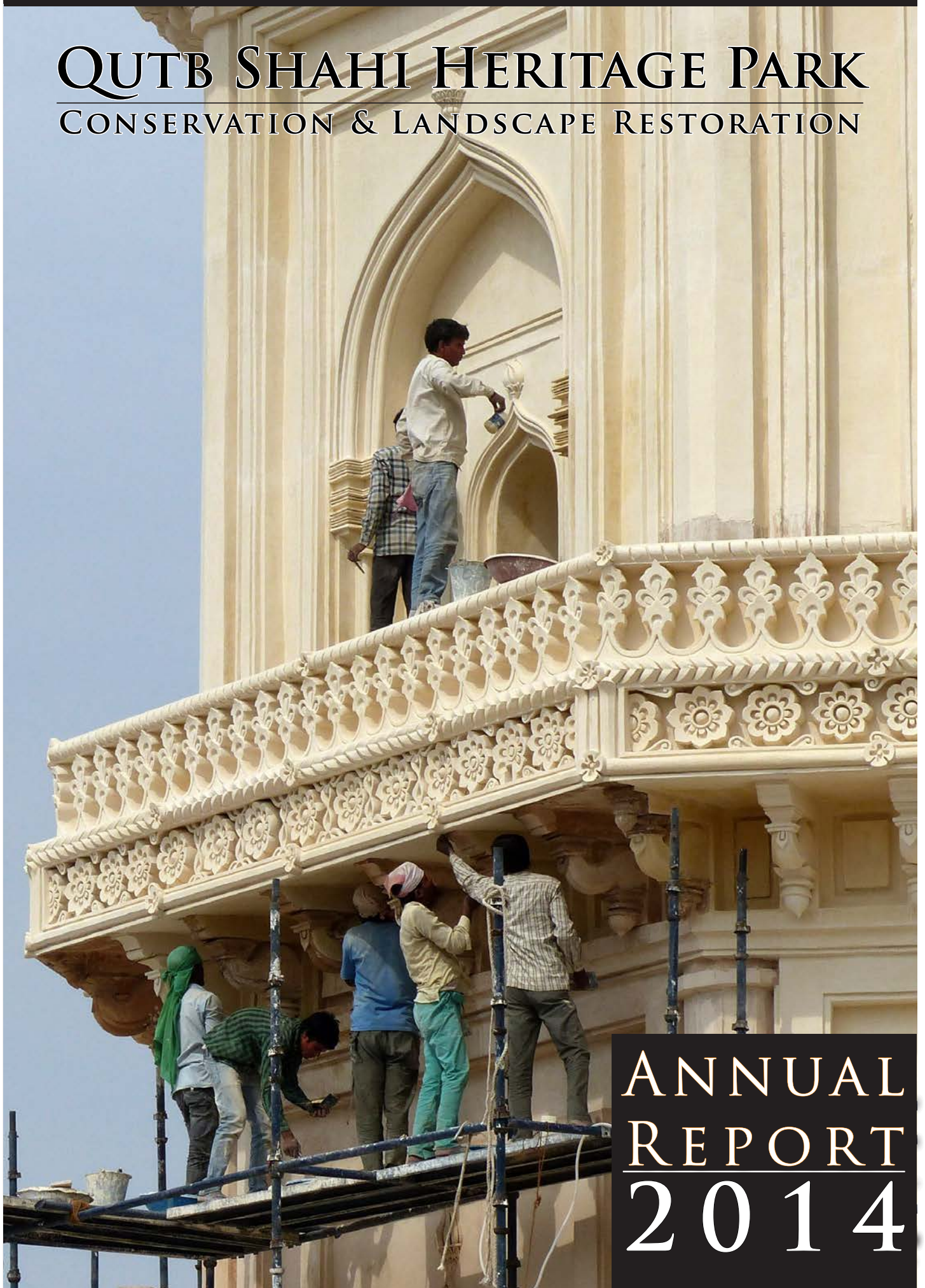


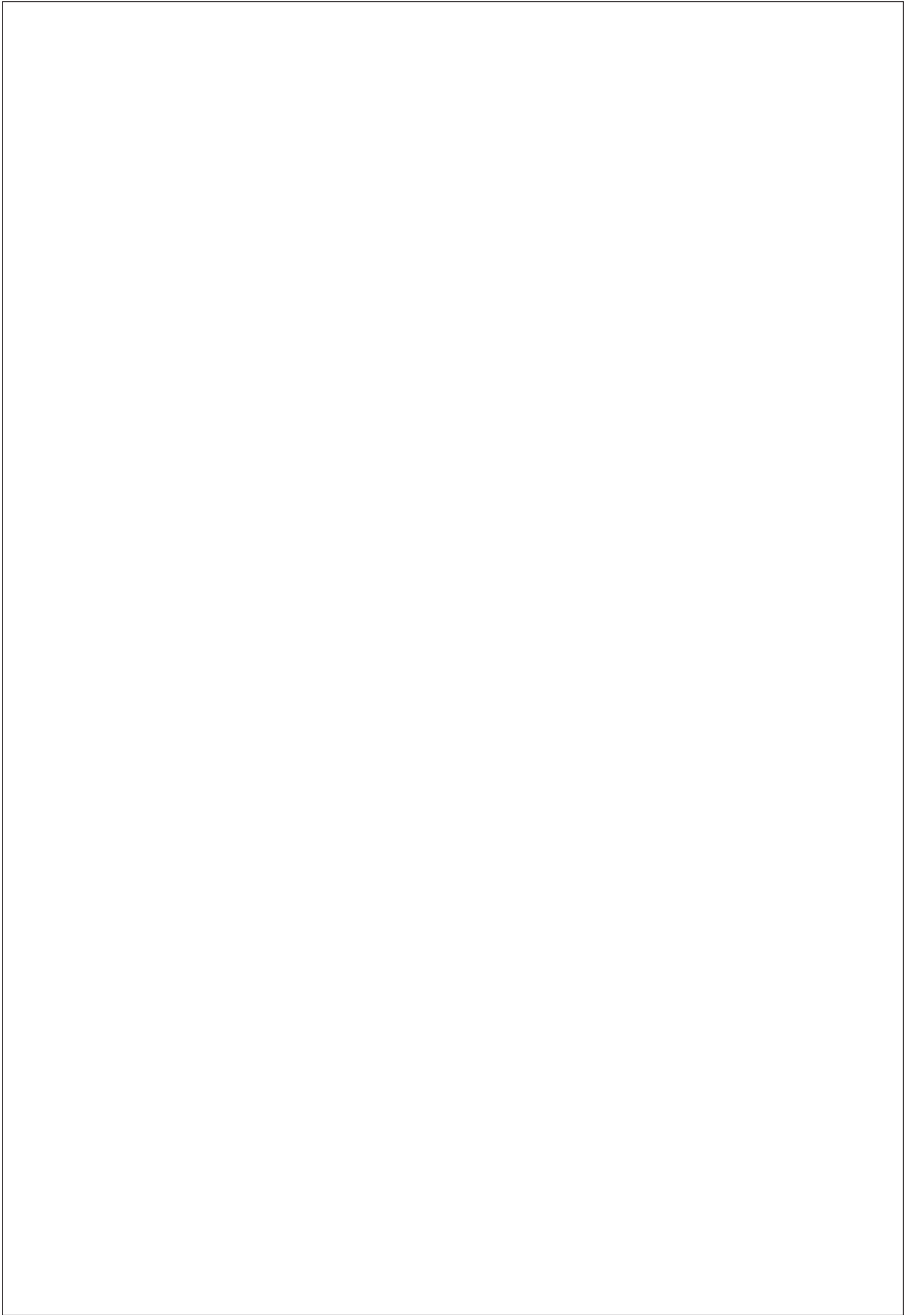
AGA KHAN DEVELOPMENT NETWORK

QUTB SHAHI HERITAGE PARK

CONSERVATION & LANDSCAPE RESTORATION



ANNUAL
REPORT
2014





QUTB SHAHI HERITAGE PARK

Conservation & Landscape Restoration

partner agencies:



AGA KHAN TRUST FOR CULTURE



AGA KHAN FOUNDATION



DEPARTMENT OF ARCHAEOLOGY &
MUSEUM, GOVT. OF TELANGANA



QULI QUTUB SHAH URBAN
DEVELOPMENT AUTHORITY, HYDERABAD

co-funded by:

SIR DORABJI TATA TRUST & ALLIED TRUSTS

for conservation works

U.S. AMBASSADORS FUND FOR CULTURAL PRESERVATION

for archaeological excavations



For regular updates on the project, scan the code or visit:
www.facebook.com/QutbShahiHeritagePark



CONTENTS

Introduction

Nestled at the foot of the majestic Golconda Fort, the Qutb Shahi Heritage Park is spread over 106 acres. This necropolis of the Qutb Shahi dynasty, that ruled the region for 169 years in the 16th–17th centuries, includes 40 mausoleums, 23 mosques, 6 baolis (step-wells), a hammam (mortuary bath), pavilions and garden structures set within a heritage zone of international significance.

Studies

An exhaustive recording, documentation and archival research exercises have been carried out as a precursor to conservation works. These include topographical surveys wherein each minor feature of the site has been mapped including all trees.

Architectural Documentation

Condition Assessment

Archival Research

Monument Files

Topographical Survey

Landscape Analysis

Structural Assessment

Tile Documentation

Petrologic Studies

Lime Mortar Centre

Visitor Analysis

Site Exhibit

Conservation

A well planned conservation effort at the Qutb Shahi Tombs Complex with multidisciplinary inputs ranging from Archaeology, Engineering, Architecture, Art History, Hydraulic engineering, Landscape architecture, Conservation architecture, Heritage Management, Urban Planners, Educationists, Designers, amongst other disciplines, can lead to the creation of a city Heritage Park of international significance.

Badi Baoli

Tomb Of Fatima Sultana

Tomb Of Jamshed Quli

Tomb Of Sultan Quli

Abdullah Mosque

Tomb Of Muhammad Quli Qutb Shah

Tomb No 18

Tomb No 15

Mosque No 14

Emergency Works

Archaeology

Area North of Hamaam

South Processional Gate

Exposure of Aqueduct

Training

Parking

Project Team

Annexure:

Project Brief



QUTB SHAHI HERITAGE PARK

Conservation & Landscape Restoration



Pinnacle of Deccani Architecture

The architectural style of Qutb Shahi monuments develops from the earlier Bahmani style and is a synthesis of Pathan, Hindu forms and can be seen to be evolving over 17 decades. Surviving as a 'Heritage Park', and presently nominated to the tentative list of world heritage monuments, visitor experience and understanding of these diverse building types could help form the critical 'first impression' of the Qutb Shahi heritage for visitors en-route to Golconda and prior to visiting Charminar and other Qutb Shahi built heritage of Hyderabad.



Unique Necropolis of Qutb Shahi's

With the tomb structures of all eight rulers of the Qutb Shahi Sultans located here the ensemble provides a unique understanding of culture of the era. The necropolis is the only surviving complex of this nature where architectural styles used during an entire significant dynasty are found in one ensemble. During the Qutb Shahi period, these tombs were held in great veneration but after their reign, the complex fell into neglect.



Architectural Significance

Comprises of over 70 structures encompassing 40 mausoleums, 23 mosques, 6 baolis, a hamam, pavilions, garden structures and enclosure walls. Many of these rival the greatest Mughal structures in scale and represent almost two centuries of funerary architecture. No other ensemble of structures in the Deccan kingdoms of Ahmednagar, Berar, Bidar, Bijapur or Gulbarga includes as many monuments of striking grandeur and complexity reflecting a unique synthesis of architectural styles.



Improving Quality of Life

In keeping with the AKTC objectives, the project will establish a model conservation process that would include greater public-private partnership for conservation of our built and intangible heritage, extend the craft based conservation approach adopted at various sites worldwide, include training opportunities for archaeologists and conservation professionals, demonstrate that conservation effort can lead to improved Quality of Life and socio-economic development of communities residing in historic neighbourhoods.



Historic Landscapes Restored

The connections with Golconda Fort will be revived allowing the site to serve as a starting point for the Qutb Shahi trail of Hyderabad leading to a significant interest in its heritage both locally and internationally. Nearly 15 hectares within the Heritage Park are being converted into an ecological zone by introducing appropriate tree species and enhancing bird habitat unique to the region. Thereby creating suitable and significant heritage zones wrapped by ecological and formal landscapes.



Architectural Conservation

The monuments in Qutb Shahi Heritage Park are built in a unique architectural style which is an integration of Persian, Pathan and Hindu forms, built in granite and lavishly embellished with lime-stucco ornamentation. Surfaces of the historic buildings are ornamented with intricate incised plasterwork and few monuments also bear glazed tilework. Each structure, especially the tombs stand within wide terraces, and together comprise a magnificent ensemble.

Project Background

The Qutb Shahi Heritage Park is a unique site with no other necropolis, anywhere in the world, matching the grandeur, diversity and completeness – the latter as mausoleums representing the entire reign of the Qutb Shahi's stand here. Apart from the tombs the site boasts of several mosques, large baolis or step-wells, garden structures and one standing hamam or bath-house.

With the Aga Khan Development Network and the Sir Dorabji Tata Trust & Allied Trusts both committed to undertaking development projects in Hyderabad, it was in 2011 that the Tomb complex was first considered to be the focus of a major urban conservation project coupled with landscape restoration. The state government was welcoming from the start and this led to a collaborative exercise to carry out an exhaustive architectural documentation of the structures and topographical surveys in 2012.

Following an improved understanding of the site, conservation requirements as well as landscape strategy formulated by landscape architect M Shaheer (Shaheer Associates) an integrated Conservation Plan was submitted in 2012 to the Department of Archaeology & Museums and the Qutb Shah Urban Development Authority (in whose possession Deccan Park presently is).

The MoU between Department of Archaeology & Museums (DAM), Qutb Shah Urban Development Authority (QSHUDA), Aga Khan Foundation (AKF) and the Aga Khan Trust for Culture (AKTC) was signed on 9 January 2013 and shortly thereafter the Sir Dorabji Tata Trust & Allied Trusts agreed to provide funds to undertake conservation works on 10 principal monuments over a five year period.

However, on 22 January 2013, on the petition of a group of vested interests possibly seeking to encroach land, the Wakf Tribunal passed orders preventing AKTC from undertaking any conservation works. This order was vacated nine months later, following public outcry, when the 16th century Badi Baoli collapsed in excessive rains and several other monuments suffered similar deterioration.

Since November 2013, with the enthusiastic support, supervision and guidance of the Department of Archaeology & Museums, Government of Telangana, conservation works, including dangerous and major repairs on the Badi Baoli have now been undertaken. Of critical importance was to setup local sources for traditional building materials – lime, granite, sand of superior quality and to set up the infrastructure required to implement a major 10 year conservation project.

The Conservation Plan was Peer Reviewed prior to commencing works. Department of Archaeology & Museums, Sir Dorabji Tata Trust & Allied Trusts and AKTC are in agreement that a project of this scale will benefit from annual independent expert review in addition to the quarterly Project Committee meetings.



Qutb Shahi Heritage Park Landscape Masterplan

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.

