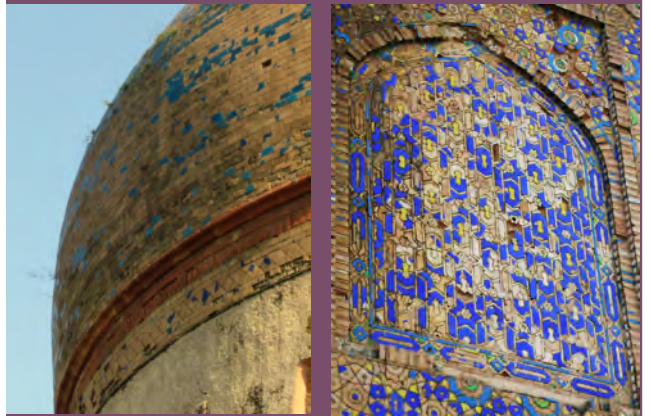
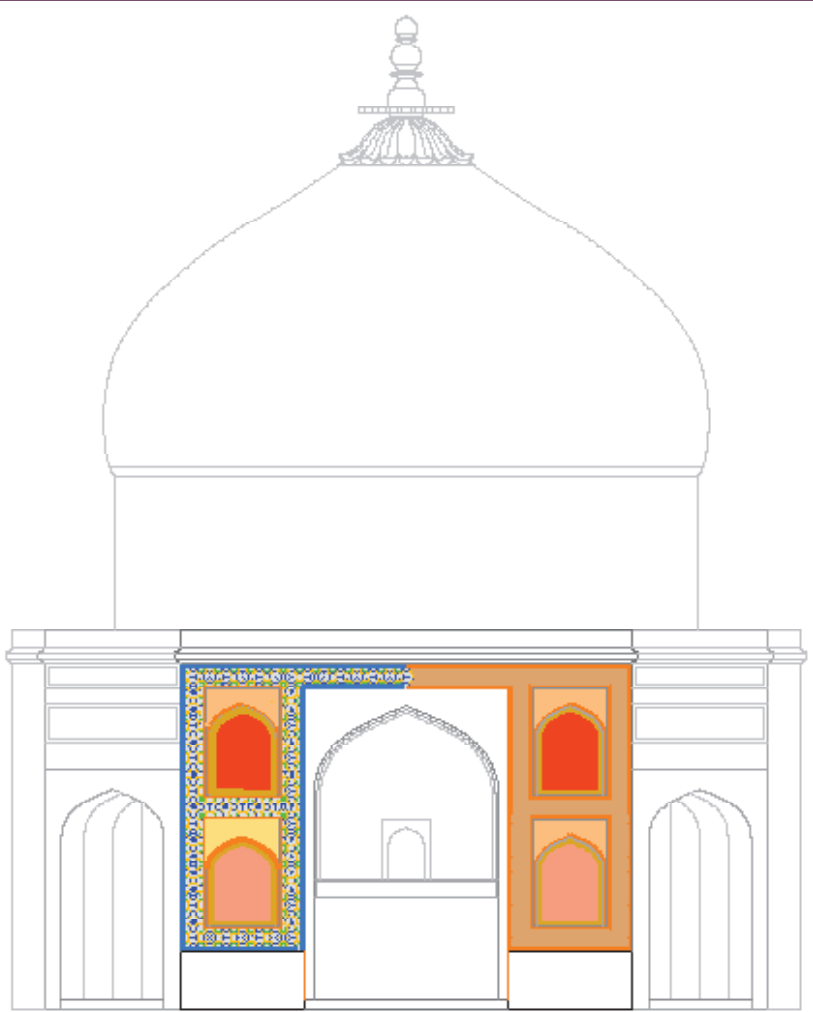


2008

# NILA GUMBAD CONSERVATION







August 2008



## RESTORATION OF THE ARCADE

### TASK:

To carefully conserve arcade that served as the northern edge of the Nila Gumbad platform.

### PURPOSE:

- The Arcade has been significantly damaged due to neglect and vandalism. A squatter settlement had been built over the arcade and a road cut through the arcade in the 1980's. It is proposed to repair the arcade and restore visitor movement to Nila Gumbad from Humayun's Tomb.
- Portions of the arcade were discovered when an ITDC commissioned park was being developed in this area, work on which was discontinued due to the archaeology that came to light.

### ACTION TAKEN:

- The squatter settlement built in this area was relocated by the ASI in 2004-5.
- The buried portions of the arcade were carefully excavated and documented in detail.
- The eastern and western edges of the arcade have undergone required conservation works.
- Traditional building skills and materials have been used in the conservation process.
- A ramp has been discovered; this was possibly used to lift stone which arrived by boat for the construction of Humayun's Tomb.

### NEXT STAGES:

Following approval of the landscape plan by the Northern Railways the road will be relocated to the eastern edge of the park and the central portion of the arcade reconstructed.

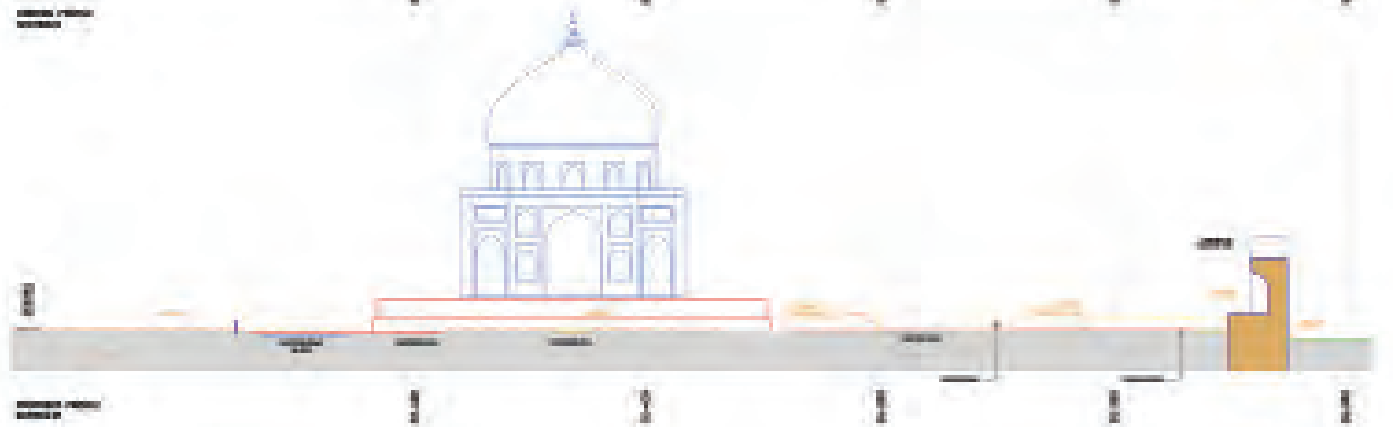
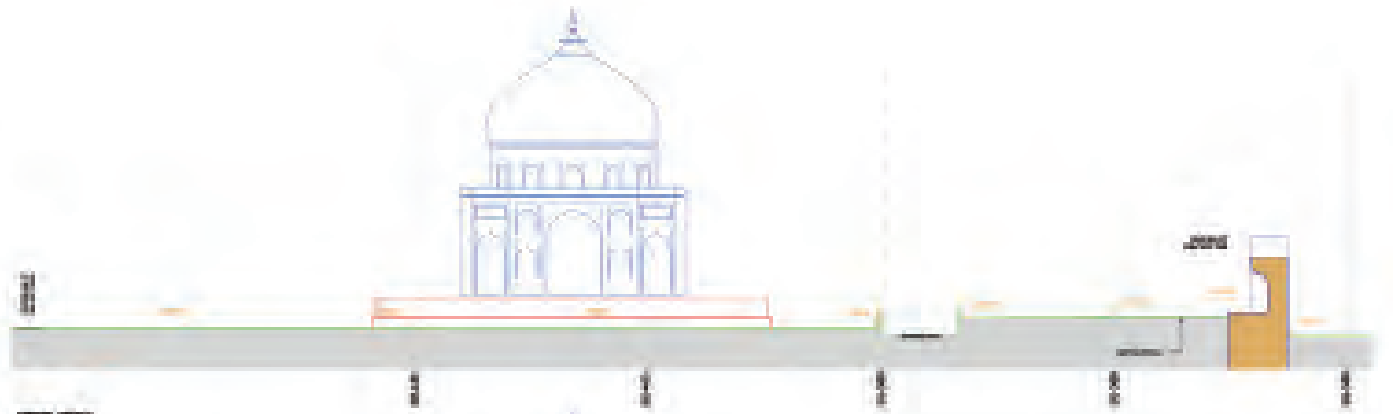
*The arcade originally served as a dam for the river water and thus suffered much damage and was subsequently covered up. Portions have been reconstructed and permission from Northern Railways is now awaited to complete the arcade.*



# Humayun's Tomb



Railway Tracks



## LANDSCAPING OF THE NILA GUMBAD COMPLEX

### TASK:

To design a sensitive landscape to fulfill the purpose of the MoU signed between ASI and Northern Railways in 2004.

### PURPOSE:

- To provide a sensitive setting for the World Heritage Site and Nila Gumbad.
- To have improved access for goods to Nizamuddin Railway Station.
- To restore visitor access to Nila Gumbad from Humayun's Tomb.

### ACTION TAKEN:

- Based on an exhaustive survey of the area a landscape plan has been prepared and following approvals from ASI, shared with Northern Railways in December 2007.
- By May 2008, Railways suggestions and modifications have been incorporated.
- The Landscape plan envisages:
  - Road dividing Nila Gumbad and Humayun's Tomb to be relocated along the eastern edge of the plot.
  - A large green space created partly owned by the Northern Railways and partly by the ASI.
  - Relocation of the Barracks to the northern edge of the plot and lowering top level of the water tank located here by 1.5 m.

