cultural context as well as leverage this for economic gain and well being of local communities.
- The inaugural session on the 23rd of January was presided by Dr. Karan Singh, Dr. Isher Judge Ahluwalia, Mr Arun Maira, Mr. Rakesh Ranjana (Senior Adviser (PCMD/HUA), Planning Commission) and Mr. James Wescoat.
- The conference comprised of sessions on: **Community Development and Management** (aimed at reflecting upon the links between culture, heritage and local communities), **Built and Tangible Heritage** (aimed at not only the conservation of monuments, but also their interaction with the general urban form and with their connection to infrastructures); **Intangible Heritage** (to comprehend how culture or art can in reality contribute to urban development)
- Members of the conference participated in heritage walks to Hazrat Nizamuddin Basti and Humayun's Tomb Complex.
- The papers presented during the conference were published in 'Seminar' magazine, May 2014 issue.

Next Steps:

The conference recommendations were drawn up and shared with the Planning Commission

43 Empowered Citizenship

Governance Manual

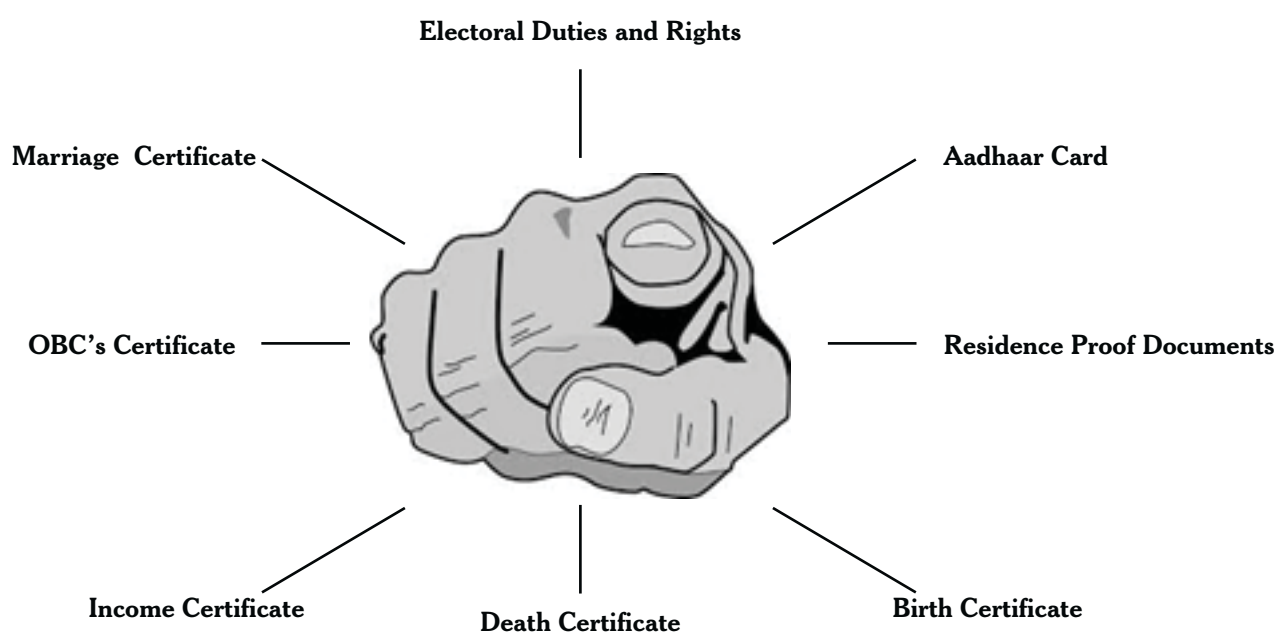
The Nagarik Nama is a governance handbook which meant for the community of Nizamuddin basti. The objective of this manual is to demystify “the State” and provide residents with practical tools to defend their entitlements.

Action Taken:

- A final draft framework of the ‘**Nagrrik Nama**’ or the governance manual was prepared containing information on various government schemes, benefits and government procedures.
- This effort has resulted in the creation of brochures to create awareness on several government related programmes such as widow’s pension scheme, ration card, aadhaar card etc.

Next Steps:

- To undertake field tests for ‘naagrrik naama’ before making it available for use to the communities.
- To make it available to communities in the Basti.





What is the Nagarik Nama?

A practical manual

Insufficient knowledge regarding the State

Lack of autonomy in local population

Increasing awareness

Generating confidence and inspiration

Reinforcing efficiency of the State in basti

It encompasses diverse topics, ranging from collective rights to individual entitlements. It has been written for the Basti's residents. The issues tackled, the language, the contacts, the legal advices, the design and the general tone of the manual are all tailored according to the specific socio-cultural context of the basti.

In the Basti, the level of understanding of the community related to governance is very limited. Residents tend to oversimplify institutional matters or have a very superficial knowledge of the schemes, rights and services they are entitled for. On the whole, given the complexity of the governance system in Delhi, basti-dwellers are too often clueless on how to approach the authorities: Where to go? Whom to talk to? What procedure to follow? This fuzziness have been addressed in the manual

For many in the basti, State-related matters are too intimidating to be addressed. Since 2008, residents have been also increasingly relying on AKDN workers for tasks such as complaining to the police or to availing schemes. This lack of autonomy deeply hampers the community's capacity of action. This deficit of confidence, fuelled by an insufficient level of awareness, generates many lost opportunities in terms development.

The Nagarik Nama contains pieces of information which are helpful residents to address their recurrent problems. The manual offers a list of entitlements people are often unaware of, it describes how the local authorities work, it explains the official procedures to avail entitlements or to complain, and it offers tips to deal with possible difficulties in the process. This is an attempt to make citizens intellectually better equipped to understand and face the State.

The Nagarik Nama is an instrument of empowerment. Its ambition is to make basti residents independent (from middle-men, from politicians but also from AKDN). It also aims at generating confidence and aspirations among its readers and at inciting them to take up a pro-active posture for the improvement of the basti.

The objective of the manual is to strengthen the presence of the authorities in the basti and make the general governance system more efficient. This implies efforts from both the residents and the authorities—the responsibilities of both stakeholders are clearly underlined in the Nagarik Nama. By filling up knowledge gaps, the Nagarik Nama aims at facilitating linkages between the State and the local community.



44 Neighbourhood Parks

As part of the project, four neighbourhood parks have been landscaped and are now managed in partnership with community groups.

Action Taken:

- As per a user survey, the Women's Park is used by more than 45 women daily. The entrance of the Women's Park has been redesigned and space near the park gate and the outer edge of the Women's Park was developed for children. The designs of the same were discussed in detail with the women user groups before implementation.
- Regular meetings were held with the visitors to the women's park to understand the problem of security and improving entrance to various parks. Women from community using the park also visited the Station House Officer (SHO), Delhi

Police requesting the police to ensure public safety in open areas in and around the Basti.

- A system of facilities and maintenance audits for two parks (central park and women and children Park) has begun in August 2014. A member of the sanitation team visits the two parks on a daily basis to record cleanliness, status of installed equipments such as swings, outdoor exercise equipment, presence of guards, watering, pruning of grass and plants in the parks. Based on the audit report, corrective measures are taken if required.
- Development works on the triangular park are complete. Facilities include a volleyball court and seating for residents and visitors. Said facilities in triangular park are now being used triangular used by the community. The outer park is being used extensively for football, basketball and cricket practices by the children in the Basti every day.
- One of the parks is yet to be freed of encroachments and as such landscape works have not been able to be implemented on this park.

Next Steps:

- Continue to pursue the Delhi Development Authority to take steps including seeking police support to implement landscape works at the fifth park.
- To explore support from Delhi Parks and Gardens' Society (Government of Delhi) for maintenance of parks.
- Follow ups with the Police for regular policing of the parks
- To involve community groups to ensure proper upkeep of the parks.





Outer Park: In 2010 before landscape development (Above) and during the Apni Basti Mela organised in 2013 (Below).



Central Park: In 2010 before landscape development (Above) and after landscaping in 2012 (Below) used frequently for community functions.



Mother and Child Park: In 2010 before landscape development (Above) and after landscaping in 2012 (Below) when it is now extensively used by Basti women





We can save 24 litres of water everyday by just fixing one leaking tap in our house! Considering this fact on the occasion of **World Water Day**, a four day awareness campaign was organized in the Basti, from 19th -22nd March 2014. As part of the program 132 leaking taps in 57 households were repaired. Children of the **Eco Club** went door-to-door along with the team of AKTC to spread awareness on the topic of water conservation and put up posters in the houses of the Basti residents.

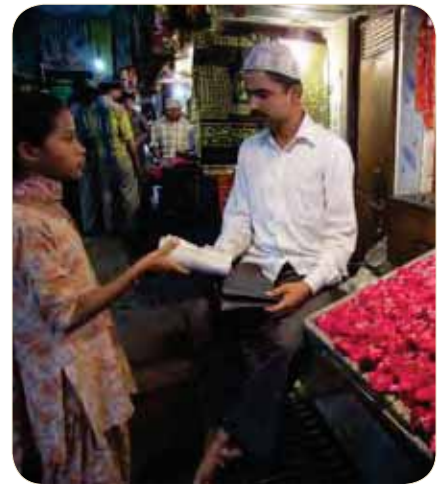


Every 5th of June is a day celebrated as the **World Environment Day** to stimulate worldwide awareness of environmental issues and encourages political, societal and individual action. This year too, AKTC celebrated the day at the historic Sundar Nursery, which adjoins the Humayun's Tomb in Nizamuddin. This 70 acre green space is being developed as an urban park which comprises of a distinct microhabitat zone, ecology and bio-diversity of Delhi's native flora and fauna.



Environmental Awareness

The environmental awareness activities in the basti range from involving community to address the issue of waste disposal on streets to educating residents of the area on water conservation through various means. This range of activities was decided after identification of issues such as haphazard disposal of municipal solid waste on streets and open spaces in the basti, wastage of water in households due to various factors.



45 Environmental Awareness

Involving community for clean and green environment to ensure a sustainable clean and green environment in the Basti, awareness programs aimed towards the same were executed. This past year apart from the Eco club children, youth from the Basti and representatives from the Dargah, were actively involved in environmental awareness programs.

Action Taken:

- A four day campaign from 19th to 22nd March 2014 was organized on the occasion of **World Water Day**. As part of this campaign, 132 leaking taps in 57 households were repaired. The Eco Club children conducted a rally and discussions in small groups with Basti residents to raise awareness on water conservation. Posters on water conservation were put up in the Basti as part of the awareness drives.
- The **Eco Club** members participated and performed a play for Earth Day celebrations held at the American Centre on 5th June 2014. 150 individuals (including government officials from HUDCO and from other NGOs) and 30 children (Eco Club members and youth from the Basti) participated in the World Environment Day celebrations held at Sunder Nursery. The celebrations included nature walks conducted by five environmental experts, which were followed by presentations and talks focused on impact of climate change on the environment.
- **Training Session on Natural Habitat:** A programme for developing nature trails in Sunder Nursery and training 10 youth from the Basti for nature walks was undertaken. Youth from the Basti were trained to identify birds, butterflies and trees along specific trails in the nursery. As a part of this training, a terrace kitchen garden workshop was organized for residents of the Basti by representatives from Bombay Natural History Society.
- **Cleanliness Drives:** A cleanliness drive was facilitated for Hazrat Nizamuddin Dargah Committee by Sanitation team of Aga Khan Trust for Culture on 2nd October 2014 on the launch of **Swachh Bharat Abhiyan**. With active support from the South Delhi Municipal Corporation, the committee undertook a campaign from the Dargah, urging shopkeepers, residents and pilgrims to come together for a clean Basti. Representatives from the Dargah also actively took a part in a cleanliness drive and rallies during the time of Basti Mela wherein Farid Ahmed Nizami, Naib Sajjadanashin, Dargah Hazrat Nizamuddin Aulia, gave a speech asking people in the Basti to take steps in keeping the Basti clean. He further appealed to the residents of the Basti through "Anmol Basti Newsletter" to come forward and actively do their bit to keep the Basti clean. The Dargah Committee has been actively continuing with facilitation of waste management in the Baoli complex.
- **Awareness activities during Apni Basti Mela:** During the Basti Mela, Urban improvements stall provided detailed information on process of waste management in the Basti being implemented by AKTC in association with the community and informal sector. The stall also emphasized on awareness of proper waste disposal by people in residential areas in Basti through games. A play, highlighting the importance of proper waste disposal and waste management was enacted by children from the Basti during the Mela.

Next Steps:

To train youth group to understand natural habitat in Sunder Nursery.

46 Basti GIS

A Geographic Information System (GIS) is a decision support system which integrates hardware, software and data. It allows the analyst to spatially visualize and analyse information and make informed decisions. Since 2007, the Nizamuddin Urban Renewal Initiative has been working towards improving the Quality of Life for the inhabitants of the Basti through several sub-components of the project like public health and hygiene, solid waste management, education and vocational programs. Successful operation and management of activities like these more often than not depends on an efficient system of data management.

The GIS for the Basti is aimed at bringing all socio-economic data related to the inhabitants on a spatial i.e. map based platform. The mapping of this data as measurable socio-economic indicators, would both assist the project team to take stock of its own outreach in the Basti and make appropriate interventions, and in turn create a model for long-term management of the socio-economic and civic urban framework.

