

BAOLI
HAZRAT NIZAMUDDIN BASTI



CONSERVATION OF THE 14TH CENTURY STEPWELL,
NIZAMUDDIN BASTI, DELHI

NIZAMUDDIN BASTI
HUMAYUN'S TOMB
SUNDAR NURSERY

urban renewal initiative

A PUBLIC-PRIVATE PARTNERSHIP INITIATIVE OF ARCHAEOLOGICAL SURVEY OF INDIA
MUNICIPAL CORPORATION OF DELHI – CENTRAL PUBLIC WORKS DEPARTMENT
AGA KHAN FOUNDATION-AGA KHAN TRUST FOR CULTURE

Hazrat Niazmuddin Baoli
Conservation of the 14th century stepwell,
Nizamuddin Basti, Delhi

Co-funding proposal
J.M Kaplan Fund

Submitted by



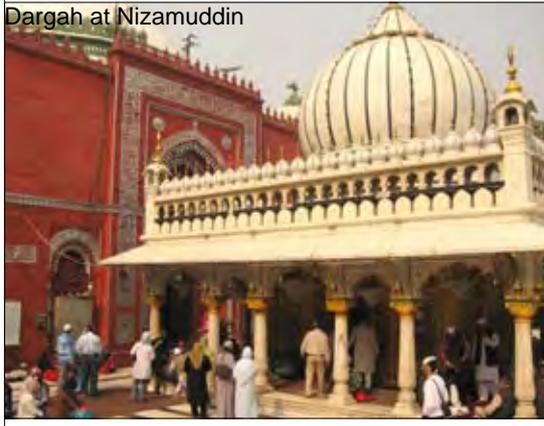
AGA KHAN TRUST FOR CULTURE

NIZAMUDDIN BASTI
HUMAYUN'S TOMB
SUNDAR NURSERY

urban renewal initiative

A PUBLIC-PRIVATE PARTNERSHIP INITIATIVE OF ARCHAEOLOGICAL SURVEY OF INDIA
MUNICIPAL CORPORATION OF DELHI – CENTRAL PUBLIC WORKS DEPARTMENT
AGA KHAN FOUNDATION-AGA KHAN TRUST FOR CULTURE

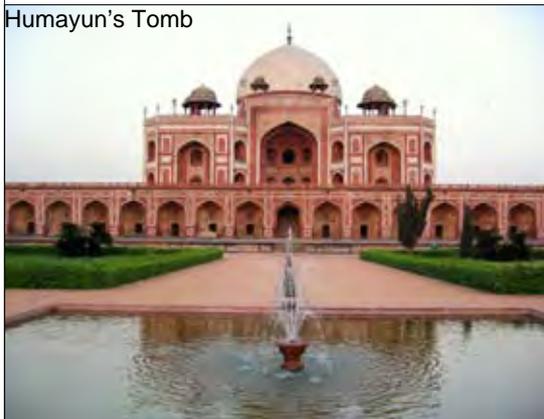
Dargah at Nizamuddin



Sunder Nursery



Humayun's Tomb



Project Summary

The project aims to focus on three adjoining zones of Humayun's Tomb, Sunder Nursery, and Hazrat Nizamuddin Basti within the larger Nizamuddin area which also includes the more affluent neighborhoods of Nizamuddin East and West. Situated within each of these zones are several significant monuments spanning almost a millennium of Delhi's heritage. Since the 14th century burial of Hazrat Nizamuddin Auliya, several significant buildings have been built in this area, especially by the Mughals, and there are today over eighty listed heritage buildings in the project area of which thirty-six are protected by the Archaeological Survey of India. The urban renewal initiative linking various, presently segregated, heritage zones in the area together as part of a large urban revitalization project which, located centrally in the capital city of Delhi, would have immense strategic importance. The project will seek to improve living standards in the Nizamuddin Basti, considerably enhance the experience of the thousands of pilgrims who visit the Dargah daily and, through rehabilitation of critical monuments and civic open spaces, enhance the area's value and significance in terms of history, places of spiritual importance and recreation.

Nizamuddin Baoli, a 14th century structure considered to be of National importance and as such protected by the Archaeological Survey of India is located at one of the principal entrances to the shrine of the Sufi saint. The baoli is fed by underground springs, and it is the only structure of its kind in Delhi which still contains water – considered a miracle by some. Since the partial collapse of the structure in August 2008, structural analysis, geo-technical studies are being carried out while community support for conservation work is being actively sought.

Hazrat Nizamuddin Basti

Social development initiatives planned in the Nizamuddin Basti area, comprising a resident population of approximately 20,000 and other beneficiaries, will offer a synergistic, community centred and collaborative approach to improve the nullah, develop public parks and strengthen urban basic services through interventions in three core areas of health, education and environmental sanitation.