### NEXT STAGES:

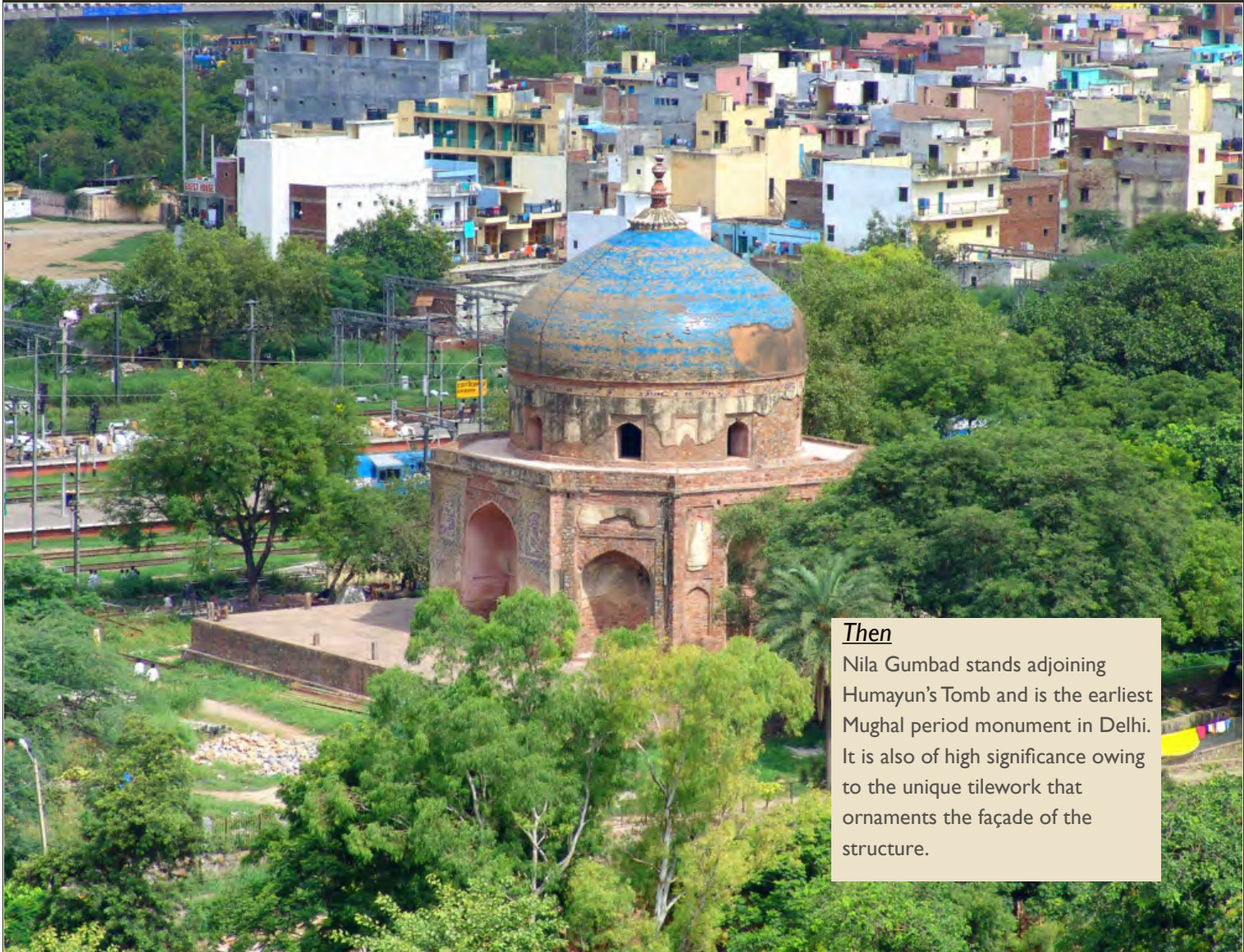
- Approvals from Northern Railways are awaited following which the landscape scheme can be implemented.
- The MoU between Northern Railways – ASI needs to be extended.



2009



# Nila Gumbad



## Then

Nila Gumbad stands adjoining Humayun's Tomb and is the earliest Mughal period monument in Delhi. It is also of high significance owing to the unique tilework that ornaments the façade of the structure.





## NILA GUMBAD

### TASK:

Conservation and Landscape development of Nila Gumbad

### PURPOSE:

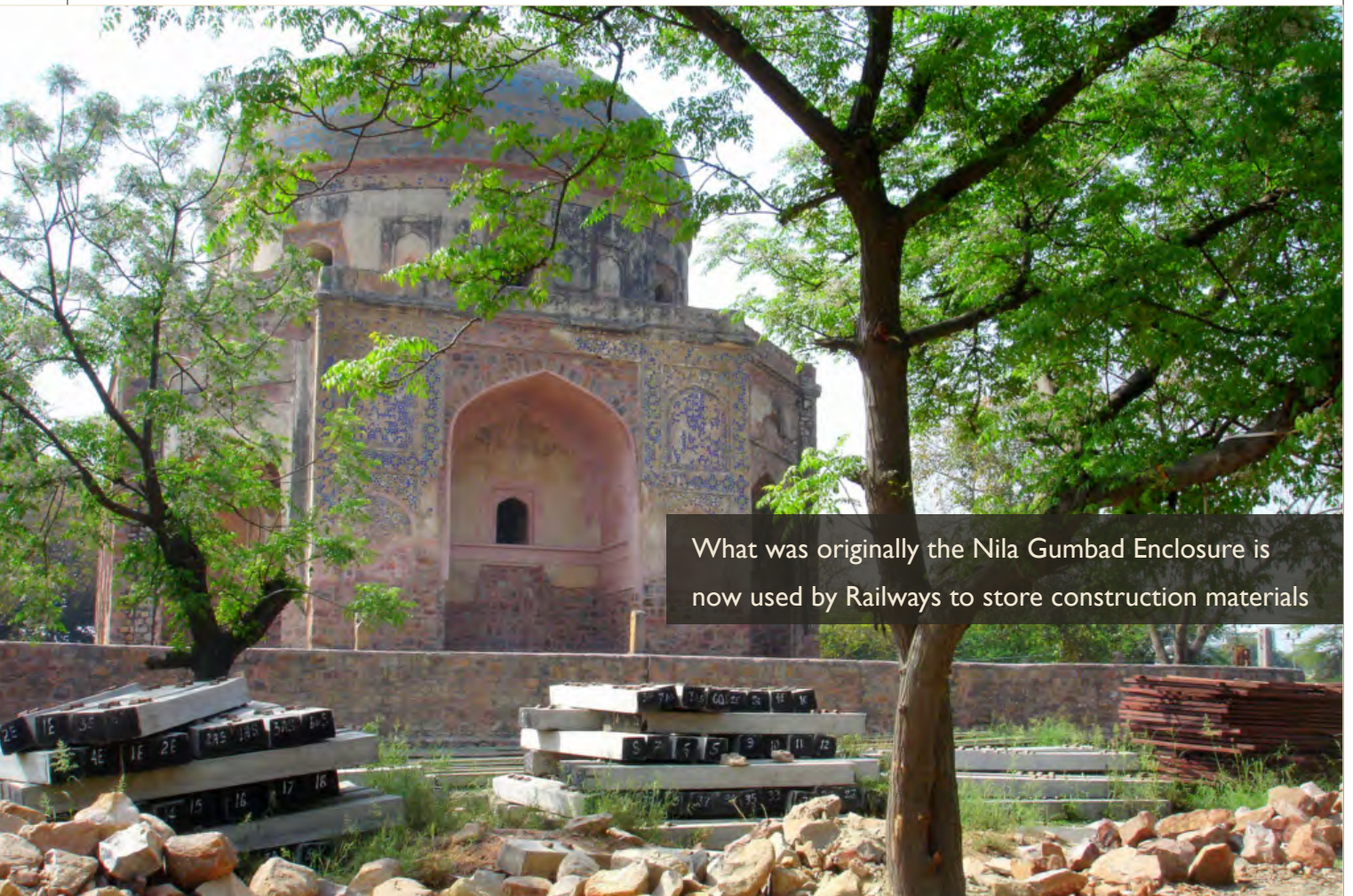
- Nila Gumbad is one of the earliest Mughal period monuments in Delhi. Originally accessed through Humayun's Tomb it is proposed to restore access for visitors to Humayun's Tomb.
- Implement a sensitively designed landscape scheme in the World Heritage Site buffer zone.

### ACTION TAKEN:

- Landscape proposal for the area was submitted by ASI to Northern Railways in 2007 for approval.
- The proposal includes relocating the road presently bifurcating the Nila Gumbad Humayun's Tomb sites to east of Nila Gumbad. This will also allow vehicular access to Nizamuddin station – necessary for goods movement.
- The original arcade of Nila Gumbad was discovered in 2008 and carefully conserved.
- Railway permission to implement the landscape scheme is still pending. The monument is used by the railways for dumping railway sleepers.

### NEXT STAGE:

- Following permission from the railways, implement the landscape scheme, that in keeping with UNESCO regulations will allow the creation of an adequate buffer zone around the World Heritage Site.