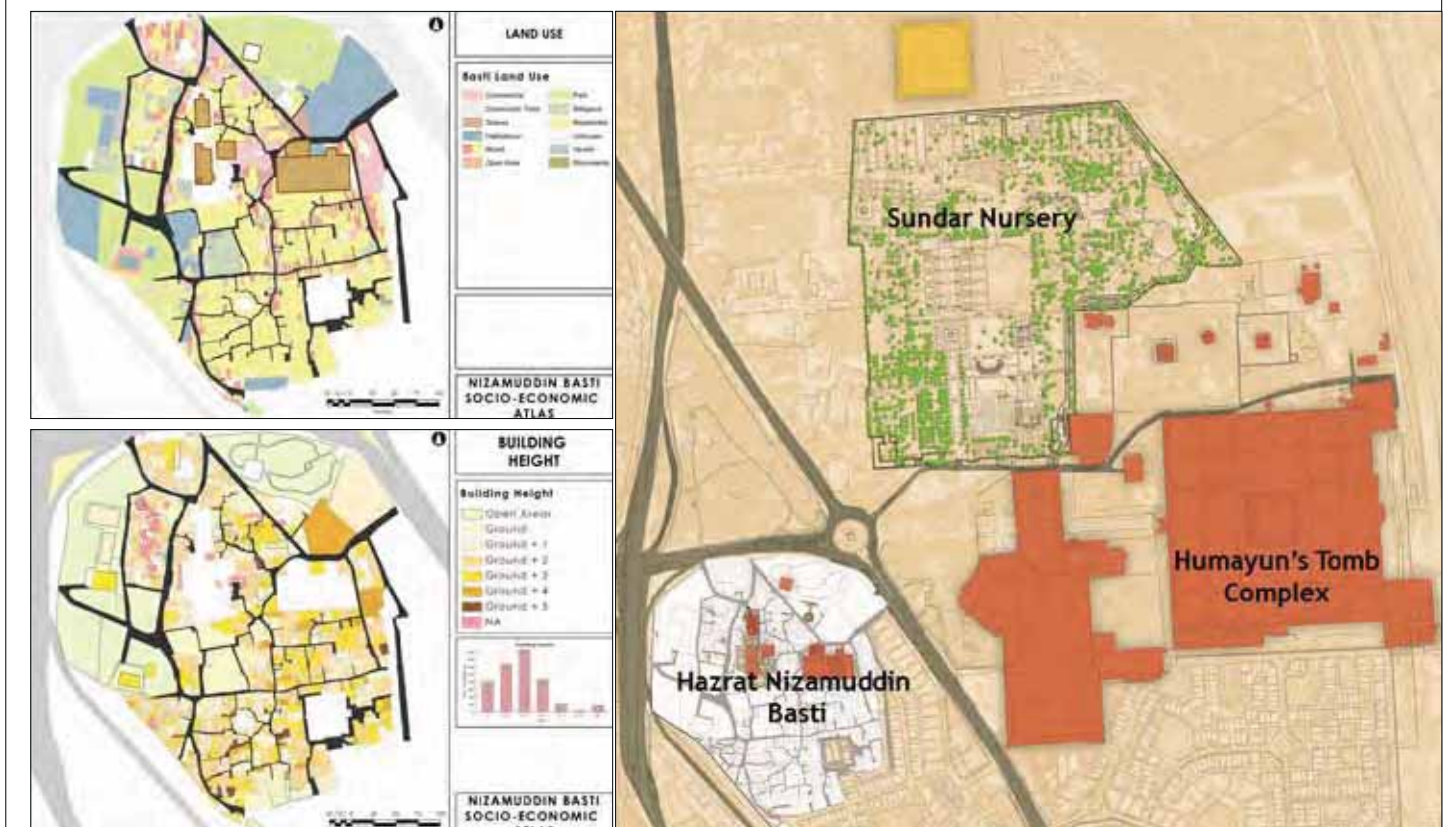
Action Taken:

During the second phase of GIS work a socio-economic GIS was attempted for Kot Mohalla, one of the eight main neighbourhoods of the Basti. The intention of this exercise was to visualise the neighbourhood in terms of different socio-economic indicators and expand it to the entire Basti. The upscaling was started at the beginning of the third phase of work. So far the following has taken place.

- a. Conversion of the existing household data to a GIS ready format.
- b. Partial verification and matching of data with the family health card system.
- c. Verification of land use and preparation of detailed land use / building use maps of the Basti.

Next Steps:

The Family Health Card Database will be integrated with the GIS.



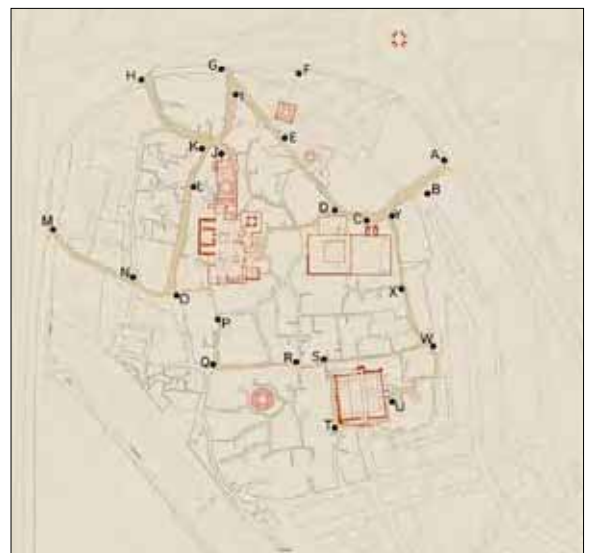
47 Designing Signage and Heritage Trail

For a historical site like Hazrat Nizamuddin Basti which comprises of several monuments and important holy places, and is visited by millions of tourists and pilgrims each year, having an integrated signage system is crucial.

Action Taken:

- The main aim of these signages and heritage trail is to facilitate visitors by providing directional and historical information to the area, monuments and urban facilities. The materials and finishes used for signage will adhere to the historic character of the Basti.
- Based on the physical survey conducted for the Basti and understanding the need of the visitors and basti residents, these signages have been categorised for three type of users - locals, tourists and pilgrims. The design of each category would also be distinctively different.
- The main objective of the signange is to facilitate clear and visible communication to all the user groups by using colors, fonts, language, size of the texts and even choosing the location at the site.
- It is proposed to insall a map of the Basti at the four main entrances of the area in three languages - Hindi, Urdu and English.
- The key map is used on all the historical and tourist signs.

TYPE	TYPE OF INFORMATION	LANGUAGE & FONT	DESIGN/PLACEMENT	TEXT	LOCATION	DIMENSIONS	PROPOSED MATERIAL	FINISH LOOK	PHOTO AREA
1	1. Title 2. Name of the Park 3. Name of the Monuments inside the Park 4. Size of the Park 5. Brief History about the site 6. QR Code 7. Logo	Urdu English		Basic information about the site, including the name of the park, the name of the monuments, the size of the park, and a brief history about the site. The QR code and logo are also included.	East of the Park, near the main entrance.	1.5m x 1.0m	Aluminum plate with a red and white finish.		
2	1. Title 2. Brief history about the site 3. Name of the site 4. Direction of the site 5. Name of the Monuments 6. QR Code 7. Logo	Urdu English		Basic information about the site, including the name of the site, a brief history about the site, the name of the monuments, the direction of the site, and the QR code and logo.	West of the Park, near the main entrance.	1.5m x 1.0m	Aluminum plate with a red and white finish.		
3	1. Title 2. Brief history about the site 3. Name of the site 4. Direction of the site 5. Name of the Monuments 6. QR Code 7. Logo	Urdu English		Basic information about the site, including the name of the site, a brief history about the site, the name of the monuments, the direction of the site, and the QR code and logo.	West of the Park, near the main entrance.	1.5m x 1.0m	Aluminum plate with a red and white finish.		
4	1. Direction 2. Name of the site 3. QR Code 4. Logo	Urdu English		BASIC DIRECTION - SHARAH-UL-QUADRI - KHAN-UL-KHAN - KHAN-UL-KHAN - KHAN-UL-KHAN	West of the Park, near the main entrance.	1.5m x 1.0m	Aluminum plate with a red and white finish.		
5	1. Title 2. Name of the Park 3. Name of the Monuments inside the Park 4. Size of the Park 5. Brief History about the site 6. QR Code 7. Logo	Urdu English		Basic information about the site, including the name of the park, the name of the monuments, the size of the park, and a brief history about the site. The QR code and logo are also included.	East of the Park, near the main entrance.	1.5m x 1.0m	Aluminum plate with a red and white finish.		





WASTE & SANITATION

5 of 9
2 0 1 4

48 Community Toilets

To provide clean and well managed community toilet complexes and ensure safe access for sanitation to the floating population of pilgrims, visitors and the homeless in the vicinity

Action Taken:

- Signage on the proper usage of the toilet have been prepared and installed at the new community toilet. On request by the community, a western toilet seat in the handicapped section has been changed to Indian style seat.
- The community volunteers carried meetings in various neighborhoods in the Basti to inform the community about facilities at the new toilet complex and to encourage families to register for monthly cards. 110 families have been issued monthly cards for the new toilet complex.
- An 8000 litre capacity filtration unit has been installed at the CTC to filter the bathwater and use it for flushing the toilets. Two volunteers and two cleaning staff have been trained for maintenance of the said plant.
- The CTCs were kept open throughout the festival of Urs and Shab-e-Raat with the help of self help group members who helped manage the facility during early morning and late evening hours. More than 3000 people used the community toilet daily during the Urs festival, and 4000 people used the facility daily during the days of Moharrams.
- Intensive awareness campaigns were undertaken during the time of the Urs so as to guide people in the Dargah to use the community toilet complexes. The awareness campaigns involved use of audio announcements, word of mouth, signage and assistance to people visiting the Dargah by showing them the way to the CTC.
- Training program to support the staff and members of Rehmat Nigrani Samooh, in maintaining a larger CTC facility was undertaken aimed to help improve services and their communication skills.
- A process of audit of cleanliness of both CTCs has been put in place to ensure that the facilities remain clean.
- Constant supervision, counseling of users, cleaning staff and managers to maintain cleanliness in the CTC to eradicate wastage of water is being continued.
- The management system and design principles of the Community Toilet complex have been shared with the Delhi Urban Shelter Improvement Board (government of NCT) and NGOs working the sector of water and sanitation.
- The new CTC has been visited by many organizations and has fetched attention from media. Higher officials from National Safai Karamchari and Development Corporation (NSKFDC) (Ministry of Social Justice and Empowerment) visited the new CTC as they were interested in understanding the design, layout and details of facilities used. They were also interested in replicating this model in other locations in the city. A community group from the Centre for Advisory Research (CFAR) visited the CTC to understand its design and day to day management being done by **Rehmat Nigrani Samooh**.

Next Steps:

- Increasing user base of CTC for fixed and floating population in the Basti.
- Increase role of community group to manage the community toilet complexes.
- To ensure minimal open defecation during the time of Urs and Moharram.



Community Toilets

PROCESS



Community Participation

- 57% of the community expressed the need for better sanitation in the Basti (2008 baseline study)
- Group discussions revealed that out of the two community toilets only one was operational and was poorly maintained limiting access to safe sanitation for a quarter of the resident population and the 3.5 lakh pilgrims to the Dargah
- Women felt unsafe and the toilets lacked adequate privacy especially at night.
- There were no provisions for children and many of them did not want to use the community toilets
- For families with no access to toilets, women were forced to bathe in the open or make temporary arrangements within the home
- Group discussions were carried out with varied user groups (men, women, children) to develop design and management parameters

Design Approach

- Community consultations provided a basis for the design of the two community toilets in the Basti
- Privacy and safety for women, availability of water, ventilation and adequate day lighting were issues that were voiced by nearly all.
- Provisions for children and appropriate provisions for pilgrims were also concerns of the community.
- The smaller facility at the Musafir Khana Street was designed with 10 toilet seats. Given the space constraints the toilet facility was split into two floors. This not only provided for better ventilation and lighting but also provided adequate privacy for women.
- The larger facility was designed to address bathing and washing needs of both residents and pilgrims along with 30 toilet seats.
- Courtyards on either sides of the building allowed for adequate light and cross ventilation
- Special provisions were made for children where toilet seats as well as the door heights were designed for children
- Two disabled friendly toilets located at the entrance allowed for easy access
- The upper floor of the larger community toilet facility was designed as a multipurpose hall that may be used for community meetings and a resource centre for the Basti.
- As a means of creating privacy, plantation was done in the form of bottle garden along the open courtyard
- Walls along the children section were decorated in the local art form using broken coloured tiles by Basti artist Om Pal

IMPACT

Building Construction

- The construction and upgrading of the toilets was done ensuring quality material and workmanship.
- The plumbing was designed to ensure that all toilets are directly connected to the main lines. This was done to ensure that a minor choking or clogging in one of the toilets does not affect the functioning of other toilets.
- The shafts were well ventilated and accessible for easy maintenance.
- The larger toilet facility was equipped with a filtration system supported by dual piping system enable the reuse bath water for flushing purposes.
- Stainless steel toilet seats such as those used by the Indian Railways have been used in order to reduce the risk of vandalism.



Management & Maintenance

- A community based management group- Rehmat Nigrani Samooh is responsible for the daily maintenance and upkeep of the toilets
- The toilets are managed through a pay and use system and family cards for residents.
- The income of the toilets is deposited into a bank account solely managed by the group.
- The cost of maintaining the toilets are shared between AKTC and the community group.
- The community group has been trained in banking and accounting and group management and continue to be trained to enhance their skills in managing the facility.
- Daily Users: 3000 and 440 family card users
- More than 8000 people used the two facilities on a daily basis during the Urs
- The Rehmat Nigrani Samooh manages the daily operations and bear 50% of the maintenance costs of the toilet including, electricity costs, staff salaries and material costs.



Achievements

De-Centralisation & People's Participation

People's Participation: They have become an active drivers of good management and development of urban services rather than mere passive recipients

People's Engagement: Through a pro-active and pro-people approach, the project ensure access to basic services, especially for the weak and marginalised sections of society.

Evolve PPP into PPPP: People- Public- Private Partnership model

- o The project actively involve people in assesing community needs and implementing plans
- o The project has been instrumental in building capacities of communities by setting up community groups focussed on civic services





Door-to-door waste collection from 800 households is now being undertaken to assist the SDMC.

49 Municipal Solid Waste Management

To address the issue of waste management and sanitation in the Basti, the ongoing program on waste management has been involving various stake holders of the society to actively participate in the same. Apart from expansion in the paid service of door to door waste collection the community group with few residents of the Basti are now progressing from 'watch and monitor' approach to "watch monitor and report" on the quality of services.

