AGA KHAN TRUST FOR CULTURE

QUTB SHAHI HERITAGE PARK

ANNUAL REPORT 2019

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Qutb Shahi Heritage Park

demonstrates a model for people centric urban development of a historic city centre with a non-profit ***People Public- Private Partnership*** framework and to implement a project leading to conservation based urban development and an improved quality of life for citizens.

Qutb Shahi Heritage Park boasts of 100+ monuments spread across 106 acres. Here the conservation works and landscape restoration aim to restore the grandeur of the site and to earn its place on the World Heritage list.

PARTNER AGENCIES:

Department of Heritage Telangana

Aga Khan Trust for Culture

Quli Qutb Shahi Urban Development Authority,Hyderabad

SUPPORTED BY

TATA TRUSTS

U.S. Ambassador's Fund for Cultural Preservation

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Scheme of Government of India

QUTB SHAHI HERITAGE PARK

Conservation & Landscape Restoration

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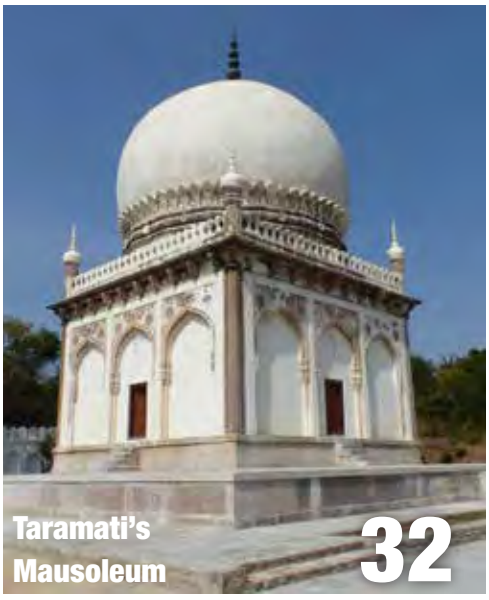


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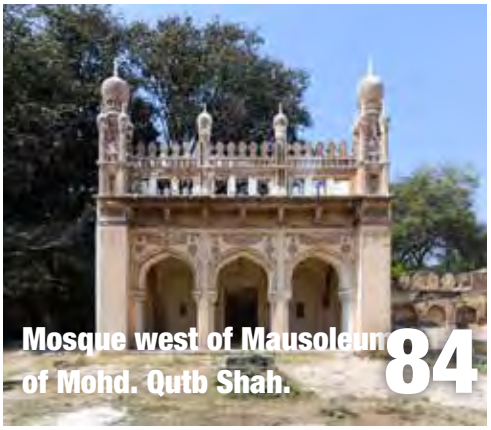
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Qutb Shahi Heritage Park is listed on the tentative World Heritage List. Major conservation and landscape restoration works will be undertaken from 2013-23 to ensure long term preservation and enhance the visitor experience of this site of international significance.

The Qutb Shahi Heritage Park, including the Deccan Park area, is one of the most significant historic medieval necropolises anywhere in the world, comprising over 70 structures mausoleums, mosques, step-wells/ water structures, a Hamam, pavilions, garden structures – all built during the reign of the Qutb Shahi dynasty which ruled the Hyderabad region for 169 years in the 16th – 17th centuries.

Executive Summary

The Qutb Shahi Heritage Park comprises of the presently segregated sites of Qutb Shahi Tombs under the management of the Department of Heritage (earlier Department of Archaeology), the Deccan Park managed by the Quli Qutb Shah Urban Development Authority as well as the land abutting the Idgah.

In January 2013, AKTC signed a ten-year MoU with both the Department of Archaeology as well as QQSUDA. However, within days of the MoU, vested interests challenging the ownership of the land by the Department of Archaeology filed a petition at the Wakf Tribunal and prohibited much needed conservation works to be carried out. Almost a year was lost on this account before conservation works commenced.

Today, almost half of the 100+ structures standing on the site have been conserved and Phase 1 of landscape restoration completed. Much will thus be achieved by January 2023 when the MoU will require review.

As with other Aga Khan Historic Cities Programme projects worldwide, the initiative at the Qutb Shahi Heritage Park aims to serve as a model project – demonstrating a conservation approach based on the understood significance of the site, appropriate for the Indian context and in conformity with international guidelines for World Heritage Sites.

Significance

The Qutb Shahi Heritage Park with over 100 monuments spread across over 100 acres of land is unique, but, more so on account of association with the majestic fortification of Golconda – less than 100 m away.

No other necropolis matches the Qutb Shahi Heritage Park for the number of monuments that stand here and as representative of every decade of construction during the Qutb Shahi dynasty. The significance is further enhanced with the archaeological discoveries of garden enclosures and residential settlements pre-dating the necropolis.

The architectural styles of the monuments are defined by bulbous domes, large platforms and striking stucco plaster – all of which are being conserved or restored as part of the Aga Khan Trust for Culture initiative. Layers of inappropriate landscape and horticulture works are being peeled away to landscape the 100-acre park in a historically appropriate manner – with plants that the Qutb Shahis would have favoured.

Together with the Golconda fortification, the site is on the tentative World Heritage List. In 2019, the dossier for the nomination was prepared but its submission deferred to prioritise that of Ramappa Temple, also in Telangana.

Challenges

Conservation and landscape restoration works at the Qutb Shahi Heritage Park have faced some significant challenges, amongst which, ongoing litigation at the Wakf Tribunal, the scale of the project – encompassing over 100 monuments and 100 acres and little knowledge of the site with lack of research and publications.

AKTC has implied in the court case at the Wakf Tribunal and assisting the government lawyers to ensure the right to continue urgent needed conservation works. It is however, hoped that the effort required by the government to bring this case to closure would be made and the site secured for perpetuity.

A sustained effort at architectural documentation, archaeological excavation and archival research commenced over two years prior to commencing conservation works and has continued thereafter. This has revealed monuments and gardens that were buried or architectural elements of monuments that were buried under layers of 20th century cement layers.

In order to overcome the challenges posed by the scale of the site, once emergency conservation works were completed on monuments across the site, works have been taken up on clusters in a phased manner and coupled with required landscape restoration. This has allowed the lean AKTC team to supervise conservation works on adjoining monuments in an efficient manner.

Partnerships

The AKTC Conservation and Landscape restoration effort at the Qutb Shahi Heritage Park will be the largest conservation undertaking in India. It would result in a site that is expected to attract millions of visitors to Hyderabad, especially when coupled with the opportunity to visit the Golconda fortification.

To enable integration of the presently segregated sites the MoU with the Department of Heritage also includes the Quli Qutb Shah Urban Development Authority.

The Tata Trusts committed to support the project at the very onset by pledging funding for conservation works on ten major monuments. These works will be completed in 2020. AKTC has received support from the Federal Republic of Germany and the US Ambassadors Fund for Cultural Preservation for conservation works undertaken in 2019.

In 2015, the Hon'ble Minister of Finance, Government of India announced support at the Qutb Shahi Heritage Park in the budget speech. This led, two years later, to a Ministry of Tourism grant to the TSTDC under the Swadesh Darshan grant. The successful completion of this grant will be a critical challenge in 2020.

Conservation

Over the past seven years, craftsmen have clocked in 2.8 lacs mandays of work at QSHP since 2013 while undertaking conservation works on monuments standing within the Qutb Shahi Heritage Park. Craftsmen have used traditional tools, building materials and craft techniques to restore missing patterns and repair the monuments. An inter-disciplinary team of engineers, conservation architects, architects have provided intense planning support, supervision and oversight for the conservation works.

Monthly joint inspections are held with officers of the Department of Heritage to review ongoing works and agree on proposed works for the following month. These are followed by quarterly review by the Technical committee – as per the MoU.

(Right) View of the Qutb Shahi Tombs from Golconda in 1991. Source: MIT Archives

Landscape Restoration

Till only two decades ago, the tombs were spread over a much larger area with no other buildings from the Golconda to the Jubilee hills. However, in the 21st century, this land parcel – hundreds of acres – has been plotted and intensively built upon.

Fortunately, new construction abutting the monuments is limited and an area of 100 acres is secured as a green space.

The landscape master plan prepared by landscape architect, Late M Shaheer, envisaged ecological buffer zones on the north, south and west of the complex, a core archaeological zone in the centre and an infrastructure zone on the eastern edge.

Within the core archaeological zone, ground levels have been painstakingly been restored to original levels – revealing rock in some places and aqueducts in others. Referencing archival records, including poetry from the Qutb Shah court – plant species have been identified and being planted.

In the eastern zone a garden amphitheatre with a seating capacity of 500 is also being built to encourage cultural events at this significant site.

Interpretation Centre

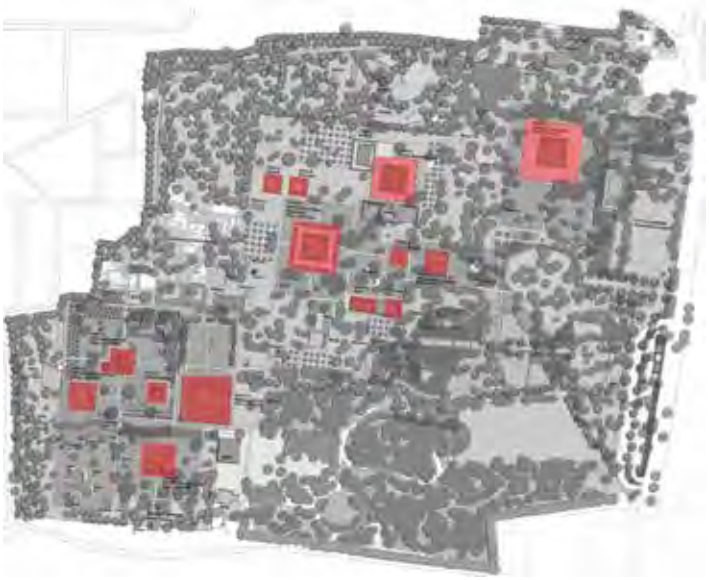
As is expected at any site of international significance, an interpretation centre is planned for the Qutb Shahi Heritage Park – to be built with funds received by TSTDC under the Swadesh Darshan scheme of the Government of India.

In 2019, AKTC invited a few select architectural firms to present concept designs for the proposed building and provided these to the Department of Heritage' Technical Committee to select one scheme.

The Tender documents have now been prepared and it is hoped that this structure will be built in 2020. AKTC will undertake building the exhibition, also from Swadesh Darshan grant funds.

Paigah Tombs

On the request of the Director, Department of Archaeology, AKTC consented to also restore the famed Paigah tombs – also unique in architectural character and of immense potential. Conservation works here commenced in 2019 and will carry forward in 2020.



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Royal Mausoleums

The Qutb Shahi Heritage Park is situated abutting the foothills of the Golconda fort and comprises of 80 monuments. The necropolis consists of 40 mausoleums, out of which 4 are comparable to the Taj Mahal in Agra and Humayun's Mausoleum in Delhi in scale and grandeur. These were built during the reign of 169 years of the Qutb Shahi rulers. The site represents 17 decades of glorious, contiguous past of a unique necropolis with the exclusivity of an entire dynasty buried inside its precincts. The mausoleum architecture is a blend of Persian, Pathan, and Hindu architectural styles and is made up of local materials. Buildings are embellished with ornamental stucco made with incised lime plasterwork. Spread across 106 acres there are six different plan types of tombs. Since many of the structures were built prior to the death of the person buried their size was dependent on the status of the individual building the tomb.

(Above) Panoramic view of the site with the mausoleum of Sultan Quli Qutb Shah in the centre; (Left) Mausoleum of fourth king Muhammad Quli Qutb Shah; (Centre) Mausoleum of fifth king Muhammad Qutb Shah; (Right) Mausoleum of Maa Sahiba Hayat Bakshi Begum

CONSERVATION

01. Mausoleum of Begum Hayat Bakshi

(Above) The conservation works were preceded by high level of documentation and followed by removal of 20th-century cement mortar and concrete. Repairs were done using traditional lime mortar and reinstatement of ornamental stucco embellished on the principal facades.
(Right) Southern elevation of Begum Hayat Bakshi's mausoleum

Hayat Bakshi Begum, better known as Ma Saheba, took a prominent part during the reign of three Qutb Shahi rulers. She was the daughter of Muhammad Quli Qutb Shah, wife of Muhammad Qutb Shah, and mother of Abdullah Qutb Shah.

Her mausoleum is a replica of the mausoleum built for her husband, both in terms of sheer scale and size. In late 2018, removal of later added cement plaster layers was commenced on the dome surface. The dome was covered with a 2-inch-thick layer of cement plaster and showed signs of deterioration permitting ingress of water and vegetation growth.

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ARCHITECTURAL DOCUMENTATION

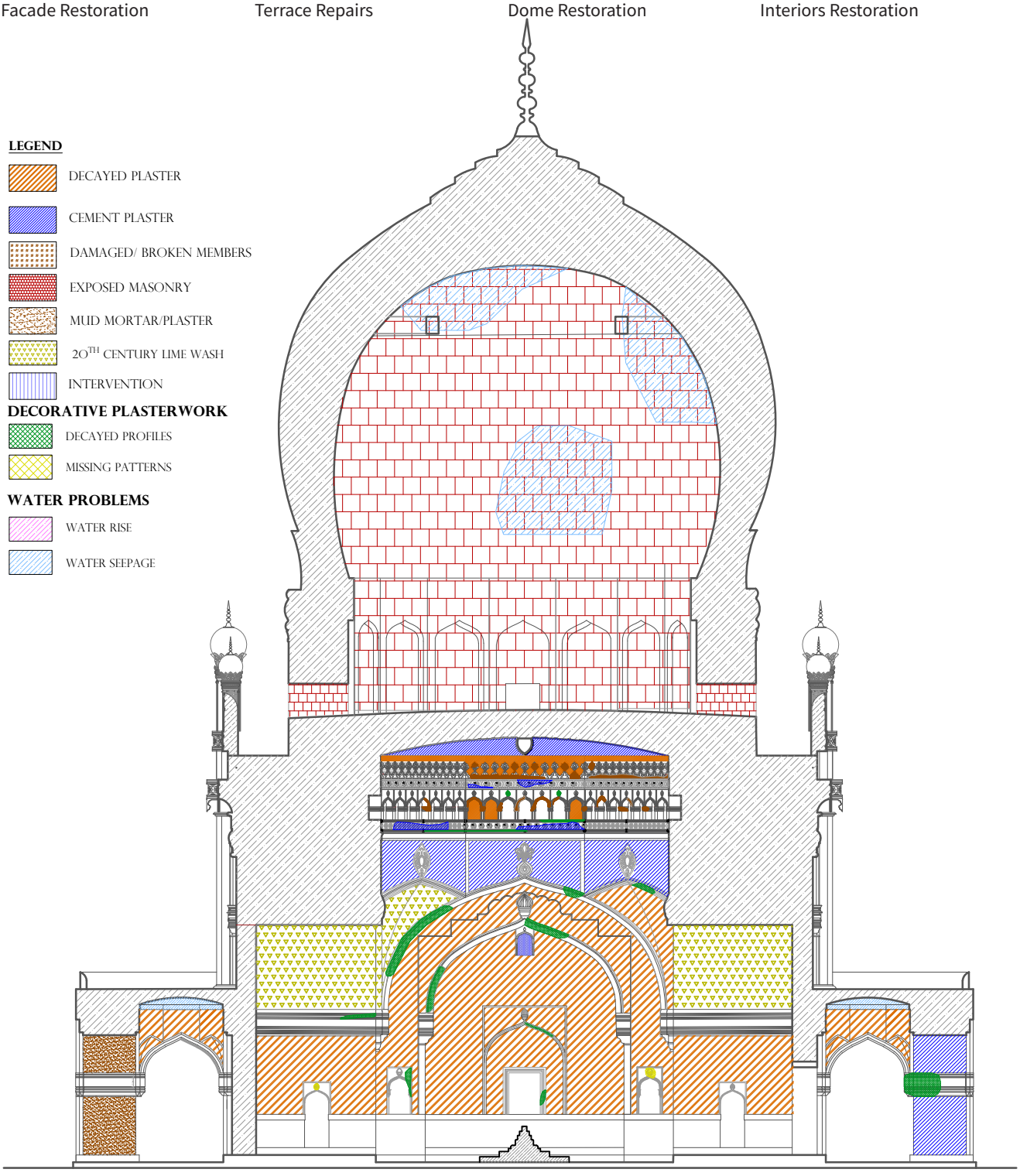
Condition assessment of the internal portions of Hayat Bakshi Begum's mausoleum. Conservation interventions being carried out on multiple portions of the mausoleum

Facade Restoration

Terrace Repairs

Dome Restoration

Interiors Restoration



INTERNAL DOME

The internal dome had signs of deterioration with cracks on the surface permitting water ingress and vegetation growth. The internal dome also had holes that were up to 11 feet deep. The internal shallow dome protruding out of the floor also had a 20th century cement plaster layer also had a 20th century cement plaster layer.

ACTION TAKEN:

- Plaster on the internal dome was found damaged due to prolonged seepage of rainwater. Repairs were carried out using traditional lime mortar.
- Holes up to 11 feet deep were found on the internal dome and were subsequently filled with rubble and traditional lime plaster.
- 20th century cement plaster layer was dismantled on the internal shallow dome, ceiling medallion and lower portions.
- Base plaster on the internal shallow dome was carried out using rich lime mortar by master craftsmen.

(Clockwise from left) The internal dome before conservation; Up to 4 feet deep holes that were found on the internal dome surface were filled with stones and lime plaster; the flooring was found damaged in portions and was hence, laid with lime concrete

TERRACE

The terrace of Begum Hayat Bakshi's Mausoleum had a 20th century cement plaster layer added during the later repairs. On close inspection it was observed that this was leading to the rainwater seeping into the lower arcade.

ACTION TAKEN:

- 20th century cement concrete was dismantled on the middle terrace as it was leading to seepage of rainwater into the lower arcade and adding excess load on the structure.
- Traditional lime concrete was laid in appropriate slope to drain out rainwater away from the structure. Ramming and curing were carried out continuously for a week to achieve smooth finish which would help rainwater drain away.
- Cleaning of terraces and existing rainwater spouts on both the upper and middle terrace were carried out before the monsoons.
- Cleaning of rainwater spouts on both the upper and middle terrace coupled with removal of plants roots was repeatedly carried out throughout the monsoons as a part of the preventive maintenance.

(Above) Dismantling of 20th century cement concrete on the middle terrace; (Below) Traditional lime concrete was laid in appropriate slope

PARAPET

Middle level parapet of Hayat Bakshi Begum's tomb is made of thick hand chiseled granite blocks covering a length of 135 m. Over time, the stone joints developed gaps and had vegetation growth within the joints. All the stone blocks were manually realigned after removal of thick plants roots growing underneath by stone craftsmen.

(Above) Stone parapet realigned on the middle terrace, and
(Below) Metal water spouts installed in existing openings for a proper drainage of the rainwater.

ACTION TAKEN:

- Stone parapet on the middle terrace was realigned after removing the interspersed plant roots growing beneath.
- 17 metal waterspouts of approved design were installed in the existing openings of stone parapet to drain rainwater away from the structure.

MINARETS & FINIALS

The corner minarets of the mausoleum were found to be covered in a layer of 20th century cement. Most of the finials present on top of them were also observed to be either damaged or missing. Covered with layers of cement, these minaret façades also showed signs of deteriorated stucco.

ACTION TAKEN:

- Cement layers from the minars at the mausoleum were removed and replaced with traditional lime plaster.
- Damaged and missing finials atop the minars were reconstructed based on in-situ evidence.
- Missing and broken details on the minars were restored using traditional lime plaster and finished in lime punning by master craftsmen.

(Above) Cement layers from the minars were removed and replaced with traditional lime plaster, missing and broken details were restored and damaged finials were re-installed.

EXTERNAL FACADE

The details on the external surface below the parapet on principal facades of the mausoleum such as merlons, medallions and the flower band were found to be damaged or missing.

ACTION TAKEN:

- Repairs and restoration works were carried out on the upper portion of the external façade of the mausoleum where broken, damaged or missing stucco details, merlons, medallions and floral bands were restored using traditional lime plaster and finished with a coat of lime punning based on the existing in-situ evidence.
- The floral band running along the lower terrace was restored using traditional lime mortar and finished using lime punning based on the existing in-situ evidence.

(Above) On the external facade, the broken and damaged ornamental details and architectural elements were repaired and restored using traditional lime plaster and finished with a coat of lime punning based on existing evidence.

INTERNAL CEILING

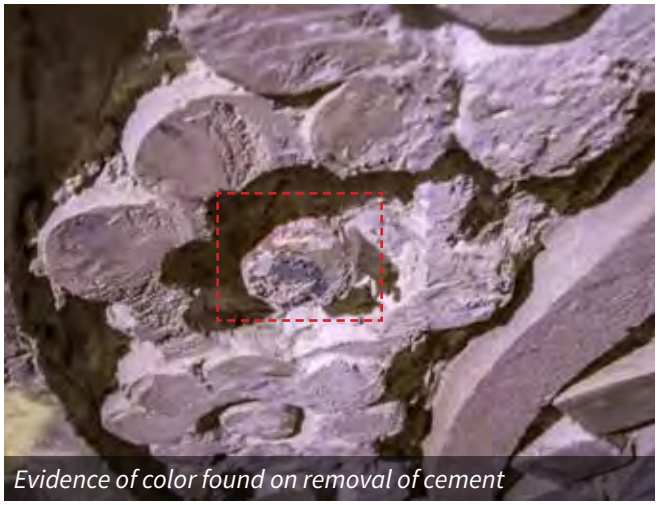
Traces of original color were revealed on the ceiling medallion and missing paint was restored based on the existing site evidence. These conservation efforts have, in turn, helped reveal the character of the structure as intended by the original builders.

ACTION TAKEN:

- Ceiling medallion were documented along with removal of 20th-century cement plaster. Ornamental stucco details were restored by master craftsmen using rich traditional lime mortar to conserve the ornamental ceiling medallion.

Removal of 20th century cement

Restoration of the medallion with traditional lime mortar



Evidence of color found on removal of cement

Before Conservation

Original design uncovered

Documentation of Original Patterns

Traces of original color were revealed on the ceiling medallion and missing paint was restored based on the existing site evidence. These conservation efforts have, in turn, helped reveal the character of the structure as intended by the original builders.

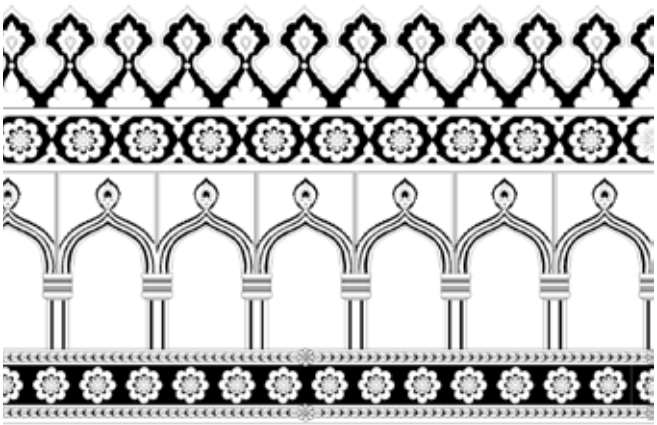
INTERNAL FACADE

The internal surface below the dome had visible signs of deterioration augmented by 20th century repairs carried out using cement. The details on the internal surface below the parapet on principal facades of the mausoleum such as merlons, medallions and the flower band were found to be damaged or missing.

ACTION TAKEN:

- 50 feet tall scaffolding were erected inside the internal mausoleum.
- Repairs on the blind arches situated below the internal dome were carried out using traditional lime mortar. 20th century cement and white-wash layers were carefully removed to reveal the original appearance of gallery. Plaster repairs were followed by finishing with a thin 1 mm layer of punning, which consists of lime putty mixed with organic additives. Evidences of black colour in grooves of arches were revealed and missing paint was restored based on the existing site evidence.
- Moulding bands surrounding the blind arch gallery were scraped to remove cement patches and were subsequently repaired with lime mortar by craftsmen.
- Cement plaster was carefully removed from the recessed arched bays and low heights vaults situated on all four sides inside the mausoleum. Ornamental details, moulding bands, arch crowns and original lattice screens were repaired by master craftsmen. Final finish on plaster repairs was done using a 1 mm thin smooth layer of slaked lime putty mixed with organic additives.
- Traces of black colour were revealed in the moulding bands and ornamental architectural elements inside the mausoleum.