View Of Qutb Shahi Heritage Park

There are 40 Tombs, 23 mosques, 5 Stepwells, 1 Hamaam, Enclosure Walls which date from the 16th - 17th centuries



The commencing of conservation works has confirmed the significant alteration the structures have suffered through the 19th and 20th centuries wherein stucco plaster patterns have been altered beyond comparison, glazed ceramic tile-work simply plastered over, extensive use of cement mortar has been used accelerating decay and deterioration. It is understood that while evidence of original treatment has survived on one or more structures, in most cases there is only an understanding of past alterations and accordingly will reflect on the conservation strategy.

Stucco plaster patterns on each of the 72 structures standing within the complex present a unique conservation challenge, with several alterations, including with cement, carried out in the past. Early on, together with the accumulation of archival photographs and material, a matrix was developed to enable decision making with regard to the repair or replacement of stucco plaster patterns.

A grant of the US Ambassadors Fund for Cultural Preservation has allowed one season of archaeological excavations to be undertaken and has revealed several structures still analysed that reveal without doubt that residential buildings also stood within the 'tomb complex'. Extensive water features – aqueducts, baths fed with terracotta pipes have also come to light.

Significantly, remnants of enclosure walls have now established that both the tomb of the first king, Sultan Quli Qutb Shah as well as the tomb of Ibrahim Quli Qutb Shah stood within enclosed gardens – thus negating the commonly held belief that unlike the Mughals in the north – the Qutb Shahi's did not build enclosed gardens to site the tombs. These discoveries will inform the landscape restoration.

On the request of the committee's responsible to conduct the Friday or Eid prayers, conservation works have also commenced on Abdulla's Mosque where several tonnes of cement concrete needed to be removed from the roof and at the Idgah where over 30 layers of paint had covered the intricate 16th century stucco plaster patterns.

Building on the works carried out in 2014, the emphasis of conservation works in 2015-16 will be the south-west quadrant where conservation works and landscape restoration would be carried out hand-in-hand.



Heritage Conservation

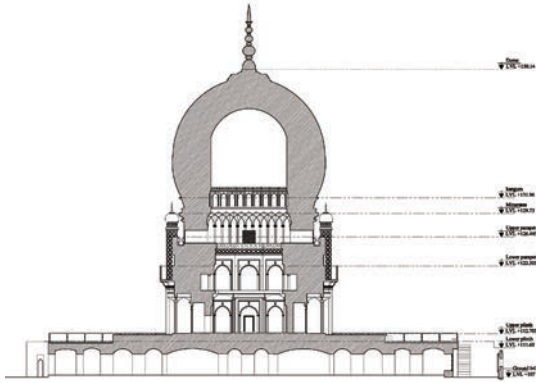


Reviving Traditional Craftsmanship



Restoring Historic Landscapes

DOCUMENTATION



The monuments in the complex blend Persian, Pathan and Hindu architectural styles and are built with local granite. Surfaces of the historic buildings are ornamented with intricate incised plasterwork and few monuments also bear glazed tilework. The tomb structures are derivations of the geometrical designs of the earlier Bahmani tombs of Bidar though the stucco ornamentation carried out here is more intricate and on a far greater scale. Through 2012, exhaustive recording, documentation, condition assessment, surveys and research exercise carried out by the multi-disciplinary Aga Khan Trust for Culture team as a precursor to the Conservation Plan that forms the foundation for the project.

01. Architectural Documentation

In order to enhance the understanding of the several monuments standing within the Qutb Shahi Heritage Park, an exhaustive architectural documentation exercise was undertaken in 2012.

Outcome

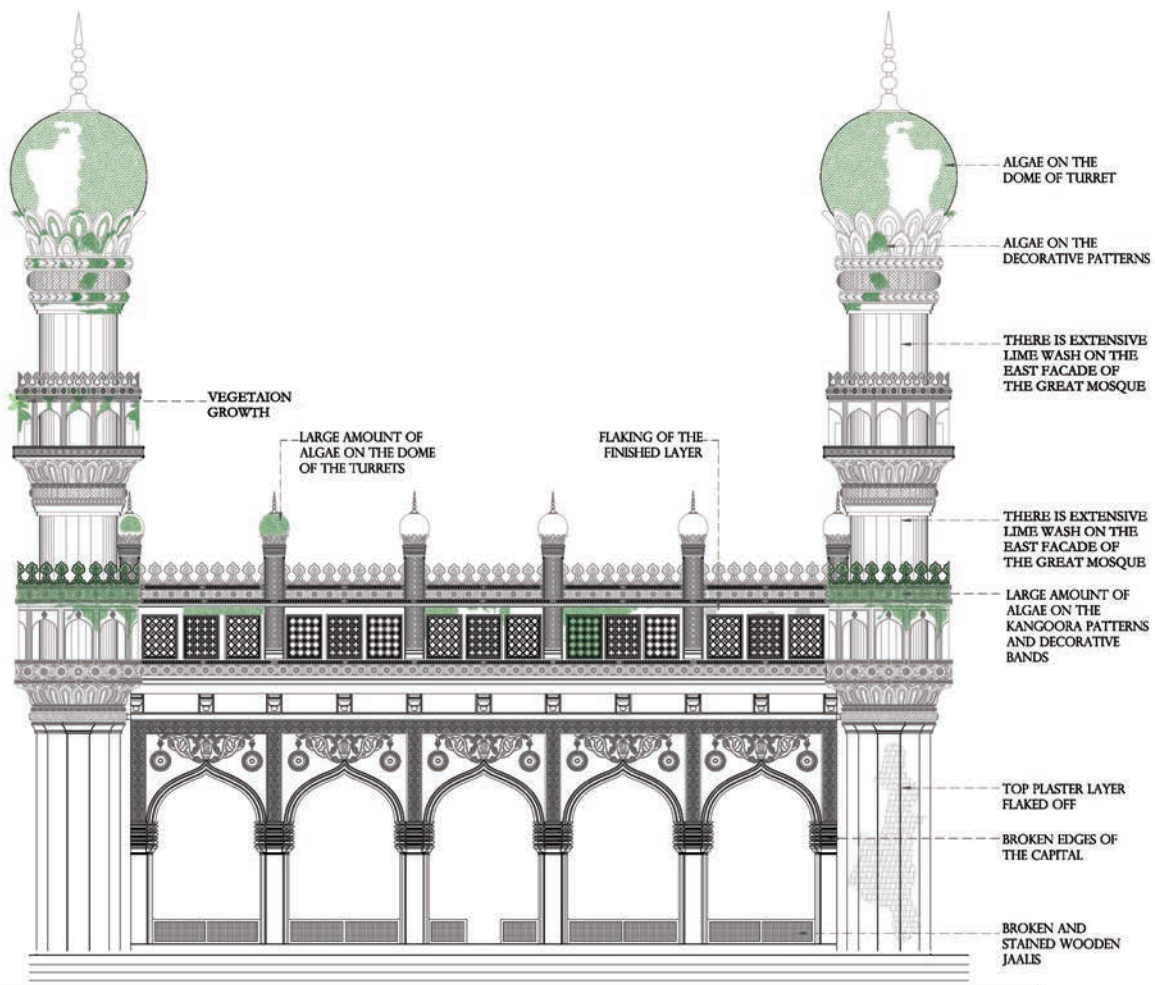
- As a precursor to the architectural documentation an inventory or 'listing' of structures standing within the Heritage Park was carried out. 72 structures were recorded. It was noted that the nomination dossier commissioned by the State Government had listed only 16 structures.
- Architectural documentation of over 50 structures standing on the site was carried out in 2012 along with locating them on the site topographical map also commissioned in 2012.
- Architectural Plans at ground, inter mediate and roof levels, elevations of all sides and necessary section along with photo documentation was prepared for all principal structures as well as for most minor structures comprising tombs, step wells, enclosure walls, grave platforms and mosques.
- Over 2000 architectural drawings – including condition assessments, compiled in 5 volumes were thus prepared.

Next Stage

- Additional drawings such as details of stucco plasterwork as well as any required rectifications will be carried out for all structures as conservation works commence on individual buildings.