Action Taken:

- **Street Waste Audits:** To help in monitoring the quality of the services of waste and sanitation by community groups and residents of the Basti, a system of street waste audits has been put in place. The neighborhood group women along with people from the Basti visit MCD officials every week to submit a report card on cleanliness of streets. As a result of street audits street sweeping by MCD *safai karamcharis* in residential areas of Basti is getting more regularized.
- **Health Insurance for Waste Collectors:** Staff undertaking door to door waste collections were linked to health insurance scheme. Each enrolled person can now avail a health insurance upto INR 1 lakh in case of hospitalization due to health issues or accident. Premium for first year has been given by AKTC, however from next year onwards the premiums will be given by the individuals out of their incomes.
- **Community based Awareness Interventions during festivals:** In order to help improve government led waste management services during festivals (Eid, Urs) in the Basti A study, "Scenario of municipal waste and its management in and around Basti Hazrat Nizamuddin, during the time of Urs of Khwaja Moinuddin Chisti- Interventions and observations during Urs in May 2014", was done and observations of the same were shared with Chairman of Delhi Urs committee in a meeting. Letters to the municipal corporation were also sent by the Dargah committee and residents of the Basti for increased frequency of street cleaning by *safai karamcharis* during the time of festivals. Awareness drive on proper disposal of meat and bone waste during Bakreid was carried out. Pamphlets on proper disposal of meat and bone waste were distributed in houses and in mosques prior to the festival. Butchers shops where sacrifices are carried out were given disposable garbage bags. Members of Neighborhood group did a meeting with SDMC Sanitary inspector of the zone and application to Sanitary inspector was given asking him to depute SDMC *safai karamcharis* to take away waste from the shops and do additional cleaning of streets mentioned in the application during the time of Bakreid.
- **Trainings of Waste Collectors and Neighborhood Group:** Women from Neighborhood group and the staff engaged in waste collection services underwent trainings on livelihood, self discipline, outlook & presentation, communication with people and working in group as team. These training are aimed to help them in working as a group, get dignity for their work and expand their work within the Basti. An exposure visit

to Pune was organised for Neighborhood group to understand work on Solid Waste Management being undertaken by Swachh (A Waste collectors' cooperative in association with Pune Municipal Corporation), and to know how an NGO, 'Kagad Kanch Patra Kashtkaari Panchayat' is supporting waste collectors of SWACH in the same.

- **Announcements in Mosques** requesting people in the Basti not to dispose waste on streets: After intervention with support from education team, announcements are being made by respective imams of mosques from time to time after Friday prayers asking residents of the Basti to dispose off their waste in responsible ways and keep streets clean.

- **Door to Door Waste Collection:** Based on mapping of households availing service of door to door waste collections, campaigns were undertaken to convince more number houses to join in so as to keep their surroundings clean and healthy. The number of households having regular door to door waste collections in the Basti stands at 745 and 60 small shops and hotels. Considering average quantity of daily waste generated per unit to be 1.5 kgs, the team of 5 waste collectors facilitate safe disposal of 407.8 tons of waste per year from the Basti to ensure a clean and healthy environment, which is above 1 metric ton or 1000 kgs of waste per day.

- **Members From Rehmat Nigrani Samooh**, volunteers from sanitation team and waste collectors were taken to Udaipur, "to understand the concept of community initiatives and community participation to address local issues such as water and sanitation". They had a chance to witness the work being undertaken by communities trained in Delwara village by SEWA Mandir and Gayatri Sewa Sansthaan in Mandli and Nimboda villages.

- Another **Exposure Visit** was organized for neighborhood group and sanitation team volunteers to understand the work on Solid Waste Management being undertaken by Swachh (A Waste collectors' cooperative in association with Pune Municipal Corporation), and to know how an NGO, 'Kagad Kanch Patra Kashtkaari Panchayat' is supporting waste collectors of **SWACH** in the same. Apart from this the group also visited Nallah Park in Koregaon Pune to see and understand the systems of treatment of water, prevention of waste from entering the nallah. Members of neighborhood group interacted with the care taker of park to understand the system of water treatment and release of treated water into the park.

Next Steps:

- To introduce, promote and encourage source segregation of waste by setting up a recycling kiosk in the Basti.
- To work closely with South Delhi Municipal Corporation and community with an objectives such as implementation of better waste management and cleaning of commercial streets as well as to ensure that hotels and meat shops in the Basti operate as per guidelines by SDMC.
- To enhance the built capacity of neighborhood group and expand their working with the government on improving waste management services
- To pursue for government led better waste management services and, seek assistance from Delhi Urs committee during festivals (Urs and Moharram) in the Basti.
- To expand system of 'street audits and report cards' in commercial streets and streets leading to the Dargah and help monitoring quality of services by community groups.
- To pursue for increased frequency of street sweepings by *safai karamcharis* of Municipal Corporation, on the streets leading to Dargah Complex.
- To expand facility of door to door waste collection in residential as well as commercial areas in the Basti.



Waste Management

Municipal Solid Waste consists of household waste, construction and demolition debris, sanitation residue and waste from streets. This garbage is generated mainly from residential and commercial areas. Municipal Solid Waste Management is **COLLECTION, SEGREGATION, STORAGE, TRANSPORTATION, PROCESSING** and **DISPOSAL** of solid wastes.

Situation before 2010:

- Hazrat Nizamuddin Basti with an area of approximately 13 acres and housing 1500 families on an average generates 8-10 tonnes of waste per day - nearly 0.4kgs from each household
- Discouraging factors for waste pickers: less percentage of recyclables mixed with high percentage of wet waste, narrow streets with insufficient space for waste collectors' rickshaws to move, and lower collection fee from households
- Disorganized system of waste collection from households and commercial units and no regular collection of waste from households. The task of Municipal Corporation was limited to street sweeping and disposal of waste from streets to municipal bins
- Waste was not being collected for weeks from the households. As a result much of the waste was seen lying on streets and open spaces in the Basti choking sewer lines and nallah and being dumped in open spaces
- Increased use of polybags, as these are easily disposable in absence of a proper waste collection system
- Improperly managed municipal bins, which overflowed with waste due to irregularity in cleaning
- **No/very less segregation of waste at the Basti level**

Situation Now:

- Organizing series of community meetings, door-to-door campaigns, and distribution of pamphlets
- Residents were approached and convinced to cooperate with waste collectors through multiple channels such as campaigns, street plays by Eco Club children, moholla health sanitation committee meetings, posters on waste and health, audio announcements etc.
- Waste collection wheeler bins, buckets, masks and gloves etc were provided to the waste collectors
- Waste collectors living in the Basti were identified and approached to start waste collection service
- Several meetings later, a system of 'door-to-door' waste collection started with 20 households in the Basti - **It now caters to 650 households and 50 commercial units**
- Formation of a neighborhood watch-group comprising of active women which assists waste collectors in their task by helping getting additional houses and timely payments, and where residents can address complaints
- Initially waste collectors were reluctant to sort waste as there was less percentage of recyclable present in it. After there was increase in the number of households, **waste audit** was done for each collector's waste. This encouraged them in actively sorting the waste.
- The waste collectors in the basti are being supported by providing them tools and equipments and uniforms to carry out with their work. Frequent campaigns and neighborhood meetings with residents of the basti are carried out to increase clients' base of door to door waste collection services.
- The women's neighborhood group conducts street audits to update the municipal corporation's officials on status of cleanliness of streets in the basti who in-turn direct their cleaning staff to address the problems of street cleanliness in the basti. As a result of this the streets in the basti have started to look visibly clean.

Effective Waste Management

After a careful analysis of the situation of increasing problem of waste management in Basti, an initiative to implement community based waste management system in the Basti was initiated in 2010.

Door-to-Door Waste Collection

Waste is collected on daily basis from 650 households and 50 commercial units in the Basti by waste collectors



First Level of Segregation

The waste collected from the Basti - residential and commercial, is segregated into recyclables and non-recyclables by the waste collectors



The recyclables are taken and stored by waste collectors in a junk dealers' godowns



The non-recyclables are disposed off in municipal bins and eventually to the landfill

Second Level of Segregation



During the second level of segregation, the collected recyclables are further segregated into different kinds of plastics, paper, metals etc. These are weighed and sold categorically once a week to the junk dealer by waste collector



The non recyclable waste from the basti is carried to the **MCD LANDFILL** site in Delhi. To minimize waste being sent to landfill from the basti AKTC is planning to set up small units to locally compost the wet waste in the basti.

50 Nallah

A half kilometer section of the Barapullah Nallah flows along the southern edge of the Basti. Until the 19th century, this together with other Delhi nallah's (drains) was considered a river or at least a tributary to the River Yamuna and known by the same name. Over time this historic Nallah that carried the rain water has become a dirty drain with waste water, solid waste and sewage. In the last few years an elevated road has been constructed over the Nallah causing the main cullet to break in many places and also dumping of very large quantities of construction waste. The redevelopment of the Nallah aims at improving the landscape around the Nallah and to use simple and organic methods of reducing solid waste and sewage in the drain to make it into a positive open space for the surrounding community.



The objective of this project is to create a usable green space on the nallah for the stretch adjoining the Nizamuddin Basti.



Action Taken:

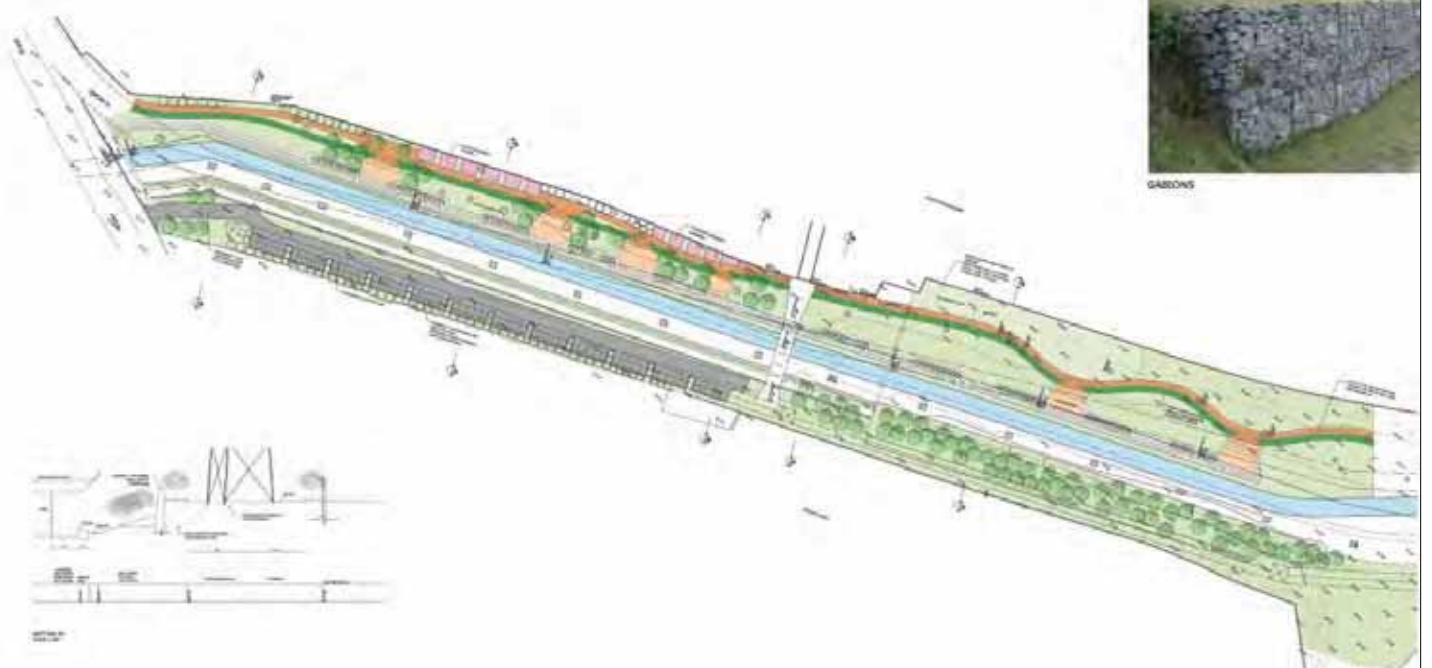
- The landscape design of the Nallah was finalized and submitted to the South Delhi Municipal Corporation (SDMC) for approvals.
- The SDMC provided AKTC with the required permission to carry out improvement works on the Nallah in the third quarter of 2014
- AKTC has diverted the flow of 250 meters of the Nallah in order to drain the original central channel. The original channel was found to be under 1.4 meters of construction waste and silt. The channel has been excavated till a length of 250 meters.
- Direct discharge of sewage from more than 40 houses along the Nallah was diverted into a separate narrow channel until a new sewer line is made.

Next Steps:

- Remaining stretch of the Nallah will be diverted and the central channel will be excavated and repaired.
- Landscaping of the Nallah (including building stone embankments) will be completed.
- A separate sewer line for 40 houses along the Nallah will be laid and connected to the adjacent trunk sewer line. This will help reduce the solid waste and sewage that is discharged into the Nallah from Nizamuddin Basti.
- A survey of the remaining stretch (3.5 kilometers) of the Nallah will also be carried out.
- Planting of trees is planned to occur during monsoons.