(Below) Conservation works at the main tomb chamber of have included careful removal of 20th-century cement, restoration of lime plaster and missing stucco patterns. Plaster repairs were followed by finishing with a thin 1 mm layer of punning. Traces of original colour were revealed, and missing paint was restored based on the existing site evidence.



FLOORING & CORRIDOR

The existing flooring before conservation was 20th century cement concrete.

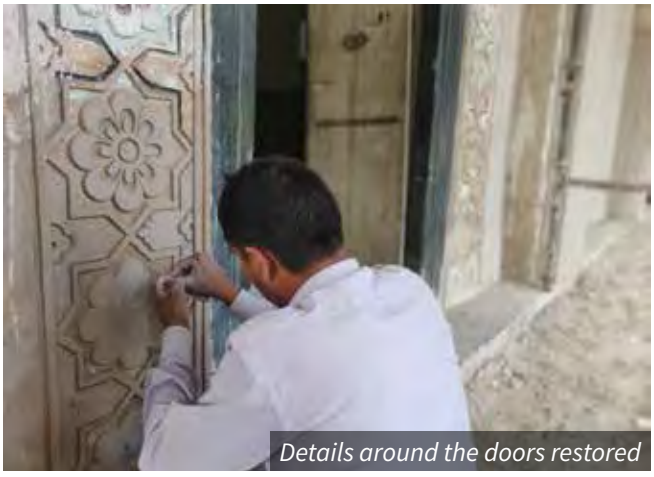
ACTION TAKEN:

- 20th century stone flooring laid in contextually inappropriate layout with cement mortar was dismantled in the arcade surrounding the mausoleum. 30 mm thick granite stone slabs were laid in approved layout and appropriate slope in lime mortar.
- Plaster repairs inside the arcade on all four sides was carried out using rich lime mortar by master craftsmen.

Before Conservation

After Conservation

Stone slabs laid in an appropriate slope on lime mortar



Details around the doors restored

IMPACT:

Restoration of internal and external facades has helped in long term preservation of the monument by removal of 20th century cement thereby reducing the seepage of water on the monument. Installation of lime concrete on the terrace has stopped the water ingress into the structure coupled with installation of stone waterspouts, will prolong life of the mausoleum. Realignment of hand chiseled stone parapet on the perimeter edge of upper plinth and meticulous restoration of ornamental stucco, medallions and floral bands has reinvigorated the original architectural appearance as envisaged by the original builders.

PLINTH

The existing flooring before conservation works was 20th century cement concrete. Upon the removal of cement concrete , resetting of plinth protection as per appropriate width suggested by landscape master plan was carried out. Installation of 100 mm thick granite stone slabs and edging stone was done by stone craftsmen. Realignment of the hand dressed stone steps situated on the southern plinth was carried out.

ACTION TAKEN:

- Construction of a 5 feet wide plinth protection was carried out along the perimeter of the lower arcade situated on the projected plinth. The plinth protection was lined with brick walls and base lime concrete for the flooring was laid. 100 mm thick granite stones slabs and edging stone were installed and laid in accordance to the approved layout and in an appropriate slope.
- Plinth protection around the perimeter of mausoleum of Hayat Bakshi Begum has commenced with work being carried out on the eastern side.
- Base work for the pathway on the lower edge of the retaining wall to the south side is being carried out.

(Above) Damaged stone steps were reset matching the alignment of steps on the eastern side by stone craftsmen

NEXT STEPS:

The projected lower plinth protection on the south side of the mausoleum is to be repaired and the existing stones to be realigned as per the original levels.

The historic water tank on the southern plinth to be repaired and finished with appropriate material.

CONSERVATION

02.Abdullah Qutb Shah's Mausoleum

(Above) South Elevation of Abdullah Qutb Shah's mausoleum
The conservation works were preceded by high standards of documentation focused on restoring "the spirit and feeling" with an emphasis of craftsmanship and authenticity. Image above depicts the installation of scaffolding on dome prior to the commencement of dismantling of 20th-century cement plaster

Sultan Abdullah Qutb Shah was born in 1626 and was the son of Sultan Muhammad Qutb Shah and Hayat Bakshi Begum. He was fond of learning and architecture, and the celebrated Persian Lexicon 'Burhane Qaati' was compiled during his reign. During his reign the extent of the Qutb Shahi Empire reached as far as the Carnatic.

His mausoleum stands on a square plinth of side 72 m. The tomb structure rises to a height of 45 m, and it a double domed structure. The lower facade made of dressed granite stone consists of seven arches enclosing a corridor on each side.

NEXT STEPS:

Dismantling of cement plaster will be followed with repairs using traditional lime mortar and reinstatement of missing ribs on the dome surface.

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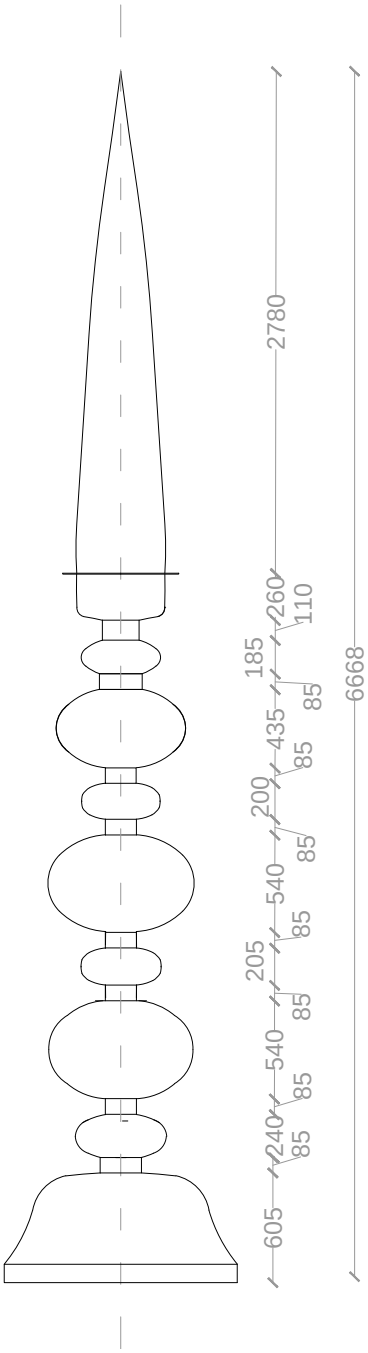
DOME

The dome of the mausoleum is dotted with over 300 patches made for supporting the wooden scaffolding erected during 20th century repairs. On inspection, the dome was found to be covered with a 4-inch-thick layer cement mortar thereby causing the original lime plaster and prominent ribs below to disintegrate. The petal band along the base of the dome was also found in a dilapidated condition before conservation.

ACTION TAKEN:

- Dome of this mausoleum was dotted with over 300 patches made for supporting the wooden scaffolding erected during repairs undertaken in the 20th century and were covered up with a thick layer of cement plaster.
- Steel scaffolding has been erected around the dome and the terrace of the mausoleum to commence the dismantling of 20th century cement plaster.
- It was observed the top conical piece of the copper finial was skewed and appeared disjointed. The top three pieces of the copper finial were carefully removed and a traditional copper smith will be repairing the damaged portions to correct the alignment and stitch the holes made by hammering of iron nails on the conical portion to attach it to the internal wooden piece.

Amongst the significant architectural elements on the mausoleum, is the 25-feet high copper finial standing atop the dome. This required specialised repairs by a traditional coppersmith, as it was found much damaged. The individual hollow copper pieces were carefully removed from the dome for repair, and have now been reinstated in their original position.



CONSERVATION

03. Muhammad Quli Qutb Shah's Mausoleum

(Above) Here the conservation works were preceded by high level of documentation and were completed in 2018. Major preventive maintenance works including installation of water spouts, grouting of stone were carried out in 2019 to prolong the life of the monument .

Muhammad Quli Qutb Shah (1581- 1611), the fourth king of the Qutb Shahi dynasty laid the foundation of Hyderabad. During his reign, the dynasty reached the zenith of its material and cultural life.

His majestic tomb, 48 m tall, is the tallest tombs at the Qutb Shahi heritage park. Raised on a vaulted structure which houses the original grave of the Sultan, it marks the beginning of the double terraced tomb construction. The upper terrace consists of a recessed bay at the center on all four sides. Each of these are supported by two large granite pillars 7m high and supported brackets which recall the influence of Vijayanagara architecture. The bulbous dome sits majestically and looms large over the Hyderabad landscape.

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TERRACE & PARAPET

(Clockwise from left) Installation of metal waterspout on the parapet at upper plinth; Grouting and pointing with lime mortar on all the joints at the upper plinth level; Cleaning of existing rainwater spouts

ACTION TAKEN:

- Sample metal waterspout was installed on the eastern parapet. Following its review and approval by the team, it was installed in the remaining 45 openings on all 4 sides at upper plinth level.
- In advance to preparing the site for monsoons, cleaning of terraces for any kind of vegetation growth or water stagnation and cleaning of the existing rainwater spouts on both the upper and middle terrace were carried out before the monsoons.
- As a protective measure against monsoons, grouting with rich lime mortar was carried out coupled with pointing on all the stone joints at the upper plinth level.

NEXT STAGE:

Periodic preventive maintenance annually before monsoons will be carried out to prolong the life of the monument

IMPACT:

Restoration of internal and external facades has helped in long term preservation of the monument by removal of 20th century cement thereby reducing the seepage of water on the monument. Installation of lime concrete on the terrace has stopped the water ingress into the structure coupled with installation of metal waterspouts on the stone parapet, will prolong life of the mausoleum. Realignment of hand chiseled stone parapet on the perimeter edge of upper plinth and meticulous restoration of ornamental stucco, medallions and floral bands has reinvigorated the original architectural appearance as envisaged by the original builders.

During Conservation

LANDSCAPE RESTORATION

04. Muhammad Quli Qutb Shah's Mausoleum

FORECOURT

The majestic tomb of Muhammad Quli Qutb Shah, built in 1602, was set amidst sprawling gardens consisting of stone pillars to support vine tendrils and foliages, as mentioned. Major alternations in modern materials have been made to the garden in the 20th century.

The garden north of Muhammad Quli's mausoleum was largely altered with additions of modern water bodies such as water fountain in the corner and shallow water channels. Layers of good earth was spread to allow the growth of carpet grass.

While archival research indicated the existence of vineyards, no physical evidence was found at site. It was agreed that the central cruciform water body would be retained while removing the four corner water fountains along with the shallow water channel. This garden would be developed appropriately with the re-establishment of vineyard in a small portion for the imagination of visitors about the historic landscape.

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(Above) Landscape scheme for the forecourt of Muhammad Quli Qutb Shah's mausoleum.

ACTION TAKEN:

- The landscape development for the forecourt of the mausoleum of Muhammad Quli Qutb Shah is being undertaken in accordance with the landscape design plan.
- Masonry walls to accommodate the earth level differences were built along the eastern and northern periphery of the garden.
- The water body situated at the centre in forecourt was filled with good earth to develop a lotus tank while the four 20th century cement corner water fountains were removed.
- 100 mm thick granite stones were installed around the edge of the cruciform shaped water body situated in the forecourt of mausoleum of Muhammad Quli Qutb Shah.
- Pathways along with connecting steps were laid in appropriate gradient as per the plan. 3.0-metre-wide pathways were laid on the north - south and east - west directions along the periphery of the garden. The pathways were finished with 50mm thick Tandur stones.
- Grading was completed in the forecourt for planting of local grass.
- Citrus saplings were planted on the periphery of the central pathways in a manner so as to not obstruct the view of the Hamam.

(Left) Construction of plinth wall along the raised forecourt; (Right) Installation of paving stone on the pathways constructed as a part of the landscape master plan

NEXT STEPS:

- The pathways shall be finished with stone kerb edging.
- Local grass shall be laid in the four corners of the main garden along with low height hedge saplings in pockets in-between the pathways and ground cover beneath the citrus plantation.
- Seating will be provided in the east-west and northern axis.
- Local varieties of lotus shall be planted in the central cruciform water body.
- A prototype of stone columns and beams shall be erected on the eastern side for grape cultivation.


Before view of the forecourt


Present view of the forecourt

(Above) Photographs showing the various stages of paving of pathways inside the forecourt of Muhammad Quli Qutb Shah. Installation of paving stone slabs and granite edging lining the cruciform shaped depressed lotus pond was carried out by stone craftsmen as per the landscape masterplan

IMPACT:

Restoration of the garden located to the north of the Mausoleum of Muhammad Quli Qutb Shah would enhance the setting of the location. This would help in better understanding the historic landscape which existed in the 19th century while making the space useful for local communities and visitors.

CONSERVATION

05. Taramati's Mausoleum

As per folklore, it is said that Premamati and Taramati were prominent singer and dancer in the court of Abdullah Qutb Shah. Credible historical sources cite them as being Hindu converts to Shiite Islam and regularly married to Sultan Abdullah Qutb Shah.

H K Sherwani, author of History of the Qutb Shahi Dynasty states that "both of them are buried in regular Muslim graves in the royal necropolis and their mausoleum have "shapely" domes. Neither of them could have been "temporary wives" of the Sultan, for in such a case they would not have been the permanent and perhaps exclusive occupants of the palaces which go by their names.

The mausoleum stands to the north-west of Muhammad Qutb Shah's tomb on a square plinth of side 25m. The mausoleum is single storeyed with a square plan of side 13m, with three blind arches on each facade, ornamented with arch mouldings and intricate arch crown and medallions.

(Above) Southern and eastern elevation of Taramati's mausoleum; (Left) Before conservation view of the Abdullah Qutb Shah's mausoleum. Conservation works on the main facades was preceded by carrying out repairs on the dome surface and installation of dressed granite stones lining the projected plinth of the mausoleum.

Supported by:

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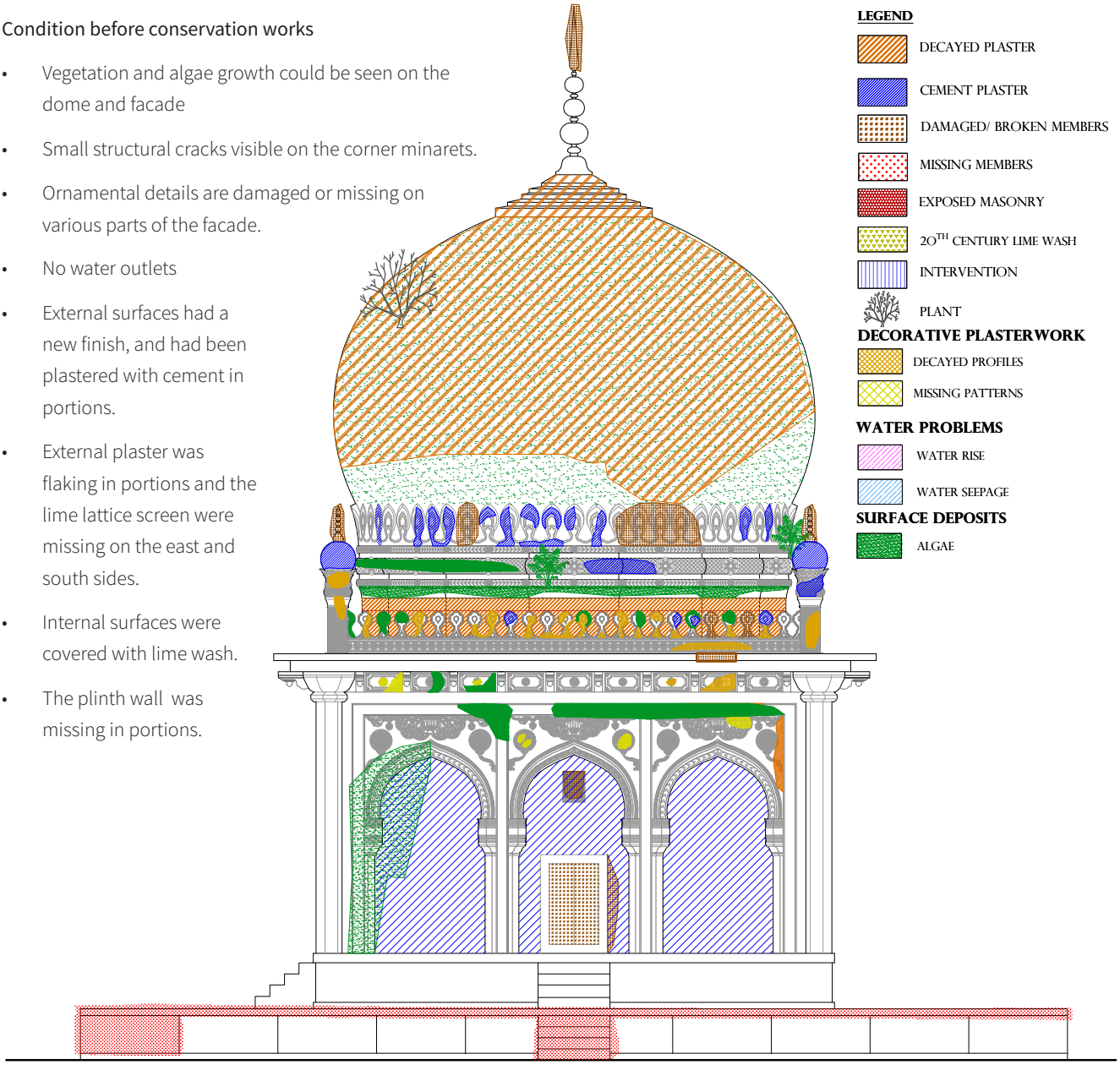
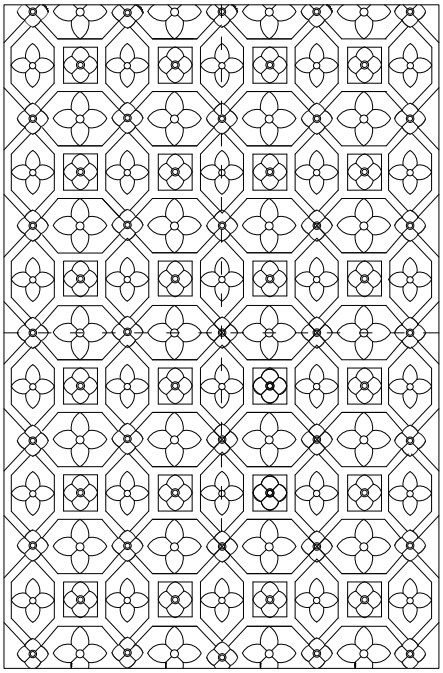
for Cultural Preservation

Condition before conservation works

- Vegetation and algae growth could be seen on the dome and facade
- Small structural cracks visible on the corner minarets.
- Ornamental details are damaged or missing on various parts of the facade.
- No water outlets
- External surfaces had a new finish, and had been plastered with cement in portions.
- External plaster was flaking in portions and the lime lattice screen were missing on the east and south sides.
- Internal surfaces were covered with lime wash.
- The plinth wall was missing in portions.



Before Conservation



A stencil of 1:1 scale for lattice screen was prepared to aid in its restoration

Craftsman restoring the lattice screen with lime mortar

DOME: EXTERNAL & INTERNAL

The dome of the mausoleum was dotted with patches made for supporting the wooden scaffolding erected during 20th century repairs. On inspection, the dome was found to be covered with a 4-6-inch-thick layer cement mortar thereby causing the original lime plaster below to disintegrate.

The petal band below the dome were damaged in portions and the drum below was also finished with cement mortar and showed visible signs of deterioration.

ACTION TAKEN:

- Dome of this tomb was dotted with over 30 patches made for supporting the wooden scaffolding erected during repairs undertaken in the 20th century and were covered up with cement mortar. After on-site investigations, all the holes were filled with rubble and lime mortar to prevent rainwater ingress.
- Scaffolding was erected around the dome and the 4-6 inches thick cement layer was carefully removed from the dome and was re-plastered with traditional lime plaster and finished with a thin final layer of lime punning
- Dilapidated lime plaster layer on the 16-sided drum supporting the dome was dismantled.
- Repairs on the drum were done using traditional lime mortar.
- The petal band along the base of the dome was restored using rich traditional lime mortar and finished with a final coat of lime punning.
- 20th century cement plaster and whitewash were dismantled from the internal dome. Plaster repairs on the dome were completed and finished with a 1 mm thin layer of lime putty mixed with organic additives.

Removal of cement

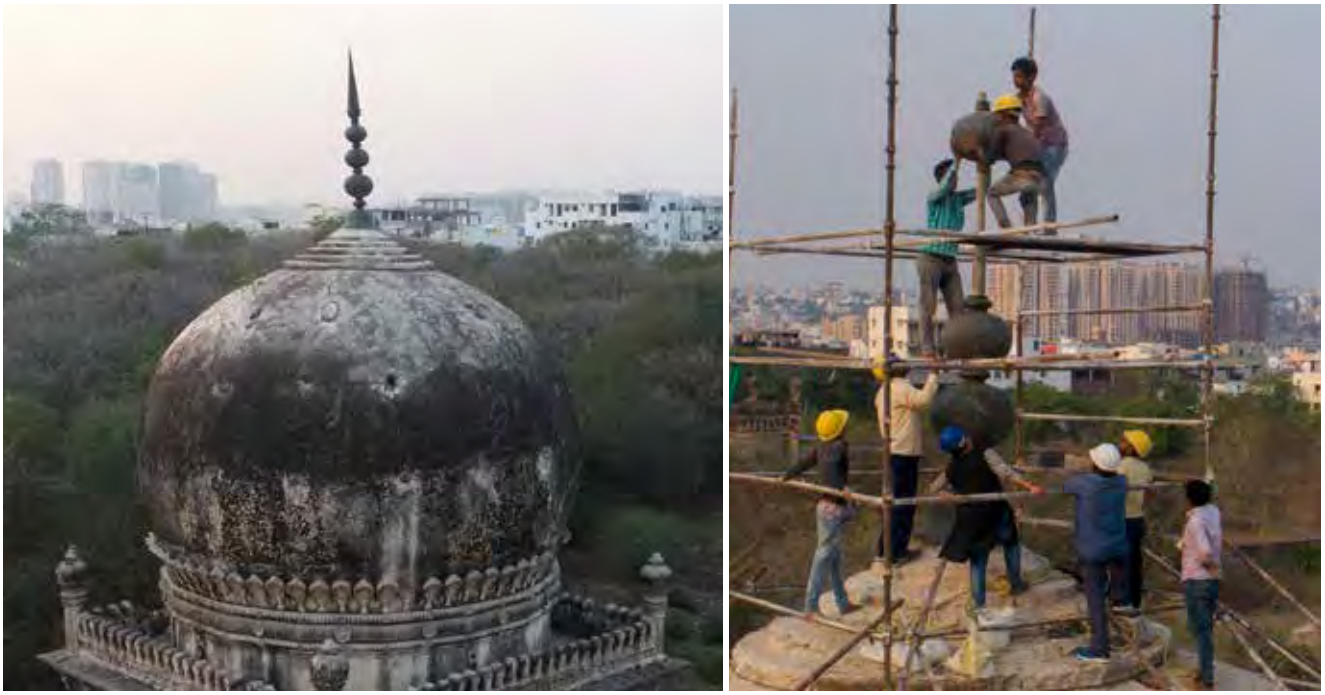
Restoration of the petal band

FINIAL

The copper finial of the dome of the mausoleum was found to be damaged and the internal support made of wood had started to disintegrate over time.

ACTION TAKEN:

- The copper finial of the dome on investigation found to be in poor shape with the internal wooden support within the finial having deteriorated over time. The various copper vessels that made up the finial also had 4-5 holes in them.
- The finial was disassembled and brought down from the dome and carefully documented.
- The damaged copper vessels were repaired by a local coppersmith.
- The repaired copper finial was carefully re-installed on the top of the mausoleum and the wooden skeleton inside the finial was replaced with a GI pipe having 80mm to 100mm diameter to withstand strong winds and rain.