Above: Sectional elevation of Mohammad Quli Qutb Shah's Tomb;

Right: Condition Assesment drawing of the Great Mosque



02. Condition Assessment

Following the architectural documentation of the structures, a condition assessment on the basis of visual inspection was carried out in 2012. This was required, together with other studies and research, to determine the appropriate conservation approach.

Outcome

- A detailed condition assessment of the monuments was done for every structure within the complex which comprised of tomb structures, step wells, enclosure walls, grave platforms and mosques.
- While documenting, most of the monuments were found to be in a poor state with various issues i.e., vegetation growth, water seepage, graffiti etc.
- A condition map was made marking the monuments that required immediate attention in the descending order and were marked on a map.
- An analysis of the condition assessment coupled with a study of archival records and photographs revealed that the final layers of plaster as well as much of the stucco plasterwork on most monuments dated from the 19th century. On the basis of the condition assessment it was observed that the monuments suffered similar patterns of material decay and structural defects.
- Cost estimates for conservation works were prepared for the significant monuments on the basis of the architectural documentation and condition assessment.

Note

1. The Architectural documentation was done manually using dilatometer and measuring tapes
2. The study was carried out based on non-destructive methods. Condition mapping of the surface was done using dilatometer and measuring tapes.
3. All Details and Plans 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

DEPT. OF ARCHAEOLOGY AND MUSEUMS,
GOVT. OF ANDHRA PRADESH



AGA KHAN TRUST FOR CULTURE

Qutb Shahi Tombs Complex
Quli Qutb Shah Tomb
Architectural Documentation
Plan at +115 mtr.

Scale:

1" = 200'

200'

400'

800'

1600'

3200'

6400'

12800'

25600'

51200'

102400'

204800'

409600'

819200'

1638400'

3276800'

6553600'

13107200'

26214400'

52428800'

104857600'

209715200'

419430400'

838860800'

1677721600'

3355443200'

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13421772800'

26843545600'

53687091200'

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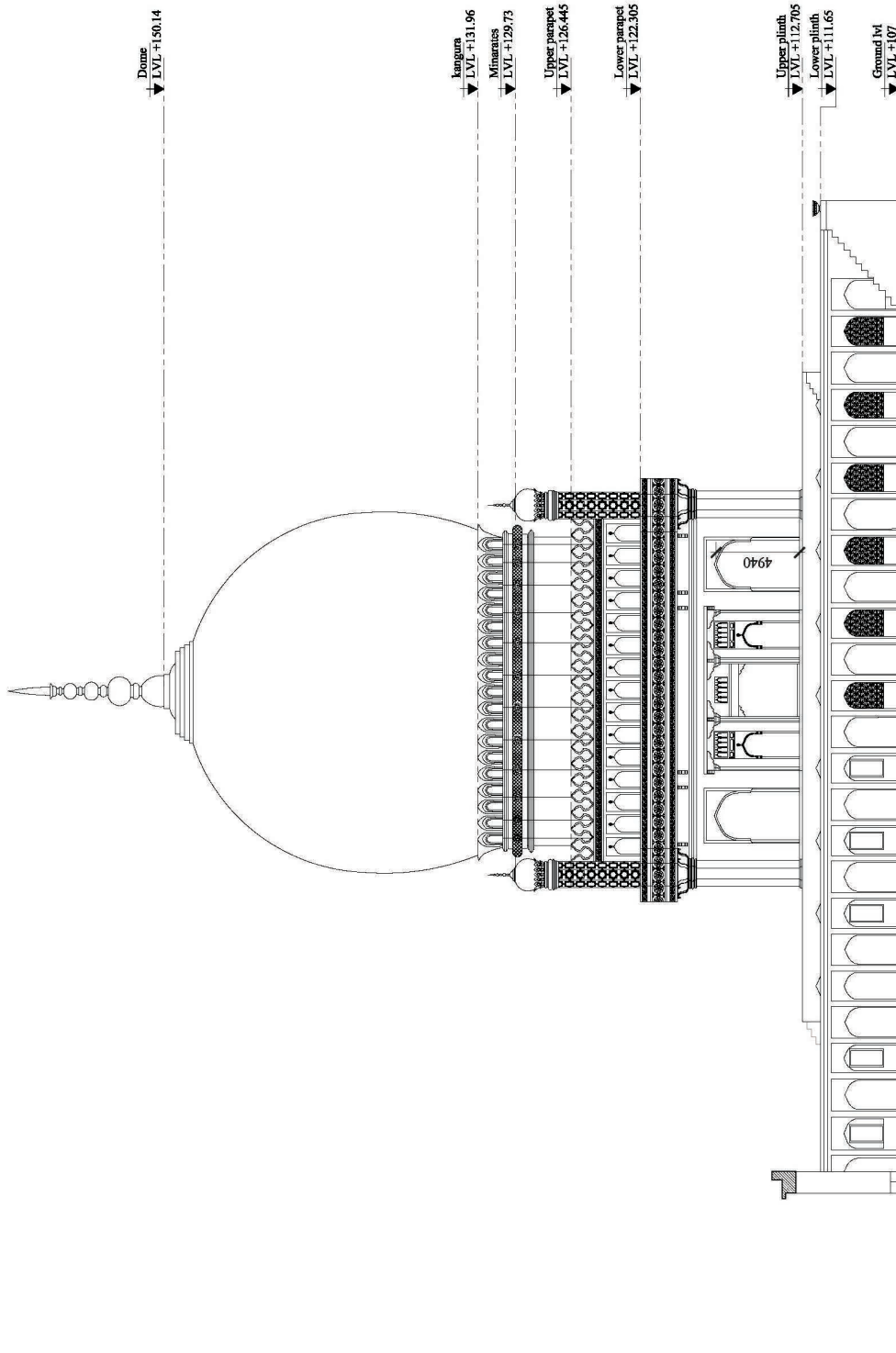
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Note

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2. This 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 Dimensions and Features documented in this study are based on the actual geometry 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