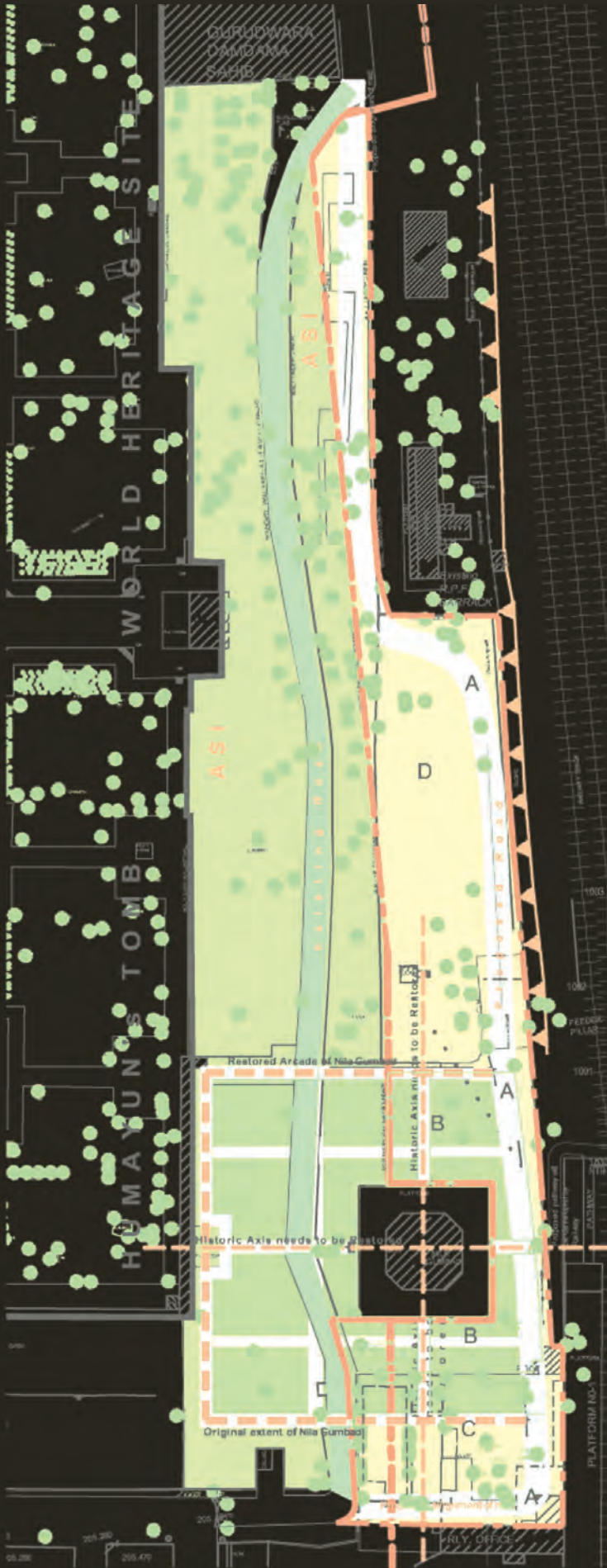


**Now:**

Unfortunately, after being segregated from the Humayun's Tomb complex in the 1980's by the construction of a road, on ASI land, the monument has suffered much neglect and vandalism. ASI's efforts to relocate several hundred squatters from the monument in 2003-4, at considerable expense, have given some relief. In order to carry out conservation works aimed at restoring the dignity of this extremely significant building and to allow an extension of the Humayun's Tomb World Heritage Site to include the Nila Gumbad, it is necessary to include adjoining areas within the protected limits of Nila Gumbad



# Nila Gumbad environs



Existing road segregates Nila Gumbad from Humayun's Tomb



Monument area using as dump yard by Railways



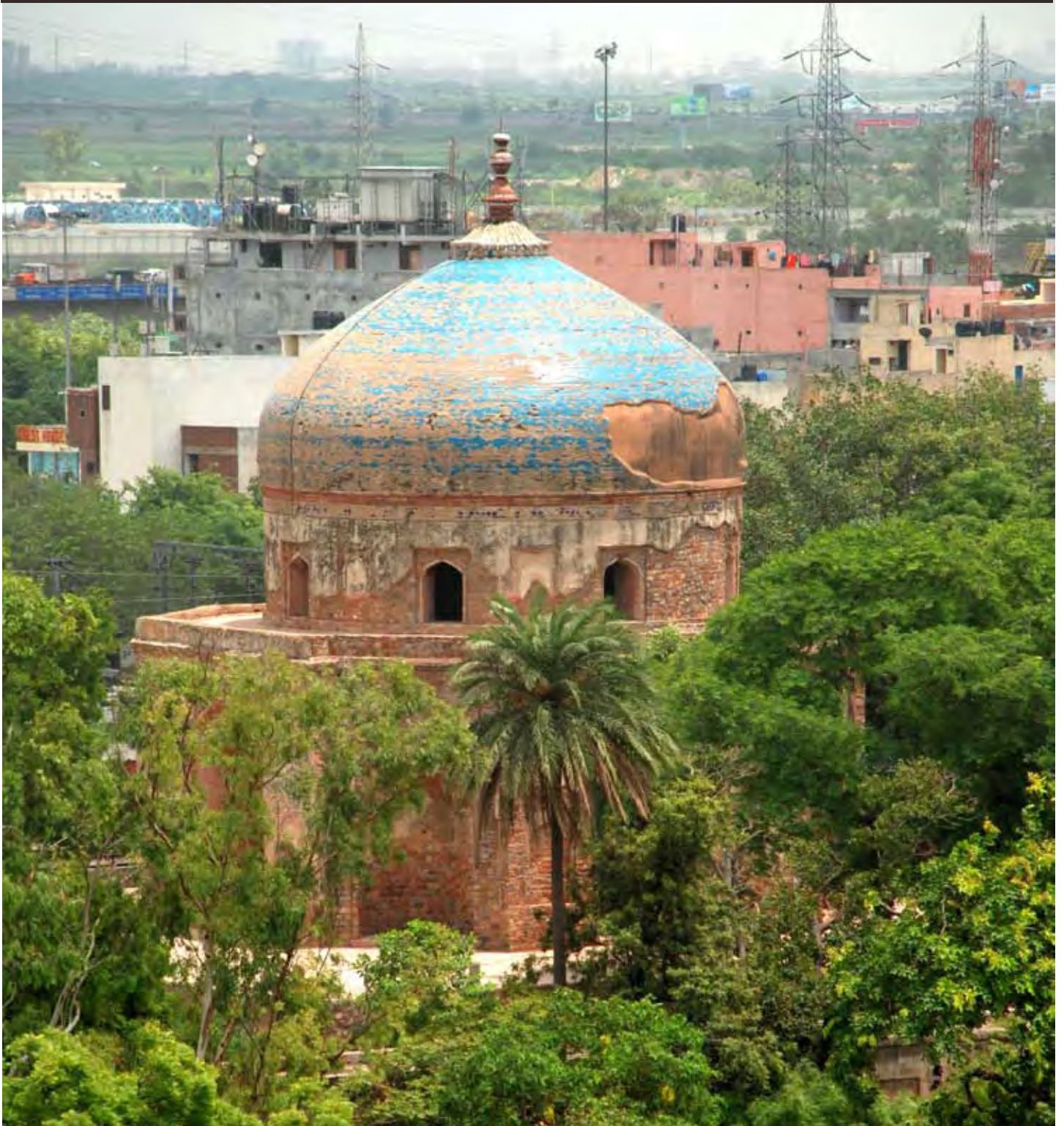
Nila Gumbad originally stood within a char-bagh, remnant of which have been recently discovered and stand beneath area used for storage by railways



2010



# NILA GUMBAD



Landscape Development



Shifting of Road



Conservation





## INTEGRATING NILA GUMBAD WITH HUMAYUN'S TOMB COMPLEX

### TASK:

- To integrate Nila Gumbad with Humayun's Tomb as it was up till the 1980's.
- To enhance the setting of the monument by restoring its immediate garden setting.
- To carry out conservation works on Nila Gumbad.
- To eventually include Nila Gumbad within the Humayun's Tomb World Heritage Site.

### PURPOSE:

Nila Gumbad though pre-dating Humayun's Tomb was almost contemporary. The proposed Landscape works will allow the one million + annual visitors to Humayun's Tomb to also visit Nila Gumbad.

### ACTION TAKEN:

#### Background.

- In the late 1970's a trunk sewer line was laid between Humayun's Tomb and Nila Gumbad, destroying portions of the arcade in the process.
- Following this the levelled land thus created was used to build a road, on ASI land.
- A dense squatter settlement comprising over 400 families eventually established here.
- Following a report on 'inappropriate developments around Humayun's Tomb' written during the garden restoration project in 2000-01, these families were relocated by the ASI, in 2003-04, at an expense of Rs 75 Lakhs
- An MoU was signed between Railways (who own part of the land in this stretch) and ASI in 2004 to allow landscaping of the area.

#### Discussions with Railways

- In October 2007, a landscape proposal was submitted to the Railways for approval. This proposal included shifting the road to the east of Nila Gumbad, on Railway land.
- Following intense discussion since 2007 and several changes to proposed layout of the road, this proposal was accepted by railways and a new MoU signed in November 2010.