Humayun's Tomb Complex

Building on the garden restoration of Humayun's Tomb, conservation works will now be carried out on the Mausoleum and other buildings within the Complex such as the monumental gateways, pavilions and tomb structures. The project also includes the integrated development of the surrounding open spaces and provision of visitor facilities and an interpretation centre.

Sunder Nursery

The 70-acre Sunder Nursery abuts the Humayun's Tomb Complex and stands on the Mughal Grand Trunk Road. The area has been a significant Sufi graveyard and within the nursery stand nine, Mughal period tombs. It is proposed to enhance nursery functions, create a significant arboretum showcasing Delhi's flora, carry out conservation work on the monuments to enhance the cultural significance, create new attractions and provide visitor facilities.

Mughal Pavilion, Sunder Nursery- Conservation works co-funded by J.M.Kaplan Trust

Before Conservation

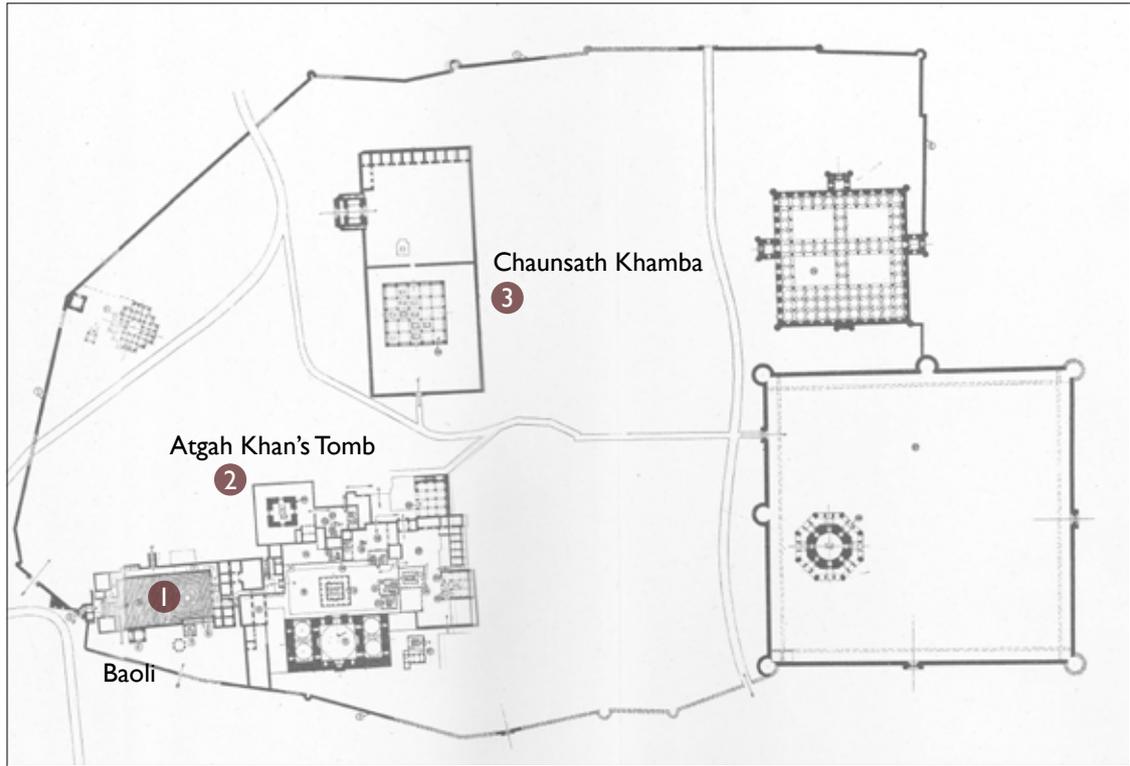


After Conservation



Nizamuddin Basti

A 1940's plan showing the significant Mughal period structures in the Nizamuddin Basti



Background

The urban village of Nizamuddin Basti, west of Humayun's Tomb, is a compact, self-contained district with a high count of landmark structures dating to the Mughal and pre-Mughal periods. Shrines, mausoleums and baoli (step well) in Nizamuddin are located within relatively short distances of one another and are well integrated with a vibrant community centred around the dargah of the 14th century Sufi Saint Hazrat Nizamuddin Auliya. The dargah is revered by Indians for its spirit of tolerance with visiting pilgrims representing a cross-section of society.