DEPT. OF ARCHAEOLOGY AND MUSEUMS,
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AGA KHAN TRUST FOR CULTURE

Qutb Shahi Tombs Complex

Quli Qutb Shah Tomb

Architectural Documentation

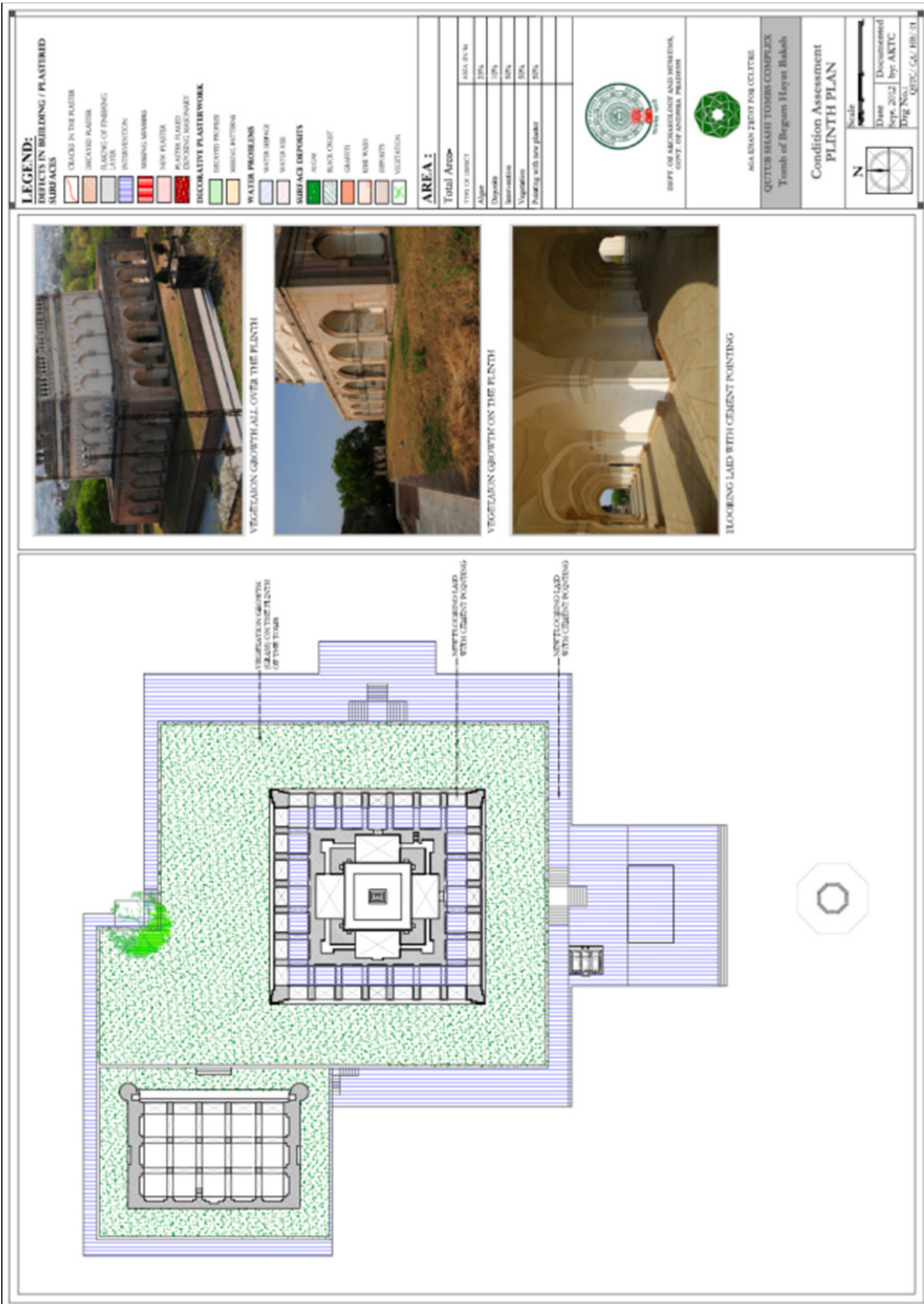
West elevation

Scale:



Date: April, 2012
Documented by: AKTC

Dwg No. QSTC/AD/QQST/07



LEGEND:
DEFECTS IN BUILDING / PLASTERED SURFACES
 CRACKS IN THE PLASTER
 DECAYED PLASTER
 FLAKING OF FINISHING LAYER
 INTERVENTION
 MISSING MEMBERS
 NEW PLASTER
 PLASTER FLAKED EXPOSING MASONRY
DECORATIVE PLASTERWORK
 DECAYED PROFILES
 MISSING PATTERNS
WATER PROBLEMS
 WATER SEepage
 WATER RISE
SURFACE DEPOSITS
 ALGAE
 BLACK CRUST
 GRAHITI
 LIME WASH
 DEPOSITS
 VEGETATION

AREA :
 Total Area-
 TYPE OF DEFECT
 Graffiti 1%
 Lime wash 55%
 Black Crust 10%
 Algae 45%
 Deposits 5%
 Intervention 2%

DEPT. OF ARCHAEOLOGY AND MUSEUMS, GOVT. OF ANDHRA PRADESH

AGA KHAN TRUST FOR CULTURE
 QUTB SHAHI TOMBS COMPLEX
 Tomb of Ibrahim Quli Qutb Shah (Ibrahim Qutb Shah Tomb)
Condition Assessment
SOUTH ELEVATION

Scale
 0 1000cm 2000cm 3000cm
 Date Documented by: AKTC
 Date Documented by: AKTC
 Date Documented by: AKTC
 Date Documented by: AKTC

03. Archival Research

As with most 'protected' monuments, the structures standing within the Qutb Shahi Heritage Park as well as their landscape setting have undergone repair/ conservation/ alteration in the past. Archival research aims to understand past repairs as well as alterations to the landscape setting.

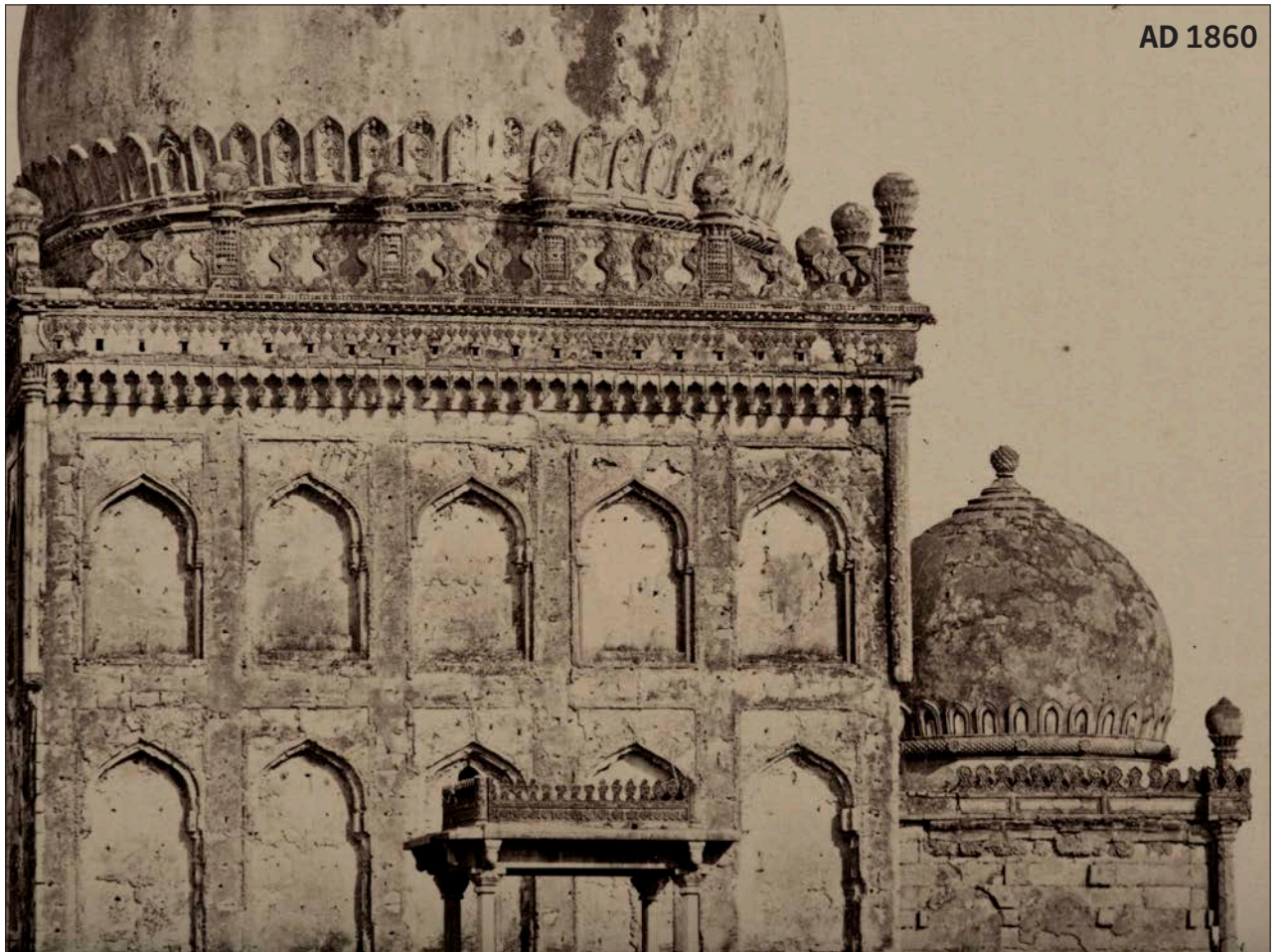
Outcome

- A sustained effort at archival research has included review of collections at the British Library, the Department of Archaeology and Museums - Hyderabad, Salarjung Museum, Archaeological Survey of India, J. Paul Getty Museum, MIT archives, Alkazi collection of photography, amongst others.
- Archival materials reviewed have included photographs dating from the 19th century onwards, earlier painting, etchings and lithographs, manuscripts, publications from the 19th century onwards, amongst others.
- Annual reports of the Archaeological Department dating from AD 1914 have been collected.
- Over 500 archival photographs with the earliest dating from 1860's have now been sourced.