### NEXT STAGE:

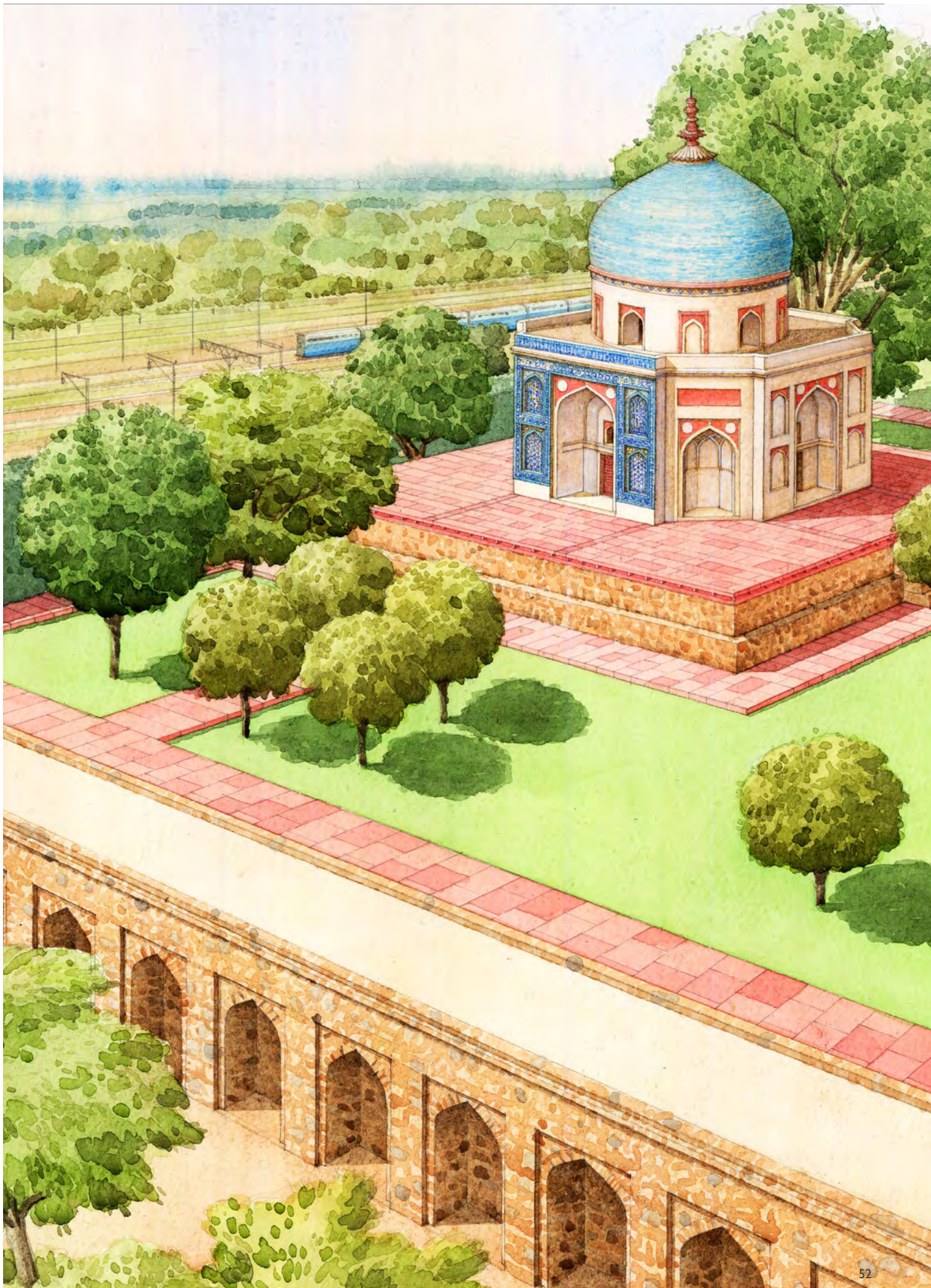
- To finalise the layout of the proposed road on ground in consultation with Railway Officers and keeping in mind site conditions such as presence of underground tanks, pump room, large trees.
- To build alternate road prior to closing present connection
- To ensure Delhi Jal Board work towards repairing the sewer line in this stretch is completed prior to restoration of the arcade.
- Conservation of Nila Gumbad.





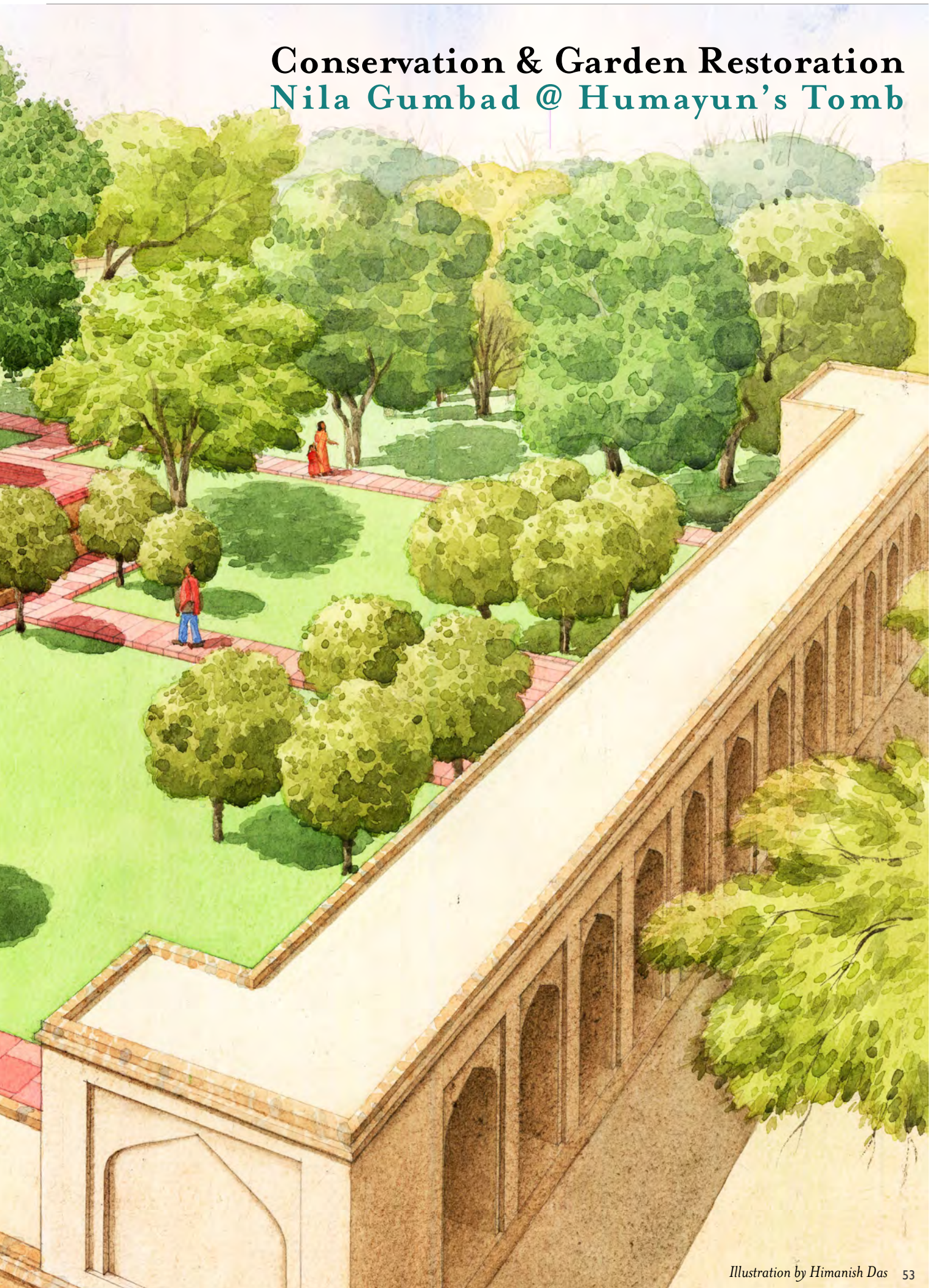
2011



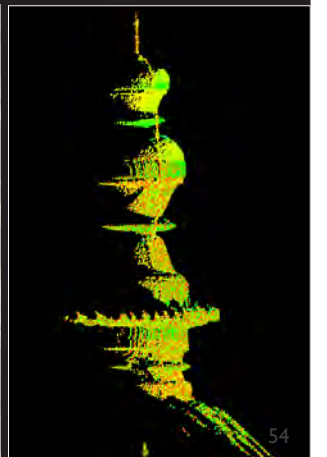




# Conservation & Garden Restoration Nila Gumbad @ Humayun's Tomb









- ◀ 1. View of Nila Gumbad in context with Humayun's Tomb World Heritage Site
- 2. Glazed tiles on the onion-shape dome, drum and external north wall are the most significant architectural elements of this monument
- 3. The interior wall and ceiling surfaces are decorated with incised plaster work and enamel paintings.
- 4. Finial of Nila Gumbad- Images generated using 3-D laser scanning data

Works are possible only following the agreement reached earlier this year with the railways that allowed land transfer to the ASI. This required years of persistent lobbying. ▼

### TASK:

- Conservation of Nila Gumbad and associated structures and landscaping the setting.
- Restoring the historic access from Humayun's Tomb to allow the millions of visitors to see this earliest Mughal era structure in Delhi.

### PURPOSE:

Conservation and Landscape works at Nila Gumbad aim to restore the historic context/ setting of the Humayun's Tomb Complex while ensuring the long term preservation and appropriate presentation of the Nila Gumbad.

### ACTION TAKEN:

- AKTC commenced effort to re-integrate Nila Gumbad and Humayun's Tomb in 1999. Consistent effort since 2007 led, in 2011, for the railways to concede – to the ASI - 42 m of land on the north and south of Nila Gumbad and 8 m to the east to divert the road presently segregating Nila Gumbad and Humayun's Tomb and restore part of the garden setting.
- Some storage rooms of the railways are to be demolished and construction of alternate rooms by AKTC in lieu of these structures has commenced
- Monument and its surrounding documented using 3D laser scanning and detailed Architectural drawings prepared.
- The landscape proposal has been finalised.
- Once the new road is built the site will be free for major conservation works to commence.