(Left) Before final installation, pieces of the copper finial were assembled on the ground to ensure that the GI pipe inserted in the center fits appropriately; (Right) Installation of the repaired pieces of copper finial atop the dome

TERRACE

The terrace was covered with a layer of 20th century cement concrete and this aggravated the water seepage inside the mausoleum. Multiple stone eaves situated below the battlements were found to be damaged or missing.

ACTION TAKEN:

- 20th century cement concrete was dismantled from the terrace.
- Traditional lime concrete was laid on the terrace to appropriate slope to drain rainwater away from the monument. Ramming and curing were carried out continuously for a week to achieve smooth finish.
- Thick plant roots on the rainwater outlets below the battlements were carefully removed and deep holes were repaired with rubble masonry and rich traditional lime mortar.
- The terrace and existing rainwater spouts on terrace were cleaned before the monsoons.



Left - Cement from the terrace was removed and replaced with traditional lime concrete in an appropriate slope
Middle - Minarets on the external parapet repaired with traditional lime plaster
Right - Missing stones eaves were replaced with hand dressed stone sections of matching size and colour

PARAPET & MINARETS

Battlements on the parapet above the eaves were severely damaged and partly broken in many portions. Minarets on the parapet above the eaves were severely damaged and partly broken in many portions, with original finials missing on all the corner minarets.

ACTION TAKEN:

- Damaged battlements were restored on the parapets using lime mortar and finished with lime punning.
- Damaged floral medallions situated immediately above the stone's eaves were repaired and restored using rich traditional lime mortar and finished with a thin layer of lime punning on all four sides of the parapet.
- Minarets on the external parapet were repaired and ornamental stucco patterns in the shaft of minarets were restored. Missing finials were fabricated based on the archival evidence were installed by master craftsmen.

EXTERNAL FACADES

The external surface below the projected stone eaves on principal facades of the mausoleum is embellished with highly ornate lime stucco including highly intricate floral medallions. Major portions of the medallions, arch mouldings, and stucco ornamentation were obfuscated with later added layers of cement. The wooden door shutters leading into the monument were found to be in a dilapidated condition.

ACTION TAKEN:

- Damaged medallions ornamental stucco around the arch crowns, and lattice screens above the doors were restored using the existing design by master craftsmen.
- Repairs were carried out on the mouldings and capital bands of the external facades using rich traditional lime mortar.
- Plastering with rich lime mortar was carried out on the blind arches situated at the base of the principal facade on all four sides.
- Stone lintels were installed on the southern and eastern doorways after replacing the 20th century cracked wooden planks situated above the doorways.
- Wooden doors matching the historic designs were fabricated by the carpenter and were installed in the southern and eastern doorways.

Missing and damaged ornate stucco patterns on the external facade of the mausoleum were carefully restored by craftsmen

INTERNAL FACADES

The internal surface below the internal dome on principal internal facades of the mausoleum is embellished with ornate lime stucco. Major portions of the battlements were missing, and floral medallions arch mouldings, and other stucco ornamentation were obfuscated with later added layers of cement. The internal surfaces also showed signs of seepage and visible signs of deterioration.

Before Conservation

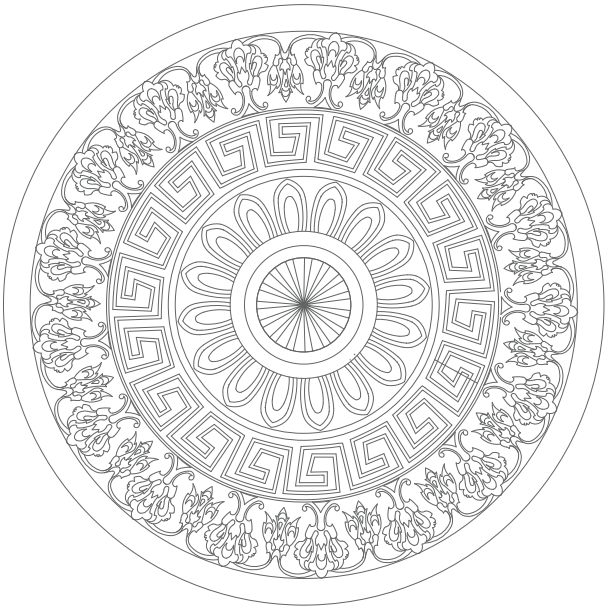
After Conservation

ACTION TAKEN:

- Repairs on broken portions of the battlements situated at the bottom of the internal dome has been finished by master craftsmen using traditional lime mortar. A total of 62 missing battlements were reconstructed in brick masonry, covered with lime plaster and finished with a layer of 1 mm thick lime punning layer.
- Repairs on the lower projected blind arch galleries were carried out using rich lime mortar and patination was gently scraped off using water and soft bristle brushes.
- 28 floral medallions were restored on the band situated above the spandrel of lower recessed arch bays.
- 20th century cement plaster and whitewash layers were removed from the spandrel, squinches, columns and the recessed arched bays present inside the internal mausoleum. Repairs have been carried out using traditional lime plaster and finished with a 1 mm thin layer of lime punning.

INTERNAL CEILING MEDALLION

The ceiling medallion of the dome of the mausoleum was found to be partially damaged and the stucco ornamentation in several sections of the ceiling medallion were missing.



ACTION TAKEN:

- Pulverized lime plaster from the internal ceiling medallion was carefully removed and missing ornamental stucco was restored matching the existing evidence at site by master craftsmen using rich traditional lime mortar and finished with a 1 mm thin layer of lime punning. A total of 56 missing floral leaf patterns were restored based on the existing evidence at site.
- Restored stucco patterns were finished with a 1 mm thin layer of matured lime mixed with organic additives

Before Conservation

Restoring the ceiling medallion based on in-situ evidence

Final lime punning of the medallion

After Conservation

PLINTH

Prior to conservation the existing vertical façade stones of the plinth were missing on three sides. The existing flooring on the plinth was non-existent and covered with plant overgrowth.

Installation of flooring on external plinth

Installation of hand-chiseled granite steps

Missing and collapsed vertical stone band along with the granite edging lining the top edge of the projected plinth were reinstate

ACTION TAKEN:

- Vertical facade stones of the plinth were found missing or collapsed on three sides.
- These missing and collapsed vertical stones of specified size and similar texture were prepared by stone master craftsmen and reinstated on the plinth.
- Hand chiseled stones of specified size and similar texture were prepared by stone craftsmen and installed as edging stones on the plinth of the mausoleum.
- Six inches thick band of dressed granite edging lining the top edge of the projected plinth was installed on all four sides of the plinth.
- 30 mm thick granite stone flooring in approved layout and appropriate gradient was laid on all four sides of the external plinth.
- Hand chiseled steps were installed below the eastern side of plinth to make the mausoleum accessible for visitors.

FLOORING

The existing flooring before conservation was 20th century cement concrete.

ACTION TAKEN:

- Dismantling of cement concrete laid inside the mausoleum was carried out to reveal the original floor levels and site cleared of debris.
- 30 mm thick granite stone flooring in approved layout and appropriate gradient was installed inside the internal mausoleum. A three-inch-thick layer of lime concrete was laid to serve as a sturdy base to support the stone flooring to be installed above.

Dismantling of cement concrete

Laying of 30mm thick granite flooring on lime concrete base

IMPACT:

Restoration of internal and external facades has helped in long term preservation of the monument by removal of 20th century cement thereby reducing the seepage of water on the monument. Installation of lime concrete on the terrace has stopped the water ingress into the structure coupled with installation of stone waterspouts, will prolong life of the mausoleum. Reinstatement of hand chiselled stone parapet on the perimeter edge of upper plinth and meticulous restoration of ornamental stucco, medallions and floral bands has reinvigorated the original architectural appearance as envisaged by the original builders.floral bands has reinvigorated the original architectural appearance as envisaged by the original builders.

NEXT STEPS:

Completion of conservation works at Taramati's mausoleum have led to reinstating the authenticity of the built fabric

CONSERVATION

06. Premamati's Mausoleum

As per folklore, it is said that Premamati and Taramati were prominent singer and dancer in the court of Abdullah Qutb Shah.

Credible historical sources cite them as being Hindu converts to Shiite Islam and regularly married to Sultan Abdullah Qutb Shah. H K Sherwani, author of History of the Qutb Shahi Dynasty states that "both of them are buried in regular Muslim graves in the royal necropolis and their tombs have "shapely" domes. Neither of them could have been "temporary wives" of the Sultan, for in such a case they would not have been the permanent and perhaps exclusive occupants of the palaces which go by their names.

Gravestone of Premamati is inscribed with verses of Quran, which reads "From all eternity Premamati was a flower of Paradise", and a chronogram indicating 1073/ 1662 AD as the year of her demise. The tomb stands to the north-west of Muhammad Qutb Shah's tomb on a square plinth of side 25m. The tomb is single storeyed with three blind arches on each facade, ornamented with arch mouldings and intricate arch crown and medallions.

Supported by:

U.S. Ambassador's Fund
for Cultural Preservation

(Above) Southern and Western elevations of Premamati's mausoleum; (Left) Before conservation view of Premamati's mausoleum. The conservation works were preceded by high standards of documentation and focused on removal of 20th-century cement plaster followed by repairs using traditional lime mortar on the dome surface and principal facades.

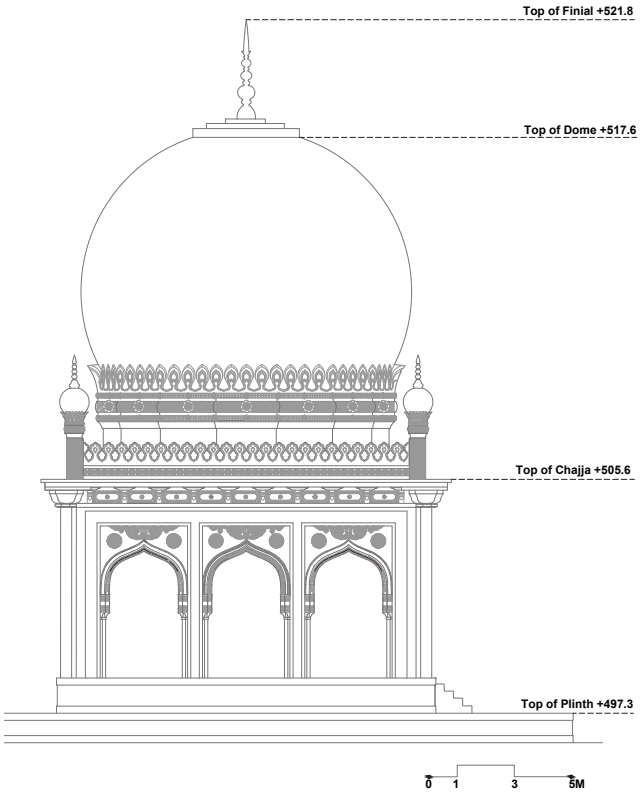
DOME: EXTERNAL AND INTERNAL

The dome of the mausoleum was dotted with patches made for supporting the wooden scaffolding erected during 20th century repairs. On inspection, the dome was found to be covered with a 4-6-inch-thick layer cement mortar thereby causing the original lime plaster below to disintegrate.

The petal band below the dome were damaged in portions and the drum below was also finished with cement mortar and showed visible signs of deterioration.

ACTION TAKEN:

- The dome of this mausoleum was dotted with over 50 patches that were made for supporting the wooden scaffolding erected during repairs undertaken in the 20th century and were covered up with cement mortar. As with the Taramati's mausoleum, all the holes were filled with rubble and lime mortar to prevent rainwater ingress.
- Scaffolding was erected around the dome and the 4-6 inches thick cement layer was carefully removed from the dome re-plastered with traditional lime plaster covering an area of over 10,000 square feet and subsequently, finished with a thin final layer of lime punning.
- The petal band along the base of the dome was restored using rich traditional lime mortar and finished with a final coat of lime punning.
- Dilapidated lime plaster layer on the 16-sided drum supporting the dome was dismantled.
- Repairs on the drum were done using traditional lime mortar.
- 20th century cement plaster and whitewash were dismantled from the internal dome. Plaster repairs on the dome were completed and finished with a 1 mm thin layer of lime putty mixed with organic additives.




Before Conservation


After Conservation

TERRACE

The terrace was covered with a layer of 20th century cement concrete and this aggravated the water seepage inside the mausoleum. Multiple stone eaves situated below the battlements were found to be damaged or missing.

ACTION TAKEN:

- 20th century cement concrete was dismantled from the terrace.
- Traditional lime concrete was laid on the terrace to appropriate slope to drain rainwater away from the monument. Ramming and curing were carried out continuously for a week to achieve smooth finish.
- Thick plant roots on the rainwater outlets below the battlements were carefully removed and deep holes were repaired with rubble masonry and rich traditional lime mortar.
- The terrace and existing rainwater spouts on terrace were cleaned before the monsoons.
- Missing and damaged granite stone eaves were replaced with matching granite stone eaves that were prepared and installed on the eastern and northern parapet by stone craftsmen.

Dismantling of 20th century cement

Missing granite stone eaves replaced with matching stone

Ramming of the traditional lime concrete on terrace

PARAPET AND MINARETS

Battlements on the parapet above the eaves were severely damaged and partly broken in many portions. Minarets on the parapet above the eaves were severely damaged and partly broken in many portions, with original finials missing on all the corner minarets.

ACTION TAKEN:

- Damaged battlements were restored on the parapets using lime mortar and finished with lime punning.
- Damaged floral medallions situated immediately above the stone's eaves were repaired and restored using rich traditional lime mortar and finished with a thin layer of lime punning on all four sides of the parapet.
- Minarets on the external parapet were repaired and ornamental stucco patterns in the shaft of minarets were restored. Missing finials were fabricated based on the archival evidence were installed by master craftsmen.

Installation of missing finial atop the minars and final lime punning of the battlements

EXTERNAL FACADES

The external surface below the projected stone eaves on principal facades of the mausoleum is embellished with highly ornate lime stucco including highly intricate floral medallions. Major portions of the medallions, arch mouldings, and stucco ornamentation were obfuscated with later added layers of cement. The wooden door shutters leading into the monument were found to be in a dilapidated condition.

ACTION TAKEN:

- Plastering with rich lime mortar was carried out on the blind arches situated at the base of the principal facade on all four sides.
- Damaged medallions and ornamental stucco around the arch crowns were restored using the existing design by master craftsmen.
- Repairs were carried out on the mouldings and capital bands of the external facades using rich traditional lime mortar.
- Stone lintels were installed on the southern and eastern doorways after replacing the 20thcentury cracked wooden planks situated above the doorways.
- Wooden doors matching the historic designs were fabricated by the carpenter and installed in the southern and eastern doorways.

20th century cement repairs on the decorative elements on the spandrel were carefully dismantled, and restored in traditional lime mortar as per site evidence

INTERNAL FACADES

The internal surface below the internal dome on principal internal facades of the mausoleum is embellished with ornate lime stucco. Major portions of the battlements below the dome were missing, and arch mouldings, were obfuscated with later added layers of cement. The existing flooring before conservation was 20th century cement concrete.

ACTION TAKEN:

- Repairs on broken portions of the battlements situated at the bottom of the internal dome has been finished by master craftsmen using traditional lime mortar.
- 20th century cement plaster and whitewash layers were removed from the spandrel, squinches, columns and the recessed arched bays present inside the internal mausoleum.
- Repairs were carried out using traditional lime plaster and finished with a 1 mm thin layer of lime punning.
- 30 mm thick granite stone flooring was installed inside the mausoleum in accordance to an approved layout and appropriate gradient on the external plinth is ongoing.
-

Restoration of capital band in lime plaster

Installation of granite stone flooring

After Conservation

INTERNAL CEILING MEDALLION

The ceiling medallion of the dome of the mausoleum was found to be partially damaged and the stucco ornamentation in several sections of the ceiling medallion were missing.

ACTION TAKEN:

- Pulverized lime plaster from the ceiling medallion was carefully removed and missing ornamental stucco was restored matching the existing evidence at site.
- Traces of black colour were revealed in groves and recessed portions of the ceiling medallion, moulding bands and ornamental architectural elements inside the mausoleum and a matching natural colourant was applied in the missing portions.
- Ceiling plaster of internal dome was found to be in a dilapidated condition due to water seepage and had to be removed.
- Repairs were carried out using traditional lime mortar and finished with 1 mm thin layer of matured lime putty applied by lime craftsmen.

Before Conservation

After Conservation

PLINTH

Prior to conservation the existing vertical façade stones of the plinth were missing on all four sides. The existing flooring on the plinth was non-existent and covered with plant overgrowth.

ACTION TAKEN:

- Vertical façade stones of the plinth were found missing or collapsed.
- The missing and collapsed vertical stones on the plinth were reinstated.
- Six inches thick band of dressed granite edging lining the top edge of the projected were installed on all four sides.
- Missing hand chiselled steps were installed below the eastern side of plinth to make the mausoleum accessible for visitors.

Stone craftsmen fixing the hand chiselled granite blocks lining the plinth of Premamati's mausoleum.

IMPACT:

Restoration of internal and external facades has helped in long term preservation of the monument by removal of 20th century cement thereby reducing the seepage of water on the monument. Installation of lime concrete on the terrace has stopped the water ingress into the structure coupled with installation of stone waterspouts, will prolong life of the mausoleum. Reinstatement of hand chiselled stone parapet on the perimeter edge of upper plinth and meticulous restoration of ornamental stucco, medallions and floral bands has reinvigorated the original architectural appearance as envisaged by the original builders.

NEXT STEPS:

Completion of Conservation works on Hayat Bakshi Mausoleum has led to the honoring the intention of the original builders and reinstating the architectural authenticity

Landscape scheme around the mausoleum of Mohd. Qutb Shah. Enclosing pathway around the mausoleum is built incorporating the earth level differences on north and west side.

LANDSCAPE RESTORATION

07. Muhammad Qutb Shah's Mausoleum

Supported by:

SWADESH DARSHAN SCHEME

Landscape development in the area around the mausoleum of Muhammad Qutb Shah, Hayat Bakshi Begum, Taramati and Premamati was finalized and the layout was marked at site in accordance to the approved landscape layout.

ACTION TAKEN:

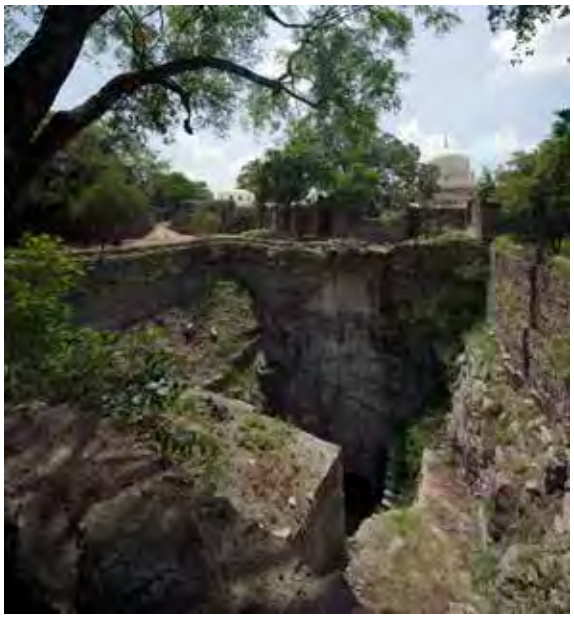
- The existing 6-meter-wide plinth protection around the mausoleum of Muhammad Qutb Shah was removed and trimmed down to 3-meter width as per the landscape master plan.
- Granite slabs for plinth protection were installed in accordance to the approved layout around the plinth of mausoleum of Muhammad Qutb Shah.
- The existing cement concrete around the plinth of mausoleum of Muhammad Qutb Shah was recycled during the laying of plinth protection for twin tombs of Taramati and Premamati.
- Toe walls in random rubble masonry were constructed for stepped platform situated to the west of mausoleum of Muhammad Qutb Shah for accommodating level differences as per the landscape proposal.
- Tandur stones were laid for the pathways connecting western edge of Hakims tomb to the pathway situated to the eastern side of mausoleum of Muhammad Qutb Shah.
- Grading of earth as per the landscape masterplan has been carried out on the western side of the mausoleum of Muhammad Qutb Shah.
- Pathways enclosing the mausoleum of Muhammad Qutb Shah are being constructed as per the landscape masterplan on the east, north and south sides.
- Local grass is being laid in the demarcated soft areas.

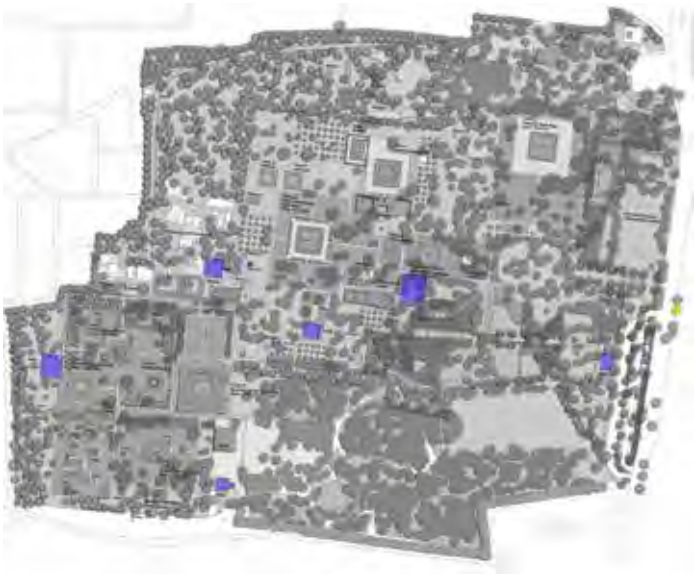
100 mm thick granite stones being realigned at original levels.

50 mm thick Tandur stones being installed on pathways.

steps with planters being built to accommodate the level drop on the west side.

local grass being planted on south side of the mausoleum





II

Step-Wells/ Baolis

Qutb Shahi Heritage Park has seven step-wells that were built here to collect rain water to irrigate the orchards that are now being replanted. Baolis spread across the 106 acre necropolis. These historic step wells are the primary source of water for the irrigation of garden surrounding the royal tombs. While the Badi Baoli has been conserved, work is yet to commence on five large Baolis located prominently alongside the monuments of Idgah, Hamam, Jamshed Quli Qutb Shah's mausoleum, Commander's mausoleum. All of these are in urgent need of repair and revival as rainwater harvesting structures.

The conservation work at baoli's represents an important interface with the community, as they assemble at the Idgah twice in a year, nearly 60 thousand, during the festival of Eid.

Based upon an in-depth analysis of scientific investigations, architectural documentation, archival research and detailed photographic surveys, conservation works would be commenced on the other baolis in the park.