GABIONS





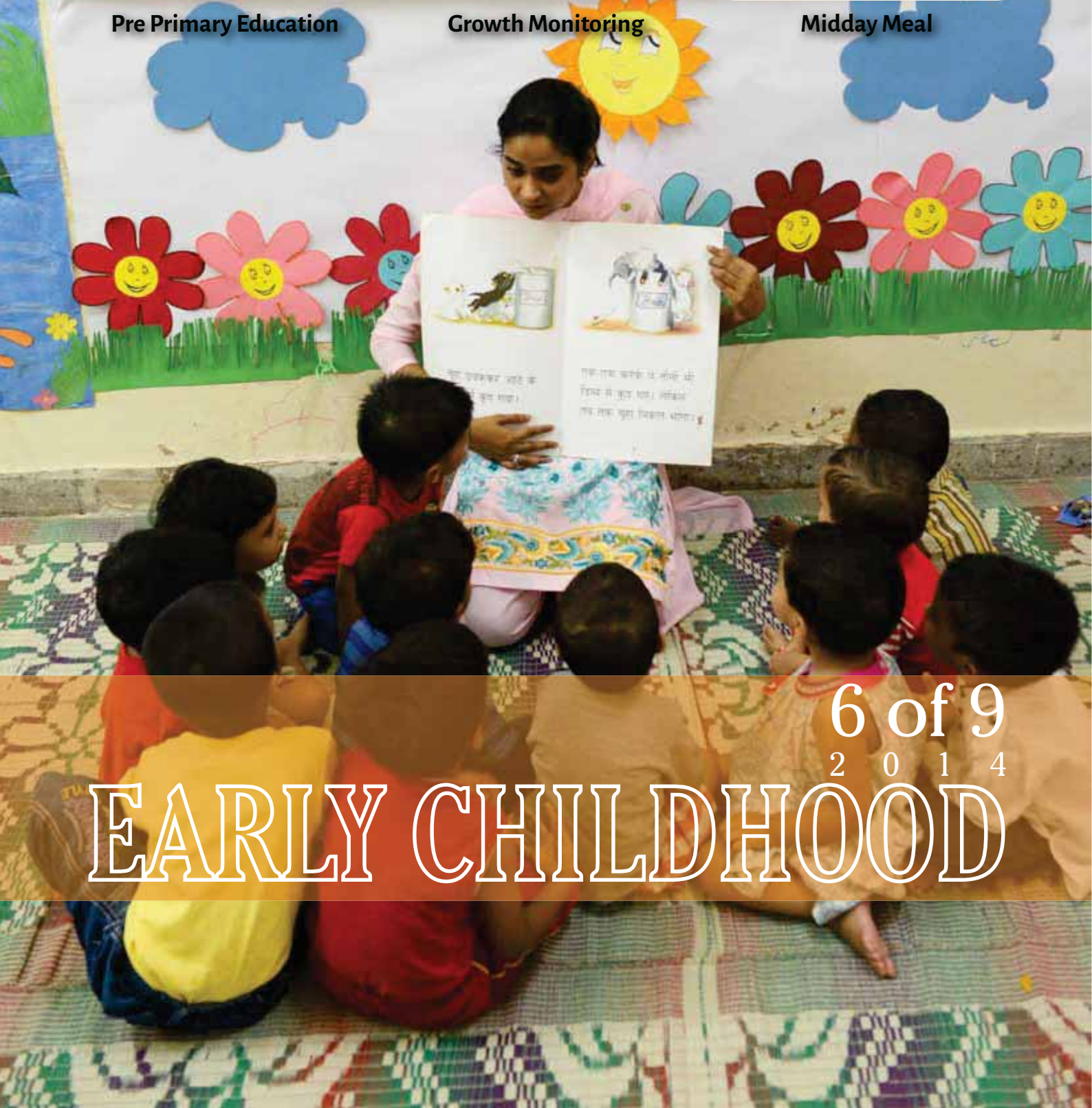
Pre Primary Education



Growth Monitoring



Midday Meal



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EARLY CHILDHOOD

51 Government Aanganwadi's

Improving Pre-School Education

Regular support was continued to all the 7 *Aanganwadi* Centres spread all over the Basti as well the nursery section in the MCD School. Further the demonstration maternal and child health centre was also improved considerably in terms of ambience and activities. The classes were very regular, 899 classes were held over the year and this encouraged the parents to send their children regularly, though extreme weather and Ramzaan continue to cause a sharp dip in the attendance.

Action Taken:

a. New curriculum implemented

The process of developing a pre school curriculum keeping the local context was initiated in 2012; it was field tested in 2013 and finally implemented in all the nine pre-school centers in 2014. The implementation involves developing lesson plans and classroom observations to ensure that the teachers are transacting the curriculum according to the plan. Capacity building of the community teachers is an ongoing process and continues.

In 2014, the teachers participated in the following capacity building initiatives:

Workshops: A total of 51 days' workshops were organized on the following themes:

- Storytelling to facilitate language development in young children
- Developing lesson plans on different themes integrating the activities from the activity bank
- Refining learning based on the classroom observations by the curriculum development team
- Regular capacity building along with the school teachers focusing on concepts of language and Mathematics in particular and principles of learning in general.
- Learning to identify early signs of disability in young children and their integration into the classroom

Finalization of teacher assessment checklist:

Teacher Assessment Checklist is to assess the teacher-based on classroom observations for classroom environment, relationship with the children, curriculum transaction process and implementation of activities. This is proving to be a useful tool for monitoring the activities of the teachers.





b. Adapting open spaces for teaching-learning

One of the biggest challenges for the ECCD component is the lack of space in the *anganwadi* centers. The project has been addressing this issue with a small step taken every year.

In 2014, the poorly utilized space in the MCD polyclinic premises where two centers functioned has been developed as an 'interactive' floor. The floor has integrated learning elements into the floor, is bright and attractive, and made of concrete making for easy maintenance and uses local technique of Tile Mosaic Work or '*cheeni ka kaam*'.

This is yet another example of the project recognizing the need to reclaim public spaces for the most vulnerable sections of society.

c. Review Meetings

Review meetings are a regular strategy to monitor the programme. This is a forum where the community teachers and the *aanganwadi* workers come together to plan the interaction.

d. Mothers' Meetings

Mothers meetings are an integral part of the Early Childhood Care Programme in Nizamuddin basti, aimed at creating a more child-friendly environment at home. Since children spent a major chunk of their time at home, especially the younger ones, it becomes imperative to inform families about developmental needs of children and how to meet them. Mothers meetings are conducted on a monthly basis at all the pre-school centres where our interventions take place, on topics like health, stimulation and early learning, nutrition, care, importance of play, etc.

Regular meeting with the mothers of children studying in the *aanganwadi* centers moved towards greater stability in 2014. This was related to the better functioning of the centers and the need to create awareness about the functioning of the centre and the role of parents in child development.

Toddler Theatre In Hazrat Nizamuddin Basti:

A play especially created for children between one and three years of age rich in visual and aural experiences. The artists used kala chaana (chick pea) in their performance creating various shapes and sounds as well as a visual narrative with it. It was a rare occurrence where 20 toddlers sat in almost complete silence and with full attention for almost 40 minutes, later given the opportunity to play with the material itself. Part of the performance was the invitation to children to play with the material kala chana after the performance. It was delightful to watch the children imitate the artists with the material.

The play was presented by Head Start Montessori House of Children, Bangalore in collaboration with Tadpole Repertory





e. Needs of Children

All stakeholders (families, communities, institutions, government, health professionals, etc) affecting the lives of children need to first understand their needs, to be able to give relevant inputs and contribute in their growth and development. The major categories under which these needs can be classified are- Health, nutrition, play and stimulation, and care and protection. With one or more of these needs being unmet, children will not be able to reach their full potential and develop as confident individuals.

f. Summer Camp

The summer camp is the regular activity that is held during the summer vacation of the school children. This activity is for children between the ages of 3-5 years.

Approximately 50 children participated in the 15-day summer camp. The summer camp caters to children enrolled in *aanganwadi* and nursery and also children who are just about to begin education.

It is also a capacity building opportunity for the field team as they field test activities to be used for the next academic session.

This year the theme was 'Understanding Me and Myself'.

The 3-5 year olds also participated in the closing ceremony which was attended by the DWCD staff and parent community.

Next Steps:

- Work towards improving the remaining *aanganwadis* through negotiation with the community
- Creating a structured programme to engage with the mothers
- Assessing impact of new curriculum on school readiness of the children who have attended *aanganwadis*.

Impact

A total of 899 classes were held for 268 children in 2014 in 8 centres (6 AWCs + 1 MCH centre + Nursery section). 48 % of the children attended more than 60 % of the pre-school classes. The average attendance for the year 2014 was 61 %.

The MCH centre which is the hub for other ECCD related activities, conducted maximum number of pre-primary classes (198), through which 36 children benefitted.

52 Childcare Support and Increasing Awareness

Increasing awareness on child care issues and setting up demonstration centers

Action Taken:

a. Parenting Programme

The parenting programme had its origin in the field observation that there was low awareness on child care issues. This structured programme was initiated in 2013 became a regular feature with the community health workers implementing it with hand holding support. It was further refined and is in the process of becoming a sharable programme. In 2014, two batches of the programme were organized and 80 women participated.

b. Community Crèche

Affordable and quality childcare for women working outside the home is a challenge in the Basti. With the government run Rajiv Gandhi Crèche Scheme limiting its reach and *aanganwadi* cum crèches still not taken off, there are no government supported childcare options available. There are a few NGOs who run a crèche but they are clearly not enough.

The project is piloting a community crèche where a member of the community is trained and supported to run a crèche in her home for other members of the community. One such crèche has been functioning since October 2014. It seems to be successful; other such project supported community crèches are planned in the coming year.

c. Bal Mela + Sports Day

These are the two special events that are organized for the pre-school children.

The Bal Mela or Children's Fair is a fun day where almost a 125 children participated in several activities that ranged from drawing, games and storytelling sessions. This was organized in partnership with DWCD.

The Sports Day is organized along with the sports events of the primary school and 125 children participated in different kinds of races.

These events help the community understand how the *aanganwadi* should function and help children learn to participate in a large group as well as prepare them for school – which is the major objective of pre- school education.

d. Creating Safe Spaces

The project over the years created several safe spaces for all segments of society.

This year saw an addition of an interactive floor in the MCD polyclinic premises.

There is also a separate park that integrates learning elements being developed where younger children can play games with embedded elements.





e. Apni Basti Mela

The Apni Basti Mela is an annual event that is organized every year during the winter months that aims to inform the community about the project and its activities.

This year the theme was the child and her needs. In addition, there was a model *aanganwadi* created to demonstrate to the community; several activities like drawing for children, play corners for children and a toy making workshop for children were organized.

Almost 9000 people participated in this 3 day event with the ECCD corner being a popular draw.

f. Enrolment in Diploma in ECCE

This has also developed into a regular programme in the Basti. In 2014, 10 girls from the Basti were enrolled for a diploma in ECCE from Jamia Milia Islamia University. This is done to enhance awareness levels of early childhood care and education principles among young women as well as equipping them with a professional diploma.

Next Steps:

This is an ongoing process; the next steps are to continue these programmes with greater community engagement.

Impact

There is greater awareness and this is seen in the higher rates of enrolment in the preschools – both government and private.

There is a recognition of the need of special care and education before the child goes to school.

It also has a bearing in the higher rates of immunization, addressed in the health programme.

Innovative teaching and learning techniques are used to enhance the education efforts.



53 Addressing Malnutrition

- Improving understanding on nutrition within the community to meet the gap in nutrition needs
- Under nutrition is persistent in the Basti and its status particularly in children under 6 years is dynamic with an episode of illness making a child under nourished.
- The two major interventions in this aspect are monitoring re-growth amongst children and introducing the concept of healthy snacks versus junk food.

Action Taken:

a. Growth Monitoring

The growth of all the children under 6-years of age is monitored at the household level on a monthly basis by the health team.

Ideally, this should be done at the *aanganwadi*; efforts to shift it to the *aanganwadi* are ongoing.

In 2014, 750 children's growth was monitored, out of which 128 children under 6 years were moderately malnourished and 43 severely malnourished. Counseling was done for all 161 malnourished children, and 30 home visits were done for home based intervention on nutrition. As a result of these efforts, 33 severely malnourished children's doctor's check up's were made possible.

b. Strengthening of Zaika –e- Nizamuddin Group

Zaika-e-Nizamuddin is the women's nutrition group that was initiated in late 2012. In 2014, it was reintroduced during the November Apni Basti Mela where the products were appreciated and accepted by the community and visitors. This has infused the group with a new energy to take it forward.

Steps Taken:

- Streamline the growth monitoring programme
- Strengthen Zaika-e-Nizamuddin and convert it into a regular programme

Impact:

Nutrition is an issue of discussion in the community due to greater awareness on nutrition issues. 161 undernourished children were identified and their needs addressed.

A women's SHG has been formed to make and spread awareness on nutritional foods.



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EDUCATION



The education programme for children aims to address the educational needs of all segments of children in the Basti – the primary school children, during and after school; children who have passed out of the MCD school and children who study in *madarsas*. Further the education component aims to enhance the quality of education by addition of art components like music, visual art, theatre and computers.

54 Faculty Development

Improving primary education and capacity building of the teachers placed at the school aimed at bringing about change in classroom processes and strengthening child-centred pedagogy.

Working with community and MCD teachers to develop capacities to understand the principles of child-centred education and work according to the principles of the National Curriculum Framework of the National Council of Educational Research and Training (NCERT).

Action Taken:

- 52 days of training for 27 community teachers and MCD teachers covering the topics of grades 1 to 5
- One of the training methodologies included video recording of teachers conducting classes according to lesson plans and replayed and analyzed as group
- Monthly review and planning meetings with all the MCD teachers, community teachers to plan the school calendar and curriculum transaction.

Next Steps:

- Continue capacity building process and academic support according to the needs of the teachers
- Continue with joint monthly review and planning meetings.

Impact:

- Learning levels of children in Hindi and Mathematics show a steady increase
- Greater stability in school attendance (as marked by community teachers not official records).
- Better organized school timetable

The project appointed young women from the community as teachers to strengthen the faculty as the enrolment had increased by 300%. These women had basic education but were not professional teachers. Young women from the community were chosen as they understood the social background of the children and would be able to interact with the parent community with ease.

Also, the National Curriculum Framework, 2005 was to be implemented along with the new NCERT textbooks which was a significant shift from the earlier pedagogy. The teacher community in the government did not fully agree with the shift nor was there adequate in-service training.

The project filled this gap through this initiative. Further, there is a need for regular academic support to the teachers in order to positively impact learning levels of children.

A 10-day residential training was held for the community teachers and MCD teachers in Sidh, Mussorie from 7th to 17th June, 2014. The teachers spent time understanding philosophical underpinnings of education using John Holt's book 'Why children fail?' They also worked on how to teach language and math to children at pre-primary and primary level.



55 School Management

An in-situ demonstration of school management practices to improve practices of school functioning and increasing community involvement in school management. While the SDMC School in the Basti existed before the project was initiated, its management had tremendous scope for improvement. The project team has ensured that the school runs for the mandated number of days and hours. Further, with the improved physical infrastructure, both enrolment and attendance increased dramatically. This necessitated better management and was seen through the regular morning assembly, better management at midday meal times and inclusion of music, computer, art and drama in school. All this is visible in the lively school environment.

Action Taken:

- Strengthening of school management committee through 2 trainings and exposure
- Ensuring that the meeting happens regularly with the participation of the school principal, teachers and SMC members. In 2014, eight meetings were held
- Involving the SMC members in school management issues like mid day meals and ensuring attendance of children
- In 2014, the SMC also took the responsibility of procuring and distributing school uniforms to all the children.