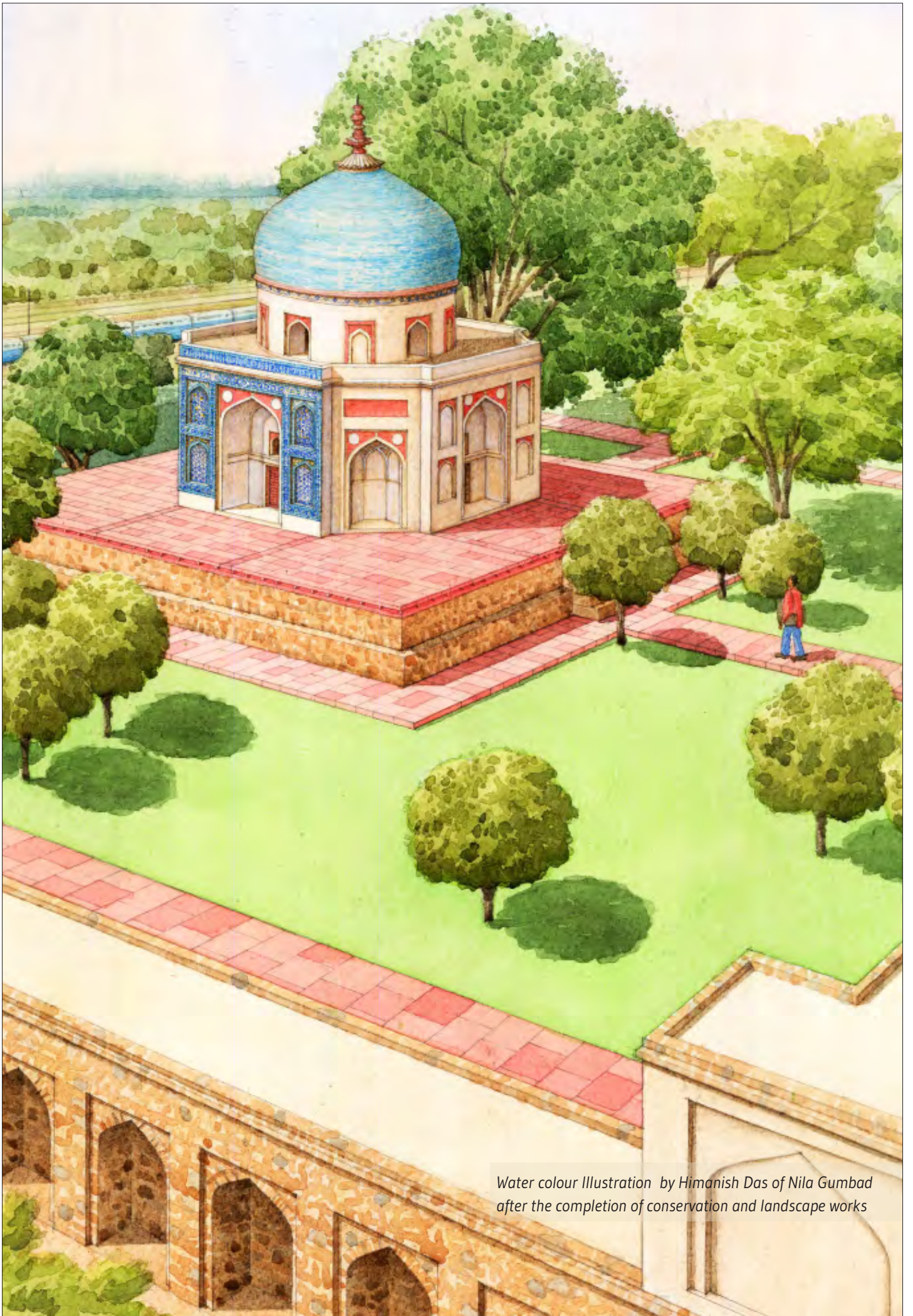
### NEXT STEPS:

- Build alternate road.
- Implement Conservation and Landscape works.



2012





*Water colour Illustration by Himanish Das of Nila Gumbad after the completion of conservation and landscape works*



## 05 NILA GUMBAD

Conservation works on the earliest Mughal-era tomb in Delhi and restoring its historic linkages with the World Heritage Site of Humayun's Tomb

1. Conservation works have led to a long-term preservation of Nila Gumbad - a significant monument of national importance, and its environ.
2. This significant site and its attached garden, rooted in history, will soon become available to the over one million annual visitors to the World Heritage Site of Humayun's Tomb. Surprising as it may seem, this space has been segregated and neglected for several decades and as such has been inaccessible to the visiting public.
3. Nila Gumbad was originally surrounded by a walled enclosure and is recorded to have been originally entered through a large gateway on the south - both have now disappeared. The conservation of Nila Gumbad and its enclosure wall will also restore the architectural integrity of the Humayun's Tomb Complex.
4. Conservation works will lead to eventual proposal to UNESCO to expand the World Heritage Site boundaries to include the Nila Gumbad complex.
5. Conservation works carried out using traditional tools and building techniques have generated employment for master craftsmen. It is expected that at least 15,000 man days of works has been generated to implement the conservation and landscape works.
6. The conservation effort will help towards furthering the knowledge on tile preparation and usage gained during the Humayun's Tomb conservation.
7. Conservation works are expected to lead to new discoveries that will enable scholars to better understand the development of tomb forms in Mughal tradition that commenced at Nila Gumbad and reached the zenith at Taj Mahal.
8. Demonstrate a successful model of public-private partnership for conservation. Unlike in the developed world where there is significant civil society engagement with conservation effort, conservation of national monuments has to date been restricted to the government agencies. The ongoing AKTC project is the first such initiative where monuments of national importance are being conserved by a non-governmental group.





## THE FINIAL

*The ornamental stone finial on Nila Gumbad, which is a prominent architectural element on the tomb structure, was found in a poor state of preservation.*

### ACTION TAKEN:

- The finial comprises of alternate use of red sandstone and marble.
- On close inspection the stone pieces were found cracked possibly due to water ingress on the iron dowels. The finial was thus out of plumb.
- The restoration of the finial required extensive cleaning of the surface, removing the dust which had deposited in the joints and the severely damaged stones were required to be replaced with new stones carefully matching the original.
- The stone finial rests over an inverted lotus made of lime mortar and finished in lime plaster. The gaps between all the petals are filled by the turquoise tiles. Many of the tiles on the inverted lotus finial were found to have been replaced with rubber sourced from slippers and were removed and replaced with glazed ceramic tiles.
- The collapsed portions of the inverted flower petals were rebuilt and finished using lime plaster.



*(Left) Finial of Nila Gumbad- Image generated using 3-D laser scanning Data (Centre) Craftsmen restoring the stone finial which is at the height (Right) Finial restored*

### Conservation of Nila Gumbad kicks off

*Times of India, May 22, 2013*

*... Like its famous neighboring world heritage site Humayun's Tomb, Nila Gumbad was a garden-tomb portions of which were destroyed in the building of the railways. In the 1970's, a road was built bifurcating Humayun's Tomb and Nila Gumbad and cement has been profusely used in past repair works.*

## GLAZED TILEWORK ON DOME

*The Nila Gumbad, the earliest Mughal era structure in Delhi, is so called on account of the blue (Nila) tiles that cover the dome. The tiles had mostly come loose and a large patch were was missing with fragments falling off due to continued vibrations from the adjoining railway lines and during thunderstorms.*

### ACTION TAKEN:

- The trapezoidal tiles on Nila Gumbad dome are very different from the tiles used anywhere else in the project area. A large portion of the dome surface was found completely devoid of these trapezoidal shaped turquoise tiles.
- In view of the significant quantities required, it was initially planned to import tiles from Iran however despite communications with workshops in Yazd, no workshop was able to produce matching tiles. As a result

the tile making infrastructure at Humayun's Tomb was considerably enhanced to make the 25000+ tiles required, which were made in 2013.

- Restoration of the tiles on the dome commenced in late 2013 and 50% of works were completed by 31 December 2013, remaining expected to be fixed in early 2014.
- Restoration of tile-work was coupled by carefully pointing the loose joints in the tilework with lime mortar to ensure no further loss of tiles took place.

In keeping with the philosophy adopted during the restoration of tiles at Humayun's Tomb, no existing tile was removed from the dome even where these had lost their glaze.

- Approximately 1000 flat tiles of different shapes and colours were also missing from the entire circumference of the neck of the dome and these were restored as per original patterns..

### NEXT STAGE:

After completion of the tile restoration on dome, the tiles of the north Façade and parapet wall will be restored to the original profiles





# THE MAIN CHAMBER





## RESTORING LIME PLASTER

*Several layers of cement plasters had replaced much of the lime plasters on both interior and exterior building surfaces, thereby accelerating the decay process and disfiguring the historic character. The cement-surkhi plaster used on many Delhi monuments in the early 21<sup>st</sup> century*



*was found to cover much of the external surface and large portions of the internal surface which were required to be carefully removed and replaced with traditional layers of lime plaster.*

### ACTION TAKEN:

- The internal and external surfaces of the monument are cleansed carefully using water and soft brushes. After cleaning of the surfaces, careful removal of the decayed lime plaster and modern cement plaster was undertaken.
- All existing lime plaster such as on the neck of the dome and internal wall surfaces were consolidated using properly slaked lime water to strengthen the existing plaster layer.
- After careful removal of the decayed lime plaster and cement plaster, the plastering of the external surface of the neck was undertaken. The plastering layers included coarse lime mortar for the base layer and fine lime mortar for the top layer.
- The plastering works of the dome neck, internal ceiling and the internal walls of the upper level are complete. Plastering works in the internal chamber have been finished with a final coat of 1 mm fine layer of Lime punning.
- Reconstruction of the missing plain red polychromy on the wall surfaces like the spandrels of the arches on upper and lower level in the internal chamber is complete.
- The incised plasterwork on the central decorative medallion on the internal ceiling, medallions on the spandrels of the arches have been carefully cleaned using distilled water and soft brushes. The missing portions were then completed by master craftsmen as per the existing details and specifications using natural colours wherever required.
- Restoration of the paintwork on the dome internal ceiling and internal walls is complete. After cleaning the internal surface of the dome, the missing patterns were completed and the restoration works on all eight painted medallions are complete.

### NEXT STAGE:

Plain and ornamental plasterwork on the external surfaces of the monument is presently being undertaken and will be completed by monsoon 2014.

## OUTPUT & OUTCOME

- The cleaning of the surfaces have led to the removal of biological colonization, algae, dust, soot etc. which stops further dilapidation of the plasterworks and also leads to long term preservation of the original fabric of the structure.
- It exposes detailed ornamentation which until now was not visible.
- The plastering of the surface led to the filling of cracks, thus preventing any further water penetration leading to permanent dampness in the structure.
- The lime water technique is used so that maximum original fabric of the monument remains intact.
- The restoration of the tiles ensures long term protection and preservation of the tiles on the dome and the neck. The tile, besides restoring the appearance, also ensures preservation as they form a protective layer.



## THE MAIN CHAMBER

### INSTALLING SANDSTONE LATTICE SCREENS

*In the neck of the dome are eight vaulted openings where grooves holding sandstone lattice screens as is typical were still visible. As with Sundarwala Burj, Lakkarwala Burj, Sabz Burj, these screens seem to have been removed in the 20<sup>th</sup> century – possibly for the antique market – thus allowing free access to birds besides altering the original character of the structure. As with other monuments it was agreed to restore hand carved screens to the eight openings.*

#### ACTION TAKEN:

- The drum has 8 arched openings each of size approximately 1250mm X 1890mm and the four recessed arched surfaces on the ground level have four arched openings each measuring approximately 855mm X 1225mm.
- The restoration of these screens revives the intended architectural character of the building and they also prevent entry of bird into the structure thus preventing decay resulting from bird droppings.
- The lattice screens were manually carved out by the master craftsmen over a period of six months using the original techniques.
- All eight sandstone lattice screens on the neck of the dome and the four lattice screens over the four doorways have been installed following the completion of the lime plastering of the Tomb chamber.