(Above) View of the Badi Baoli after conservation; (Left) Baoli to west of Jamshed Quli's mausoleum; (Center) Baoli to north of Hanam; (Right) Baoli to east of Ibrahim's Tomb

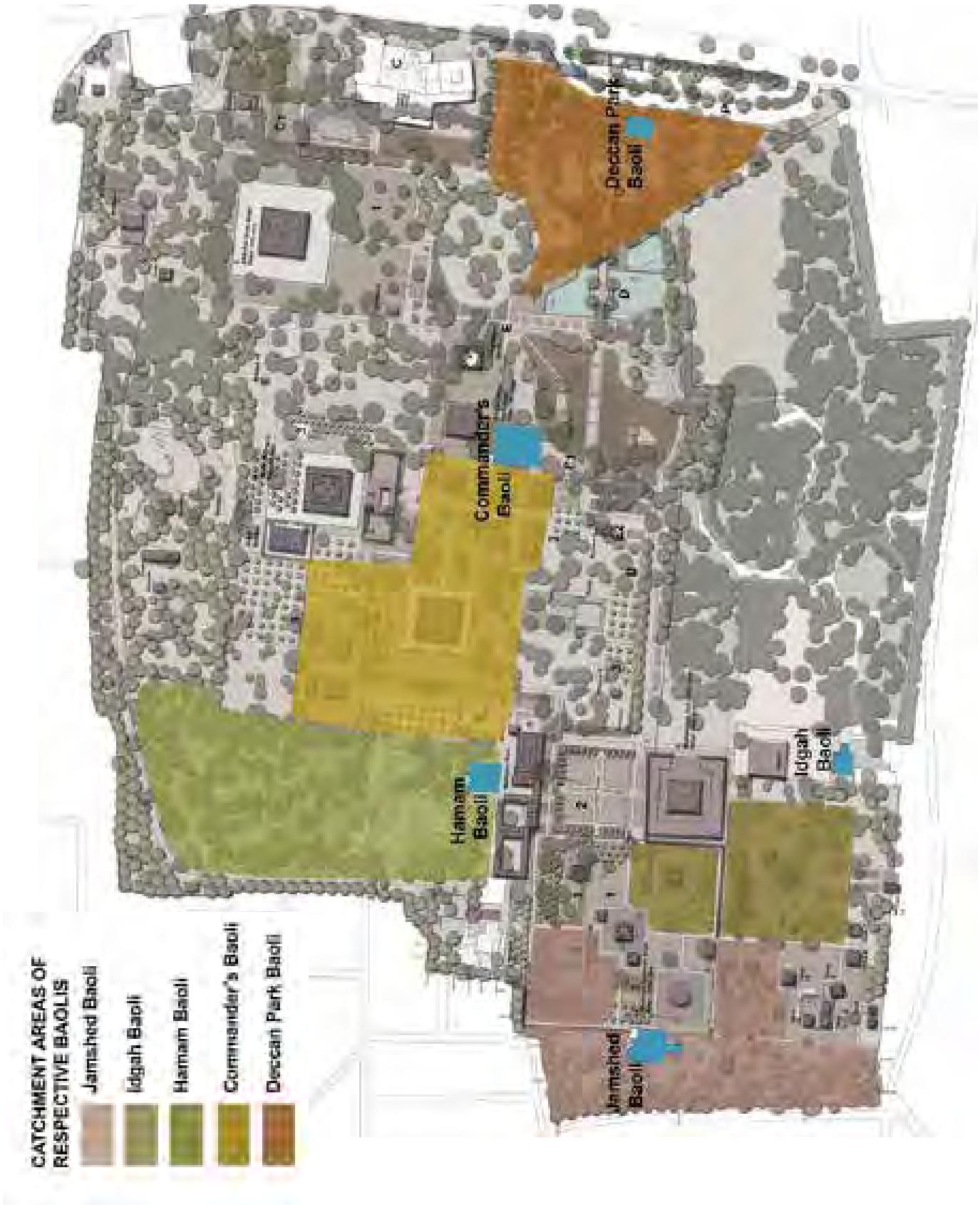
LANDSCAPE RESTORATION

08.Rainwater Harvesting

(Above) Conservation of the Badi Baoli, after its collapse in 2013, required over 4000 mandays of work required to clear the Baoli of collapsed masonry, under extremely dangerous conditions but the reconstruction of 600 cu.m. of stone masonry has led to an annual collection of 3 million litres of water - now used for irrigation and conservation works.

The AKTC project at the Qutb Shahi Heritage Park commenced with the restoration of a collapsed baoli, which today is a major attraction for visitors to the site. The proposed five structures are in a relatively better state of preservation. Conservation works on the five stepwells will ensure structural integrity is restored with missing portions rebuilt, works using traditional materials, building crafts will reveal the original architectural appearance, reverse the damage caused due to neglect and vegetation.

These step-wells were built over a century and represent a varied architectural style and together form a very important ensemble of water related structures within one complex. Historically, these five stepwells would have collected almost 15 million liters of rainwater during the monsoons– water required for irrigation for the remainder of the year. Thus these important monuments also played a major role in maintaining the ecological balance and sustaining the biodiversity. These five structures comprise a major attraction at this tentative World Heritage Site. Their conservation would lead to greater visitor interest and numbers and also set an example for conservation of traditional water harvesting structures as a means to address India's water shortage.


CATCHMENT AREAS OF RESPECTIVE BAOLIS
Jamshed Baoli
Idgah Baoli
Hamam Baoli
Commander's Baoli
Deccan Park Baoli
Deccan Park Baoli
Commander's Baoli
Hamam Baoli
Idgah Baoli
Jamshed Baoli

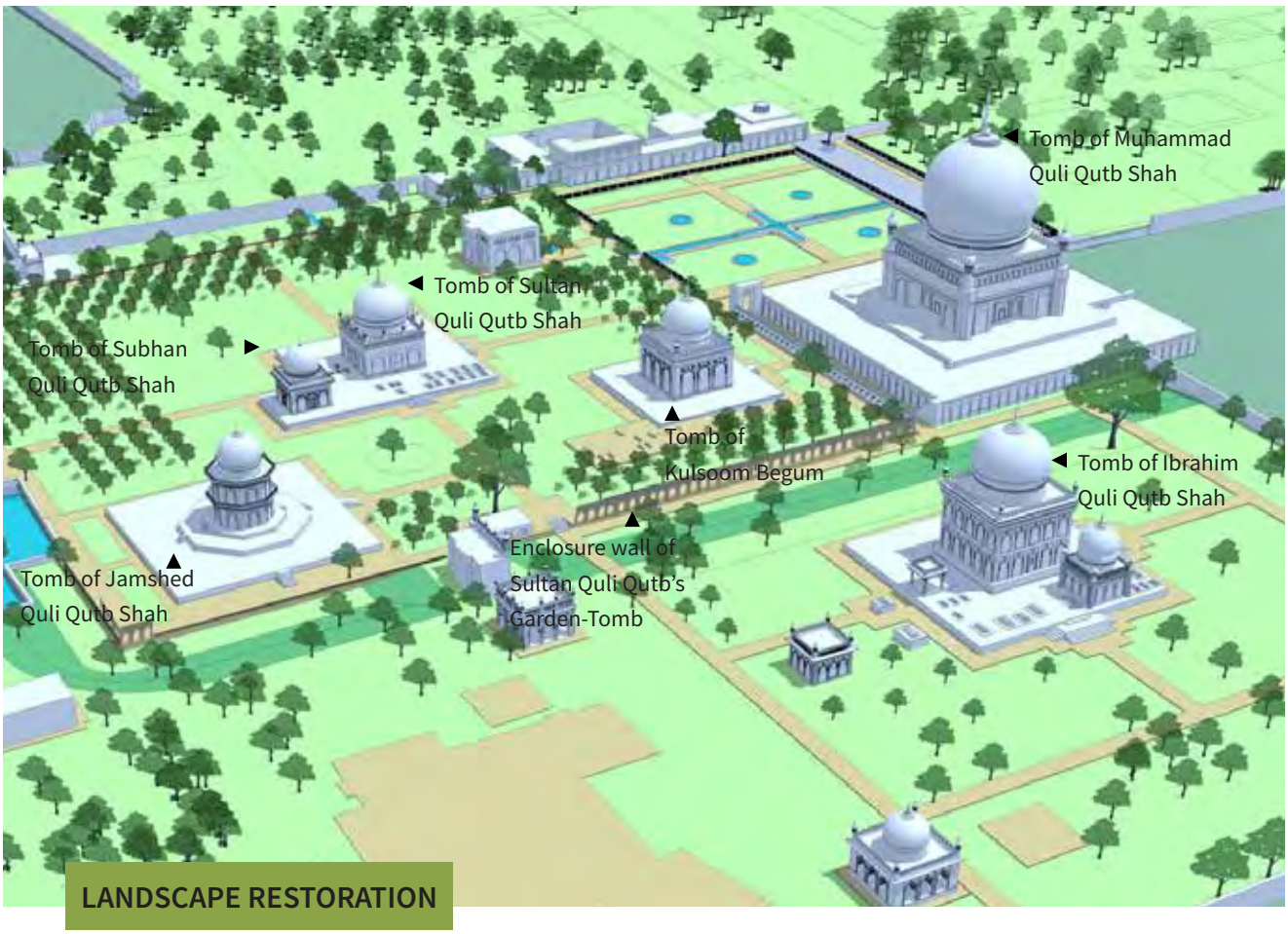
III

Garden Enclosures

Archaeological excavations revealed the extent of the enclosure wall surrounding the mausoleum of Sultan Quli Qutb and disputed the legend that the Mughal dynasty was the first to have introduced the concept of their mausoleums set in the center of elaborate gardens. The enclosure wall was originally standing to the west of Muhammad Quli's tomb. The wall of 560m length has a lower surface of dressed granite stone, with a coping band. The arcade originally extended over the whole square. Floral arch crowns are visible over the original arched and a horizontal projected moulding is present below the simple battlements.

Portions of similar enclosure wall surrounding the garden enclosures of Mausoleums of Muhammad Qutb Shah and Hayat Bakshi Begun are present at the site. The enclosure surrounding the tombs of Muhammad Qutb and Hayat Bakshi consist of a line of blind arches. The arches are surrounded by rectilinear bands. A projecting horizontal band at the top of the surface is topped by simple battlements.

Few remnants of the enclosure wall surrounding the enclosure of Ibrahim Quli Qutb Shah's mausoleum with a series of truncated blind arches is visible on the southern periphery of the Qutb Shahi Heritage Park.



LANDSCAPE RESTORATION

09. Sultan Quli Qutb Shah's Mausoleum- Garden

(Above) Aerial View showing the garden enclosure of Mausoleum of Sultan Quli Qutb Shah. Tomb of Jamshed Quli and Kulsum Begum were built later within the enclosure. Ibrahim Quli's mausoleum also has remains of another enclsoure wall built in ashlar stone masonry with truncated arches.

The discovery of the 16th century enclosure wall and reconstruction of the arcade in portions above the wall beneath through 2017-18, established a sense of enclosure and formality to the tomb gardens. The north east corner of the garden enclosure, however, was largely obfuscated with the addition of modern layers to the extent of creation of modern garden features.

Landscape works here commenced with the financial support of the Swadesh Darshan Grant in partnership with Department of Heritage Telangana, Govt. of Telangana and were implemented by the Aga Khan Trust for Culture. The landscape work is being supported by Swadesh Darshan Grant, Ministry of Tourism, Govt. of India.

Reinstatement of the enclosure wall on the north east portion shall mark the completion of the restoration of mausoleum of Sultan Quli's garden enclosure. This shall help envisage the enclosed garden which was largely disturbed in recent years thus establishing the intent of the original builder.

ACTION TAKEN:

- Modern brick pedestals with concrete lattice screens, modern concrete bridge and water channel built during the 20th century was removed.
- Excavations were carefully carried out to trace the original portions of the historic stone wall.
- Hand chiseled dressing of stones of matching texture were undertaken for preparation of the vertical stones for the wall and the coping.
- The dressed vertical stones along with coping on top were reinstated on the base establishing the north east section of the garden enclosure.
- Stone masonry walls were raised in portions where no evidence of the wall or wall base were found.

(Left) Reconstruction of missing north-eastern portion of historic enclosure wall encapsulating the mausoleum of Sultan Quli Qutb; (Right) proposed reconstruction of a portion of arcade to highlight the historic enclosure wall surrounding the mausoleum of Sultan Quli Qutb; (Bottom) Completion of the enclosure wall of Sultan Quli Qutb Shah's Mausoleum-Garden.

CONSERVATION

10. Muhammad Qutb Shah's Mausoleum

GARDEN ENCLOSURE

Repairs on existing arcade was followed by reconstruction of the four arches on the north-west corner situated abutting Taramati's mausoleum, establishing a sense of enclosure and formality to the mausoleum of Muhammad Qutb Shah.

The north east corner of the garden enclosure, however, was largely obfuscated with the addition of modern materials like cement to the extent of disfiguring the historic wall surface.

Removal of 20th century cement and damaged plaster from the wall surface

Replastering of the wall surface and repairs on the arches using traditional lime mortar

ACTION TAKEN:

- Extensive plant roots and vegetation was removed from the wall surface and voids filled with rubble masonry and rich lime mortar.
- Excavations were carefully carried out to trace the original portions of the historic stone wall.
- Re-plastering of damaged wall surfaces was carried out by craftsmen in traditional lime mortar and finished with a 1 mm thin layer of slaked lime added with organic additives.
- Missing battlements in stone masonry walls were raised in portions where original battlements were found to be missing.
- Plinth protection was installed along the length of the restored enclosure wall as per the landscape masterplan. Four arches were reconstructed in on the north-west corner matching the existing in-situ evidence.

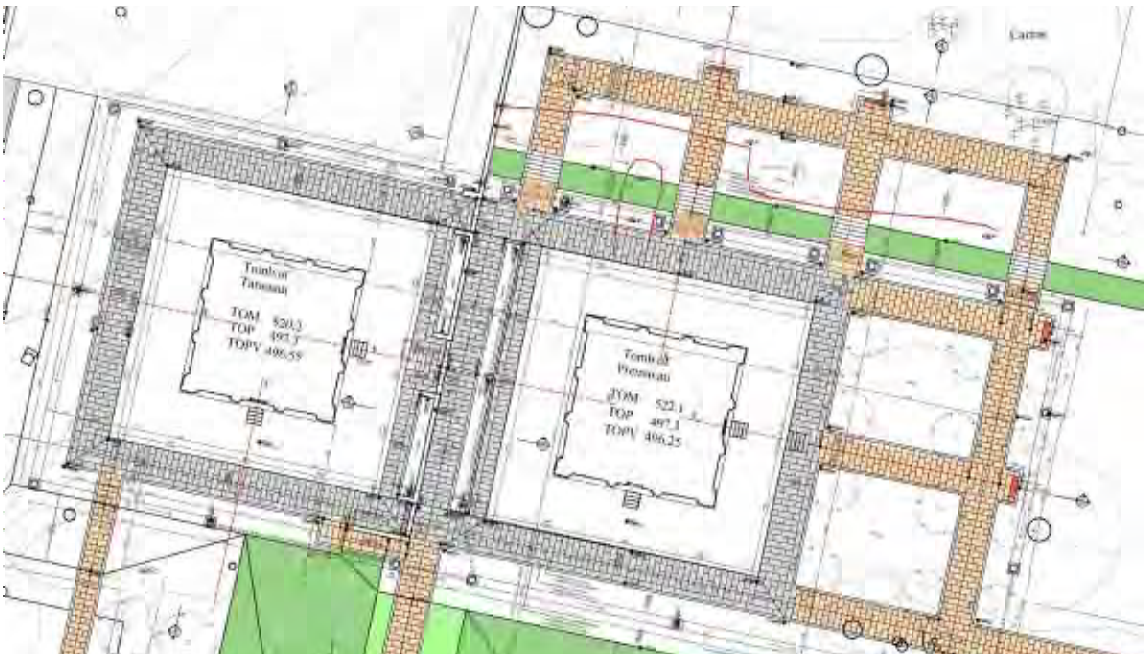
NEXT STEPS:

- Plinth protection abutting the enclosure wall situated to further west of Mosque situated at the south-western corner of Taramati's mausoleum will be laid and finished with Tandur stones to gradient as per the landscape plan.
- Appropriate earth grading shall be carried out adjacent to the plinth protection being installed along the extent of enclosure wall.
- Repairs of damaged portions on the enclosure wall will be carried out using rich traditional lime mortar by master craftsmen.

Repairs on the arches using traditional lime mortar; Repair and reconstruction of battlements was carried out

LANDSCAPE RESTORATION

11. Taramati & Premamati's Mausoleum

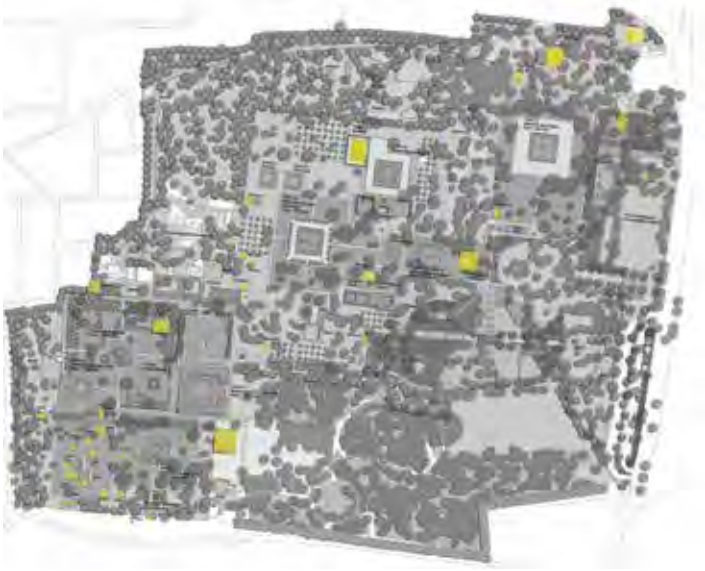


Proposed landscape plan for the mausoleums of Taramati and Premamati

ACTION TAKEN:

- Base work for the plinth protection around the mausoleums of Taramati and Premamati were completed. 100 mm thick granite stones labs were installed around the mausoleums.
- Rubble masonry steps on the eastern edge of the mausoleum of Taramati were constructed as per the design specified in the landscape masterplan.
- Several interconnected manholes were constructed to channel rainwater from the upper terrain behind Taramati's mausoleum to the nearest baoli.
- Edging stone along the plinth protection for the mausoleum of Taramati was installed.

(Below) Installation of edging stones along the recently constructed pathways being carried out along with the channelizing of rainwater for landscaping



IV

Mosques & Mausoleums

Multiple single-story tombs are situated in the south-west corner of the Qutb Shahi Heritage Park. These structures were built prior to the death of the person buried their size was dependent on the status of the individual building the tomb.

Small tomb structures comprising a single chamber of low height with openings on all four sides and covered with a shallow, almost flat dome.

Several of these smaller tombs have an arcaded verandah on all four sides, enclosing an octagonal internal mausoleum chamber with a terrace over it giving the tomb structure a stepped appearance. Though each arcaded bay of the verandah is roofed by a vault, there exists a usable flat roof above. These tomb types are covered with a bulbous dome.

There are 23 mosques within the site and all mosque structures are of a small scale indicating that these are essentially mosque structures attached to graves and tombs. All mosques are similar in plan and design, these being rectangular structures with an arcaded eastern side. Internally, the mosques are usually divided into three bays with each bay roofed with a shallow/flat dome. The facade of these mosques is marked by ornate parapets and multi-tiered corner parapet minarets capped by smaller dome shapes and shaft of the minarets is embellished with stucco details.

LANDSCAPE RESTORATION

12. Hakims'& Commander's Mausoleum

(Above) Conservation of the twin mausoleums of Hakims and abutting mausoleum of Commander was carried out by master craftsmen – stone carvers, stucco plasterers, masons, carpenters, and has generated over 6000 man-days of work

The conservation work on the twin mausoleums was completed towards the end of 2018 and opened for public in January 2019. Landscape development works were carried out simultaneously.

The area to the south of Commander's mausoleum forms a significant junction between the landscape development being done on one end to connect to the major access path from the main entrance plaza, cutting across the lake from Deccan Park area into the tombs complex. A detailed garden layout has been developed for this area incorporating the levels as well as the axial pathways from Deccan Park leading to the main approach pathway up to the mausoleum of Sultan Quli – the point of origin of the Tombs complex.

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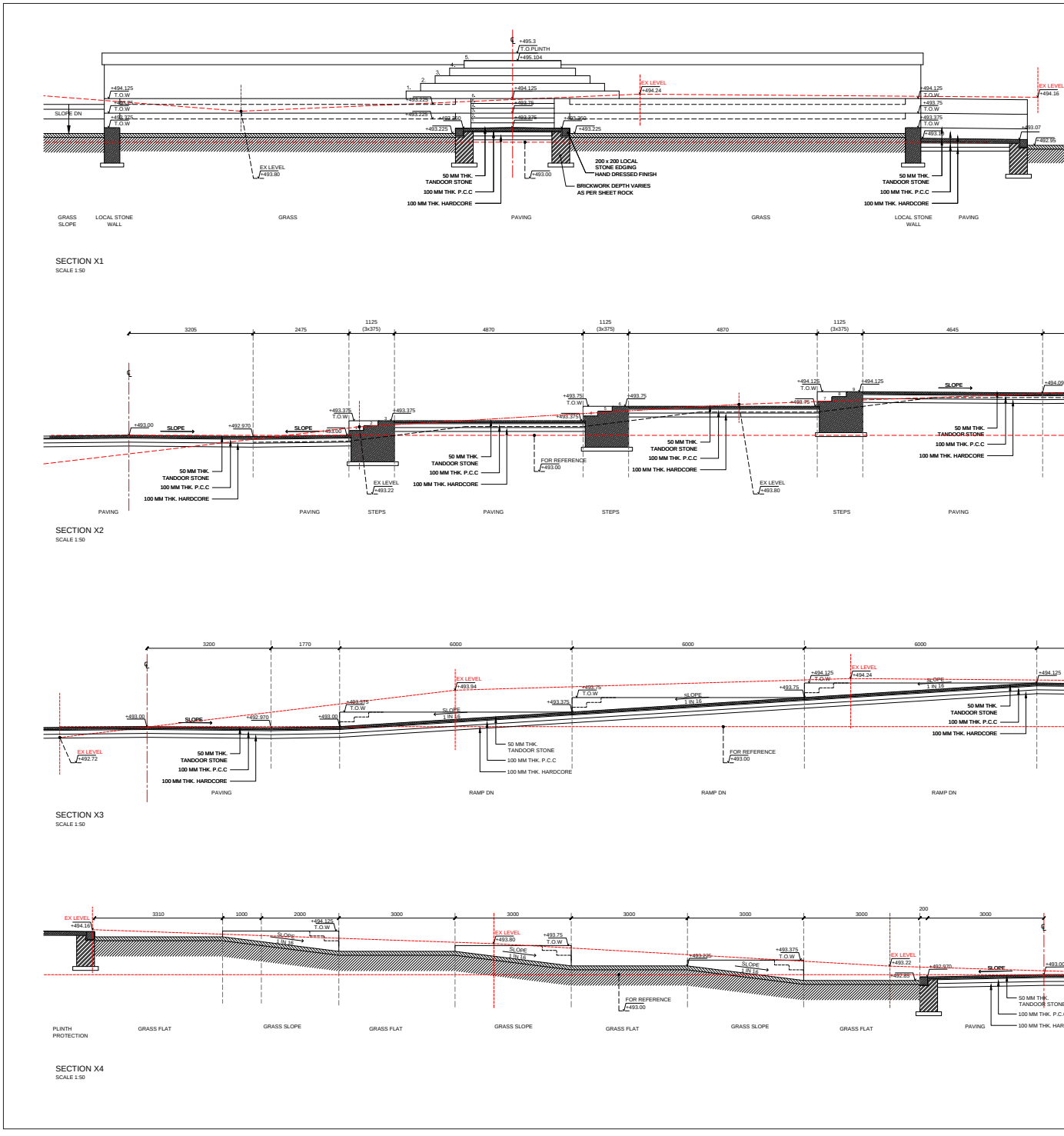
SWADESH DARSHAN

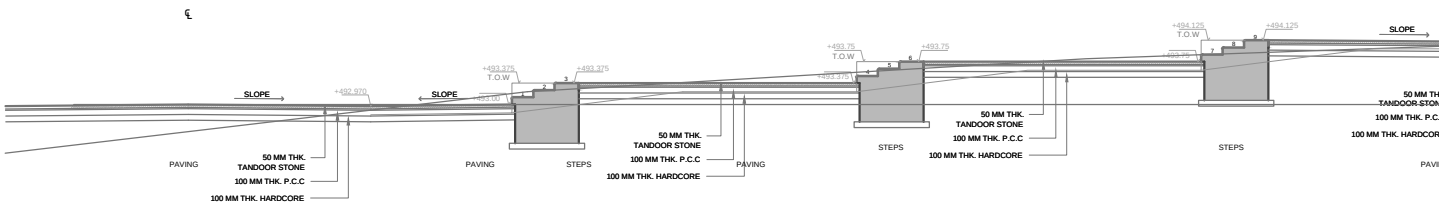
ACTION TAKEN:

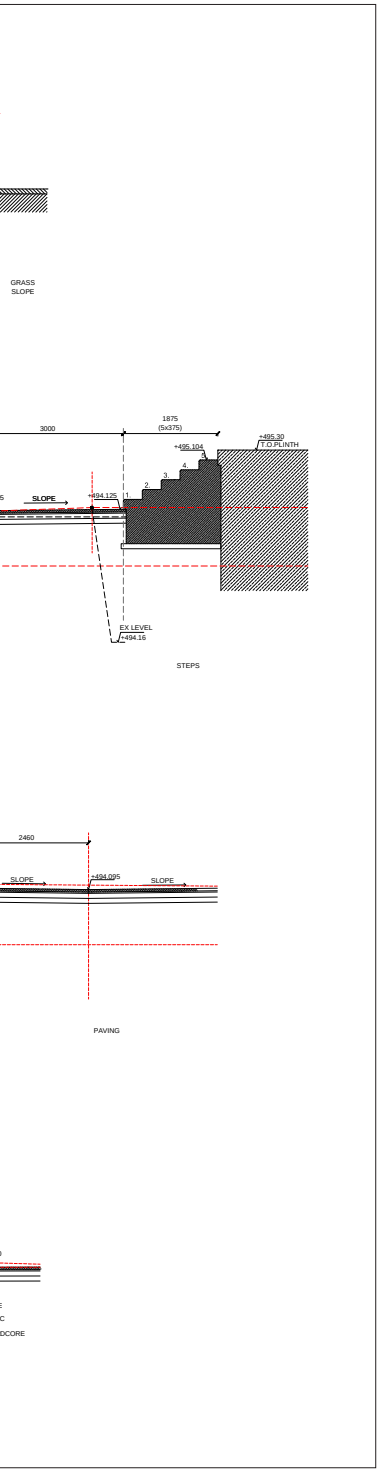
- Stone masonry walls are being built on the south side as per the landscape proposal with ramp access on the south east to accommodate the varying levels.
- Layout of the main plaza to the south was carried out and excavation works and the construction of brick retaining walls are being undertaken.
- PCC for the base of pathways of plaza is being laid.
- On the north side, pathways connecting to the mausoleums of Fatima Sultana and Hayat Bakshi Begum were laid on the eastern and western edge as per landscape proposal. They were finished with 50 mm thick Tandur stones as per approved pattern.
- Earth grading on the north side of the mausoleums is being carried out for laying of local grass.