Next Steps:

- SMC needs to be reconstituted
- Strengthening of new SMC
- Greater role of SMC in school management

IMPACT

Community feels there is a greater stake in the functioning of the school though it is still far away from managing the school without support



A 3-days training for School Management Committee (SMC) was conducted at S.D.M.C. Co-Education Pratibha Vidyalaya, Nizamuddin (West) from 18th to 20th November 2013. As per the Right To Education (RTE), MCD has constituted this SMC which comprises of parents of the students, community representatives, social workers and activists. With the primary objective of IMPROVING QUALITY OF EDUCATION and strengthening the school - community - parent interface, this training oriented SMC's members of their role and responsibilities and make a common understanding about Right To Education (RTE).



56 Computer Access for All

The ability to work with computers is today a necessity. In Hazrat Nizamuddin Basti access to computers was limited to a handful and in order to address the need, the project established a NIIT Career Development Centre at the Municipal School. Computers access to school children and to the larger community in the afternoon's has thus been possible for six years now. At the NIIT Career Development Centre, several programmes are offered ranging from for the very young children to training programme that prepares youth for jobs in the hardware sector. In addition, Animation/ Web design advanced programme and course in Data entry have also benefitted several youth. Despite operating these courses it was realized that several children, especially street children, had no access to computers and the NIIT 'Hole in the wall' computers have been installed in six locations within the Hazrat Nizamuddin Basti. Though unstructured training, these computers are pre-loaded with educational material and monitoring & research has demonstrated that groups of children working on computers in this manner has a significant positive impact on learning.

Action Taken:

- For children who are not enrolled in the SDMC school, there are 6 hole-in-wall computer kiosks spread throughout the basti which are pre loaded with school curriculum taught through games as well as games for pure fun. Maintaining 6 hole-in-the wall computer kiosks spread across the Basti which were installed in 2012; these kiosks are connected to a range of electrical connections – school, polyclinic, police station and a community member.
- There is a computer lab in the school which was setup in 2008 with 16 computers and a dedicated computer teacher. Each child from nursery to grade 5 has at least one computer period a week, increasing their familiarity with computers.
- Computer period integrated into the school time table.

Next Steps:

- Maintenance of kiosks
- Strengthening the school computer programme

Impact

- All the children in the Basti have access to the computers – free of cost
- A study indicated a small increase in academic achievement.

(Below) A NIIT Centre has been established in the Basti



57 Academic Support to Children

There are three components to this programme, academic support to children from class 1 to 5 during school hours, the bridge classes for out of school so that they can be enrolled in the mainstream school and an after school academic support programme for children till grade 10.

Children who complete grade 5 from the SDMC School need additional support especially in Maths, Science and English. This academic support is provided through after school classes, held in the SDMC school. About 80-100 children participate in these classes. This support enables them to complete their school education as failure in the upper primary classes is a major reason for dropping out of school.

Action Taken:

- 500 school children (from grades 1 to 5) received on site classroom support in Math and Hindi from community teachers during school hours.
- A 15 days summer camp was organized in the month of May 2014. A total no of 200 children attendant the summer camp from nursery to class 6. The main emphasis of the summer camp was language, math, visual arts and theatre.
- Pre and post learning assessment
- Bridge classes for 24 children were organized in 2014; of these 15 were main streamed, 9 children's families migrated out of the Basti.
- Academic support was provided to 117 children after school. For the primary school children, this was especially focused on first generation learners in key learning areas of Hindi and Mathematics; 82 children who had completed primary school in the Basti were provided academic support in Mathematics, Science and English.

Next Steps:

- Continue support to the learning activities for all primary classes during school hours by the community teachers.
- Review the out of school programme for efficiency and continue with modifications.

Impact

Academic achievement of children who have regularly attended the classes have improved



58 Art Education

There are 2 parts in this component – Art Education in school and after school activities. The project has introduced art education in the school curriculum. This has taken the form of a dedicated music teacher from the project, a part time music teacher from the SDMC. One of the community teachers has been trained to work in visual arts and crafts with the children. Each child receives at least one music class and one art class per week. In addition, community teachers work with children to dramatise the lessons that they study in class. There are special assemblies where the children present their work to the rest of the school.

Action Taken:

- Included music lessons and art lessons in the school timetable to ensure that the children of all the 15 sections in the school receive 8 sessions per month in art and music.
- The project had begun a theatre initiative in 2010. Those children have grown up and set up their theatre group called **Agaaz**. They are poised to take it to the next level.

Next Steps:

- Maintain art education in the school
- Add sports to the curriculum
- Provide hand holding support to **Agaaz**

Impact

The curriculum is richer with the addition of the art component and improves the quality of education offered in the MCD School.

(Top) On the 9th of April, 'Aaghaaz' - a theatre group of children from Nizamuddin Basti performed 'Kho' a play based on the writings of Safdar Hashmi, at The Heritage School, Vasant Kunj, New Delhi. The play was performed in the morning assembly where all the school students and teachers were present .



(Below) 32 children from Hazrat Nizamuddin Basti participated in an intensive month long summer theater workshop organised by Urdu Academy which culminated with the performance of a play "Gadbad Jhaala" at Chinmaya Mission, Lodi Road. The script was written by Anis Azmi, Secretary, Urdu Academy while the play was directed Nadeem Khan. This is the fourth year in a row that the collaborative effort in between AKTC and Urdu Academy resulted in a brilliant performance by the Nizamuddin Basti Children utilizing the summer holidays for a creative endeavor.



59 Madarsa Education

The Madarsa education programme was initiated with the objective of improving the quality of education in the madarsas in the Basti. It began with an assessment of education in the madarsas. This programme works with 2 of the 3 madarsas in the Hazrat Nizamuddin Basti with a view to expand the scope of their educational experience. These are children from other states and have limited access to non religious education. The project has appointed a teacher to work on Hindi and Maths. This was the first time that these boys from the Madarsa visited an area outside Nizamuddin during the exposure tour. In the apni basti mela, special events were organized for them keeping in mind the cultural context. This took the form of naat competition instead of regular music competition and calligraphy competition instead of art competition.

They also enthusiastically participated in the summer camp and a special cricket tournament held in the Australian/New Zealand High Commissions.

Action Taken:

- A total number of 24 meetings organized with *madarsas* of Kaali Masjid, Dargah Hazrat Nizamuddin, Panchpeeran, Chakkar Waali Masjid, Lal Masjid and DPS *Madarsa* in 2014. The main focus was on to introduce the formal education in *Madarsa* system.
- Appointment of a teacher working in 2 *madarsas* to add to the religious education offered in the *Madarsa*. The teacher goes in both the *madarsas* at mutually agreed times and teaches the children
- To improve the quality of education, the *madarsa* children participated in the Apni Basti Mela and enthusiastically participated in the book fair and specially organized competition of *naat*, *qurait* and calligraphy.
- *Madarsa* children were taken on an exposure trip to Delhi monuments

Next Steps:

- Initiate work in the girls Madarsa
- Strengthen the programme

Impact

Greater exposure to Madarsa children



60 Education for Adolescents

Taking cognizance of the expressed need to learn English, especially by the young adults during the baseline survey, the project initiated the English Access Micro- Scholarship Programme, supported by the American Centre of the US Embassy in 2010. This programme was very successful it continues.

Action Taken:

- Initiated the fourth round of English Access Micro-Scholarship Programme with 116 young women and men between the ages of 13 to 18 years.
- 12 young women and men applied for scholarships to study abroad after completing Access and 7 went abroad.
- Continued the toastmasters club to encourage public speaking

Next Steps:

Apply for continuation of this programme

Impact

- 300 young women and men have participated in this programme so far and 116 more are currently enrolled
- An increase in confidence and self esteem in the youth who graduate from this programme

To provide innovative English Language teaching for 14-16 year olds from the basti and adjoining neighbourhoods, the project teamed up with the US Embassy Access Micro-scholarship program since 2010. The teaching includes support for developing key language skills such as listening, speaking, reading and writing amongst the students. Co-funded by US Embassy, 300+ students have undergone English language training since January 2010 onwards. The programme has allowed curriculum based support to improve performance of students in school. English Access Microscholarship Programme helps young adults gain confidence through learning English and various activities.



61 Adult Education

This has been a smaller programme in response to a need expressed by women from the Basti to learn basic literacy and numerals skills. This has been a small and difficult programme to maintain given the constraints of women's mobility and household responsibilities.

A similar programme for teaching English to religious leaders based on a need expressed by them was initiated.

Action Taken:

Initiated the 3rd round of the adult literacy programme for women with 20 women

Next Steps:

This programme will be continued only if there is a need expressed by the community

Impact

The women who attended the classes regularly became competent readers leading to an increase in self esteem.



62 Education for religious teachers

During a meeting with the religious teachers in the basti (there are 9 *maqtabas* and 3 *madarsas* in the basti); the group shared a desire to learn English. The project organized English classes for them in two locations.

The teachers also visited other areas where Madarsa improvement programmes were functional. A similar programme for teaching English to religious leaders based on a need expressed by them was initiated.

Action Taken:

- Initiated 2 batches of English classes for religious leaders – one in the Dargah of Hazrat Nizamuddin Auliya and the other located in the school.
- Monitoring of the classes indicated that the religious leaders after the need expressed by them were unable to attend the classes regularly leading to poor learning.

Next Steps:

Review the programme and if needed re-initiate it.

Impact

- Those religious leaders/teachers who were regular in coming for the classes, showed marked improvement and learnt English.
- Demonstrated to the community our intention to help them develop but the project needs their participation for programmes to function at peak capacity.



LIVELIHOODS



Vocational Education is focussed on **Livelihood Generation** for Basti youth and women. The socio-economic survey indicated that only 1 per cent of the youth had access to any kind of vocational training. A career development centre was set up that offers courses that prepare youth for the retail sector and other computer related professions. For youth who were unable to complete their education, courses in the hospitality and service industry are offered. So far almost 600, young women and men have been trained and almost 50 per cent accepted placement to work out of the basti. Over 200 women have been trained and are part of the Self Help Group - Insha E Noor - which produces products from traditional aari embroidery, crochet, tailoring and paper-cutting inspired from the architectural heritage of Nizamuddin.



63 Vocational Education

The vocational education programme addresses the vocational training needs of almost all segments of the population of Nizamuddin Basti. This component of the project offers information, linkage with government entitlements, skill training and placement to women and men with varying educational backgrounds and employment needs.

Action Taken:

Setting up Rehnumai – a resource centre

Rehnumai is a resource centre set up in the Basti which offers information on government entitlements by providing information on the process that needs to be followed to obtain specific government documents, the supporting documents needed and assistance in filling the forms if required. In case, there are a large number of people needing assistance in a particular scheme then one of the Rehnumai personnel may accompany the group to that particular office.

In 2014, 1025 people were assisted to link with 16 different kinds entitlements.

This programme has helped to increase awareness among the community of the various government entitlements that are available to them and the process to link to that entitlement – this empowers them and equips them to deal with the government as a development agency.

In addition, Rehnumai functions as a market intelligence agency and provides information on vacancies. It also works with the NIIT foundation to set up job fairs.

In 2014, 5 job fairs were organized that offered 310 jobs to 450 people. Some of these included people who had been trained in previous batches; 226 people took up appointments. Further it provided information of 65 jobs to walk in cases.

In the last quarter of 2014, Rehnumai also began offering information on higher education opportunities to youth to the Basti.

In 2014, a total of 1025 people visited the Rehnumai centre for information

Rehnumai offers assistance in the following schemes:

1. Laadli
2. Birth registration
3. Income certificate
4. Widow pension
5. Old age pension
6. Disability certificate
7. Disability pension
8. Ration card
9. Aadhar card
10. EWS Certificate
11. Election /voter ID Card
12. PAN Card

For youth who have completed school

This is one of the older components of the programme and is appreciated by the community. This is implemented with the NIIT Foundation through a Career Development Centre (CDC). It offers professional and non professional courses.

In 2014, the CDC offered professional courses in Customer Service Associate Training (CSAT), Data Entry, IT for professionals (ITP), Certificate Course for Accounting Package (CCAP) and Video Editing; in all 246 students were trained in professional courses. Similarly 128 students participated in non professional courses: IT for beginners and Fun with computer. Of these, 226 have been placed in companies like Vodafone, iEnergizer, Pantaloons, Marks and Spencer, Syrex, India Info line, Bharat Matrimony, Big Apple, Laxita, W-Store, Mc-Donald, Divyani International, Globus, Reliance Fresh, Wave Cinema, Archies, Max Store, Pizza Hut, Costa Coffee, Varun Beverages. The salaries offered to these young people ranges from INR 96,000 to INR 2,00,000 per annum (CTC).

The training method apart from classroom sessions includes a soft skill component, orientation for interviews as well as industry visits to equip them for the employment market.

For youth who have not completed school

There is a significant number of youth who have not been able to complete their schooling for a range of reasons making them ineligible for the government run Industrial Training Institutes. The usual process is for these young men to work as poorly paid apprentices with senior workers – not all of them become skilled enough to reach the next level. This programme aims to convert the ‘unemployables’ into skilled workers.

The Aga Khan Development Network as part of the vocational and livelihood training programme, has conducted a job oriented short term training programme for the youth of Basti Hazrat Nizamuddin who are interested to work in or are engaged in the construction industry.

In 2014, 11 young men were trained in plumbing and 60 as electricians by the Construction Industry Development Council (CIDC) and 45 have found placement or are self employed.

Further, 19 practicing workers were certified by the CIDC of the Government of India.

This training has equipped these construction industry workers to be able to find placement in government contracts as well.

64 Insha SHG

The origins of this component are in the 2008 baseline survey finding that only 9 % of the women had some income of their own. In addition, mobility of women has been an issue. The project therefore focused on creating livelihood opportunities in the Basti.