The rare examples of religious pluralism one can experience in Nizamuddin offers an important message of hope for India and the world. Nizamuddin Basti, with its living culture, forty-five listed monuments and a 15,000-strong population with below-average income levels, requires an integrated area development approach, emphasising AKTC's experience as a prime coordinator of a consortium of consultants, NGO's and private sector groups involved in a comprehensive programme of preservation/ rehabilitation of a number of monuments as well as the socio-economic development of the basti.



An exhaustive socio-economic survey, carried out to formulate project strategy also revealed that nearly 40% of the residents are recent immigrants from neighbouring states and Bangladesh.

Ongoing Works- People-centric approach

Socio- Economic Interventions



Sanitation & infrastructure development



Cultural Mapping



Baoli Nizamuddin Basti



Baoli, 1940's

Historical Significance

The baoli constructed by Hazrat Nizamuddin in 1321-2 A.D, measures 38m x16m internally and is enclosed by dressed stone walls on the South, East and West, the descending steps being on the North. There were 40 steps above the water level. Buildings have been erected on the walls of the baoli at different times, and on its southern and eastern sides is a narrow arcaded passage leading to the tomb of Sheikh Nizamuddin. The southern arcade is the work of Muhammad Marruf in 1379-80 A.D. There are buildings on all sides of the baoli including several tombs on the western walls such as the beautifully-tiled Chini-ka-Burj.

The baoli is the only structure in the basti which was built during the lifetime of Hazrat Nizamuddin in the Dargah complex. On the completion of the Baoli, Hazrat Nizamuddin blessed the water which is still supposed to be efficacious in curing diseases and expelling evil spirits. The baoli has underground springs that still supply water which has turned bright green in colour due to overcrowding and pollution in the whole vicinity.

Present Condition

This early 14th century structure, originally surrounded by domed pavilions and tombs is today hemmed in by modern structures. On the southern side the arcaded pavilion, contemporary to the baoli, has been built upon. Along the eastern edge is a passageway leading to the Dargah or tomb – shrine of Nizamuddin Auliya and the vaulted passage has itself been constructed over in recent years. On the northern corners of the baoli are two tombs, dating from the 16th century which are in a poor state of preservation and presently inaccessible to the public. The western side of the baoli is showing stress at its southern corner where a vaulted pavilion has been built around; at the northern end of this side stands the remnants of a Mughal period mosque – presently inaccessible.

A study of archival images of the Baoli reveals that the water level has increased considerably over the last few decades. This in part could be due to the inappropriate repair works carried out earlier this decade wherein the walls of the baoli below water level has been covered with a thick layer of chemical epoxy and in addition the stone joints pointed with cement mortar.

The structure is built by digging the ground to the required size followed by building retaining walls in random rubble masonry, that seem to be 2 m thick and these are faced with dressed blocks of Quartzite. In August 2008 a large portion on the western wall of the baoli collapsed; this included the random rubble masonry wall beneath the facing stones. The collapse has led to the passage over it standing in a precarious position.



(Top) The collapsed western wall of the Baoli
(Bottom) Heavy encroachments along the walls



Conservation Proposals

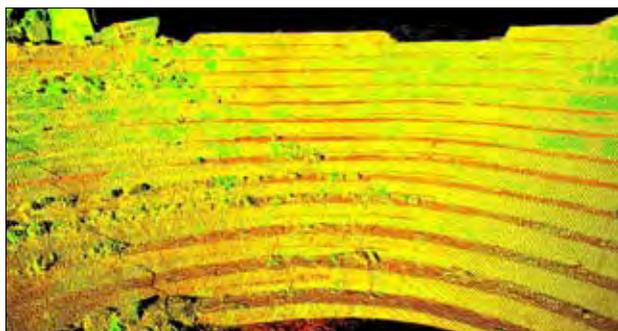
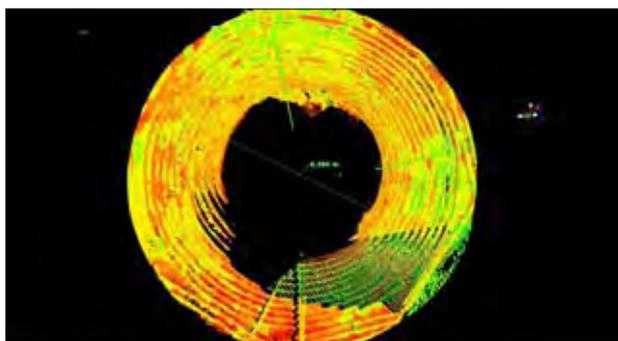
The Conservation works that are expected to commence shortly have been preceded a sustained dialogue with the local community as works will effect access to the shrine and other buildings in the area. Efforts are also underway to rehabilitate the 16 families that presently occupy the roof of the 14th century arcaded pavilion. The single family who occupied the passage over the collapsed portion of the baoli is being provided alternate building at AKTC cost in lieu of agreeing to demolish the present modern structure; this work is expected to complete by mid December following which repairs to the collapsed portion will commence.