(Top) Pathways were built connecting Fatima's mausoleum to Commander's mausoleum; (Bottom) Construction of steps as part of the plaza south of Commander's mausoleum



A stepped garden was designed at area south of the Commander's Mausoleum incorporating the difference in levels. This garden serves as an important junction between the main pathway from the main entrance leading to the east processional pathway of mausoleum of Sultan Quli Qutb Shah




GRASS
SLOPE
3000
1875
(5x375)
+495.30
T.O.PLINTH
+495.104
+494.125
SLOPE
EX LEVEL
+494.16
STEPS
2460
SLOPE
+494.095
SLOPE
PAVING
+495.30
T.O.PLINTH
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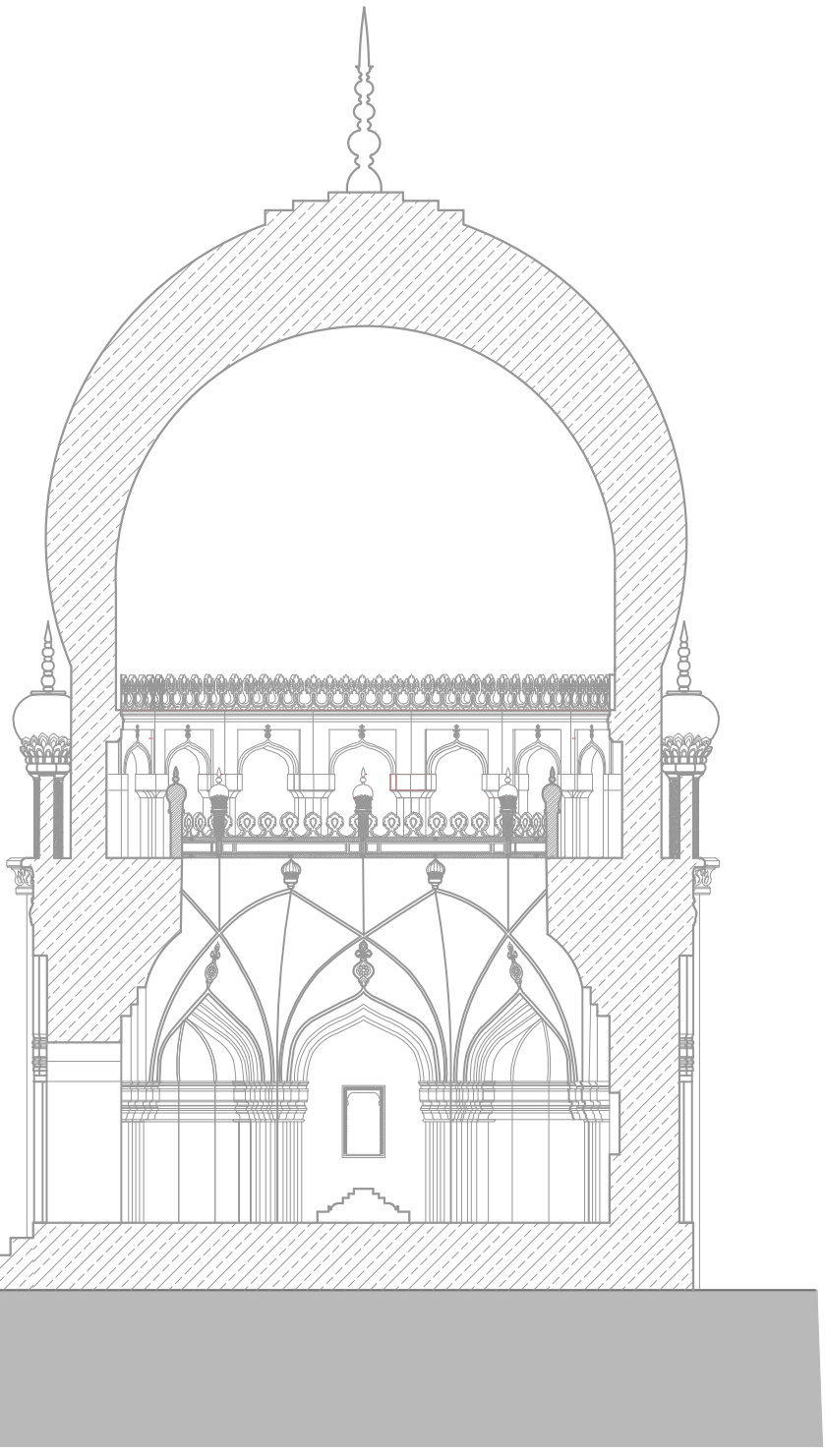
+494.095
SLOPE
+494.125
STEPS



13. Completion Ceremony of Conservation Works

The highly ornate mausoleums of Hakims and Commander were built in the 17th century are amongst the few prominent mausoleums in the Qutb Shahi necropolis built for non-royals. All three structures are profusely ornamented with stucco plaster and their majestic domes topped by copper finials. Conservation works on these three structures were carried out through 2017-2018 and were preceded with a 3D laser scanning that allowed a precise condition assessment of these significant monuments. Conservation works carried out by master craftsmen using traditional materials – lime mortar and stone and traditional building tools and techniques were supervised by a multi-disciplinary AKTC team. Over 15000 man-days of work were carried out by stone carvers, masons, plasterers, and stucco plaster specialist craftsmen.

Supported by:

Consulate General of the Federal Republic of Germany Chennai

Sri B. Venkatesham, IAS, Secretary, Government of Telangana kindly agreed to Preside at the completion ceremony for conservation works on Hakim's and Commander's Mausoleum on 4 January 2018 in the presence of Ms. Karin Stoll, Consul General, Consulate of the Federal Republic of Germany, Chennai.

Stucco works were missing or cemented over were restored in traditional lime mortar; similarly missing copper finial of Hakim's tomb required to be restored to the structure. Everywhere, 20th century cement plaster was carefully and scientifically removed. Removal of cement also revealed hidden layers of mouldings and stucco ornamentation. The cement plinths of the monuments have been replaced with traditional granite stone blocks – to ensure long term preservation of the structure. Stone carvers were required to create missing stone blocks for the Hakim's Tombs – carefully matching the original. Each of the minarets at Hakim's mausoleums parapet were reconstructed to restore historic architectural character.

Conservation works on the 80 monuments that stand within the Qutb Shahi Heritage Park commenced in January 2013 following a MoU between the Department of Heritage, Government of Telangana and Aga Khan Trust for Culture. For the Conservation effort at Hakim's and Commander's mausoleum, the support to AKTC by the Federal Republic of Germany is part of Germany's Cultural Preservation Programme and has been provided through the Consulate General of the in Chennai. Conservation works on the other monuments within the Qutb Shahi Heritage Park will continue up till 2023.

Ms. Karin Stoll, Consul General, Consulate of the Federal Republic of Germany, Chennai, Mr. B. Venkatesham, IAS, Secretary, Government of Telangana, Ms. N.R.Visalatchy, Director, Department of Heritage, Government of Telangana and Mr. Ratish Nanda, Chief Executive Officer, Aga Khan Trust for Culture visited the Qutb Shahi Heritage Park to mark the completion of the conservation efforts at the twin mausoleums of Hakims and Commander.
Multidisciplinary team of Aga Khan Trust for Culture explained the conservation works carried out at the mausoleums to visiting dignitaries.





















ADAPTIVE REUSE

14. Hamam: Serai

(Above) Proposed design for the office space for the Department of Heritage Telangana, Govt of Telangana

Archival images from the 1860s revealed that the north and eastern wings of the arcade were missing and these were reconstructed in 2017-18. In 2019, plaster repairs using lime mortar, installation of stone inside arcade were followed by the installation of a glass facade held together by metal sections. Glass facade will cover the reconstructed arcade overlooking the internal courtyard and this space will be reused as the new office and an archive library for historic documents of the Department of Heritage, Government of Telangana.

ACTION TAKEN:

- Work at the reconstructed arched corridors of the proposed department office and exhibition space is in progress and the brick shuttering supporting the arches was removed.
- The arch facades were plastered using lime plaster and finished with a thin coat of lime punning both internally and externally, and all the moulding bands and ornamental arch crowns added in accordance to the design.
- The flooring pattern of the proposed department office and exhibition space was finalized and installed in accordance to the approved layout and appropriate slope.
- Façade skin comprising of steel members and glass was erected at one of the internal arches as sample for approval. Following approval, works are being undertaken for erection of similar skin to develop the space as site office for the Department of Heritage.
- The earth in the courtyard has been duly graded as per the landscape proposal.

NEXT STEPS:

Installation of glass panels in between the vertically erected steel members will be carried out in 2020.

The arch facades were plastered after removal of brick shuttering

Installation of flooring inside the arcade

Sample facade skin for the proposed office space

Grading of earth in the courtyard

LANDSCAPE RESTORATION

15. Hamam: Forecourt

The south façade of the Hamam including the Serai spans over a length of 100 metres with varying internal floor levels. Cement concrete in enormous quantities was laid in the 20th century along the southern edge of the entire structure thereby altering the original ground levels.

To accommodate the 2.0 metre drop of internal flooring from the west to the eastern edge of the façade, plinth protection and pathways on the forecourt for this structure with connecting ramps and plaza were proposed. The aqueduct running from the west to the east on the southern side of Hamam was decided to be covered partially and exposed towards the east side.

IMPACT:

Development of Hamam forecourt would provide proper access to Hamam, Serai and the proposed office space. Original levels of Hamam were revealed enhancing the grandeur of the monument. Water draining towards the aqueduct would ensure adequate surface water drainage which would eventually be collected in the Badi Baoli, thus conserving water for future use.

ACTION TAKEN:

- 300 mm thick cement concrete was dismantled and excess earth from the edge of the structure was removed.
- The entrances to the Hamam Serai were marked and connected with a ramp having an appropriate gradient for barrier free access. Base works were carried out for plinth protection.
- Hand chiseled dressed stone steps were installed at the entrance to the Serai.
- The 6.4 M wide plinth protection was finished with 100 mm thick natural rough granite stones and a 1.0 M wide interconnection of similar finish in graded profile. The stones were graded towards the aqueduct for surface water discharge.
- The plinth protection of Hamam was finished with natural rough granite with the top level being a minimum 150 mm below the original internal flooring level.
- Retaining walls were built around the holding earth of the Peepal tree abutting the monument.
- Walls were built on both sides of the aqueduct, 150 mm away from the edge, covered with 100 mm thick granite slabs at the western portion and exposed on the east.
- Base work for the access pathway and interconnections to the central garden north of mausoleum of Mohammed Quli Qutb Shah were completed with brick retaining walls and concrete in-between.
- Grading of earth along the pathway and plinth protection were carried out as per the landscape proposal.

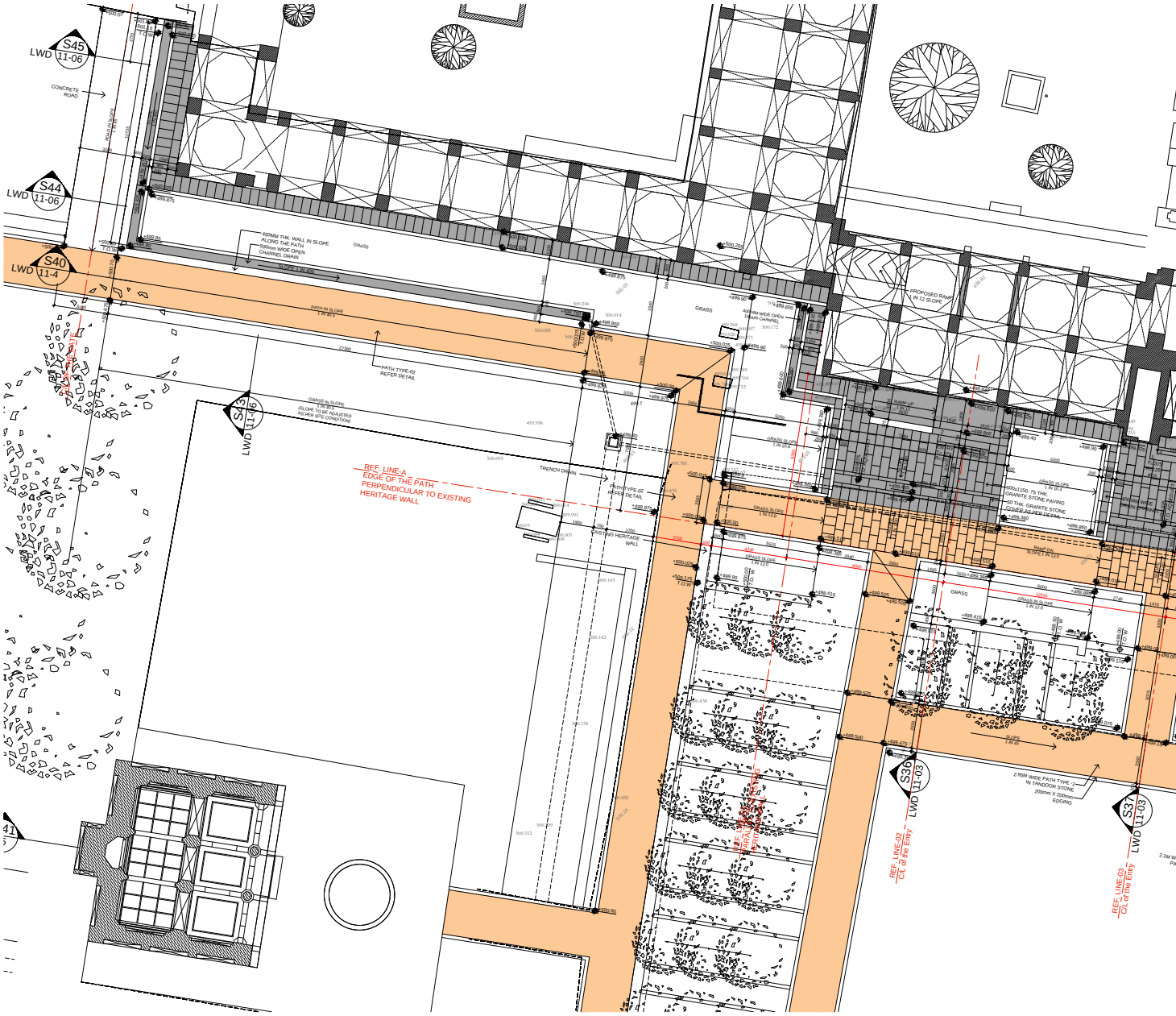
Repairs on the aqueduct discovered on removal of filled earth

Ramp built for ease of access to the serai

6.4 meters wide plinth protection was finished with 100 mm thick natural rough granite stones with the grading towards the aqueduct. Care was taken that the historic water channel running at the south of Hamam is not affected and is being covered with granite stone slabs

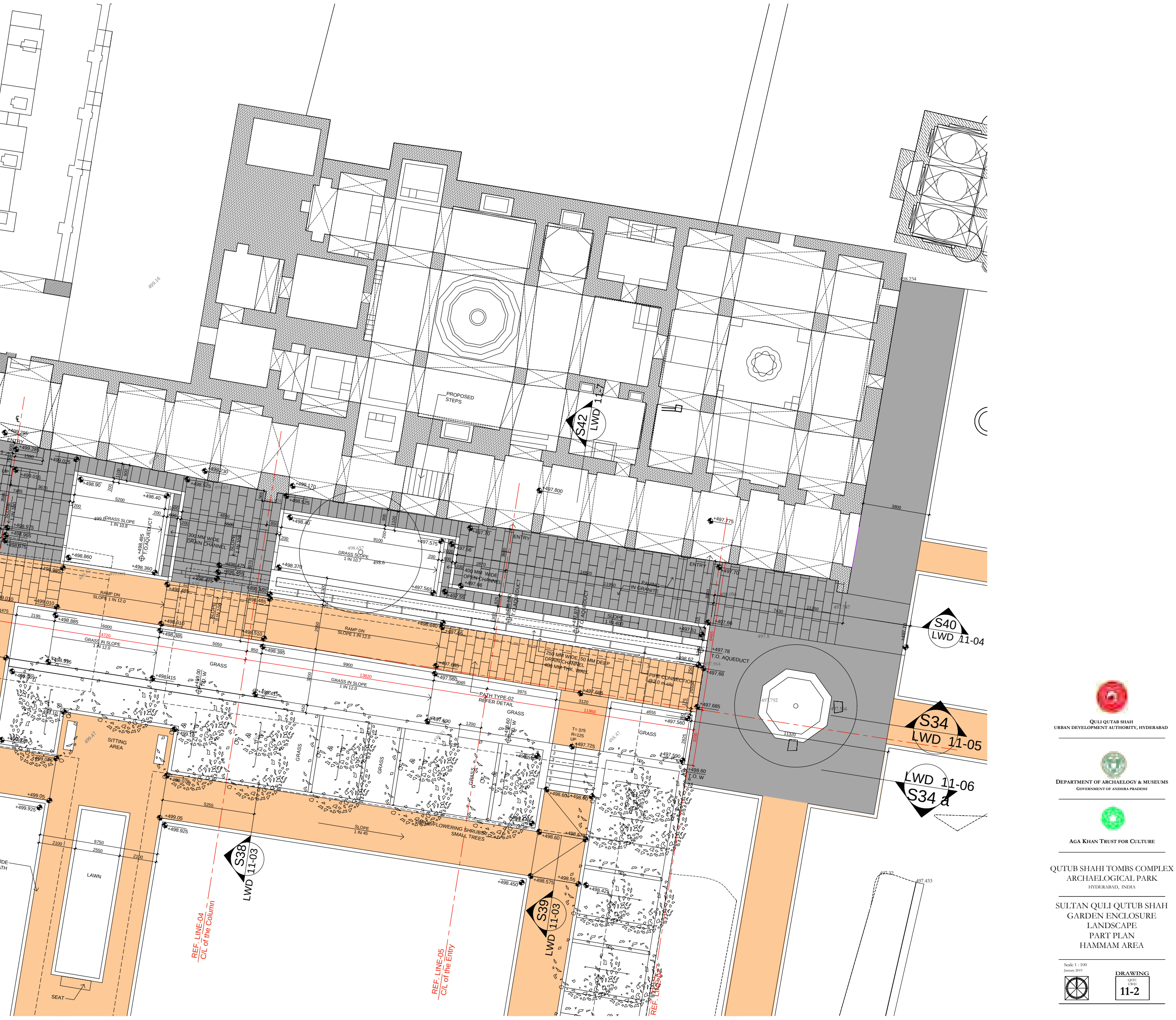
NEXT STEPS:

- The pathways shall be finished with 50 mm thick Tandur stones.
- Base work for the entrance court to the Hamam shall be undertaken and completed with 100 mm thick natural granite stones laid to appropriate pattern and slope as per the landscape proposal.
- Local grass shall be laid in the areas between the pathways and plinth protection.
- A catch basin shall be built on the eastern edge of the aqueduct, connected to Badi Baoli for surface water collection.



The Hamam Forecourt:

Following removal of the 30 cm thick cement concrete running west to east along the southern facade of Hamam and the adjoining Serai, plinth protection was carefully designed. Entry courts at strategic points of Hamam and the Serai were provided with connecting slopes to provide barrier free access. Grass slopes along the graded pathways were provided with drainage leading to the historic aqueduct. The existing historic Banyan Tree adjoining the main structure has been carefully retained and incorporated in the design.



A portion of an aqueduct was exposed south of Hamam as a part of the landscape masterplan

Retaining walls were built around the holding earth of the Peepal tree abutting the monument

CONSERVATION

16. Mosque south west of Taramati's Mausoleum

This mosque is situated to the south of Taramati's mausoleum, and it covers an area of 16.66 x 12.58m, stands on a plinth having an area of 20.15x34.3m and is approachable through a raised plinth.

The internal chamber of the mosque consists of three arched bays. Each of the three bays is covered by a shallow dome with a central ornamental medallion.

FACADE RESTORATION

The external façades of the mosque were covered with 20th century cement, multiple layers of limewash and several lattice screens and minarets situated on the parapet were found in a damaged state.

ACTION TAKEN:

- Scaffolding has been erected around the perimeter of the structure on northern, western and southern sides.
- 20th-century cement and white-wash layers are being carefully removed to reveal the original appearance of the structure.
- Plaster repairs are being carried out on the northern, western and southern walls by master craftsmen using traditional lime mortar.
- Repairs with traditional lime mortar followed by lime punning have been finished on the internal and internal surfaces.

Floral details restored with traditional lime plaster

Final lime punning of the internal surface

MINARETS & FINIALS

Sections of the corner minaret had collapsed before conservation.

The ornamental stucco details, missing minarets and finials on top of them were restored using traditional lime mortar

Craftsmen restoring the missing minarets on the parapet based on existing evidence

Missing finials installed on corner minars

ACTION TAKEN:

- Collapsed portions of corner minarets at the parapet level were reinstated.
- Reconstruction of missing and restoration of partially damaged minarets has been carried out by master craftsmen using traditional lime mortar.

TERRACE

The terrace showed visible signs of water seepage inside the mausoleum.

Ramming of the new terrace lime concrete

(Left) Existing terrace in a dilapidated condition

ACTION TAKEN:

- There were evident signs of water seepage from the terrace inside the structure. Repairs on terrace concrete were undertaken and new terrace lime concrete was laid to appropriate slope.
- Dilapidated terrace layer leading to seepage of water was carefully dismantled and traditional lime concrete was laid coupled with installation of projected waterspouts on the western edge to channel rainwater away from the structure.

NEXT STEPS:

Installation of granite stone slabs will be carried out inside the mosque in appropriate layout.

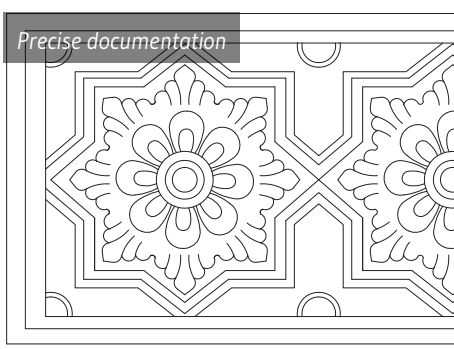
CONSERVATION

17. Mosque west of mausoleum of Mohd. Qutb Shah

It covers an area of 16.66 m x 12.58 m. The eastern facade of the mosque has three arched openings. The arches have intricate mouldings, arch crowns and medallions. A rectilinear band surrounds each arched bay. The projected eave is supported by stone brackets and beams, with lime stucco patterns between the brackets.