About 200 women have been trained in the crafts of embroidery, garment construction and crochet. Training is now a regular feature with about 4-5 new members joining as walk-in's and being trained on the job. Currently, about 50 women are working regularly in the Insha Crafts Centre. Most of these women (90%) are also organized into 4 SHGs and save every month as well providing loans to the members. In addition, there are 3 SHGs of women who work as Sehat Apa's and Sehat Saheli's as part of the health component. All these groups have a bank account. In 2014, these 7 groups had a total saving of Rs 3,05,300/- of this Rs 3,44,000 was circulated as loans. The loans have been used by the members on education, health, to repay existing debts, to procure new gas connections, etc. The Insha Crafts Centre participated in 10 fairs; Insha products are retailed through the craft shop of the National Crafts Museum and the Oberoi hotel chain. In addition Insha also works on orders for a range of clients that include Fabindia and an export house.

The total turnover for Insha for the financial year 2013-14 was Rs 14,24,361/-.

Each Insha member earns according to the amount she produces for the centre. This is a function of market linkages. In 2014 the centre had 59 women working for 240 days. The amount earned was from Rs 1000 to 27000 per year. In 2014, Insha Crafts also secured a grant from the Australian High Commission to strengthen it with training of members and equipment.

Next Steps:

- Strengthen the education and market intelligence component of Rehnumai resource centre
- Deepen the reach of the programme for linking government entitlements
- Based on market intelligence, introduce new vocational training programmes that have a demand from the industry
- Strengthen the placement services of the CDC
- Strengthen the market linkages for the women livelihood programmes

Impact:

- There is greater awareness of government entitlements in the community.
- Family incomes have gone up for 525 families by at least Rs 8000 to Rs 10,000 per month through the training and placement services
- 43 women of Insha Crafts have raised their income ranging from INR 1000 to INR. 27000 in addition to improving their self esteem

Ms. Natasha Stott Despoja, Australia's Ambassador for Women and Girls (AWG) visited Insha Crafts Centre in the Basti to understand the project and support Insha Crafts Centre through a grant to strengthen the ongoing work. The group deeply appreciated the work of the crafts centre and the spirit of the women working in the centre.



65 Noor SHG

Providing economic opportunities to women group from the community through craft skill development. The products created use motifs from the monuments that surround Nizamuddin Basti thus promoting people –monument linkage.

Action Taken:

- The self help group of women trained in paper cutting craft (*Sanjhi*) participated in various craft Bazaars and other corporate events. These events gave them opportunities to showcase their hand crafted products, thereby increasing the outreach of the products as well of the group. The events included **Basant Bazaar** and **Festival of Lights** organised by Dastkar, exhibition cum sale at Dilli Haat organised by Dastkaari Haat Samiti, exhibition organised by IAS officers wives association, **Winter Festival** organized by Canadian High Commission, **OZ Haat** and **India International Trade Fair**. The annual sale was for INR. 3,98,314 out of which INR. 2, 33,840 were paid to the group members.
- For the third year, the members completed the assignment for the **World Partnership Walk** organized by AKF Canada. A total of 2700 products consisting of 800 notebooks, 1000 bookmarks and 900 greeting cards. During this process, two new products (bookmarks and candleholders) were sampled and produced. Lamps customized by International School of Business, Hyderabad were executed.
- The members conducted a two day interactive *sanjhi* cutting workshop with the students from **Indian Institute of Technology** (IIT) Delhi. The workshop had 35 design students guided by 8 women from the SHG group on the intricacies of the *sanjhi* cutting. The wall size cuttings produced from the workshop now decorate the massive windows of the main building, wind tunnel of IIT.
- On the occasion of **International Museum Day** in collaboration with Sanskriti Foundation, the SHG conducted a half day *sanjhi* workshop for school children at Sanskriti Museum.
- The group members have been conducting series of workshops with different schools. The workshops included pasting and fabrication of products after paper cutting to make the students understand the process involved through various stages from paper cutting craft to make a product out of the cutting.



Noor products use traditional 'sanjhi' paper-cutting techniques to make products with motifs from the monuments.



Total children treated by the Pediatrician
11,000



Total women treated by the Gynecologist
10,223



Total Tests conducted at the Pathology Lab
1,14,259



Child health card records the weight of each child which is plotted on a weight to age chart Total children covered for growth monitoring **700 /month**



Promoting awareness and services for improved maternal and child health leading to reduced maternal and infant mortality and safe deliveries as well as complete immunisation of children

Community outreach through the health team at the household level, linkage with public health services, counselling in groups and individually, parenting programme



HEALTH

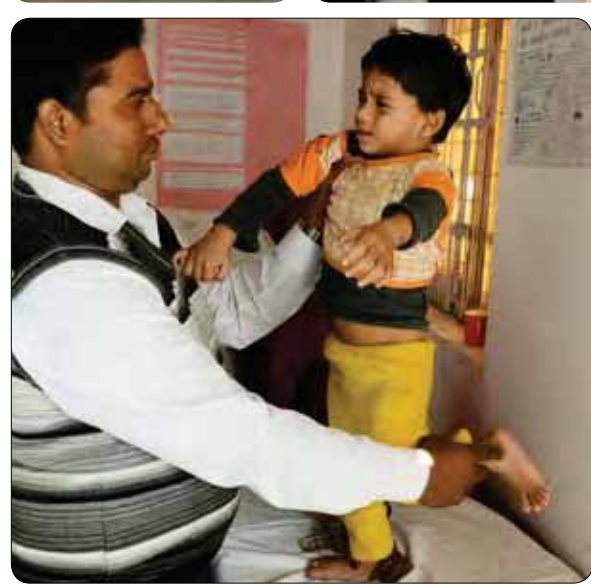
2014
9 of 9

Regular training, monitoring of health team leading to improved capacities to address health practices and health seeking behaviour of the community

Total patients treated at the MCD Polyclinic
2,84,633

Strengthening the SDMC Polyclinic facilities since 2008

Setting up of Community based groups like the Mohalla Health and Sanitation Committees leading to greater efficiency of the public health service



66 Clinical Facilities

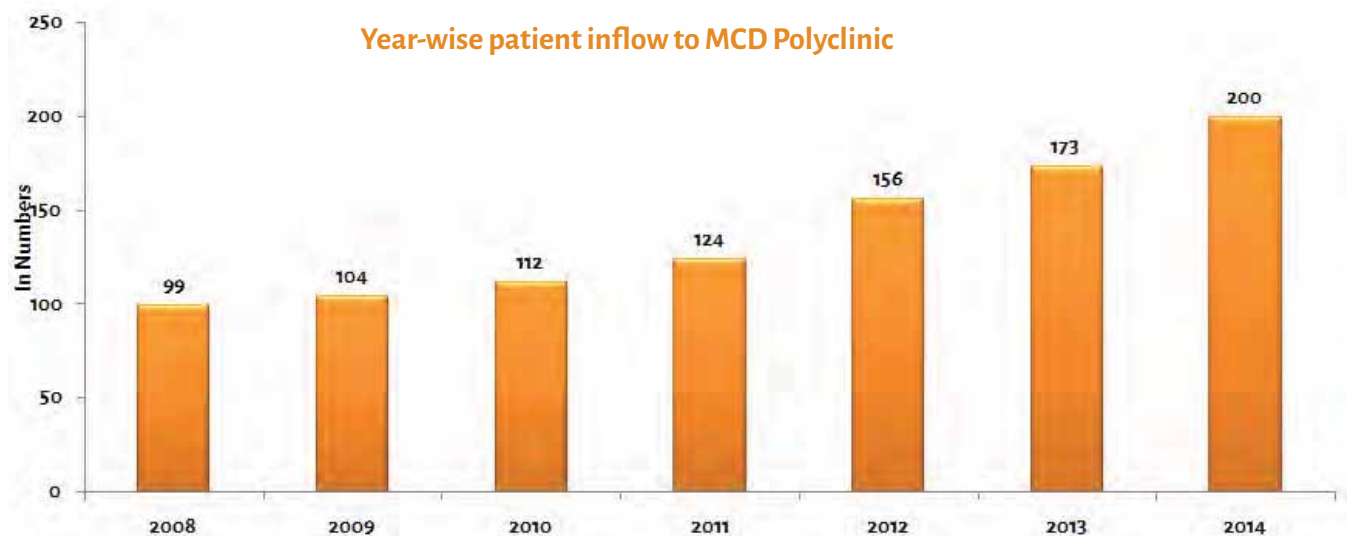
From 99 patients per day in 2008 to 113 patients per day during the period 2009 to 2011, the overall patient inflow to the general OPD increased by 14% in the first three years of intervention. The first 3 years of the project were aimed at strengthening services at the MCD polyclinic. The average patient inflow was 124 per day during 2011. After the initiation of the community health outreach programme in February 2012, the average inflow increased to 156 patients per day, which is a cumulative increase of 57% since 2008 and 25% since 2011. During the year 2013, general OPD flow has crossed 50,000 for the first time; average per day inflow increasing to 173 patients per day. During 2014, the average patient inflow has increased further to 200 per OPD. During the last 6 years the patient inflow to the MCD polyclinic has been doubled.

Action Taken:

1. General OPD

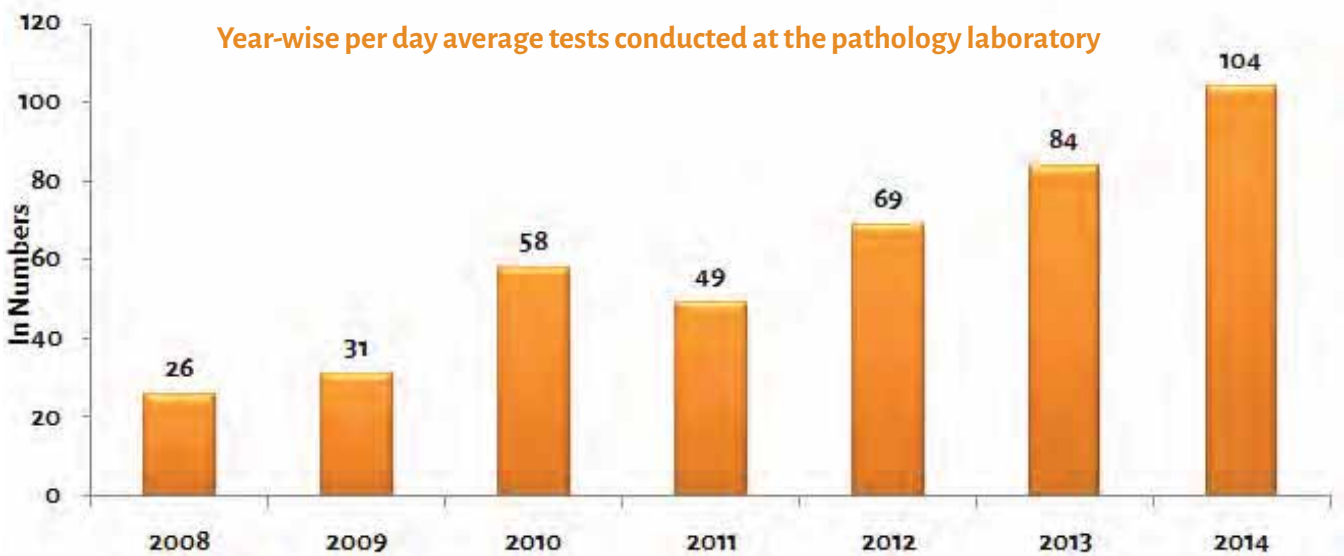
With the strengthening of the services the per day patient inflow, at the MCD Polyclinic, increased from 99 in 2008 to 124 in 2011, an increase by 25 %.

With the initiation of the community health programme the per day patient inflow at the MCD polyclinic has gone up to 200, doubled during the last 3 years.

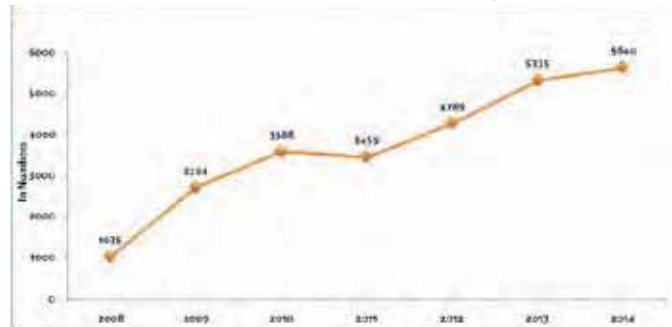


2. Pathology Laboratory

During the last 6 years a total of 1,16,804 tests conducted at the path lab benefiting to more than 26,000 patients.



Year wise patient load at the pathology laboratory



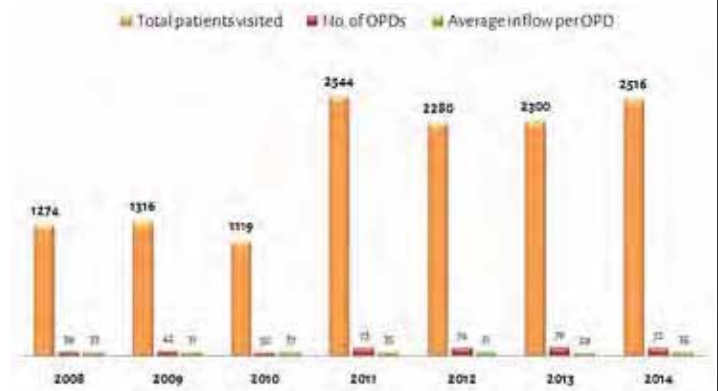
3. Eye/ENT OPD

By end of 2014, there has been a 4 times increase in inflow of eye patients when compared to 2008. The patient inflow to ENT OPD doubled during the last 6 years.