A 3D Laser High Definition Survey has been completed and is being followed by a series of geo-technical investigations that will guide the repair strategy which aims to:

1. Repair the collapsed portion using traditional building techniques and material.
2. Ensure long term preservation of portions of baoli walls that are bulging, possibly using modern techniques.
3. Remove modern materials such as cement and epoxy used in earlier repair attempts that have caused significant damage to the stone fabric
4. Enhance the setting of the Baoli by carrying out repairs to surrounding buildings; this may also include purchasing surrounding buildings from their present occupants.
5. Establish a water purification system that would ensure that the water, considered sacred by the local community and pilgrims, remain clean.

Conservation works will involve local youth and seek the support and participation of the local community. Being a Protected Structure of National Importance the conservation works will be carried out in partnership with the Archaeological Survey of India.

(Right) 3D Laser High Definition Survey



Atgah Khan's Tomb



Atgah Khan's tomb, 1940's

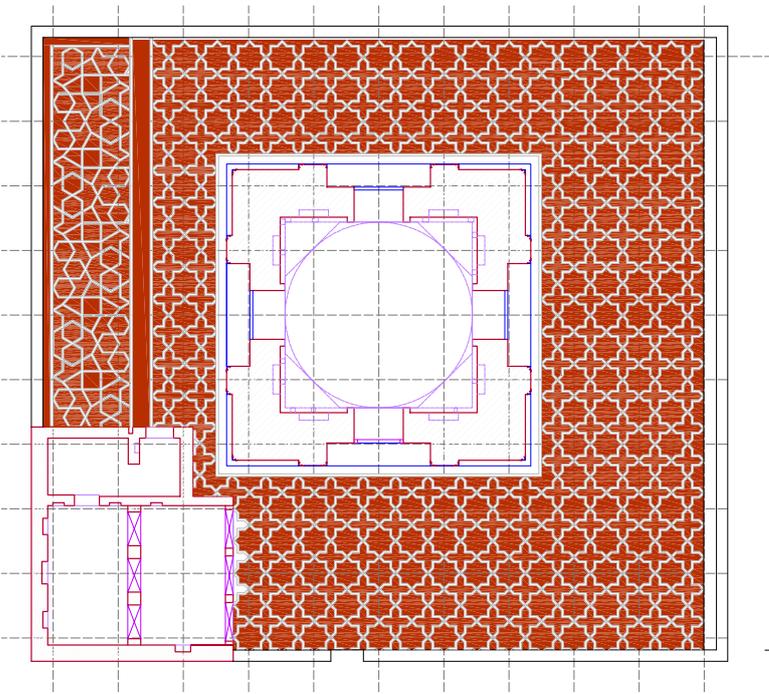
Historical Significance

Shamsuddin Atgah Khan held an important position in the court of Mughal Emperor Akbar; he was the husband of Ji Ji Angah, a wet nurse of Akbar.

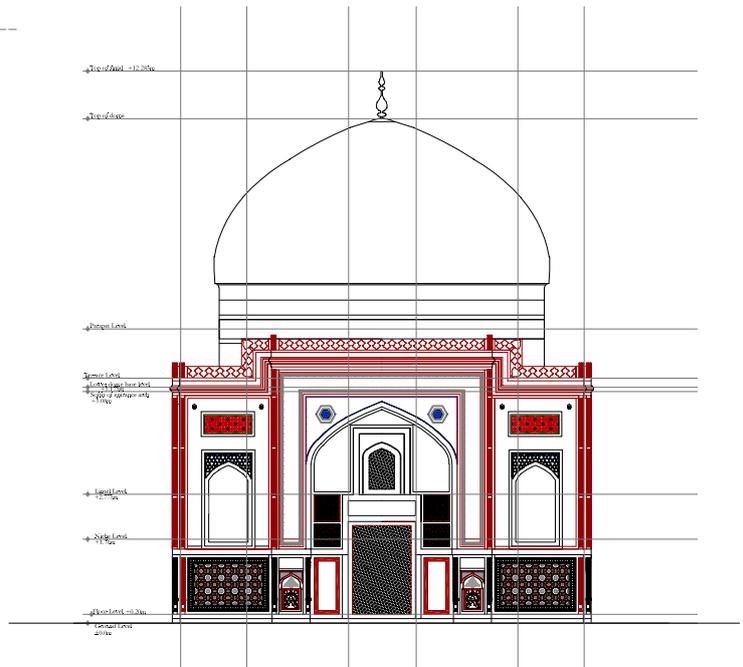
In 1562 A.D, he was killed by Adham Khan, another courtier following which his son, Mirza Kokaltash, arranged to have the tomb built near the tomb of the highly venerated Sufi saint, Hazrat Nizamuddin Auliya, and his tomb.