Existing detail on the mosque

Traces of original detail found



Precise documentation

(Clockwise from left) The external facade of the mosque was repaired with lime mortar after removal of 20th century cement and white wash layers; Restoration of decorative plasterwork on parapet; Craftsmen repairing and restoring the battlements

EXTERNAL AND INTERNAL FACADES

The external façades of the mosque were covered with 20th century cement, multiple layers of limewash and several portions of decorative plasterwork and minarets situated on the parapet were found in a damaged state. Six minarets on the western parapet were found in a damaged state and had to be reconstructed matching the existing evidence at site. Archival evidence of ornamental medallions was revealed after removal of twentieth century plaster layers.

ACTION TAKEN:

- Scaffolding has been erected around the perimeter of the structure on northern, western and southern sides.
- 20th century cement and white-wash layers are being carefully removed to reveal the original appearance of the structure.
- Plaster repairs are being carried out on the northern, western and southern walls by master craftsmen using traditional lime mortar.
- Repairs with traditional lime mortar followed by lime punning have been finished on the internal and internal surfaces.
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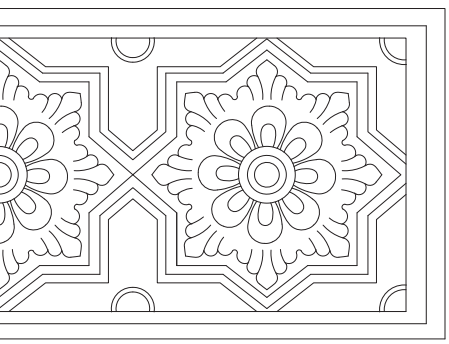


(Top) Restoration of details and minarets on the parapet; (Bottom Left) Repairs on the collapsed portions of a minaret and installation of missing finial on top; (Bottom Right) Missing minarets were restored using traditional lime mortar

MINARETS & FINIALS

Sections of the corner minaret had collapsed before conservation.

ACTION TAKEN:

- Collapsed portions of corner minarets at the parapet level were reinstated.
- Reconstruction of missing and restoration of partially damaged minarets has been carried out by master craftsmen using traditional lime mortar.

CRAFTSMANSHIP

Conservation works at the Qutb Shahi Heritage Park are carried out using traditional buildings materials like lime and organic additives, and carried out with tools like chisels and hammers to ensure long-term preservation which will require minimum preventive maintenance in the future. Traditional building construction technologies are to be employed for conserving these monuments.

These techniques are time tested and utilize traditional knowledge systems. The use of traditional lime plaster prepared under strict supervision and applied by master craftsmen will help the buildings survive for a considerable time, thus negating the need for subsequent conservation in the future. Conservation works will be carried under the supervision of a multidisciplinary team comprising of conservation architects, engineers, craftsmen, masons, craftsmen.

CONSERVATION

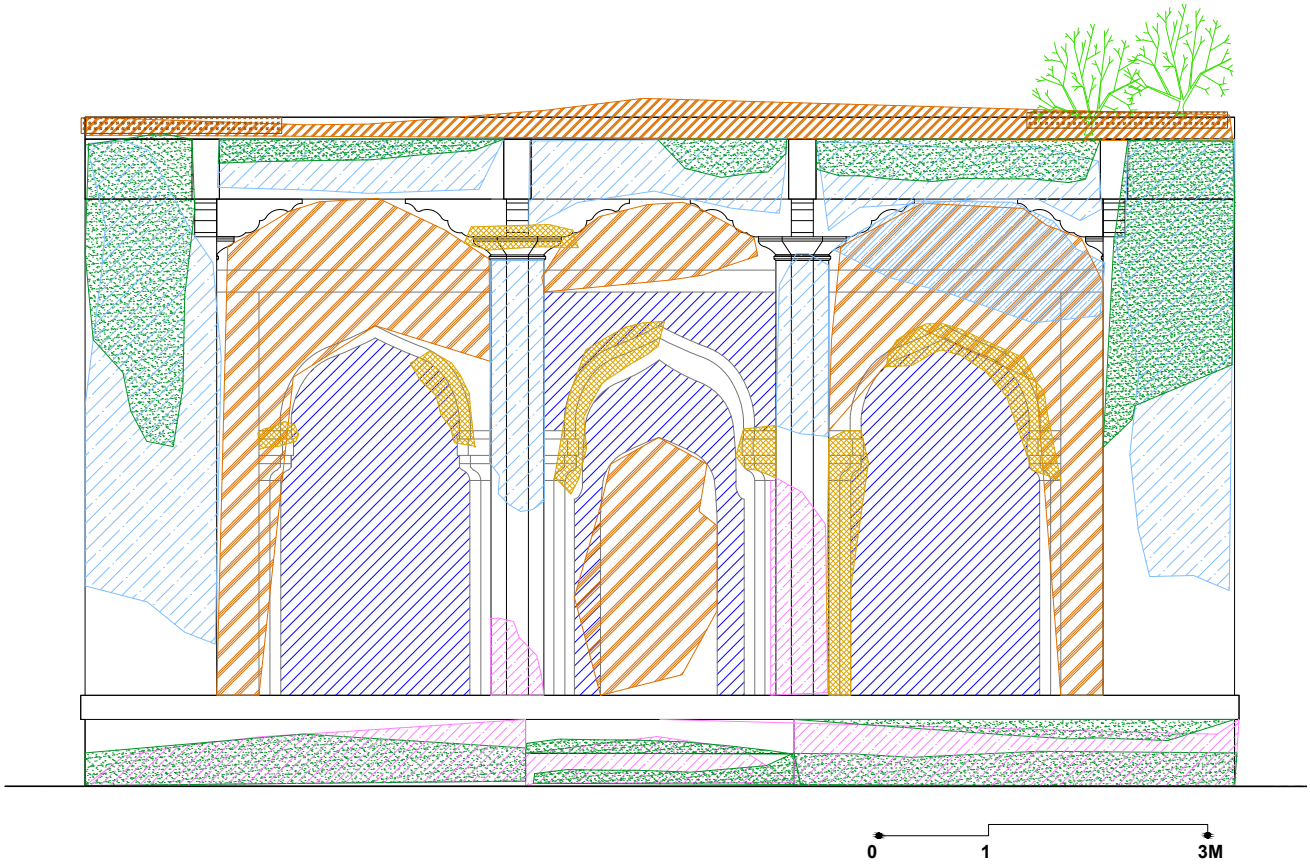
18. Mosque south west of Hamam

Above: The mosque after conservation. Facing Page: Image of mosque before conservation

This mosque situated to the west of the forecourt of Muhammad Quli's mausoleum, covers an area of 10.48m x10.735m.

The western, northern and southern façade has three blind arches each. The eastern façade of the mosque has three arched openings with a projected porch held up by two dressed granite octagonal columns dividing the porch into three bays. The projected porch eave is supported by dressed stone brackets and beams.

The internal chamber of the mosque consists of three arched bays covered by a flat roof having a coffered ceiling. The central projected mihrab is five-sided with no ornamentation. Existing parapet on the mosque was missing.



EAST ELEVATION - CONDITIONAL ASSESSMENT

TERRACE & FACADES

The terrace showed visible signs of water seepage inside the mausoleum. The external façades of the mosque were covered with 20th century cement, multiple layers of lime wash and several portions of the recessed blind arches were found missing on the western and northern facades damaged state. Deep plant roots were visible on the internal facades and layers of cement plaster was covering the wall surfaces. Terrace was leaking with large tree roots visible on the surface and waterspouts were found missing on the western parapet.

ACTION TAKEN:

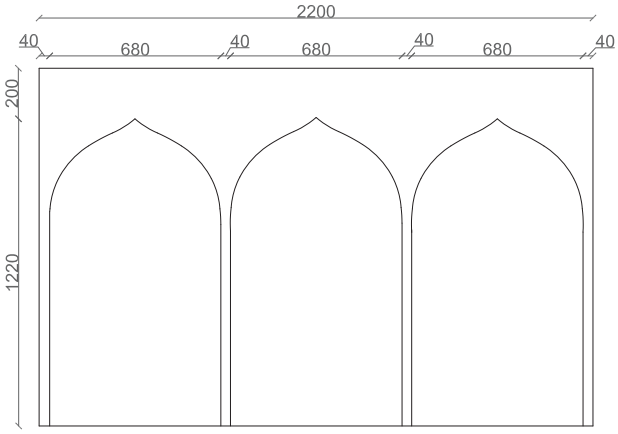
- There were evident signs of water seepage from the terrace inside the structure. Repairs on terrace concrete were undertaken and new terrace lime concrete was laid to appropriate slope.
- Missing parapet was reconstructed in rubble masonry with lime mortar and finished with traditional lime plaster by master craftsmen.
- Dilapidated terrace layer leading to seepage of water was carefully dismantled and traditional lime concrete was laid coupled with installation of projected waterspouts on the western edge to channel rainwater away from the structure.
- 20th-century cement and white-wash layers were carefully removed to reveal the original appearance of the structure.
- Plaster repairs are being carried out on the northern, western and southern walls by master craftsmen using traditional lime mortar.
- Repairs with traditional lime mortar followed by lime punning have been finished on the external and internal surfaces.
- Missing blind arches on the northern and western external facades were reconstructed using honey comb brick shuttering and allowed to set for a period of 30 days.

Removal of cement

Repairs with traditional lime mortar

Final lime punning of the brackets after they were restored

Before Conservation



Reconstruction of arches using honey comb brick shuttering

After Conservation

CONSERVATION

19. Mosque No. 12

This mosque situated to the west of the forecourt of Muhammad Quli's mausoleum, covers an area of 10.48m x10.735m.

The western, northern and southern façade has three blind arches each. The eastern façade of the mosque has three arched openings with a projected porch held up by two dressed granite octagonal columns dividing the porch into three bays. The projected porch eave is supported by dressed stone brackets and beams.

The internal chamber of the mosque consists of three arched bays covered by a flat roof having a coffered ceiling. The central projected mihrab is five-sided with no ornamentation. Existing parapet on the mosque was missing.

IMPACT:

Restoration of internal and external facades has helped in long term preservation of the monument by removal of 20th century cement thereby reducing the seepage of water on the monument. Installation of lime concrete on the terrace has stopped the water ingress into the structure coupled with installation of stone waterspouts, will prolong life of the mausoleum.

TERRACE & FACADES

ACTION TAKEN:

- 20th century cement plaster was scraped and removed on the south, west and north façades.
- The north, south and west facades of the mosque was plastered using traditional lime mortar and finished with a finishing layer of lime punning.
- The floral stucco moulding bands above the brackets supporting the eaves have been restored by the master lime craftsmen.
- Cement plaster and multiple layers of whitewash were removed from the internal wall and ceiling surfaces.
- Repairs on the internal surfaces were carried out using traditional lime mortar and finished with a 1mm thin layer of lime punning made with matured lime putty mixed with organic additives.
- 20th century cement concrete was removed from inside the mosque and replaced with traditional lime concrete.
- Repairs were carried out on the merlons of the mosque and the broken merlons of the minars were reconstructed to match the existing merlons.
- During the process of scraping and restoration, historic evidence of merlons below the parapet was revealed on the western facade.
- Lime concrete was re-laid in appropriate slopes on the terrace along with the installation of two projecting stone waterspouts on the western edge to channel rainwater away from the structure.
- Missing finials on the minars were reinstated based on in-situ evidence.
- 20th century cement layer from the minars was removed, and the parapet minar surfaces were re-plastered using traditional lime plaster and finished with a thin coat of lime punning.
- Missing and broken details on the minars were restored by master craftsmen using traditional lime plaster and finished with a thin coat of lime punning.

Stucco details restored

LANDSCAPE RESTORATION

20.Southern Gateway

Landscaping was carried out in the region to the immediate west of the ramp constructed for connecting the Southern Gateway to the pathway constructed parallel to the Mausoleum of Ibrahim Quli Qutb Shah.

Supported by:

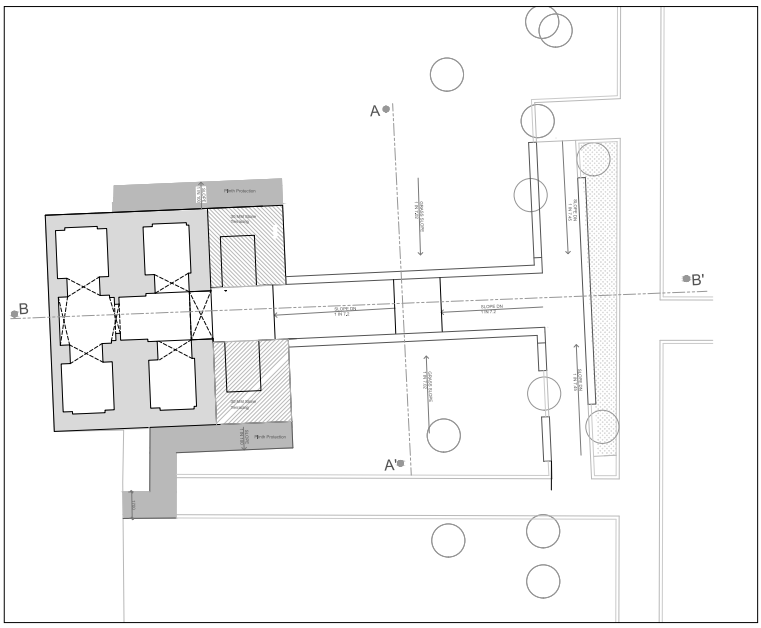
SWADESH DARSHAN

ACTION TAKEN:

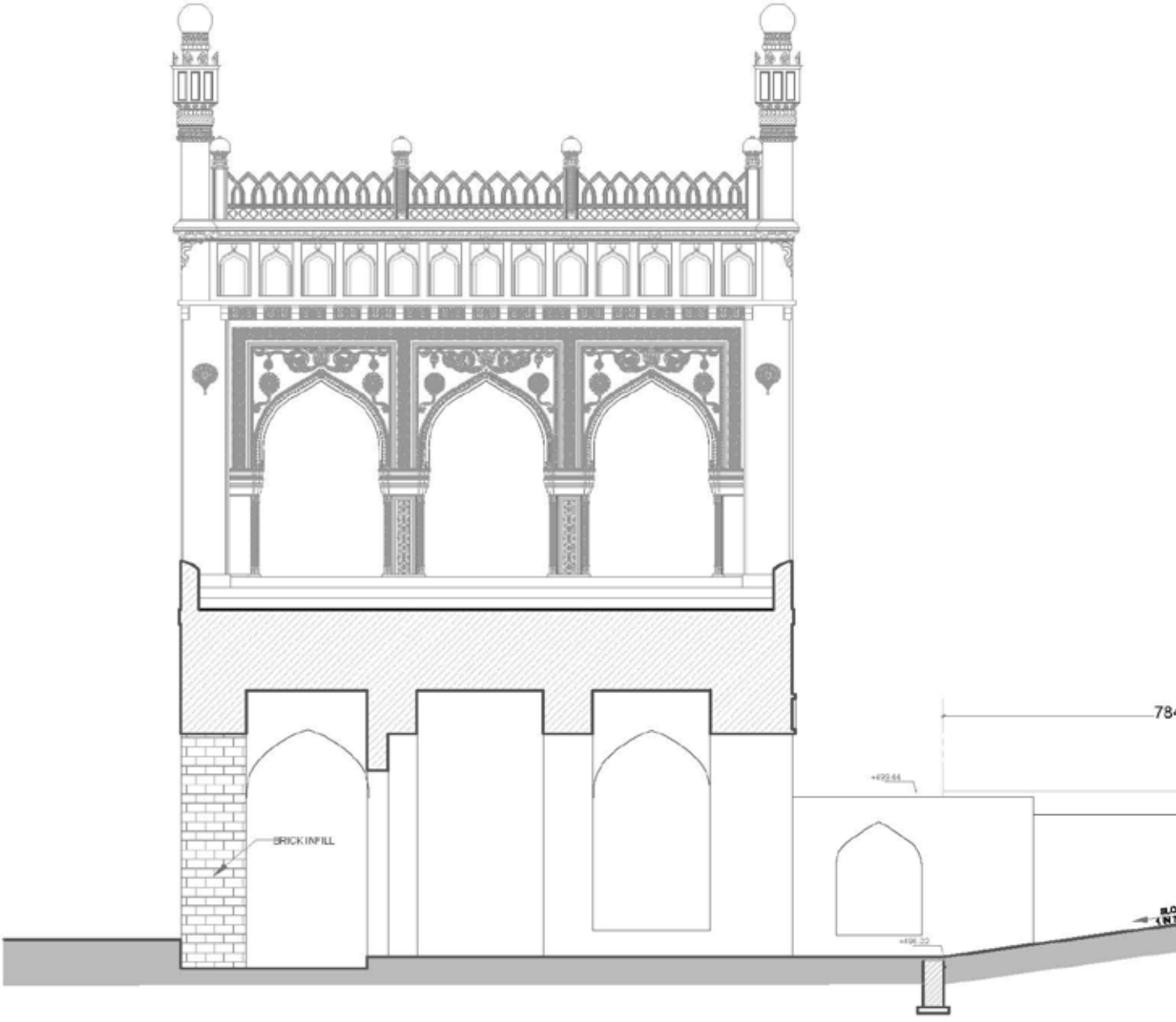
- The work on the pathways connecting the Southern Gateway to the tombs and the unknown tombs in the South West quadrant have been completed including preparation of base, brickwork retaining walls (near mosque above the southern gateway) and 50 mm thick Tandur stones that are laid in accordance to the landscape proposal.
- Tandur stones were laid on the ramp joining the western peripheral pathway in the south-west quadrant to the South Gate, which is linked with the historic pedestrian linkage to Golconda Forts outer fortification.

NEXT STEPS:

- The work on the pathways connecting the Southern Gateway to the tombs and the unknown tombs in the South West quadrant have been completed including preparation of base, brickwork retaining walls (near mosque above the southern gateway) and 50 mm thick Tandur stones that are laid in accordance to the landscape proposal.
- Tandur stones were laid on the ramp joining the western peripheral pathway in the south-west quadrant to the South Gate, which is linked with the historic pedestrian linkage to Golconda Forts outer fortification.

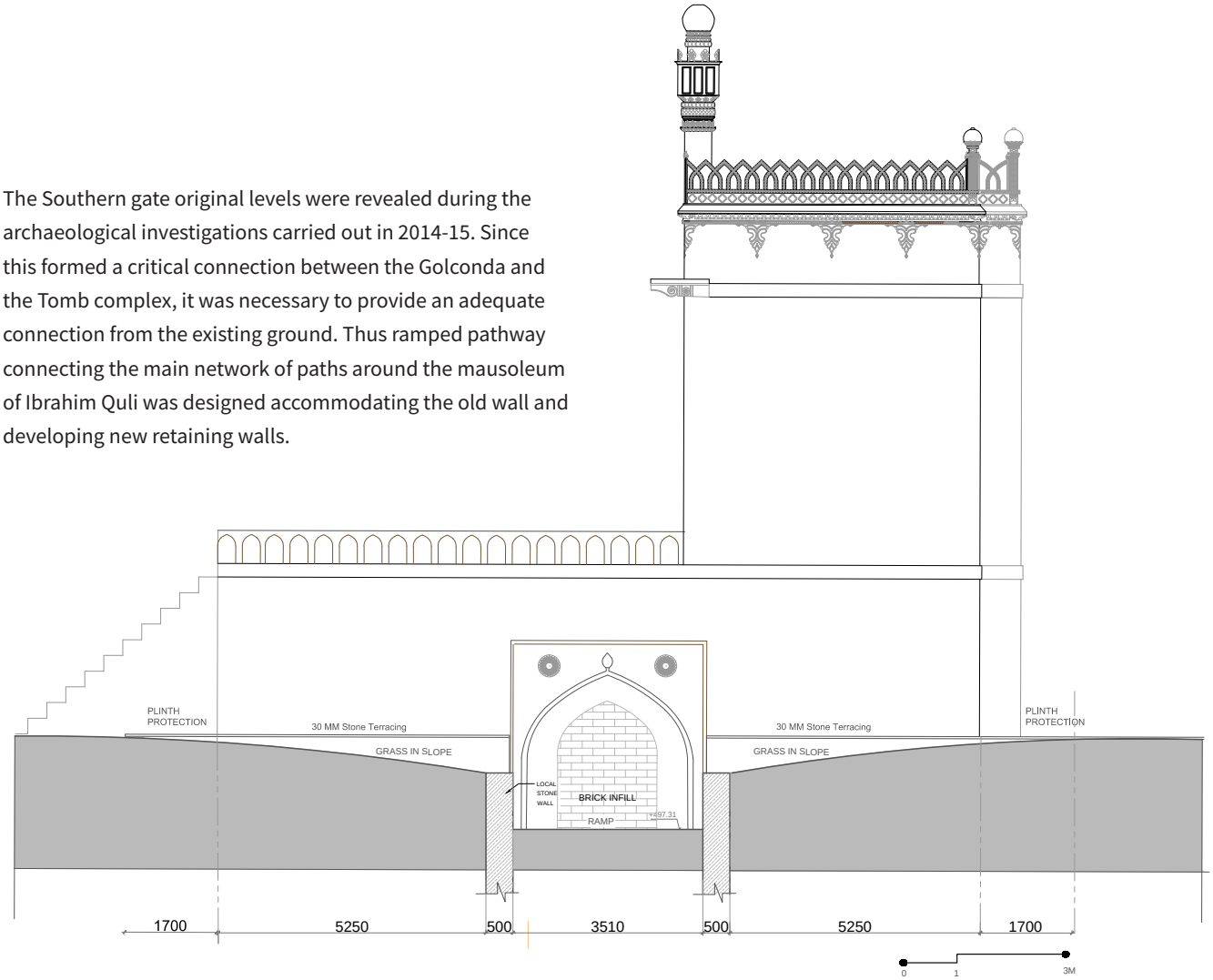


Key Plan - South Gate Landscape Development

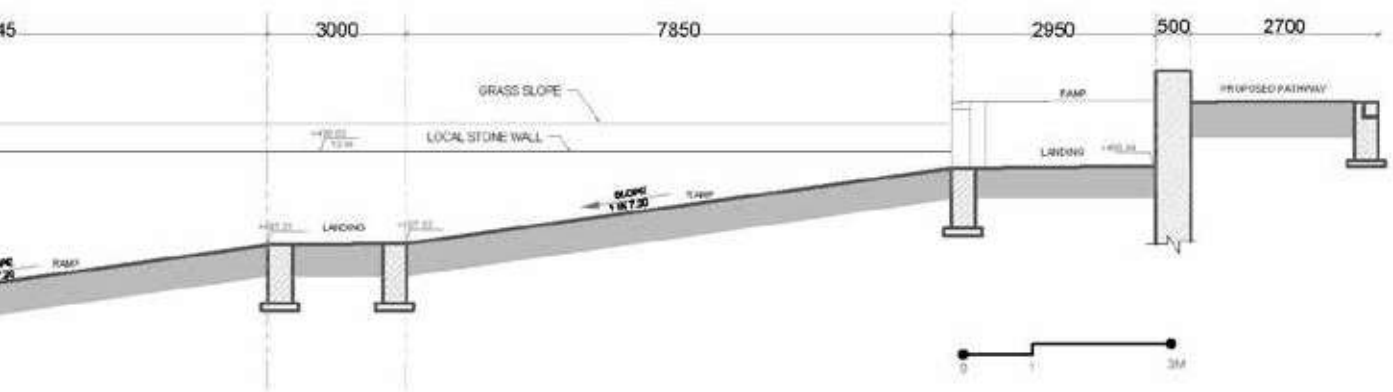


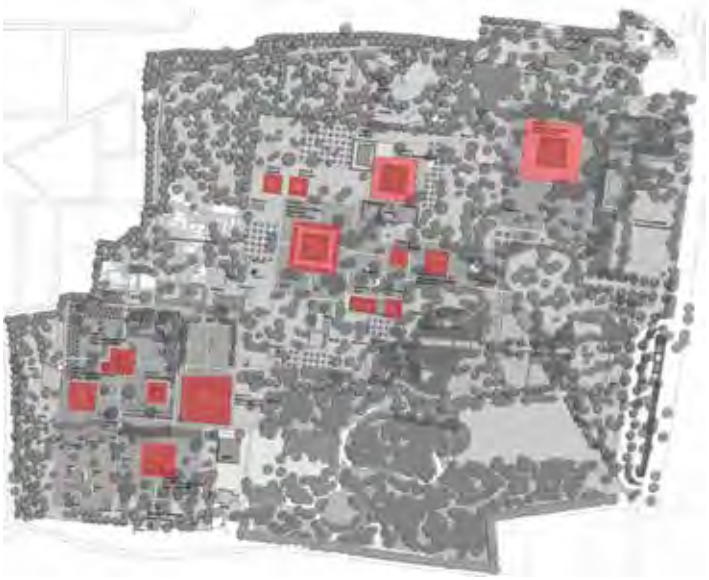
Architectural Drawing Section BB

The Southern gate original levels were revealed during the archaeological investigations carried out in 2014-15. Since this formed a critical connection between the Golconda and the Tomb complex, it was necessary to provide an adequate connection from the existing ground. Thus ramped pathway connecting the main network of paths around the mausoleum of Ibrahim Quli was designed accommodating the old wall and developing new retaining walls.