Patient inflow to Eye OPD



Patient inflow to ENT OPD





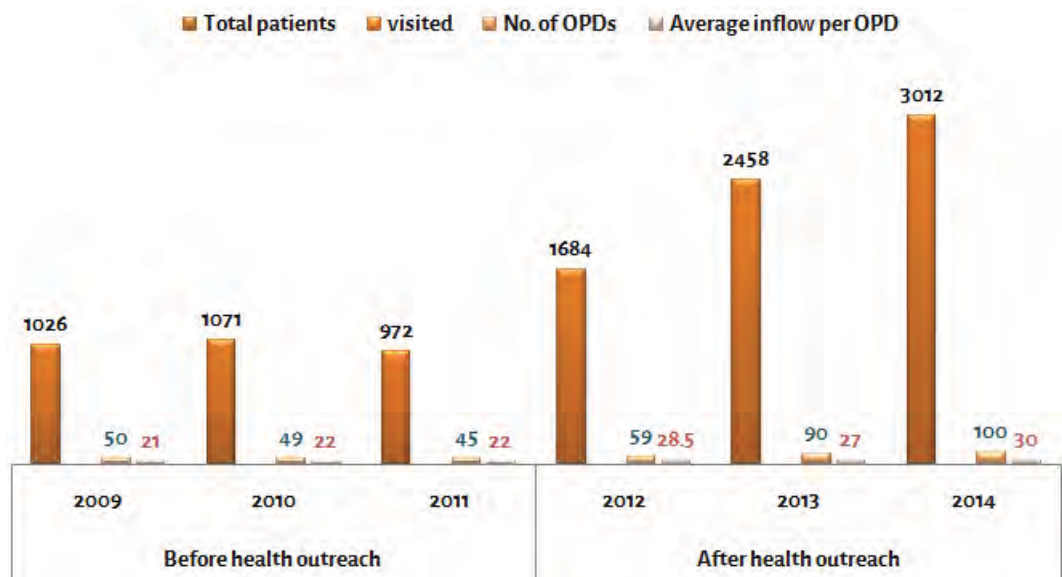
4. Maternal and Child Health Services

Since 2011, MCH services have been provided through MCD established satellite Maternal and Child health (MCH) centre. Antenatal care for pregnant women and immunization services for the children are provided by MCD. In addition to this, the project supports provision of bi-weekly gynecology and pediatric services. Gynecology OPD also caters to the needs of pregnant women.

a. Gynae OPD

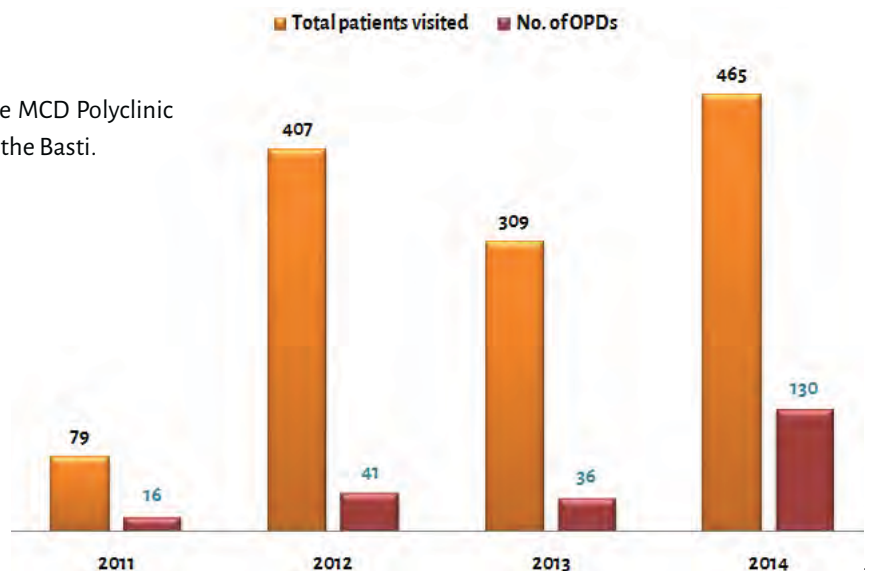
During 2014, a total of 3012 adolescents and women have received treatment and counselling services in 100 OPDs.

The average number of patients treated per OPD was 30.



b. ANC

A total of 464 ANC consultations conducted at the MCD Polyclinic during 2014 benefiting 150 pregnant women from the Basti.



*MCD + AKDN

c. Paediatric OPD

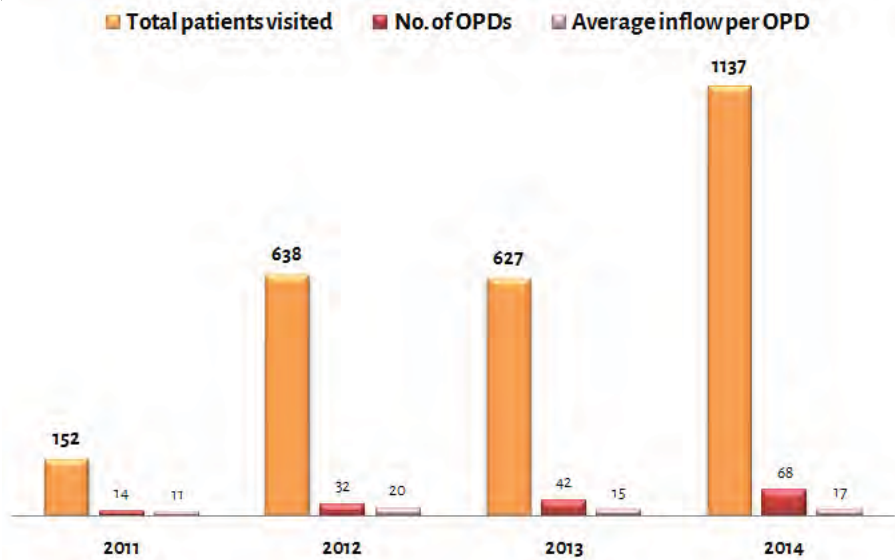
During 2014, a total of 4391 children were provided with treatment showing an increase by 64 % compared to 2012.

The average inflow per day was 46.



d. Immunisations

· During 2014, 1137 immunizations were provided to children in the age group of 0–5 years under the government immunization schedule.



Next Steps:

Advocacy with MCD to begin taking over some of the initiatives currently borne by the project

Impact:

- A stable curative public health facility is available in the Basti
- Significant increase in patient load in the polyclinic due to improved services and outreach programme
- Pathology lab continues to be the most reliable laboratory in the surroundings



67 Community Health

The community health initiative was initiated in 2012 recognizing the need to link the community with the public health facilities created in the community and to impact the health practices and health seeking behaviour with a special focus on maternal and child health.

ACTION TAKEN:

1. COMMUNITY HEALTH WORK (CHT)

a. Capacity building of CHT – This has been an ongoing process since 2012 and the change in the change agents i.e. the community health team has been significant. They have emerged as a strong cohesive unit capable of bringing about steady change in the community. In 2014, the community health team of 45 received training for a total of 29 days. Themes included non-communicable diseases, disability, growth monitoring. In addition to these, refresher trainings were organised for the team on reproductive and sexual health issues and life skills. Most of these training were organised in 2 batches due to large group size. Team also went for a 5 days exposure trip to Comprehensive Rural Health Project, Jamkhed, Maharashtra to understand their health related initiatives.

b. Community meetings – The community meetings are both structured meetings like the parenting programme and informal meetings that are carried out in the community with smaller groups of people mostly women and adolescent girls. In 2014, two batches of parenting programme were conducted from April to June with 40–50 participants and in latter part of the year with 25 participants.

c. Work on Disability –The work on disability was a planned activity that was catalysed by the placement of an intern from AKF Canada. All the facilities that offer any kind of assistance in terms of treatment or education were mapped in a radius of 5 kms of the

Basti. The community health team was trained for 4 days in understanding disability, the different forms of disability, the importance of early identification among other topics.

Further, a mapping exercise to identify the disabled children was carried out, 47 children were identified with a range of disabilities both mental and physical; of these 19 children have been linked to a scholarship where they receive INR 500 per month; 9 children have been linked to Cheshire Homes a charity that offers free education to the disabled.

In addition, an occupational therapist visits the clinic regularly to help 12 children with mobility and behaviour issues.

18 homeless people in the Basti who needed artificial limbs or orthopedic aids were identified by the Mohalla Health and Sanitation Facilities and linked with the Government of India's Department of Social Justice for free orthopedic aids. Further, a draft of the disability manual like the existing Sehatnaama has been prepared.





The Jannat Mohalla Health and Sanitation Committee identified the problem of inadequate water supply in Kot Mohalla for the past 2 months in their March monthly meeting. This was worrying with the approaching summer. They decided to address this problem. The AKF team suggested that they should present evidence to the Delhi Jal Board to substantiate their complaint. The group decided to conduct a survey covering 40 households to check the water supply – its regularity and duration. The survey was conducted for 20 days covering the entire area with 5 houses being covered in each street. Armed with this data, they wrote to the Executive Engineer, Delhi Jal Board Lajpat Nagar identifying irregular water supply and at odd hours. The DJB took cognisance of their report and sent a team to review the situation. The problem was identified and rectified on the same evening – essentially performing a by pass surgery! Water supply has been restored at normal timings and the Jannat MHSC is feeling very confident that they were able to solve their problem on their own – with a little help.

d. Linking With Public Health Facilities – This is an ongoing key activity of the community health team where vulnerable individuals of the community – pregnant women, children and people with episodes of illnesses or chronic diseases are mapped and linked with the public health facility or referral as is needed. This household level uses the family health card as the tool for engagement with the family. In 2014, about 15 individuals who were suffering from serious diseases tuberculosis, cancer and HIV were linked by the community health team to a medical facility.

Also, 101 pregnant women were tracked linked with ante natal care. In 2014 98 deliveries took place; of these 85 in a health facility and 13 at home.

322 diabetics were identified and are receiving follow up treatment. On the occasion of the World Diabetes Day, 800 screening tests were conducted in the Basti. This was a part of a larger initiative called the 'NDTV Health4U' being taken up by NDTV in partnership with Fortis hospital and SLR Diagnostics to promote healthy lifestyles.

e. Family Health Folder – This is the tool for engagement with the community and has helped us deepen our reach within the community. The folder has 5 cards including general health card, eligible couple card, maternal card, child health card and a follow up card. Each card is filled with a different frequency at the household level.

In 2014, 1400 households of the 1600 households in the Basti were covered and at least 3 visits made by the community health team to these households. However most of the families about 80 % are visited every month to cover eligible couples, pregnant women and families having children in the age group of 0-6 years. More than 25,000 household visits were done by the health workers during 2014.

f. Review Meetings: In order to provide continuous support and guidance to the community outreach team, regular meetings are conducted with the health workers by the health coordinator. These meetings are helpful in taking feedback from the team and solving their queries that emerge during the field work. Such meetings also serve as a platform for identifying key problem areas and the possible plan of action/ strategy for the same. This year, a monthly quiz was also conducted with the team to aid them in reading and utilizing information from Sehatnama.

2. COMMUNITY GROUPS

There are 5 community groups formed under the community health initiative known as the Mohalla Health and Sanitation Committees (MHSC). In the initial stages, they used to meet every month but in the last quarter this has been converted into a bimonthly meeting.

They are being supported through training and hand holding support. In 2014, 8 meetings of each of the 5 MHSCs took place i.e. a total of 40 meetings. Each of these meetings picked on an issue emerging from the community and tried to solve it within the framework of government services and their entitlements. The issues that are taken up in 2014 by the MHSCs were

- o Poor supply of water
- o Poor quality of water
- o Irregular cleaning of streets
- o Cleaning of sewer lines
- o Non -availability of garbage collecting van
- o Opening of a ration shop in the Basti



68 Strengthening of Family Health

The Family Health Monitoring System is the data base of the health status of the community. Data collected at the household level is entered into specially designed software and reports generated for follow up action by the health team. In 2014, reports on antenatal care, growth monitoring of children, child immunization and reproductive health problems from eligible couple cards were generated on a monthly basis which helped the health team to follow up on the cases identified. Similarly the reports on chronic health problems are generated and shared in a quarterly basis with the health field team.



ACTION TAKEN:

- Strengthen the community health team to enable them to address the non communicable diseases
- Increase capacity of the community health team so that more of their members are able to conduct field level meetings
- Refine the disability programme to set up a system of early identification for disability for referrals
- Finalise the disability manual
- Finalise the module of the parenting programme for dissemination
- Refine the FHMS and make it more friendly for community groups like the MHSCs.

Impact:

- 101 pregnant women covered and ensured safe delivery.
 - No infant mortality reported during 2014.
 - Needs of 40 disabled children addressed
 - 18 adults linked with the Department of Social Justice for orthopaedic aids
 - Each MHSC had certain work related achievements - getting regular cleaning of streets and sewer lines done, getting improved supply as well as quality of water etc.
- Many residents got linked to government entitlements and schemes through MHSCs.





Women's Empowerment

Women's day was celebrated in Hazrat Nizamuddin Basti with the entire project team of AKTC and AKF on 8-March. On this occasion, an interaction between the Police and women from the Basti was organized, which addressed the need for women to learn self defence and also establish a link with the police.

The SHO of the Nizamuddin Basti Police Station visited and listened to security risks in the basti. The women spoke of their concerns related to drug menace and other security issues in their Basti, and requested for an increase in patrolling in the basti. The SHO gave assurance to improving situations and also informed them of the relevant laws. Police personnel from the women's cell demonstrated what women could do in case they were being assaulted and places where one can hit to buy time to escape. They also shared that the police would be happy to conduct a training in self defence if the women were interested.

The main learning for the women was that mental toughness to defend oneself is more important than mere physical strength.

69 Community Gymnasium

On the request of the women community groups, the project set up a gymnasium adjacent to the health clinic with separate timings for use by men and women groups.

Action Taken:

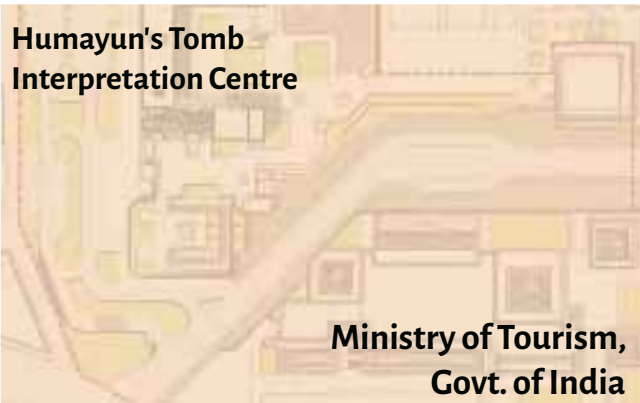
- Since August 2014, AKTC has begun an Audit of the maintenance of the gym in which a sanitation team member visits the Gym daily to record the status of machines and equipments and cleanliness of the gym.
- 45 women and 70 men use the gym on a regular basis.
- Regular meetings were held with the users of the gym to assess requirements and to finalize list of repairs to existing equipment.
- The ladies gym instructor has started conducting house visits in order to promote better fitness and health along with increasing the number women who use the gym.