The tomb stands within a walled enclosure and consist of a 7 m square chamber covered by a dome. In the centre of all four sides are deeply recessed arches containing doorways all of which, with an exception of that towards the south forming the entrance to the tomb, are closed with latticed stone screens. The building has red sandstone cladding inlaid with marble and coloured tiles. The interior of the tomb was once very effectively ornamented with painted plaster.

XYZ



Ground floor plan of Atgah Khan's Tomb, Nizamuddin Basti



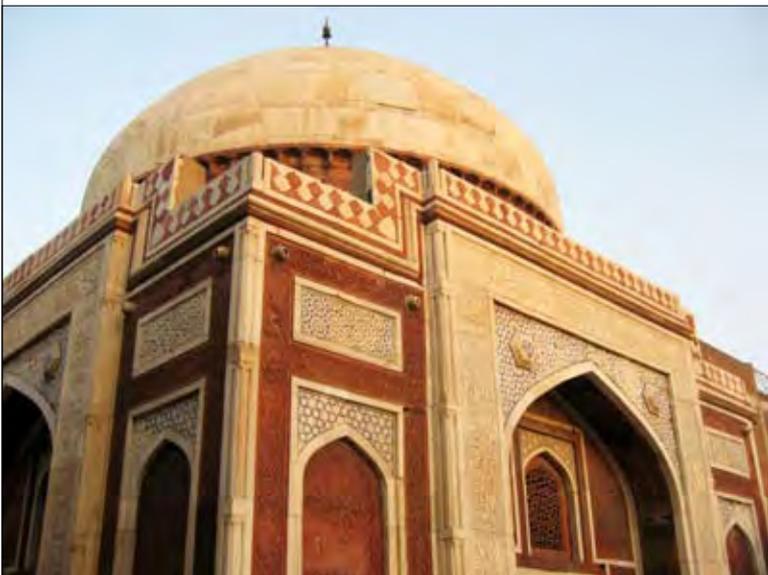
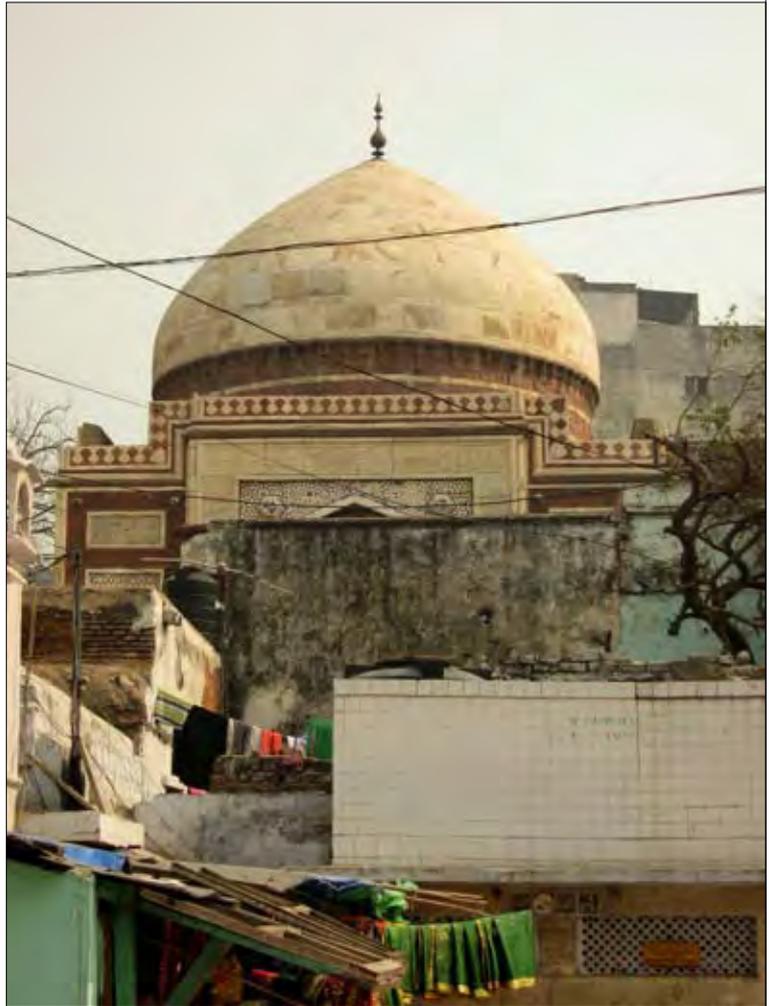
Front elevation of Atgah Khan's Tomb, Nizamuddin Basti

Present Condition



Atgah Khan's Tomb, now barely accessible to visitors is one of the finest Mughal era buildings. Though protected by the Archaeological Survey of India and considered to be of National importance, population pressures have meant the open areas surrounding the tomb have gradually been built upon and the connected pavilions walled up. The original gateway visible until earlier this decade, is now dilapidated with its fine stonework stripped.