Impact

Archival material, especially photographs and traveller descriptions have helped establish the major changes that occurred on the site in the 19th and 20th centuries. On several occasions archival photographs have revealed details of the stucco plasterwork that have since been lost or altered with cement plaster thus allowing restoration of the original design intention.

(Right) Study of an archival image (Top) dating from early 1860's by J.H. Nixon of Ibrahim's Tomb shows the extent of 19th century alterations (Bottom); Copyright: Alkazi Foundation



AD 1860



AD 2015



No. of Archival Images Collected 500
Period ranging from AD1860 - 1974
Archival Sources referred 09

04. Monument Files

To ease conservation decision making as well as maintain a careful record of conservation and landscape works, a 'file' for each individual structure standing within the Qutb Shahi Heritage Park has been developed.

Outcome

- Architectural drawings, condition assessment drawings, archival photographs or details thereof, photographs of present condition were first compiled together.
- As conservation works on structures have commenced, record and rationale of decisions have also been inserted in the said files.

Impact

Just as Human Resource departments maintain individual files on all personnel; this practice has been introduced on an experimental basis to establish best practice. It will provide a valuable record for posterity.



Total No. of Trees Mapped 2450
Total No. of Species Found 59
Native to Site 30

(Above) The tree mapping exercise, which began a year ago, includes measuring and recording the height of the tree, girth of its bark and the size of its canopy

05. Tree Mapping

Dense vegetation is seen across most portions of the Qutb Shahi Heritage Park and this has either self seeded or haphazardly planted and required to be recorded.

Outcome

- All the trees in the complex have been numbered and marked on the map.
- Basic information every tree comprising of size of canopy, width of girth, height, species and nativity is being tabulated.
- Over 3000 trees have been numbered and information on them have been prepared.
- Besides, the ground cover, the seasonal changes occurring in the complex is also being photo-documented.
- A herbarium for the site is also being compiled.

Impact

The tree mapping exercise will help in increasing the bio-diversity of the Qutb Shahi Heritage Park.

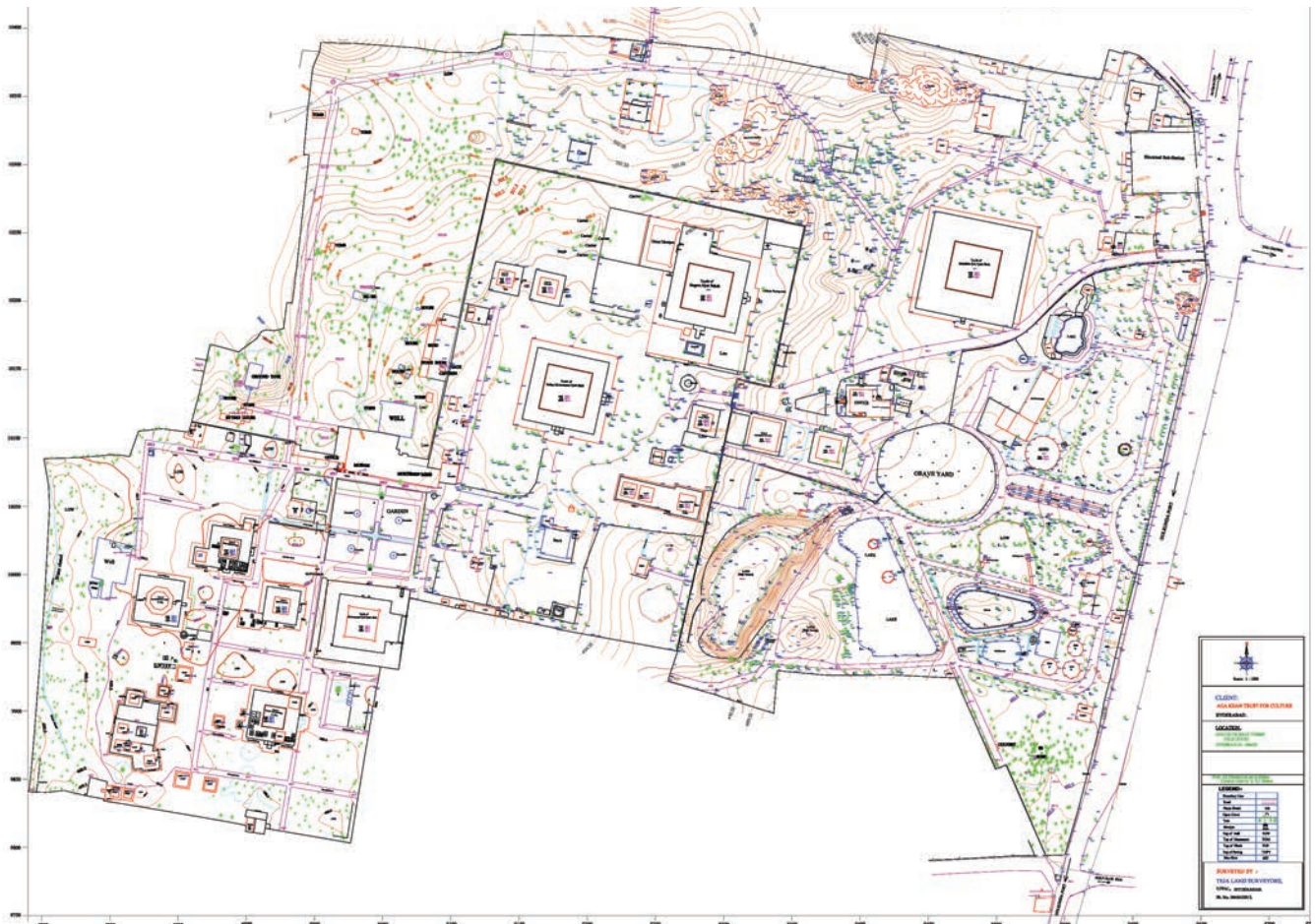
06. Topographical Survey

In the absence of an existing site survey map, a topographical survey was commissioned at the onset.

Outcome

- A brief topography was initially carried out for the site to have a basic idea of the terrain of the complex.
- Later upgraded to a detailed survey of the entire complex including the Deccan Park and the Idgah area.
- Location of structures, trees, pathways, level differences across 108 acre complex was mapped in detail.

(Below) Topographical Plan Of Qutb Shahi Heritage Park



07. Landscape Analysis

Landscape studies such as slope analysis, vegetation analysis, visitor circulation, prominent visual corridors were required in addition to archival research to help formulate the landscape master plan.