*(Left) The craftsmen transporting the sandstone jaali weighing over 700kg to the height of over 40 feet (Right) It takes 2-3 months of hardwork by 8 craftsmen to prepare a jaali of this size and complexity. All the 8 sandstone lattice screens on the neck of the dome and 4 lattice screens on the lower level are restored.*

# 06 SECURING THE SETTING

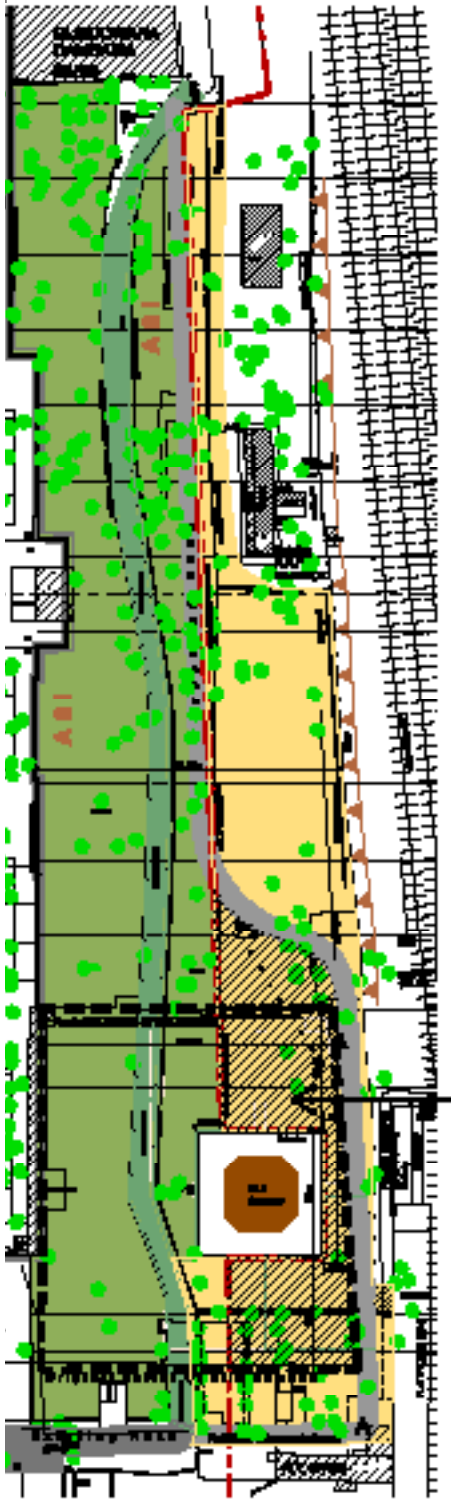
The west wall of Nila Gumbad later served as part of the eastern wall of emperor Humayun’s Tomb thus the two mausoleums stood abutting each other. In the 1970-80’s a trunk sewerage line was laid in the area between the two tombs – tearing through the masonry arcade. The land thus levelled was later used to build a road thus cementing the bifurcation and leading to over 200 squatters settling around Nila Gumbad. On the ASI relocating the squatters, the land was claimed by the railways and 12 years later efforts continue to secure this land to restore the garden and shift the road.

**ACTION TAKEN:**

- Conservation works commenced following the written agreement with railways to hand over 42 m of land on the north and south and allow enough land on the east to build an alternate road and thus restore linkages with Humayun’s Tomb.
- The restoration of the enclosed Garden around the monument and the connection with the Humayun’s tomb Garden will enhance the historic character of the complex. The Outstanding Universal Value of the World Heritage site is understood, to be an ensemble of 16<sup>th</sup> century Tomb-Gardens and the restoration of the Garden will increase the prospect of inclusion of the Garden Tomb complex in the World heritage core zone.
- Though the alternate road construction was largely completed in 2013, Railways has not permitted demolishing a 8 feet square toilet and negotiations continue. Railways have also continued to dump sleepers and other material on ASI land causing damage to the monument and disfiguring the setting while not permitting works to commence.

**NEXT STAGE:**

It is requested that the ASI initiate dialogue with railways to allow implementation of the agreement as well as remove all material stored on ASI land. Following construction of the road as planned and securing the land the garden setting can be developed and linkages for visitors established.



(Above) Landscape proposal of Nila Gumbad environs; (Right) Present-day view of the area around Nila Gumbad with railway sleepers dumped in the vicinity





## 07 CONSERVATION OF WESTERN ARCADE

### ACTION TAKEN:

- The Tomb was originally surrounded by a walled enclosure and is recorded to have been originally entered through a large gateway on the south - both have now disappeared. A further entrance giving access from the Humayun's Garden Tomb exists in the adjacent wall which was blocked in the early 1900's.
- A large portion of the western arcade was in a state of collapse, and the southern wing has been partially rebuilt.

### NEXT STAGE:

The Nila Gumbad Garden Tomb enclosure will be made accessible from the Humayun's Garden Tomb complex through the west enclosure wall by opening the blocked entrance doorway.



### IMPACT:

*The conservation and landscape works at Nila Gumbad have ensured long term preservation of this earliest Mughal-era structure. The conservation activities will lead to an improved understanding of early Mughal architecture to te visitors, students and researchers. It has also revived the lost traditional craftsmanship of tile making and also enabled the youth from the Basti to continue tile making for the other monuments in the country. Conservation works at Nila Gumbad has not only created over 25,000 man-days of work for skilled craftsmen, but also demonstrated the urban approach towards conservation of historic sites.*

*(Top) Archival photograph showing the arcade between Humayun's Tomb and Nila Gumbad  
(Left & Right) Restoration of the arcade based on historical evidence*



2013

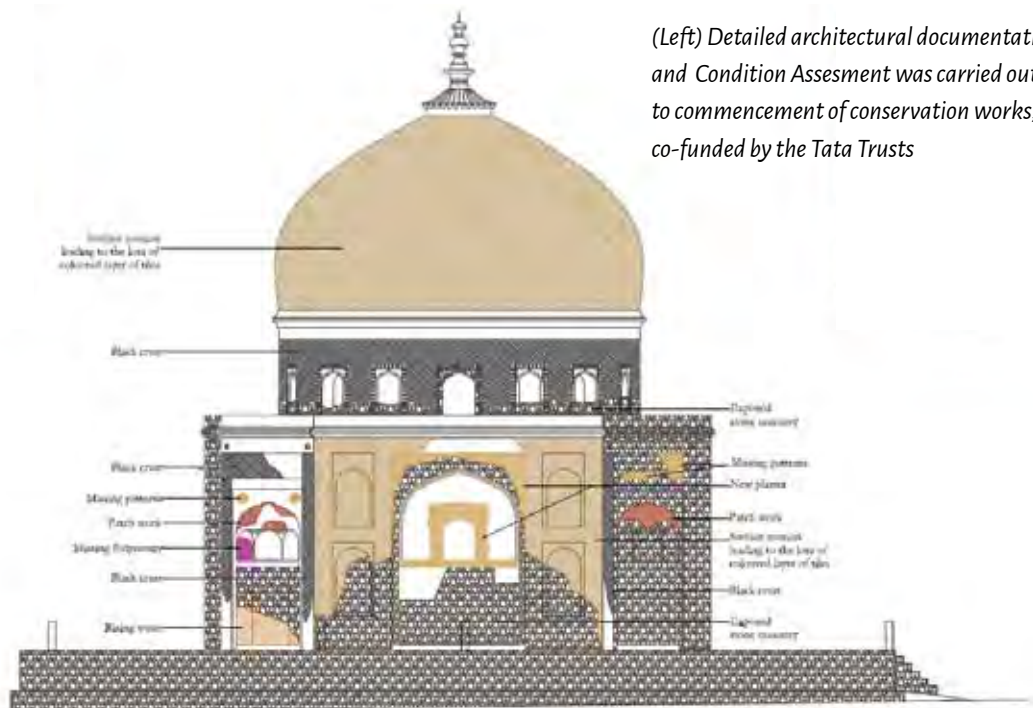


# 09 Nila Gumbad

Nila Gumbad is the earliest Mughal era structure to have been built in Delhi and was originally sited as a small river island, accessible through the arched gateway included within the later Humayun’s Tomb enclosure wall. In the 19<sup>th</sup> century railway tracks were laid eating into the original garden of the Nila Gumbad and the northern half of the Nila Gumbad garden enclosure was lost completely.

### Action Taken:

- After cleaning of the surfaces and careful removal of the decayed lime plaster and cement plaster, the plastering of the external surfaces is undertaken.
- The consolidation using properly slaked lime water to strengthen the existing decayed plasterworks was carried out.
- The plastering layers included coarse lime mortar for the base layer and fine lime mortar for the top layer. The plastering works of the dome neck, internal ceiling and internal and external surfaces are completed with 1 mm fine layer of Lime punning.
- Reconstruction of the missing plain red polychromy on the external and internal wall surfaces like the spandrels and borders of the arches are complete.
- The restoration of the tile work on the dome and the drum is complete. After the procurement of the required raw materials, the preparation of approximately 25,000 tiles started. The preparation of the tiles for the north Façade and parapet wall is ongoing.
- All the 8 sandstone lattice screens on the neck of the dome and 4 lattice screens over the doorways have been restored to the monument.
- The restoration of the finial started with the extensive cleaning of the surface, removing the dust, soot etc. which got deposited over the years. All the joints were then carefully filled.
- All the stones which got damaged over the years due to bursting were replaced with new stones matching with the original sectional specifications.
- The collapsed portions of the inverted flower, on which the Finial rests, were rebuilt and finished using lime plaster.
- The tiles similar to that of the dome were also restored on the inverted flower where they were completely missing.