(Top) Atgah Khan's Tomb, 1940's
(Bottom) Atgah Khan's tomb, 2007



Exquisite inlay works using white and black marble and red sandstone on the base of the tomb have suffered as a result of poor restoration works using modern materials such as cement. The interior of the building has suffered significant damage and possibly stone has been stripped from here sometime in the 20th century. Only part of the highly ornamental ceiling now survives and would need urgent conservation works.

Water seepage from the roof of Atgah Khan's Tomb has led to severe stone deterioration and some of the ornamental sandstone has deteriorated to an extent that would require part replacement – using traditional tools and building techniques. Atgah Khan's Tomb is the only Mughal era structure in Delhi that has a unique ceramic tile inlay work on marble – though several tiles still survive these are loose.

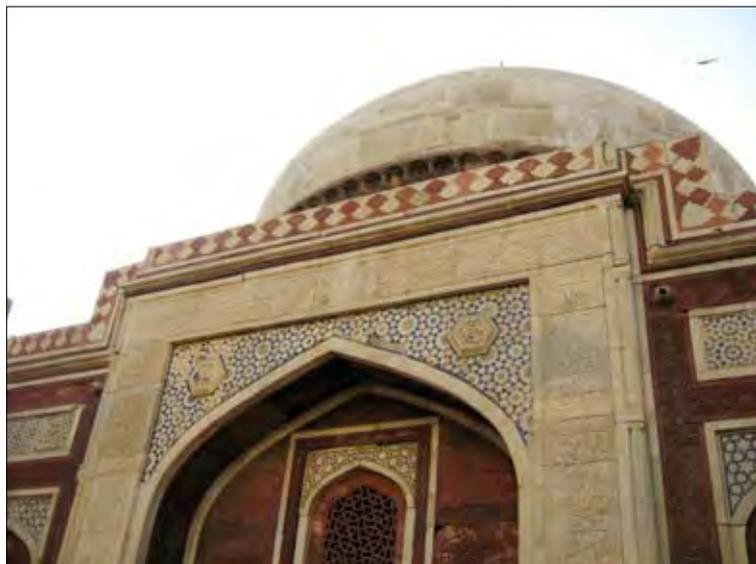


Conservation Proposals

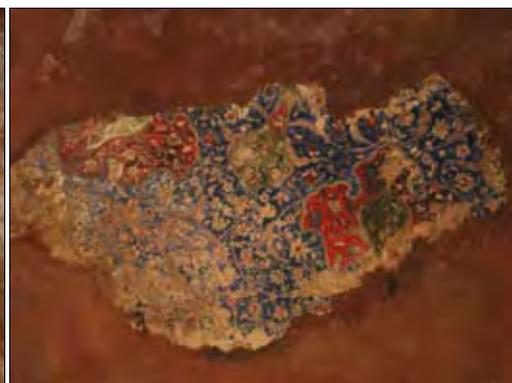
Conservation works, expected to commence in mid 2010, will include careful and prolonged works on the tomb structure, the gateway, the attached structures including the tiled works and the courtyard paving.

The white marble dome would need to be carefully pointed and it may be required to dismantle part of the marble which has been damaged prior to re-setting in traditional lime mortar. The roof is leaking and would be required to be made water-tight to ensure no further damage is inflicted on the ceiling below.

(Top) Atgah Khan's Tomb, 1940's
(Bottom) Atgah Khan's tomb, 2007



Interiors of the Tomb



The deteriorated sandstone on the façade would need to be replaced while ensuring stone and craftsmanship matches the original. The inlay work panels, two on each façade, would need careful repair which would include removal of cement and other modern materials used. It is possible that some of these are beyond repair and would need to be replaced – in which case the original panels will be inserted on the boundary walls of the enclosure.

In the interior of the tomb building, the ornamental ceiling requires urgent conservation works and, if, during the course of archival research, photographs of the ceiling are discovered, steps will be taken to restore the ceiling – which is unique. The large amount of stone that seems to have been removed from the building would be replaced on the basis of available evidence.