Outcome

A design brief for proposed landscape plan was developed from a close appraisal of the existing situation including:

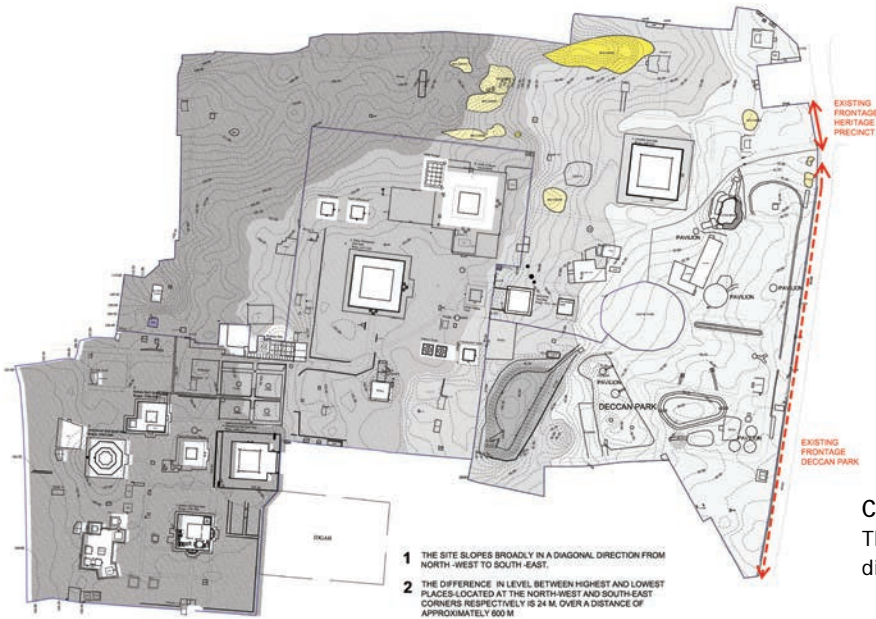
- Site slopes and levels
- Drainage and water-bodies
- Vegetation
- Access , movement and activity
- Existing monuments, their visual setting and relationship to the landscape

Impact

The landscape master plan has been prepared taking into account the existing topographical, features as well as view corridors and an appropriate circulation system.

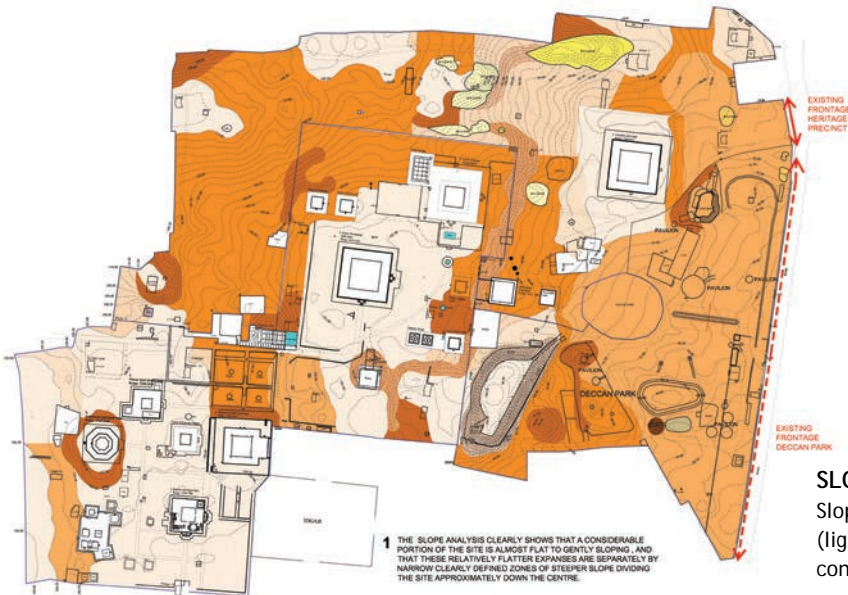


(Above) View of the Golconda fort wall and the Qutb Shahi tombs in 1986 A.D (Below) in 2014; Quli Qutb Shahi Heritage Park is located at the foot of the majestic Golconda fort. Though the outer enclosure walls of Golconda are just across the road from the southern edge of the necropolis, the visitor entrance to the fort is roughly a kilometer south of the Qutb Shahi Tomb complex and now segregated by a significant settlement.



CONTOURS, ELEVATIONS

The Qutb Shahi Heritage Park slopes in a diagonal direction from north -west to south -east.



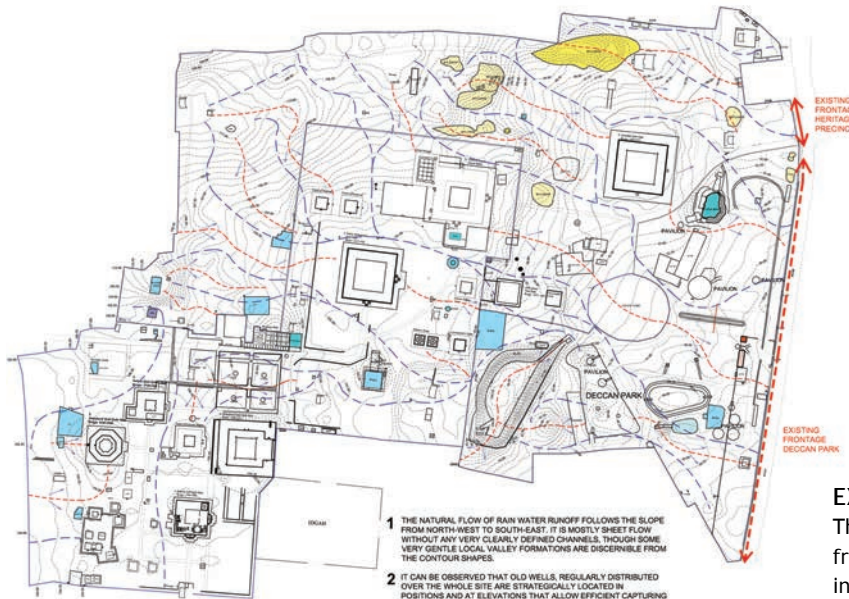
SLOPE ANALYSIS

Slopes varies from 1 in 2 (dark brown) to 1 in 100 (light beige). An analysis of these slopes reveals that a considerable portion of the site has only a gentle slope.



EXISTING VEGETATION

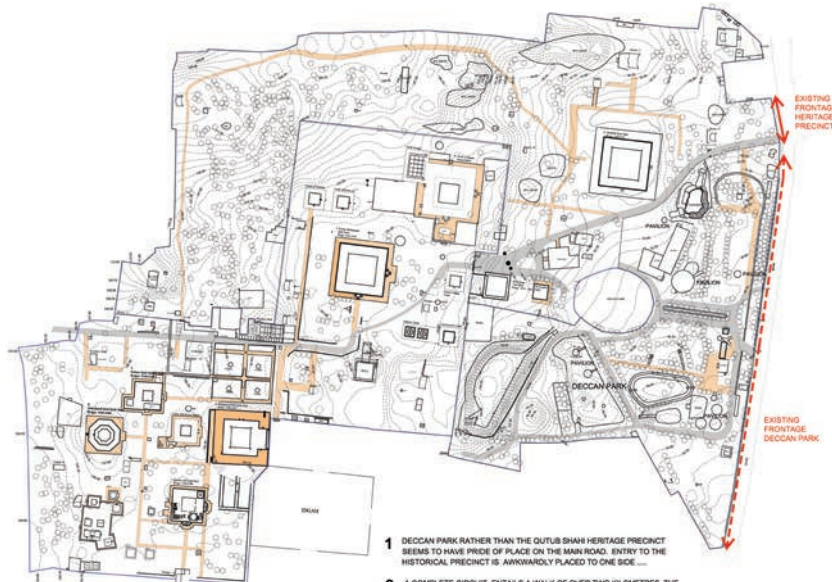
Existing vegetation consists of native forest type vegetation, scattered groups, individual trees amongst monuments and dense ornamental planting in Deccan park. Each tree is presently being documented.