(Left) Detailed architectural documentation and Condition Assessment was carried out prior to commencement of conservation works, co-funded by the Tata Trusts

### LEGEND:

DEFECTS IN PLASTERED SURFACES		DECORATIVE PLASTER AND BANDS		WATER PROBLEMS		SURFACE DEPOSITS		DEFORMATION		DETACHMENT		DEFECTS IN STONE		NEW INTERVENTION	
CRACKS IN THE PLASTER	DECAYED PLASTER	ENRICHED MARCHART	DECAYED PROFILES	WATER DETAILED	WATER POSE	ALGAL	SPORE/SPONGING	FRACTURE	BURSTING	EROSION	REVEGNETATION	MISSING TILE	NEW PLASTER	NEW STONES	NEW FINIAL
LACATED PLASTER	MISSING PLASTER	MISSING PLASTER	MISSING PLASTER	WATER POSE	WATER POSE	BLACK CRUST	EFFLORESCENCE	TEAR CRACKS	CONCRETE SCALING	CONCRETE SCALING	EROSION	MISSING MOLDERS	NEW PLASTER	NEW STONES	NEW FINIAL
BLASTING OR EROSION	NEW PLASTER	NEW PLASTER	PLASTER CRACKS			GRANITE	MISSING POLYCHROME	MELTING	UNREINFORCED	UNREINFORCED	LOCAL MARCHART	MISSING AND BURSTING	NEW PLASTER	NEW STONES	NEW FINIAL

# 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:

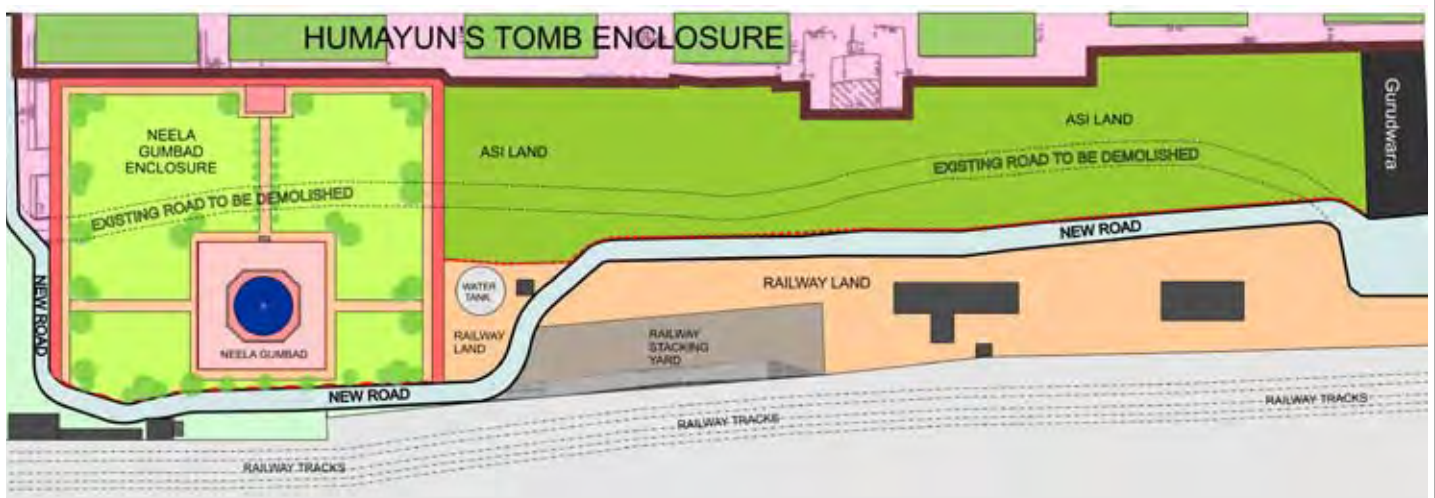
Construction of the alternate road that re-routes traffic behind the Nila Gumbad has been completed in mid 2014. After long negotiations since 2013, the Indian Railways has agreed to demolition of an abandoned toilet block that was located on the route of the proposed road. The new road is currently 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*



*Removing cement concrete from terrace, plinth and main hall*

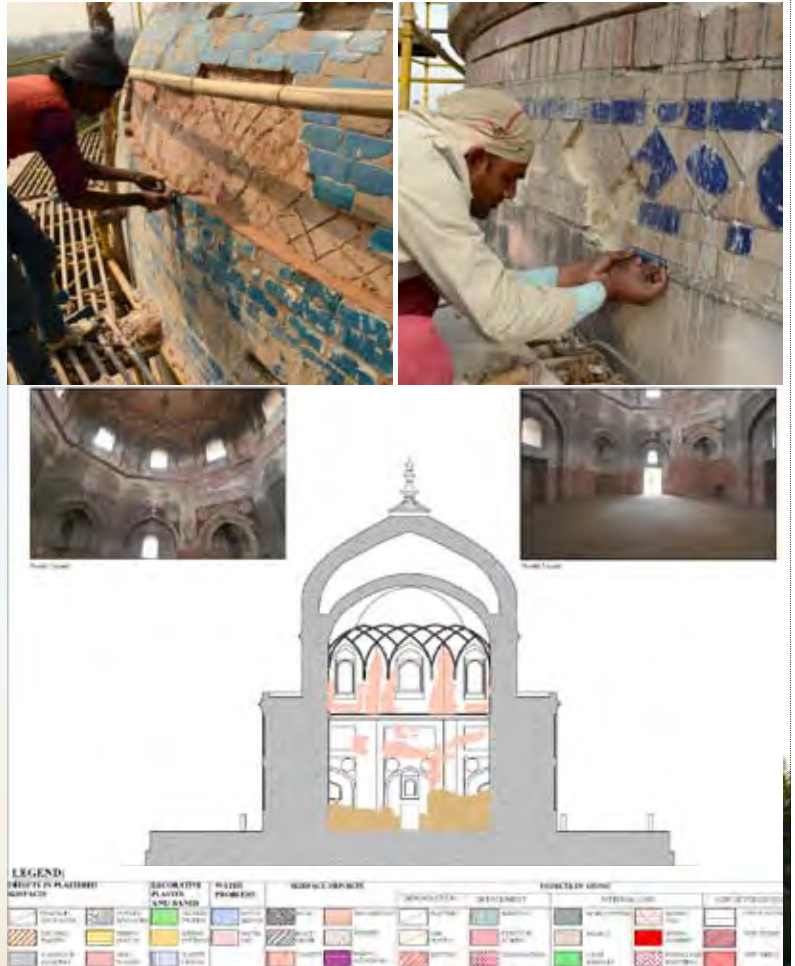


*Restoring historic plasterwork*





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



2014

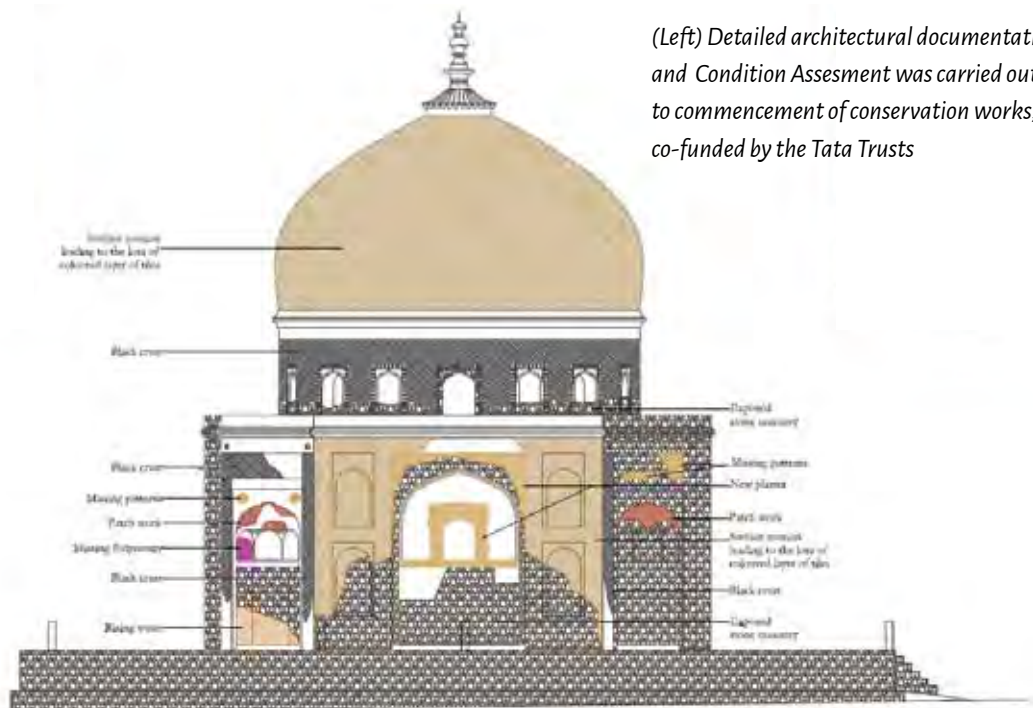


# 09 Nila Gumbad

Nila Gumbad is the earliest Mughal era structure to have been built in Delhi and was originally sited as a small river island, accessible through the arched gateway included within the later Humayun’s Tomb enclosure wall. In the 19<sup>th</sup> century railway tracks were laid eating into the original garden of the Nila Gumbad and the northern half of the Nila Gumbad garden enclosure was lost completely.

### Action Taken:

- After cleaning of the surfaces and careful removal of the decayed lime plaster and cement plaster, the plastering of the external surfaces is undertaken.
- The consolidation using properly slaked lime water to strengthen the existing decayed plasterworks was carried out.
- The plastering layers included coarse lime mortar for the base layer and fine lime mortar for the top layer. The plastering works of the dome neck, internal ceiling and internal and external surfaces are completed with 1 mm fine layer of Lime punning.
- Reconstruction of the missing plain red polychromy on the external and internal wall surfaces like the spandrels and borders of the arches are complete.
- The restoration of the tile work on the dome and the drum is complete. After the procurement of the required raw materials, the preparation of approximately 25,000 tiles started. The preparation of the tiles for the north Façade and parapet wall is ongoing.
- All the 8 sandstone lattice screens on the neck of the dome and 4 lattice screens over the doorways have been restored to the monument.
- The restoration of the finial started with the extensive cleaning of the surface, removing the dust, soot etc. which got deposited over the years. All the joints were then carefully filled.
- All the stones which got damaged over the years due to bursting were replaced with new stones matching with the original sectional specifications.
- The collapsed portions of the inverted flower, on which the Finial rests, were rebuilt and finished using lime plaster.
- The tiles similar to that of the dome were also restored on the inverted flower where they were completely missing.