Conservation works will also need to be coupled with rehabilitation for the eight migrant families who occupy the tomb courtyard and the family of Quwwal singers who occupy the crypt chamber. While the Quwwals will be relocated to within Nizamuddin Basti as their livelihood is directly dependent on the Shrine; the other eight families have expressed a willingness to be relocated outside the Basti where relatively more affordable accommodation can be found.

This would be followed by conservation of the historical structures presently occupied including the crypt of Atgah Khan's Tomb. An adjacent tomb building, not presently occupied will also be taken up for Conservation.



As part of the larger project at Humayun's Tomb, research into use of ceramic tiles is now ongoing, this would enable us to produce ceramic tiles as per original specifications which could then be restored on the building.



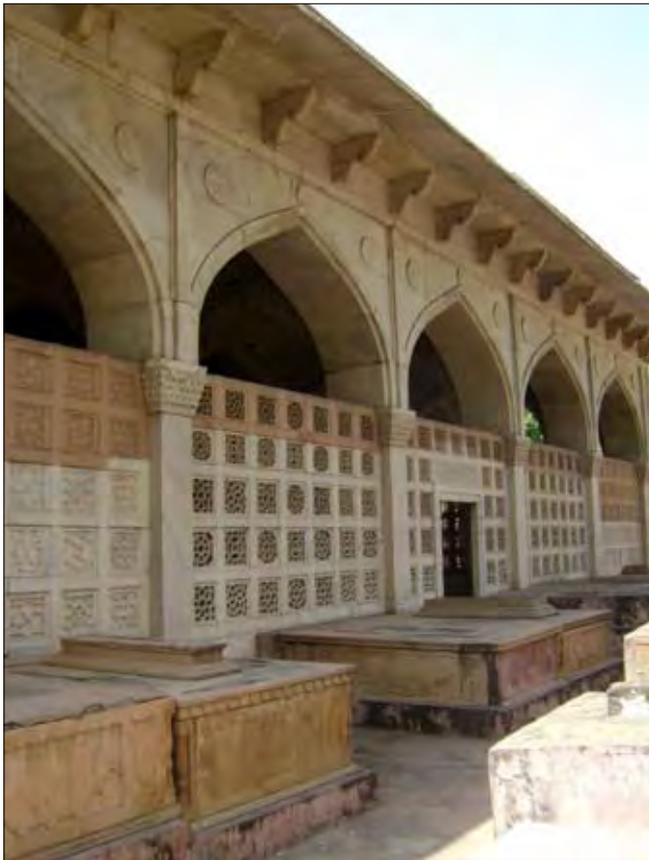
Chaunsath Khamba



Chaunsath Khamba, 1940's

Present Condition

Besides being a unique early Mughal era building, Chaunsath Khamba (Literally 64 pillars) is the largest surviving open space within Nizamuddin Basti. However, the open space has been sub-divided with an enclosure wall erected in the 1960's separating the monument from its courtyard thereby blocking the principal view to the monument. Similarly the tomb of one of India's most famous Poet's, Ghalib, has been segregated by blocking openings that originally connected it to the Chaunsath Khamba complex. The courtyard has itself been insensitively paved thereby disfiguring the historic character of the complex.