Architectural Drawing Section AA





V

Swadesh Darshan Scheme

The Union Budget Speech of 2015 pledged development works at Qutb Shahi Heritage Park along with seven other sites in the country. Funds were channelized through the Swadesh Darshan Scheme of the Ministry of Tourism, Government of India, which promoted integrated development of theme based tourist circuit. Under this grant, landscape works, design development and proposed construction of Qutb Shahi Interpretation Centre at the Qutb Shahi Heritage Park, and landscape development at the Paigah Tombs, Raymond's Tomb, and Hayat Bakshi Begum's mosque are being funded. Landscape works at the Qutb Shahi Heritage Park and Paigah Tombs are being carried out by the Aga Khan Trust for Culture in partnership with the Department of Heritage, Government of Telangana. Landscape works at the Raymond's Tomb and Hayat Bakshi Begum's mosque are being carried by Telangana State Tourism Development Corporation in partnership with the Department of Heritage, Government of Telangana.

(Above) Proposed view of the underground Qutb Shahi Interpretation Centre; (Left) Paigah Tombs Complex; (Centre) Raymond Tomb; (Right) Hayat Bakshi's Mosque

CONSERVATION

21. Qutb Shahi Interpretation Centre

To enhance visitor experience for those visiting the Qutb Shahi Heritage Park and the adjoining Golconda Fort, an interpretation centre is proposed to be built at the entrance of the Qutb Shahi Heritage Park, in a zone presently known as the Deccan Park.

View of entry to the proposed Interpretation Centre. The existing ground will be sunk to allow proper light and ventilation while taking care not to obstruct the view of the monuments from the Centre.

Objectives of Qutb Shahi Interpretation Centre:

- Showcase the rich building tradition of the Qutb Shahi dynasty
- Present the evolution of the Qutb Shahi royal necropolis, Golconda Fort and the area around it.
- Display objects of antiquity from the Qutb Shahi period.
- Provide tourist amenities such as exhibition galleries, children orientation gallery, restaurants, toilets, and museum shop.
- It is hoped that the proposed interpretation center will also serve as a gateway to the sites of Deccan sultanates such as Bidar, Bijapur, Gulbarga – all of which are jointly being proposed for World Heritage Site nomination.

The Interpretation Centre will serve as the nodal repository for disseminating information and enhancing understanding related to the Qutb Shahi heritage of

Hyderabad. Here, visitors will experience and learn about the history, achievements in art and architecture of the Qutb Shahi rulers as well as their contemporary Deccan sultanates.

The unique and distinct architectural styles of the Qutb Shahi's and other Deccan sultanates are not well known and the Interpretation centre will draw upon primary research, learning through

the on-going conservation effort to engage visitors.

It is hoped that the building of the Interpretation Centre, will lead to a significant increase in visitor numbers to the Qutb Shahi Heritage Park – where stand 80 major monuments.

Some views of the Interpretation Centre:


Qutb Shahi Gallery


Entrance Zone


Orientation Court


Ramped Cafe-Court

ACTION TAKEN:

- Six Architects with experience in similar works were invited to study the site and propose an ideal design of the Interpretation Centre. A meticulously drafted Design brief was provided to them for their understanding of the requirement and purpose. They were called to the site to get an idea of the setting and the requisite.
- The six shortlisted architectural firms were invited to present their conceptual designs for the proposed interpretation centre in the Deccan Park area. They submitted the design on April following which review and selection of the final design was undertaken.
- The committee formulated by the Department of Heritage, Government of Telangana, selected the winning entry after assessing the designs presented.
- Studio Lotus was selected for the design of the Interpretation Centre by the committee.
- A series of discussions on the approved concept of the Interpretation Centre were held with Studio Lotus to finalize the design.
- The final design was marked on the proposed location for review and necessary changes were incorporated in design accommodating all the native trees existing on the site.
- Discussions were held on the pattern of services including HVAC, electrical, fire safety, water supply and sewage.
- A site review of the layout was held with the Director, Department of Heritage Telangana, explaining him the layout on the site for approval.
- Drawings of the final design of the Interpretation Centre has been submitted to the Govt. of Telangana for necessary statutory approvals.
- Tender drawings, estimates and BoQ for the works have been submitted to Telangana State Tourism Development Corporation for invitation of bids and commence construction works.

CONSERVATION

22. Paigah Tombs

Above: Aerial view showing the Paigah Tombs Complex
Facing Page: intricate ornamental lime stucco details around the doorways of one of the tombs

The Paigah tombs are the resting place of the Paigah family of Hyderabad. Known for their undoubted loyalty to the Nizams, the Paigahs were one of the most influential and powerful nobles of the time. Their affluence is reflected in the intricately carved marble tombstones.
Built in the 18th century, the small complex of the Paigah tombs is a unique ensemble with no comparative site anywhere in the world boasting of the incredible craftsmanship employed by the Hyderabadi craftsmen. The structures boast of fine lattice screens and incised plasterwork – both in lime mortar.

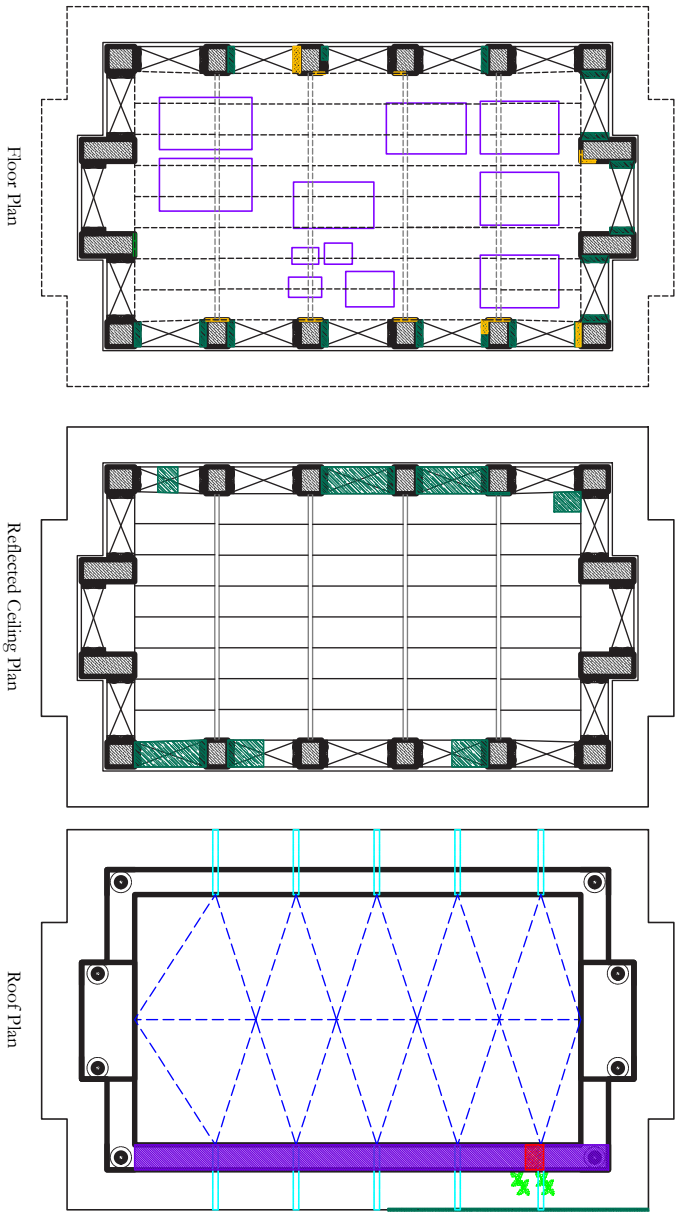
The Paigah Tomb Complex houses several tomb enclosures, a mosque, a water body, and an entrance gateway. These 200 years old tombs are known for their architectural excellence as shown in their craftsmanship of highly intricate surface ornamentation.

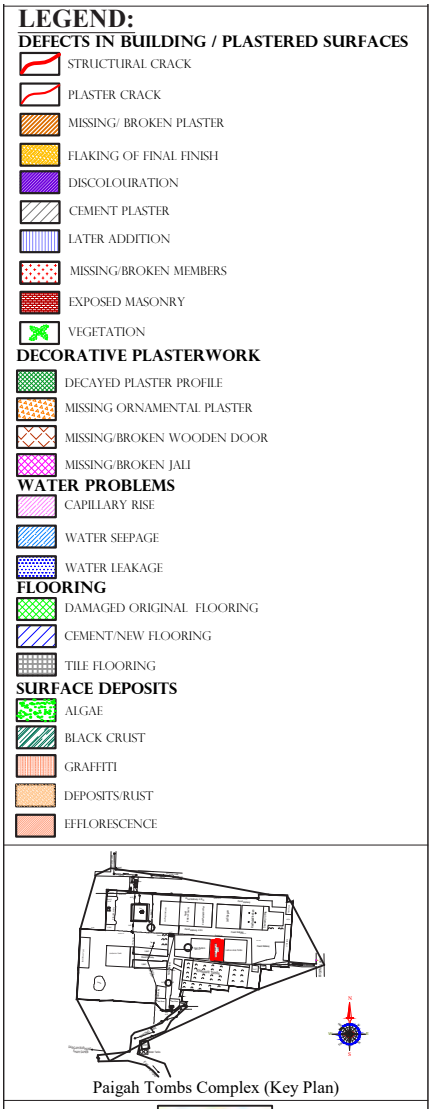
As a part of the Phase I of Conservation Works, emergency repairs were carried out on the Ghansimiyan Tomb, that included stitching of the cracks, relaying of the terrace, and reinstallation and conservation of the fallen minarets. Detailed documentation and conservation work on the Samakhana have also commenced, and the building shall temporarily house the site office during the ongoing conservation and other site work.

As a part of the Swadesh Darshan Scheme, the Department of Tourism, Telangana, has proposed to develop the area's landscape. Its proposed components include landscaping, illumination, information, signage, and a ticket counter. It has also proposed the setting up of an exhibition for the site. Other tourist/visitor facilities including drinking water, toilets, solid waste management, and parking will also be incorporated for tourists. Accordingly work on the pathways as a part of Phase I of landscape works have commenced.

DOCUMENTATION

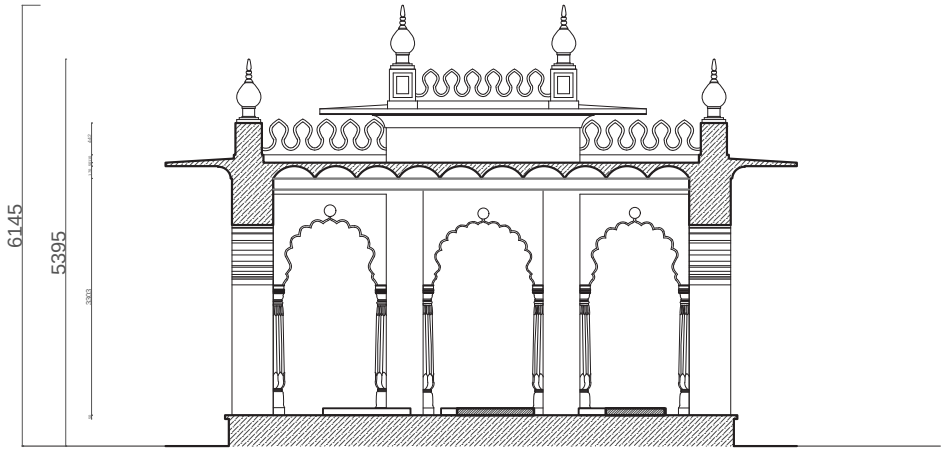
Detailed building documentation of the individual mausoleums situated inside Paigah Tombs complex is being carried out. Documentation for mausoleum of Ghansimiyan, Khair Nawaz Jung and Samakhana have been completed and is ongoing at mausoleum of Latif-ul-Nissa.



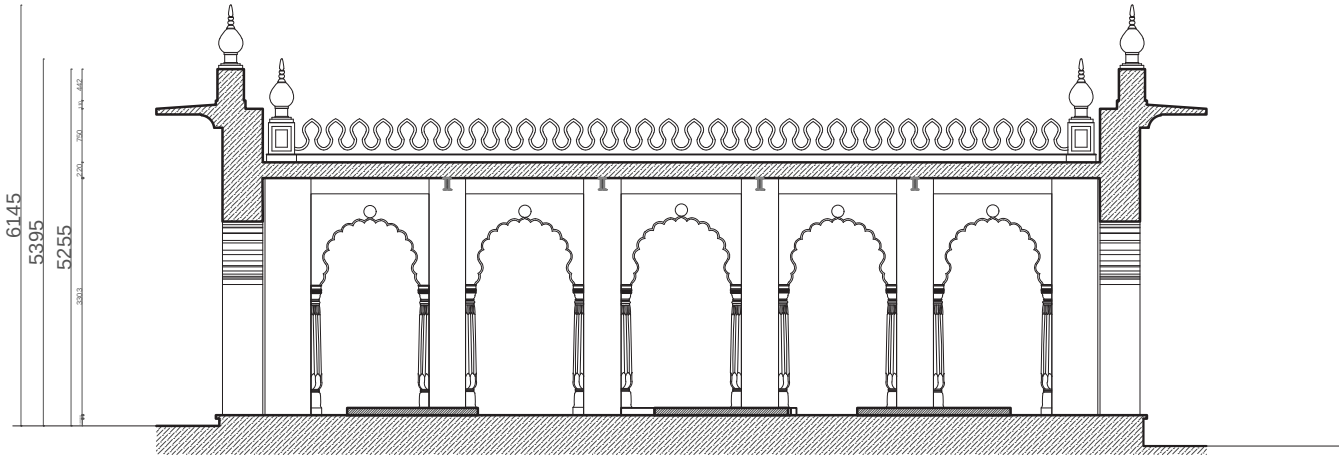


Condition assessment of Khair Nawaz Jung Tombs

Interior view of the mausoleum of Khair Nawaz Jung



Section A-A'



Section B-B'

Architectural Documentation (Section) of mausoleum of Khair Nawaz Jung

Images indicating the current conditions of the mausoleum of Khair Nawaz Jung.

LANDSCAPE RESTORATION

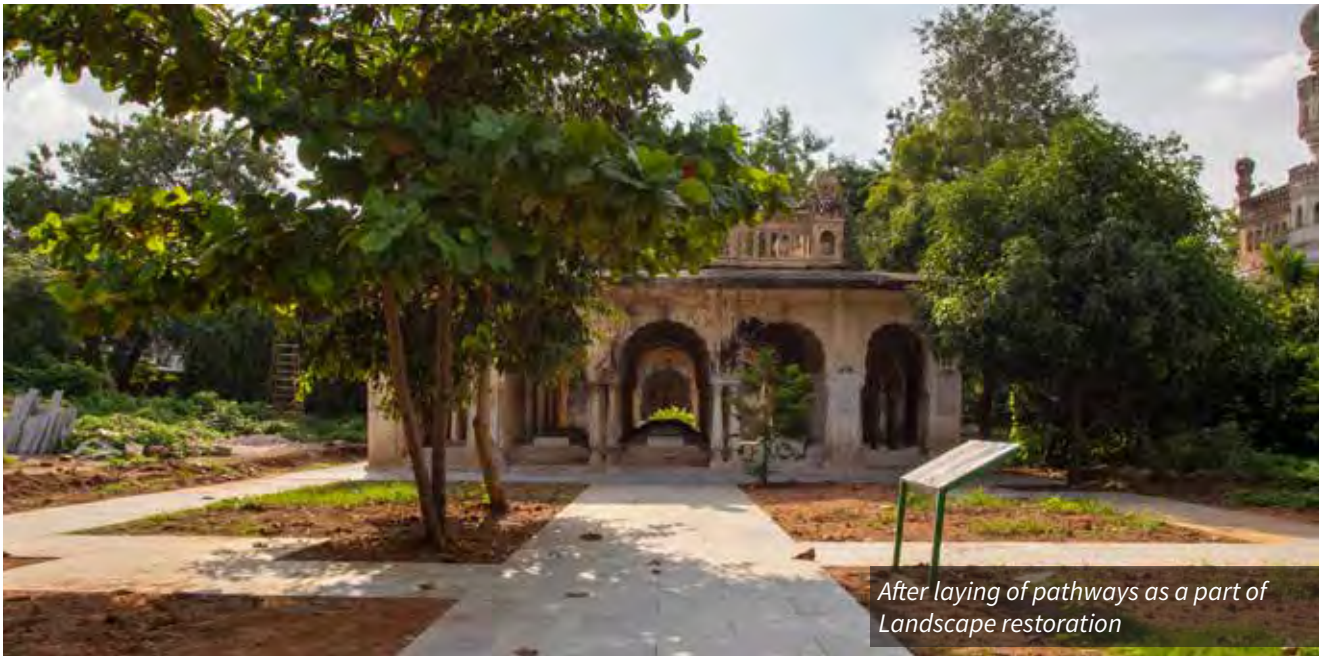
- Initial investigations were carried out around the tombs of Ghansimiyan and Samakhana to determine the original levels of plinth.
- Landscape proposal for phase-I was finalized and layout marked on the western quadrant of site.
- Base work for the plinth protection and pathways around the mausoleum of Ghansimiyan and Samakhana was completed.
- Installation of 30 mm thick granite stone was completed in the phase-1 situated on the south-west corner of site.
- Existing slopes on the raised platform were documented in detail for understanding the existing drainage of rainwater to the lower portions of site.

Supported by:

SWADESH DARSHAN

Before landscape restoration

Basework for pathways being laid as a part work of landscape restoration



After laying of pathways as a part of Landscape restoration

CONSERVATION

23. Ghansi Miyan's Mausoleum

Conservation works are being undertaken by the Aga Khan Trust for Culture in partnership with Department of Heritage Telangana, Govt. of Telangana. The landscape work is being supported by Swadesh Darshan Grant, Ministry of Tourism, Govt. of India.

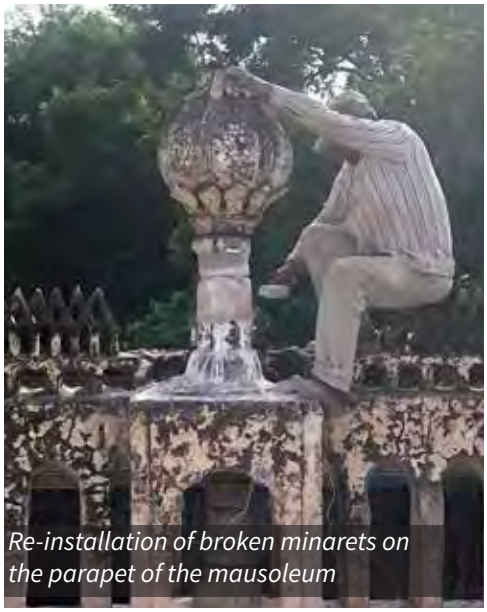
Ghansimiyan's tomb is situated in the South West corner of the Paigah Tombs Complex. It belongs to Sardar-ul-Mulk Ghansi Miyan who was a commander in the Nizam's army and a close relative of the Paigah noble Nawab Tegh Jung.

Conservation works at this monuement aim to restore the missing architectural features and replace inappropriate repairs in cement with traditional materials and techniques, ensuring mitigation of water ingress and prolong the life of the monument.

ACTION TAKEN:

- Structural cracks on the ceiling and terrace of Ghansimiyan Tomb were stitched using rich lime mortar injected through injection grout by stone craftsmen.
- Dilapidated lime concrete was removed from the terrace and projected eaves to reveal original levels and reduce later added load on the structure.
- Traditional lime concrete was laid in an appropriate slope on the terrace and on the reconstructed portion of projected eaves and was then followed by persistent ramming and curing.
- Skylight situated on centre of terrace was covered with a stone slab raised on low height piers to prevent rainwater from seeping inside the mausoleum and yet bring in ambient light.
- The terrace and existing rainwater spouts on the terrace were carried out before the monsoons.
- Collapsed bulbs of the minarets were reinstated matching the existing evidence. In a couple of minarets, collapsed shaft of the minarets were reconstructed using stones cut to appropriate size and fixed using rich lime mortar.
- Lime concrete was laid in the plinth protections built around the perimeter of the mausoleum.
- 30 mm thick granite stones were laid as plinth protection, laid to appropriate slope and approved layout to channel rainwater away from the foundation of the structure.
-

Relaying of terrace concrete with traditional lime concrete in an appropriate slope



Re-installation of broken minarets on the parapet of the mausoleum

Emergency repairs - stitching of structural cracks inside the mausoleum

Pathways and plinth protection surrounding the mausoleum as a part of the landscape restoration

CONSERVATION

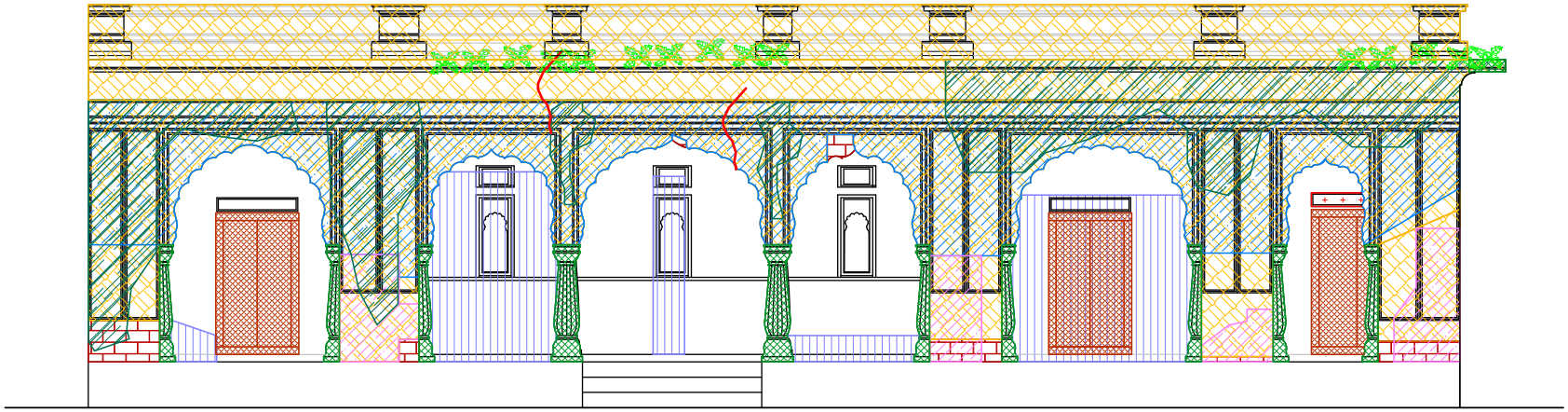
24.Samakhana

The Samakhana is utilitarian rectangular building located to the West of Ghansimiyan's Tomb. It contains an open central chamber, one enclosed chamber to the South West corner of the central chamber, two enclosed chambers to the North West corner of the central chamber and a long open corridor running the length of the building on the eastern edge of the building.