Next Steps:

- Conduct meetings with gym users to make facilities better & increase their involvement to handle small issues by them.
- Undertake repairs/purchase of damaged/broken gym equipments
- To increase the number of ladies as well as youth gym users.
- To integrate the gym use within the community health programme.



Project Co-Funding



Conservation:
Isa Khan & Bu Halima Complex



World Monument Fund

Conservation:
Chausath Khamba



German Embassy, India

Education:
Access Microscholarship Program



US Embassy

Skill Development Training
for minorities



Housing & Urban Development Corporation (HUDCO)

Support to Women
SHG's in the Basti



Australian High Commission, India

Landscape Development:
Sundar Nursery



Norwegian Ministry of Foreign Affairs

Nizamuddin Monument Area
Development Plan



**Delhi Urban Heritage Foundation,
Delhi Development Authority**

Conservation:
Sunderwala Mahal



National Culture Fund (NCF)

AGA KHAN DEVELOPMENT NETWORK

Project Team

Core Team

- Mr. Ratish Nanda**, Project Director
Mr. Rajpal Singh, Chief Engineer
Ms. Jyotsna Lall, Senior Programme Officer
Mr. Guntej Bhushan, Project Manager
Ms. Shveta Mathur, Senior Programme Officer, Urban Improvements
Ms. Deeti R Ray, Programme Officer, Cultural Revival
Ms. Archana Saad Akhtar, Programme Officer, Design & Outreach
Ms. Somak Ghosh, Finance Manager



(Right) Project Committee chaired by DG, ASI and comprising of senior members from the ASI, SDMC, CPWD, AKDN meet annually to review project's progress

Conservation

- Mr. N.C.Thapliyal**, Engineer In-charge
Mr. Neetipal Brar, Project Architect
Ms. Divya Nandini, Project Architect
Mr. Nikul Kumar, Engineer
Mr. M C Gautam, Senior Archeological Assistant
Mr. Suraj Kumar, Art Conservator
Mr. Saroj Pandey, Conservation Assistant (Art)
Mr. Om Veer, Engineer
Mr. Chuttan Lal Meena, Art Conservator
Mr. Salauddin Saifi, Co-ordinator, Tile Centre
Mr. Izhar Ahmad, Site Supervisor
Mr. Om Parkash, Field Supervisor

(Right) Conservation architect explaining the historical significance and works undertaken on the monuments in Humayun's Tomb Complex

Principal Consultants

- Prof. M Shaheer**, Shaheer Associates, Landscape
Mr. Shakeel Hossain, Aalam E Khusrau
Vir Mueller Architects, Humayun's Tomb Site Museum
Mr. Ashok B Lall, Garden House Design
Mr. Ram Rahman, Photography
Mr. Mayank Mehta, Video Documentation
Mr. Vijendra Nagar, Aerial Photography
Mr. Shubham Mishra, GIS Consultant
NIIT Foundation Training Agency conducting courses



Socio Economic Programmes

Mr. Deepak Padhi, Programme Officer, Monitoring & Evaluation
Mr. Kishwar Khan, Programme Officer, Vocational Programme & Field Implementation
Mr. Hyder Rizvi, Programme Coordinator, Education & School Improvement
Dr. Gursimran Kaur, Programme Coordinator, Health
Ms. Vardana Puri, Programme Coordinator, Early Childhood Care and Development
Ms. Ratna Sahni, Programme Coordinator, Vocational Education
Ms. Swati Batra - Co-ordinator - Livelihood
Ms. Harshika Saini Dewan - Prog Co-ordinator - ECCD
Mr. Syed Faisal Mahmood, Programme Coordinator, Vocational Programme
Ms. Rukhsana Khan, Coordinator, Health Outreach
Ms. Musarrat, Coordinator, Health Outreach
Ms. Seema Bohat, Auxiliary Nurse Midwife
Mr. Tilak Raj Chauhan, Pathology Lab Technician
Mr. Mohd. Ayaz Khan, Assistant Monitoring & Evaluation

Sundar Nursery Environment Development

Mr. N. K. Agarwal, Engineer-In-Charge
Mr. Kiran Pal Singh, Horticulture-in-Charge
Mr. Vishal Kakkar, Project Engineer
Mr. Kapil Mangla, Engineer
Mr. Alok Shrivastava, Project Architect
Mr. Bijender Mailk, Site Supervisor
Mr. Sandeep Kumar, Horticulture Assistant
Mr. Ashish Panwar, Horticulture Assistant
Mr. Chhote Lal, Horticulture Supervisor
Mr. Kewal Ram, Field Supervisor
Mr. Ganeshi Lal, Field Supervisor
Mr. Ramesh Singh, Field Supervisor
Mr. Suhel Akhtar, Field Supervisor
Mr. Ishwar Singh, Field Supervisor

(Below) Barapullah Nallah re-development works under progress



Urban Improvements

Mr.M.P.Mishra, Engineer-in-Charge
Mohd. Nayeem, Senior Engineer
Mr. Arshad Rizvi, Prog. Coordinator-Waste Management
Ms. Sakshi Saini, Coordinator – Urban Improvements
Mr. Arun Kumar, Architect
Mr. Ranjit Kumar, Coordinator – Water & Sanitation
Mr. Hugo Ribadeau Dumas, Volunteer, Urban Improvements

(Above) Youth from Hazrat Nizamuddin Basti trained as heritage volunteers conducting heritage walk at Humayun's Tomb Complex



Cultural Revival

Mr. Pradeep Khusro, Research Associate, Aalam E Khusrau

Mr. Sharid Jamal, Research Assistant, Aalam E Khusrau

Mr. Amir Ahmed, Coordinator, Sair E Nizamuddin Group

Prof Iqtidar Husain Siddiqui, External Consultant

Prof. Yunus Jaffery, External Consultant

Administrative

Mr. Rupendra Chahar, HR officer

Mr. Hardeep Thakur, Admin Officer

Ms. Kavita Kanojia, E.A to Project Director

Md. Amil Saifi, IT Officer

Mr. Nishant Bajpai, Finance Officer

Mr. Neeraj Gupta, Finance Officer

Mr. Ankit Agarwal, Accounts Assistant

Mr. Rakesh Kumar, Admin Assistant - Site work

Ms. Rabia, Office Clerk

Mr. Balveer Singh, Office Clerk

Mohd Bilal, Electrician

Pappu Arwar, Plumber

Design & Outreach

Mr. Himanshu Dhanda, Video Consultant

Mr. Narendra Swain, Photo Officer

Ms. Ruchika Arora, Research Consultant

Mr. Rinkesh Rana, DTP Officer

Mr. Sagar Suri, DTP Operator

Mr. Faisal Fahim, DTP Assistant

Master-Craftsmen

Dhani Ram, Field Supervisor

Attar Singh, Stone craftsmen Supervisor

Babu Lal Supervisor cum Storekeeper

Amirak, Master Craftsmen

Tile Centre

Rahimuddin ; Asif Ahmad Ansari; Abdul Hafiz;

Rajendra Kumar Sorampal; Md. Asif; Shoaib Abbas;

Md. Wakil; Md. Imran; Md. Amir; Khustar Ali;

Md. Kamal Hussain; Abdul Rehman; Asif Ali

(Below) Over 500,000 man-days of work generated for mater craftsmen



(Right) 1550 out of 1610 or 96% households covered in socio-economic and urban improvement schemes



Community Team

COMMUNITY HEALTH WORKER – SEHAT APA

Farhat Khan, Hamida Khan, Heena Nejam Zadi, Mehru Nisha,
Nazima Begum, Razia, Safina, Saira, Shabnam Roohi,
Shahjahan, Faiza Kanwal
Ms. Shivani, Data Entry Operator

COMMUNITY HEALTH CONTACTS – SEHAT SAHELI

Afroz Begam, Akbari Begum, Anisa Begum, Anjum Begum, Anwari, Anwari Begum, Badar Jahan, Farhana, Farida Begum, Farjana Prveen, Fatma Begum, Gulshan, Kahkasha Praveen, Najma Shafi, Nighat, Nikhat, Noor Bano, Nuzhat Sultana, Qamrunisha, Razia Perveen, Rehana Khatoon, Rubana, Rumana Khatoon, Saira, Saira Ali, Saira Bano, Salma, Shahana Begum, Shaheen Parveen, Shahjahan, Shaista, Shaista Parveen, Shirin, Shobarani, Suvaleha, Zaheda, Zeenat Begam, Shaheen Begum, Nishaira, Parveen, Afroz Jamala, Salma Begum

COMMUNITY, ACCESS, SUBJECT ENRICHMENT AND ECCD TEACHERS

Gazala, Faiza, Masooma, Mehvish Parveen, Nazima Parveen, Saba Parveen, Shaista Parveen, Zainab Fatima, Farhana Khan, Husna, Kamar Jahan, Farhat Naaz, Azarudin Shah, Mohsin Quereshi, Arti Idora, Zeba Zubair, Subby, Nazmeen, Shaheen Parveen Quereshi, Sana Arshad, Saima Malik, Kahkasha, Farheen Iqbal, Mohd. Rafiq, Hemlata, Anita,

CAREER DEVELOPMENT CENTRE

Nazia Khan, Abdul Rahim, Nasreen, Sayra Begum, Sehnaz

INSHA CRAFTS CENTRE

Reshma, Instructor-Embroidery
Alka Thakur, Instructor- Stitching
Mohd. Islam, Consultant- Stitching Master

COMMUNITY BASED WASTE MANAGEMENT

Sayyad Sajid Ali, Anisa, Mohd. Rafiq
Mobin, Munisha Begum, Saida,
Rahima Khatoon, Shahida

COMMUNITY BASED TOILET MANAGEMENT

Mohd. Shariquddin, Surinder, Anil Jha, Sameena ,
Sajrul Nisa

COMMUNITY CAPACITY BUILDING ON URBAN SERVICES AND ENVIRONMENT

Nighat Parveen, Mohd. Salman,
Mohd. Shawan

Public Agencies - 2013

Archaeological Survey of India (ASI)

Dr Rakesh Tewari, Director General
Mr. Pravin Srivastava, former Director General
Mr. Shharat Sharma, Additional Director General
Dr. B.R.Mani, Additional Director General
Mr. Janhwij Sharma, Director (Conservation)
Dr M Nambirajan, Director Monuments
Mr. T R Sharma, Regional Director (North)
Mr. Vasant Kumar Swarnkar, SA, Delhi Circle
Mr. Daljeet Singh, SA, Delhi Circle
Shri R.S. Jamwal, Superintending Archaeological Engineer
Shri Ravinder Kumar, Dy. S.A (Horticulture), Delhi Circle
Mr. Jagdeep Singh, Senior Conservation Assistant, Humayun's Tomb
Mr. R.K. Jhingan, Former Senior Conservation Assistant
Mr. Deependra, Horticulture Assistant, Humayun's Tomb



(Above) ASI - AKTC Core team reviewing the progress of conservation works at Khan E Khanan's tomb; (Below) CPWD - AKTC team reviewing works at Sundar Nursery

Central Public Works Department (CPWD)

Mr. V K Gupta, Director General
Mr. S.K.Mittal, Former Director General
Mr. Vijay Motwani, Special Director General (NDR)
Mr. Upender Mallik, Additional Director General (NDR)
Mr. Prabhakar Singh, Chief Engineer, NDZ 1
Shri Rajesh Kumar Kaushal, Chief Architect NDR
Dr. B C Katiyar, Deputy Director General (Horticulture)
Mr. Ashwani Kumar, Director (Works)
Mr. M P Nim, Director (H) DR,
Mr. B N Srivastava, Former Director Horticulture (NDR)
Shri N K Sharma, Deputy Director (H), HQ
Mr. Satyavir Singh, Asst. Director, Horticulture
Mr. A.K. Saxena, Former Asst Director, Horticulture
Mr. Deshwal, SO, Horticulture



South Delhi Municipal Corporation (SDMC)

- Mr. Farhad Suri**, Councillor and Leader of the opposition
Mr. Manish Gupta, Commissioner
Mr. G.S. Meena, Additional Commissioner, Health
Ms. Kiran Dabral, Additional Commissioner, Education
Mr. Deepak Hastir, Former Additional Commissioner (Education)
Mr. Rupesh Kumar Thakur, Deputy Commissioner, Central Zone
Mr. Feroz Ahmed, Chief Engineer
Mr. Ravi Dass, Engineer in Chief
Shri Shamsheer Singh, Chief Town Planner, Municipal Corporation of Delhi
Shri Girish Sharma, Superintending Engineer, Building Section, Central Zone
Mr. Devender Kumar, Chief Engineer IV
Dr P K Dash, Additional Director Hospital Administration (Med), Health Department
Mr. C. Uday Kumar, Director (Education)
Mr. Rajesh Pathak, Former Director (Education)
Ms. Savita Rani, Former Deputy Education Officer, Central Zone
Mr. N. K. Ghai, Additional Director (Education)
Dr. Rita Sharma, Assistant Director (Education)
Ms. Manju Khatri, Additional Deputy Education Officer, Central Zone
Mr. Mashaqat Hussain, Former School Inspector, Central Zone
Mr. Babu Lal Meena, School Inspector, Central Zone
Mr. Hans Raj Bharadwaj, School Inspector, Central Zone



(Left) Mr. Balvinder Kumar, Vice-Chairman (DDA) inaugurating the Apni Basti Mela in the Hazrat Nizamuddin Basti.



Nizamuddin Urban Renewal Initiative

a *People* Public - Private Partnership

Archaeological Survey Of India - South Delhi Municipal Corporation - Central Public Works Department

Aga Khan Foundation - Aga Khan Trust For Culture

Creating An Indian Urban Conservation Model through:

People's Engagement

Empowered Women And Youth

Inclusive And Sustainable Development

Improving Quality Of Life

Upgrading Infrastructure To Provide Basic Amenities To All

Vocational Training To Ensure Productive Youth

Improving Physical And Social Infrastructure

Technologically Driven Innovations

Creating Employment Opportunities

Boosting Tourism

Building Heritage Awareness

Environmental Development

Community Led Urban Health

Showcasing Delhi's Ecology

Restoring World Heritage

Craft Based Conservation

Conservation-Led Development

AND MORE...

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