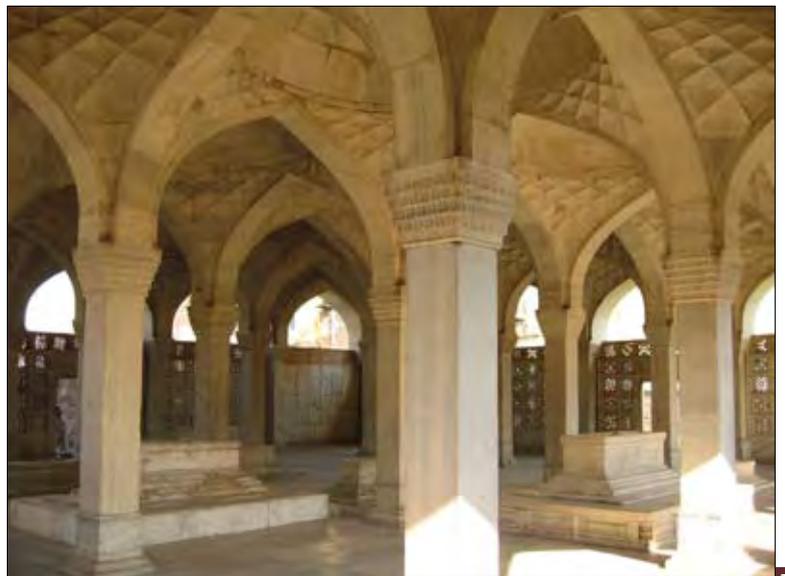


Historical Significance

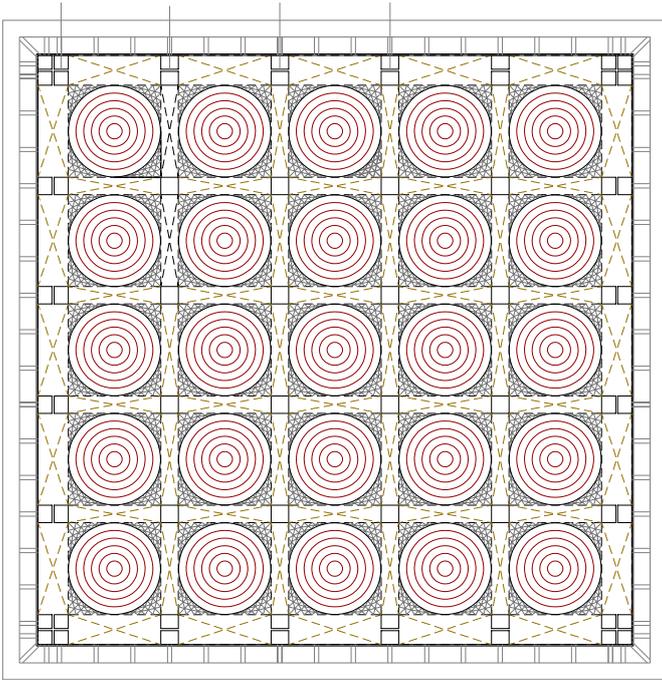
Chaunsath Khamba is the tomb of Mirza Kokaltash, the son of Atgah Khan built during the years AD 1623-4. The tomb is a large colonnaded hall almost 15 m square built entirely of marble and divided into 25 domed bays. All four facades of the tomb are filled in with lattice screens in marble and sandstone.



Besides Chaunsath Khamba, the monumental gateway, enclosure wall, a well and a plinth survive – all of which are today in a poor state of preservation. Chaunsath Khamba, built entirely of marble is held together using iron dowels, a significant number of which have rusted as a result of water penetration and split the marble. Several stone fragments from the enclosure wall are now missing and the opening arch on the south is in a dilapidated condition needing careful repairs using Mughal brick. The well has in recent years been clad with thin sections of red sandstone thereby disfiguring its historic architectural character.



Conservation Proposals



Amongst the principal works proposed at Chaunsath Khambha is the sensitive landscaping using traditional materials to unify the three segregated zones of the complex and also give the local community, most of whom are immigrants, a significant open space within the settlement.

Over a two year period it is proposed to carefully remove the cemented portions and damaged marble pieces, replace iron dowels with non-corrosive metals and repair/indent marble fragments where required in a traditional conservation repair. Simultaneously, it is proposed to remove the excess 30 cm of concrete from the roof and replace with a traditional lime concrete roof with significant slopes, in order to restore the original levels to allow easy drainage of rain water and prevent further corrosion of iron dowels that will remain within the structure.



The double storied monumental gateway leading to the entrance needs careful conservation works which include plasterwork and stone replacement, especially on the façade. Similarly, the Mughal period well will be desilted and restored to its original character on the basis of archival images. The plinth located at one end of the complex originally had underground rooms, meant to protect from the heat of the Indian summer and possibilities to restore these rooms would be explored. Chaunsath Khambha is today enclosed on three sides by modern buildings that detract from the historic character of the area. As part of the conservation works housing improvement of these structures to provide required facilities and uniformly treat their facades is proposed.



Budgets

Baoli

Total Project Cost - US \$ 15 million

Conservation of Baoli:

Survey Studies	-	US \$ 20,000.00
Infrastructure Improvement	-	US \$ 40,000.00
Rehabilitation Cost	-	US \$ 140,000.00
Conservation Costs	-	US \$ 100,000.00
Total	-	US \$ 300,000.00

Atgah Khan's Tomb

Rehabilitation	-	US \$ 200,000.00
Conservation, including surrounding structures	-	US \$ 150,000.00

Chaunsath Khambha

Landscaping	-	US \$ 75,000.00
Conservation	-	US \$ 100,000.00
Housing Improvement	-	US \$ 100,000.00
Total	-	US \$ 1,075,000.00

Conservation of other unprotected monuments in Nizamuddin Basti	-	US \$ 150,000.00
---	---	------------------

Amount requested from J M Kaplan Trust - \$ 500,000.00 spread equally over three years (2009-11)

.....