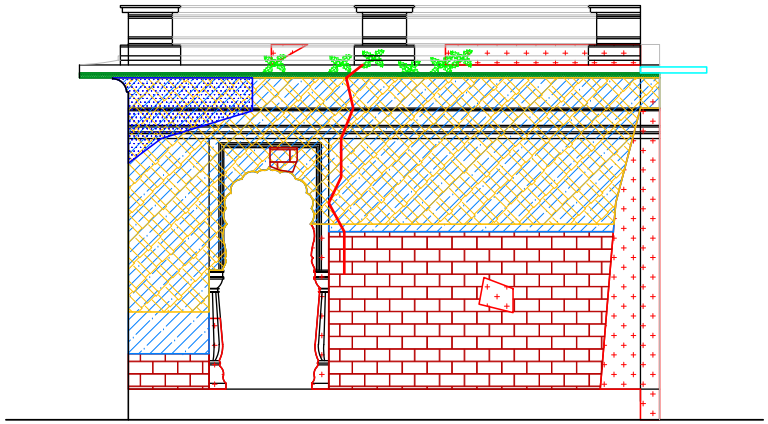
ACTION TAKEN:

- Collapsed walls of the north-west corner chambers were reconstructed using rubble stone and rich lime mortar by stone masons.
- 12 feet long and eight-inch-thick granite stone beams were manually lifted and placed on the collapsed portions of the terrace.
- Lime concrete laid to appropriate slope was laid in the collapsed portions to mitigate water seepage inside the structure.
- Deep cracks on the terrace of Samakhana were stitched by laying of traditional lime concrete followed by persistent ramming and curing.
- Missing projected eave stones on the northern parapet were prepared to match the existing profile and reinstated.
- Missing waterspouts were installed on the western parapet to channel rainwater away from the structure.
- The terrace and rainwater spouts on the terrace were cleaned before the monsoons.

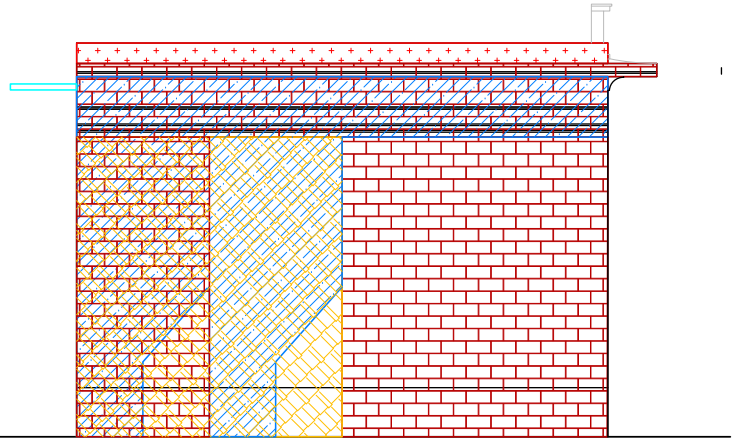
(Below) Re-installation of missing roof beams and repairing of terrace concrete of the Samakhana with traditional lime concrete in an appropriate slope



East Elevation



North Elevation



South Elevation

Note

1. The Architectural documentation was done manually using distometer and measuring tapes
2. The study was carried out based on non-destructive method. Condition mapping of the surface was done on basis of visual inspection at site.
3. All Details and Patterns documented in this study are the graphical representation of the actual and prepared on basis of geometry.
4. The colors used in this documentation are indicative of the actual, due to limitations of computer graphics. (for glazed tiles and decorative pattern)
5. All drawings are in millimeter. Please refer graphics scale for actual dimension

LEGEND:

DEFECTS IN BUILDING / PLASTERED SURFACES

- STRUCTURAL CRACK
- PLASTER CRACK
- MISSING /BROKEN PLASTER
- FLAKING OF FINAL FINISH
- DISCOLOURATION
- CEMENT PLASTER
- LATTR ADDITION
- MISSING/BROKEN MEMBERS
- EXPOSED MASONRY
- VEGETATION

DECORATIVE PLASTERWORK

- DECAYED PLASTER PROFILE
- MISSING ORNAMENTAL PLASTER
- MISSING/BROKEN WOODEN DOOR
- MISSING/BROKEN JALI

WATER PROBLEMS

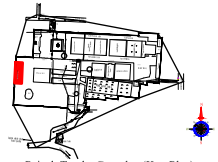
- CAPILLARY RISE
- WATER SEEPAGE
- WATER LEAKAGE

FLOORING

- DAMAGED ORIGINAL FLOORING
- CEMENT/NEW FLOORING
- TILE FLOORING

SURFACE DEPOSITS

- ALGAE
- BLACK CRUST
- GRAFFITI
- DEPOSITS/RUST
- EFFLORESCENCE



Paigah Tombs Complex (Key Plan)

DEPARTMENT OF HERITAGE TELANGANA

AGA KHAN TRUST FOR CULTURE

Paigah Tombs Complex
Samakhana

Condition Assessment
Elevations

Scale:
0 1500mm 3000mm

Date:

Documented by: AKTC

Drg No.
PTC/CA/SMK/02

- Reconstruction of collapsed parapet walls matching the existing profile on the terrace was carried out using bricks and rich lime mortar by stone masons.
- 20th century cement plaster was dismantled on the southern, western and northern external walls. Lime plaster repairs were carried out by master craftsmen using traditional lime mortar.
- Lime plaster in dilapidated condition was dismantled and 20th century paint layers were scraped off from the internal wall surfaces.
- Plaster repairs were completed in the corner chambers.
- Dilapidated Lime plaster and 20th century paint layers were scraped off in the south-west corner chamber. Repairs in lime plaster were followed by finishing of internal walls and ceiling with a 1mm thin layer of lime putty mixed with organic additives.
- 30 mm thick granite stone was installed inside the south-west corner chamber after dismantling the existing 20th century cement flooring.
- Teak wood doors and frames matching the existing design specifications were installed in all five door openings.

Scrapping of 20th century plaster inside the Samakhana to reveal the base lime plaster

Reconstruction of broken walls of the Samakhana

NEXT STEPS:

Dismantling of cement plaster on the wall and ceiling surfaces inside Ghansimiyan's tomb and Samakhana will be followed with repairs using traditional lime mortar.

IMPACT:

To ensure long term preservation, 20th century cement layers from the mausoleums are being carefully removed and replaced with lime mortar. Conservation works being undertaken include the restoration of damaged intricate lattice screens, removal of 20th century cement layers, repairs in lime mortar, lime punning, and installation of stone waterspouts on terraces of individual tomb structures. Conservation of ornamental stucco and lattice screens both on the internal and external façades as per the intention of the original builders shall in turn restore the authenticity of material form, and design of the mausoleum.

CONSERVATION

25. Badshahi Ashoorkhana

Interior view showing the tiled arched bays of the Badshahi Ashoorkhana

Measuring 36.57 m x 27.43 m and having a height of 10.97 m, the flat roof of the main Ashoorkhana structure is supported by monolithic stone columns.

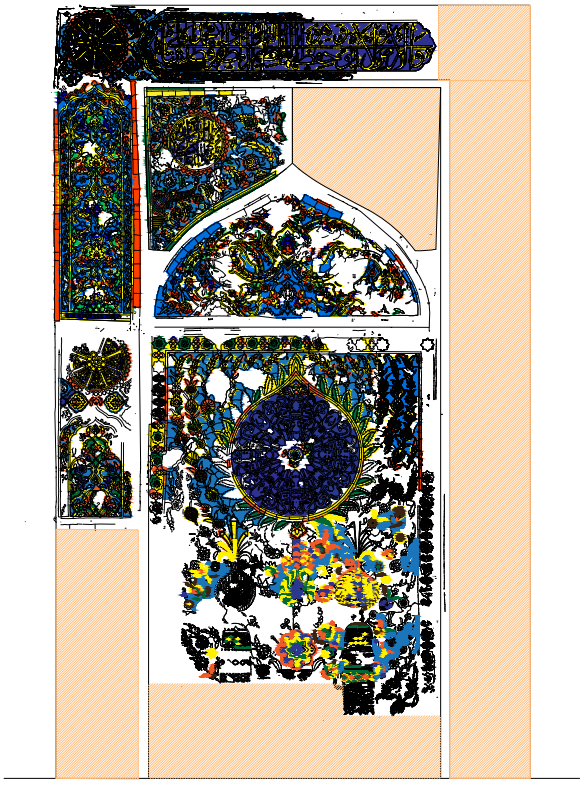
Five recessed arches, 3 on the western wall and one each on either side are encrusted with exquisite enameled inlay tile work, which was installed by Persian craftsmen during the reign of Abdullah Qutb Shah in 1611. The tilework consists of highly refined geometric, floral and arabesque designs in a varied colour palette consisting of blue, white, yellow, green and terracotta.

Three of the five arched panels are noteworthy – one represents a giant Alam (a religious metal standard symbolizing the battle standards carried by Hussain and his followers at Kerbala), the second panel has designs of staggering hexagons containing jewel like shapes connected by grand arabesque swirls, and the third panel which contains a massive pot-of-plenty overflowing with twisting and turning vegetation. True scale detailed documentation of this intricate tilework was carried out to assess the condition of the tilework.

DOCUMENTATION

- True scale detailed documentation of the exquisite inlay tiles on the recessed bays inside the structure is being carried out to precisely estimate the extent of damage.
- Layers of 20th century paint obfuscating the underneath tiles are being cleaned to reveal the tiles.
- The tiles are being individually traced and superimposed on AutoCAD drawings, prepared with perspective corrective photogrammetric images created using point cloud data.
- Thermal imaging cameras use infrared radiation to highlight areas beneath the tiles with excessive water seepage in a rainbow coloured palette. This will aid in adopting an appropriate conservation methodology to conserve the tile embellishment on the internal facades.
- Documentation has been completed in four of the five recessed arch bays embellished with tilework inside the structure.

(Below)True scale detailed documentation of the inlay tiles on the recessed bays inside the structure is being carried out.



OUTREACH

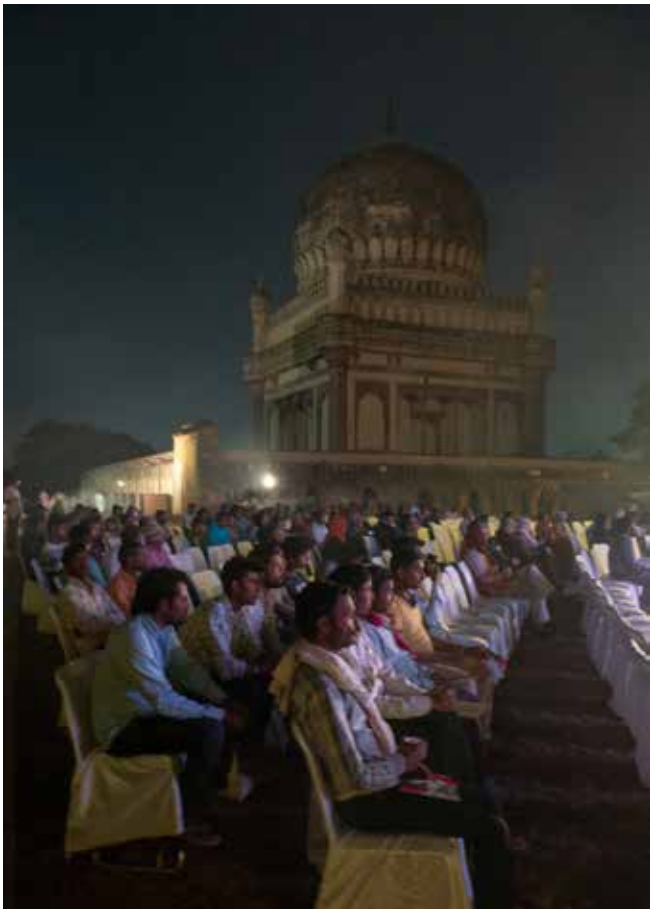
26. Kalapana 2019

Brain storming session on devising strategies for built heritage in India for the next decade

Heritage walks conducted by AKTC at the Qutb Shahi Heritage Park.

TATA Trusts celebrated the third edition of KALAPANA 2019 - Imagine The Arts, a multidisciplinary art platform connecting various stakeholders to deliberate on ways forward in the field of arts at the Qutb Shahi Heritage Park. The event hosted a public lecture by Shivendra Singh Dungarpur from the Film Heritage Foundation followed by an open-air screening of Ritwik Ghatak's cinematic masterpiece "Meghe Daka Tara", a 1940's classic movie which was recently restored. Conservation of historic monuments by Aga Khan Trust for Culture at the Qutb Shahi Heritage Park was be showcased as one of the important frameworks in the field of arts and culture being celebrated through the event.

A series of site walkthroughs were conducted by the Aga Khan Trust for Culture at the Qutb Shahi Heritage park from 05-07 December showcasing the six years of painstaking conservation works, carried out by the Aga Khan Trust for Culture in partnership with Heritage Telangana supported by the TATA Trusts , wherein master craftsmen have clocked in nearly 300,000 man days of work to restore the authenticity and grandeur of the 16th-17th century necropolis situated on the foothills of Golconda fort. Conservation and landscape works on all the 80 monuments standing within the 106-acre site are expected to be completed, under this partnership project, by AD 2023.



Audience at the open air screening of Ritwik Ghatak's now restored 'Meghe Dhaka Tara'

Public lecture by Shivendra Singh Dungarpur from the Film Heritage Foundation on film restoration

Heritage walks conducted by AKTC at the Qutb Shahi Heritage Park.

OUTREACH

27. UNESCO Workshop

Above: Comprehensive site walkthrough was conducted by the AKTC at the Qutb Shahi Heritage Park

A two-day workshop on "Understanding Conservation of Cultural Heritage", was organized jointly by UNESCO and AKTC in co-operation with the Municipal Administration and Urban Development, Hyderabad was hosted at the Hyderabad Metro Rail Conference Hall, Hyderabad on November 25-26, 2019.

Day 1

- The workshop titled Understanding Conservation of Cultural Heritage, was jointly hosted by UNESCO and Aga Khan Trust for Culture with specialists with core competency in heritage conservation and urban planning presenting various case studies on heritage conservation aided with socio-economic urban development initiatives to nearly 40 officials drawn from the town planning and engineering departments of various municipalities in Telangana.
- Aravind Kumar, Principal Secretary, Municipal Administration and Urban Development emphasized about understanding the historic significance of historic monument, as a holistic approach includes understanding of processes involved in restoration of a monument, involving the communities and demonstration of economic benefits as a result of conservation achieved through integrated planning. He suggested preparing a comprehensive inventory of historic monuments as a precursor to start the process of monetizing its centuries old heritage to improve the socio-economic conditions of Hyderabad. The panelists of the workshop were assured of appropriate budgetary allocation

by Mr. Kumar. He encouraged the participating public officials to develop a tourism circuit for Hyderabad in a manner which states of Gujarat and Rajasthan have done. This will reinvigorate tourism and inculcate active participation from the local communities. He

- Junhi Han, Chief, Culture Sector from UNESCO, Delhi presented the role of heritage in global urbanization followed by creation of contemporary green cities. She presented the German case study of contemporaneous reuse of the Reichstag after the end of war. She emphasized the conservation of maximum possible existing build heritage through adaptive reuse for contemporary uses.
- Paroma De Sarkar, Conservation Architect and Heritage Expert presented case studies of preparing heritage guidelines for historic precincts in Karnataka and recommended for Telangana based municipalities to preserve heritage.
- Shveta Mathur, Urban Planner, AKTC presented the case study of Nizamuddin Basti: Planning in a historic City Center which showcased the issues adversely affecting the historic core and in turn the local populace. She explained various socio-economic infrastructure interventions carried out by AKTC in consultation with the community which led to raising of quality of life for the residents.
- Ratish Nanda, CEO, Aga Khan Trust for Culture, shared experience of achieving holistic conservation in tandem with the local community of the Nizamuddin area of New Delhi and explained in detail the conservation carried out at the Humayun Tomb, a 16th century World Heritage Site which restored the originality, integrity and authenticity of the magnificent structure. He mentioned the persistent engagement with the community which after a time reached a stage when local people reached out to AKTC for restoration of a mosque situated near the tomb of Sufi saint Nizamuddin Auliya. Presentation was followed by screening of a film titled “
- Prashant Banerjee, Program Manager- Conservation, AKTC presented the use of lime mortar in conservation at the Qutb Shahi Heritage Park with emphasis on preparation of lime mortar, processes involved, and the craftsmanship involved followed by benefits of using lime for repair of historic buildings. Presentation was followed by screening of a film titled “

Day 2

- On the subsequent day, a comprehensive site walkthrough was conducted by Rajpal Singh, Chief Engineer, AKTC; Yoshowant Purohit, Project Manager, AKTC; Prashant Banerjee, Project Manager- Conservation for the participants of the workshop of the Qutb Shahi Heritage Park.
- Yoshowant Purohit, Project Manager, Qutb Shahi Heritage Park – AKTC presented the upcoming Qutb Shahi Interpretation Centre situated in Deccan Park including architectural drawings, rendered illustrations, services and overall scheme of the upcoming interpretation centre was presented and briefly discussed with the participants of the workshop.

Case studies presented on heritage conservation aided with socio-economic urban development

OUTREACH

28. Dissemination of Project Learnings

Every year, the project engages with academic institutions, cultural organizations, civil society, opinion makers, conservation professionals, students, policy makers who are keen to learn from the experiences or replicate the project model or its elements in their work areas.

29. Linkages with Educational Institutes

Every year, the project engages with academic institutions, cultural organizations, civil society, opinion makers, conservation professionals, students, policy makers who are keen to learn from the experiences or replicate the project model or its elements in their work areas.

Institutions	Description of Activity	Output
Officers of the Military Engineering Services, Indian Army visited the site in April 2019	The group visited the project site at the Qutb Shahi Tombs as part of their exposure visit to understand the nuances of conservation and landscaping works being done and the linkage between heritage conservation and improving the quality of life for the visiting denizens.	The outcome of this visit was to have a more nuanced understanding of the history and evolution of architecture of the Qutb Shahi empire as well as the ongoing conservations works undertaken by AKTC at the Qutb Shahi Tombs.
Trainees from various cadre of All India Civil Services Office visited the site in September 2019	The group visited the project site to understand the project interventions in a public-private partnership of AKTC with multiple governmental agencies.	Students gained a first-hand experience of the ongoing conservations works at the Qutb Shahi Tombs Complex, as well as a better understanding of the project interventions being carried out under Public Private Partnership model between AKTC and multiple government agencies
Students from the Indian Hotel Management Institute	Student group visited the project site to understand the tourist visitor inflow, strategies used for upgrading visitor amenities and understand the engagement between visitors and a heritage site	At the end of their visit, students gained a better understanding about the relationship between tourism and a heritage site, with special focus on the need for provision of adequate visitor facilities.
Students from the National Institute of Fashion Technology, Hyderabad	The group visited the project site to understand the nuances of conservation and landscaping works and its impact on improving the quality of life for the visiting denizens	The outcome of this visit was to have a more nuanced understanding of the history and evolution of architecture of the Qutb Shahi empire as well as the ongoing conservations works undertaken by AKTC at the site.

Public Agencies - 2019

Government of Telangana

- **Mr. Shailendra Kumar Joshi,** IAS, Chief Secretary to Government, Government of Telangana
- **Mr. Arvind Kumar,** IAS, Principal Secretary to the Government Municipal Administration and Urban Development
- **Mr. B. Venkatesham,** IAS, Secretary, YAT&C, Government of Telangana
- **Mr. Lokesh Kumar D.S.,** IAS, GHMC Commissioner cum QQSUDA Administrator
- **Mr. Parthasarathi, IAS,** Ex. I/c Secretary, YAT&C, Government of Telangana
- **Mrs. Sunita Bhagwat,** IFS, Executive Commissioner of Tourism Government of Telangana
- **Mr. Md.Musharraf Ali Faruqui,** IAS, Zonal Commissioner, GHMC, Government of Telangana

Department of Heritage Telangana:

- **Mr. A. Dinakara Babu,** IAS, Director DHT-cum-Commissioner of Tourism, Government of Telangana
- **Mrs. N.R. Visalatchy,** IPoS, Ex. Director
- **Mr. B. Narayana,** Deputy Director, Engineering & I/c Director (Qutub Shahi Tombs)
- **Mr. A. Raju,** Superintendent
- **Mr. N. Narsingh,** Conservation Assistant
- **Mr. Balaraju,** Senior Assistant (Qutub Shahi Tombs)
- **Mr. T.Ch. Nancharaiah,** I/c Conservation Assistant (Qutub Shahi Tombs)

Quli Qutb Shahi Urban Development Authority (QQSUDA)

- **Mr. P. Badarinath,** Secretary
- **Mrs. M. Lalitha,** Assistant Director of Horticulture
- **Mr. Mallikarjunudu,** Chief Engineer
- **Mr. Guruveera,** Executive Engineer

Telangana State Tourism Development Corporation (TSTDC)

- **Mr. Boinapally Manohar,** Managing Director
- **Mrs. Saritha Galla,** Executive Engineer
- **Mr. Ashoka Kumar,** Executive Engineer
- **Mr. Ch. Parshavedi,** Assistant Executive Engineer
- **Mr. Shankar Reddy,** Executive Director Projects
- **Mr. Ajay**

Project Technical Committee

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- **Mr. A. Dinakara Babu,** IAS, Director, Department of Heritage Telangana, Government of Telangana
- **Mrs. N.R. Visalatchy,** IPoS, Director, Department of Heritage Telangana, Government of Telangana
- **Mr. B. Narayana,** Dy. Director, Department of Heritage Telangana, Government of Telangana
- **Mr. A. Raju,** Superintendent, Department of Heritage Telangana, Government of Telangana
- **Mr. Anil Kumar,** Dy. Superintendent Archaeologist, ASI, Hyderabad Circle
- **Ms. Lynn Meskell,** Independent Expert, Stanford Archaeology Center, Stanford University
- **Mr. Boinapally Manohar Managing,** Director, TSTDC, Government of Telangana
- **Mr. A. Ashok Kumar,** Superintendent Engineer, TSTDC. Government of Telangana.
- **Mr. Ch. Parsavedi,** Asst. Executive Engineer, TSTDC, Government of Telangana
- **Mr. P. Badarinath,** Secretary, Quli Qutb Shah Urban Development Authority, Government of Telangana
- **Mrs. Lalitha,** Assistant Director (Horticulture), Quli Qutb Shah Urban Development Authority, Government of Telangana
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- **Mr. Yoshowant Purohit,** Project Manager, AKTC, Hyderabad
- **Mr. Ganesh Reddy,** Manager Operations, AKTC, Hyderabad
- **Mr. Prashant Banerjee,** Project Manager-Conservation, AKTC, Hyderabad

Aga Khan Development Network

- **Mr. Ratish Nanda,** CEO
- **Mr. Rajpal Singh,** Chief Engineer
- **Ms. Jyotsna Lall,** Senior Programme Officer
- **Ms. Archana S Akhtar,** Senior Programme Officer
- **Mr. Somak Ghosh,** Finance Manager
- **Mr. Deepak Padhi,** Programme Officer, Monitoring & Evaluation
- **Ms. Shveta Mathur,** Urban Planner
- **Mr. KP Singh,** Chief Horticulturist
- **Mr. Yoshowant Purohit,** Project Manager
- **Mr. K. Ganesh Reddy,** Manager Operations
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- **Mr. K. Ganesh Reddy,** Manager Operations
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- **Ms. Natasha Khaitan,** Architect
- **Mr. Vinod Kumar,** Field Supervisor
- **Mr. Izhar Ahmed,** Field Supervisor
- **Mr. M. Rajesh,** Office Chauffeur
- **Mr. Arshad Jamil,** Consultant, Site Engineer

Principal Consultants:

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- **Mr. Sree Rama,** Lantek Engineering Consultants
- **Ms. Poornima Balakrishnan,** Consultant – Conservation Architect
- **Shaheer Associates,** Landscape Design Consultants
- **Mr. Shafeeq Rehman Mahajir,** Legal Consultant, Brainstorm Legal Advocates
- **Mr. Srinivas,** Videovilla, Videography Consultant
- **Ernst & Yong LLP**
- **Tac Design Pvt Ltd**
- **Vir Mueller Architects Pvt. Ltd**

All photographs in the report have been taken by the AKTC project team.