(Left) Detailed architectural documentation and Condition Assessment was carried out prior to commencement of conservation works, co-funded by the Tata Trusts

### LEGEND:

DEFECTS IN PLASTERED SURFACES		DECORATIVE PLASTER AND BANDS		WATER PROBLEMS		SURFACE DEPOSITS		DEFORMATION		DETACHMENT		DEFECTS IN STONE		NEW INTERVENTION	
CRACKS IN THE PLASTER	DECAYED PLASTER	ENRICHED MARCHART	DECAYED PROFILES	WATER DETAILED	WATER POE	ALGAL	EFFLORESCING	FRACTURE	BURSTING	EROSION	SOCCAGE & SCALING	SOCCAGE	MISSING TILE	NEW PLASTER	NEW POINTING
LACATED PLASTER	MISSING PLASTER	MISSING PLASTER	MISSING PLASTER	WATER POE	WATER POE	BLACK CRUST	EFFLORESCING	TEAR CRACKS	CONCRETE & MORTAR	CONCRETE & MORTAR	CONCRETE & MORTAR	MISSING MORTAR	MISSING MORTAR	NEW STONES	NEW STONES
BLASTING OR TROWLING	NEW PLASTER	NEW PLASTER	PLASTER CRACKS	WATER POE	WATER POE	GRANITE	MISSING POLYCHROME	MELTING	DISINTEGRATION	DISINTEGRATION	DISINTEGRATION	DISINTEGRATION	MISSING MORTAR	NEW PLASTER	NEW PLASTER

# 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:

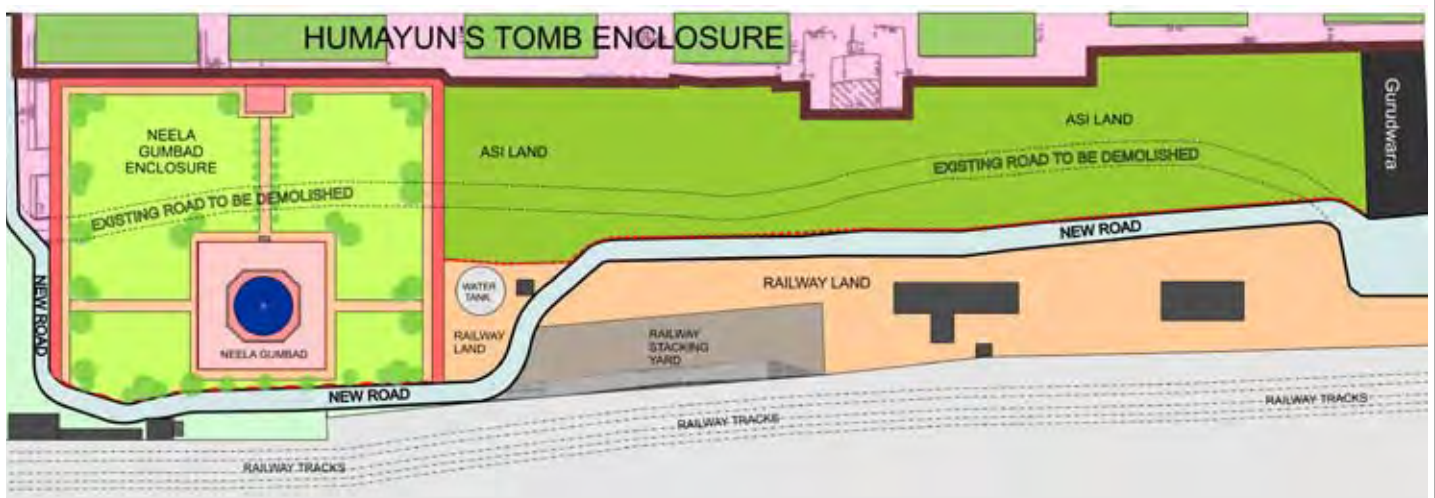
Construction of the alternate road that re-routes traffic behind the Nila Gumbad has been completed in mid 2014. After long negotiations since 2013, the Indian Railways has agreed to demolition of an abandoned toilet block that was located on the route of the proposed road. The new road is currently 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*



*Removing cement concrete from terrace, plinth and main hall*

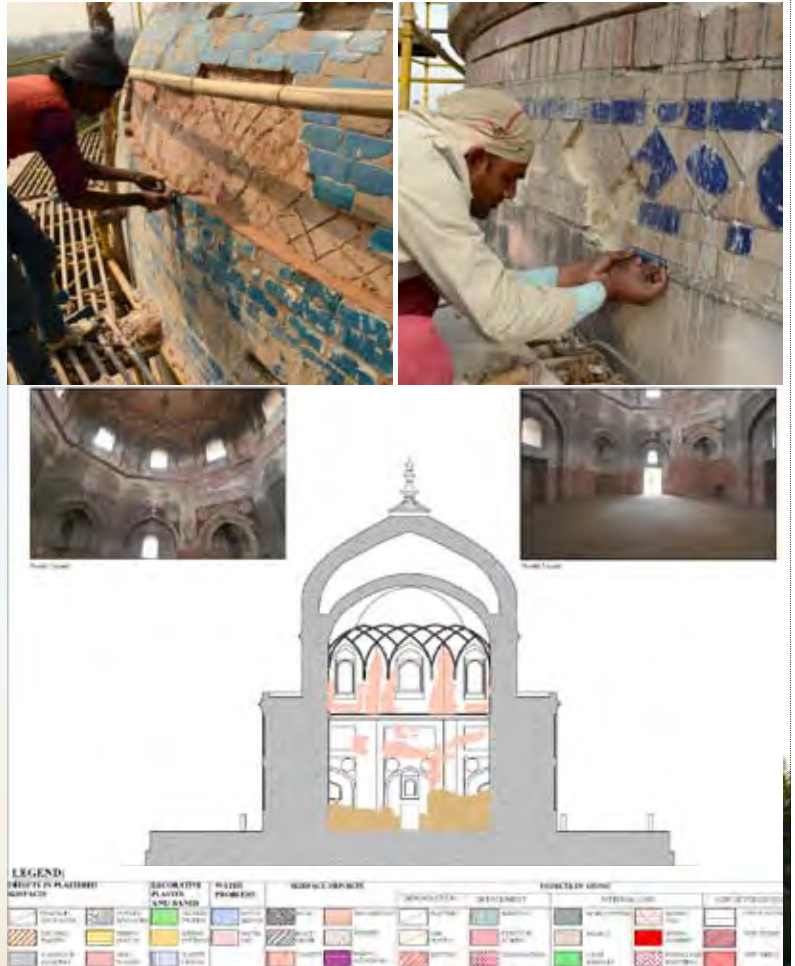


*Restoring historic plasterwork*





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





2015

# 08

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## Nila Gumbad: Conservation & Landscaping

The Nila Gumbad is the earliest Mughal era structure to have been built in Delhi. The western enclosure wall of Nila Gumbad's garden was later incorporated within the eastern enclosure wall of Humayun's Tomb. In the 1980's the two monuments were segregated when a trunk sewerage line was laid between them piercing the Nila Gumbad's northern enclosure wall. The levelled land became a road and so Nila Gumbad was surrounded by over a hundred squatter dwellings.

In the late 1990's during the Humayun's Tomb garden restoration, AKTC commenced efforts towards eventual conservation of Nila Gumbad and its integration with Humayun's Tomb. As a first major step, the community residing at Nila Gumbad were relocated by the ASI but thereafter the vacated land was claimed by Northern Railways!

Since 2007, efforts were first made to stop an effort to build a garden designed ostensibly on Mughal patterns on the Railways stretch of land and thereafter to seek permission to built an alternate road along the eastern edge of the ASI plot, passing to the east of Nila Gumbad. Conservation efforts on Nila Gumbad commenced in 2013 following the surrounding land having been secured.

### **ACTION TAKEN:**

- Conservation works undertaken at Nila Gumbad in 2014 saw the removal of all modern cement plaster and restoration of a traditional lime plaster layers as per original Mughal designs. The plinth and the tomb were paved with red sandstone.
- At the onset, in 2015, eight feet high fencing was installed all around the immediate periphery of Nila Gumbad.
- In 2015, the eastern plinth wall of Nila Gumbad partially collapsed and was found to have been repaired with mud mortar. A wheelchair access ramp was built on this facade which also helped in providing extra support especially in view of the vibrations caused by train movement.
- Landscape development of Nila Gumbad was commenced by levelling of land requiring significant increase in earth levels in the immediate setting of the mausoleum.

*View of Nila Gumbad and its surroundings in 2011*





- Pathways are being constructed; levelling and dressing of soft areas is ongoing as per landscape plans of Prof. M Shaheer.
- Excavations along the northern edge of the enclosure walls have been done to finalise the base level of the arches in the northern arcade that were demolished in the 1980's and are to be reconstructed.
- The tiles for the intricate tile work on the North facade of the monument are currently being prepared in AKTC's tile making facility at site. Residents of the Basti have been trained to manufacture these specialised tiles.
- Various government agencies like the NDMC water department, the BSES, the Delhi Jal Board and the Telephone department have been requested to remove their service lines for the Nila Gumbad surroundings. Earlier all these services were running through the ASI land.

**NEXT STAGE:**

- Complete landscapes works at the Nila Gumbad monument, and restore connections with Humayun's Tomb by reopening the presently blocked opening.
- Conservation of intricately tiled facade on North side of the tomb.
- Complete conservation works on the historic arcade on the North side of Nila Gumbad.
- Levelling and landscaping of area south of Humayun's Tomb's eastern enclosure wall by lowering to the extent possible. Planting and horticulture works to be completed.

*View of Nila Gumbad and its surroundings in 2015*





August 2010

*(Below) Nila Gumbad - Landscape Proposal*