- 1 THE NATURAL FLOW OF RAIN WATER RUNOFF FOLLOWS THE SLOPE FROM NORTH-WEST TO SOUTH-EAST. IT IS MOSTLY SHEET FLOW WITHOUT ANY VERY CLEARLY DEFINED CHANNELS, THOUGH SOME VERY GENTLE LOCAL VALLEY FORMATIONS ARE DISCERNIBLE FROM THE CONTOUR SHAPES.
- 2 IT CAN BE OBSERVED THAT OLD WELLS, REGULARLY DISTRIBUTED OVER THE WHOLE SITE ARE STRATEGICALLY LOCATED IN POSITIONS AND AT ELEVATIONS THAT ALLOW EFFICIENT CAPTURING OF WATER.

EXISTING DRAINAGE

The natural flow of rain water runoff follows the slope from north-west to south-east. Landscape works will include earth grading to ensure rainwater is collected in the step wells.



- 1 DECCAN PARK RATHER THAN THE QUTUB SHAHI HERITAGE PRECINCT SEEMS TO HAVE PRIDE OF PLACE ON THE MAIN ROAD. ENTRY TO THE HISTORICAL PRECINCT IS ANKWARDLY PLACED TO ONE SIDE.
- 2 A COMPLETE CIRCUIT ENTAILS A WALK OF OVER TWO KILOMETRES, THE SITE BEING ABOUT 900 M DEEP, MEASURED DIAGONALLY. A PATH SYSTEM BASED ON THE HISTORY OF THE SITE WOULD BE A VITAL PART OF THE SITE.

ACCESS AND MOVEMENT

A path system based on the history of the place would play a vital role in enhancing and enriching the visitors' experience of this large, deep and complex historical site.



LANDSCAPE CONCEPT

The landscape masterplan envisages ecological zones on the north and south of the core monument zone and a zone for facilities and parking along the periphery.

08. Bird Mapping

In addition to mapping vegetation, surveys of bird life observed within the Qutb Shahi Heritage Park are being informally carried out.

Outcome

- On a monthly basis birds observed on the site are photographed and recorded.
- Several species have been recorded including Little Cormorant, Shikra, Sunbird family, Green Bee Eater's, Indian thick knee, Southern Caucal, Hawk Cuckoo, Golden backed woodpecker, Indian Golden Oriole, Peafowl, Small Minivet, amongst others.

Impact

The landscape masterplan will envisage creation of specially designed bird habitat zones within the Qutb Shahi Heritage Park.

(Left) Tickell's Flycatcher; (Top) Minivet; (Bottom) Spotted Owl



09. Structural Assessment

Following the completion of the architectural documentation and condition assessment of the monuments in the complex, a structural assessment of the monuments was commissioned in early 2014.

Outcome

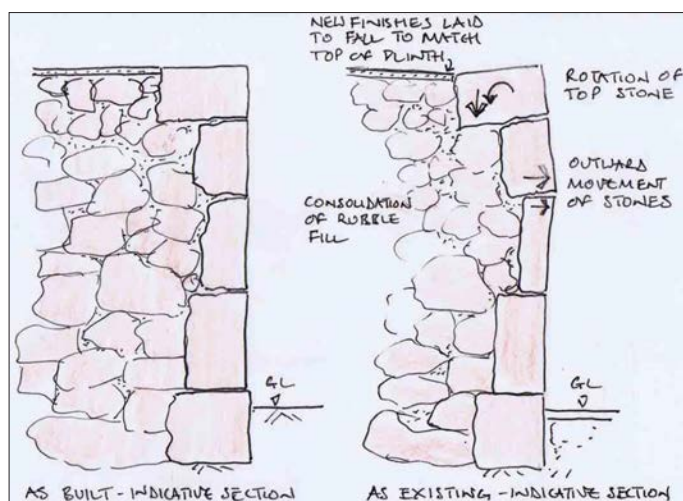
- A team of Stand Consulting Engineers, London were based in Hyderabad for a month to study the principal monuments on the Qutb Shahi Heritage Site.
- All structures- tombs, mosques, step wells and the mortuary bath - were appraised with structural engineering investigations.
- A summary for the urgency of the structural works in the monuments was recommended.
- The larger domed tombs demonstrate the masons had an excellent understanding of the structural principles for this form of construction. Mohammed Quli Qutb Shah's tomb, the grandest structure in the complex, contains sophisticated techniques to address particular structural challenges with the design. Most of the structures are in a reasonable condition for their age and type of construction. The majority of structural issues arise from a lack of maintenance and inappropriate repairs. Common problems include root damage by vegetation growth and changes to the falls at roof level which have compromised the drainage of rainwater and resulted in accelerated deterioration.

Impact

Close monitoring of structures where cracks or settlement is noted as well as undertaking emergency repairs where required.



(Above) Structural engineers assessed the monuments with the team and prepared a summary (Below) of the existing structure, the structural defects and their likely cause(s), and a summary of the structural repairs that are required.



10. Tile Documentation

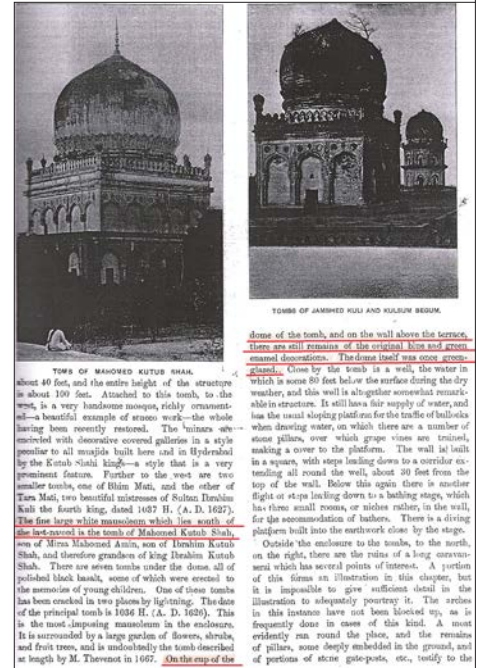
The architectural documentation revealed ceramic glazed tiles on three monuments- Tomb of Ibrahim Quli, Tomb of Mohammad Qutb, and Tomb of Abdullah Qutb Shah, which led to further documentation and tile analysis.

Outcome

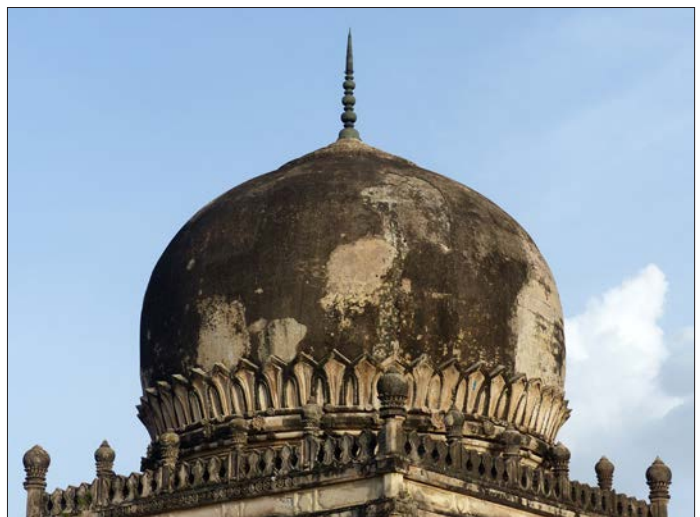
- Each of the Tombs have been extensively documented with the tile work being traced and measured along with condition assessment.
- Sample of glazed tiles have been collected from the monuments and have been sent for testing to Research Laboratory for Archaeology and the History of Art department at Oxford University to understand the physical and chemical properties of the tiles.
- Tomb of Abdullah showed signs of glazed tiles of five different colours i.e. orange, blue, white, green and yellow on the top columns on the corners of the upper storey, as well as around the flower bands on the first storey.
- On the Tomb of Mohd. Qutb V, tiles, revealed below the current plaster layer, once covered the entire dome as well as exterior bands and merlons below the dome. The colours found are Blue, Turquoise, Green, Yellow and White. The dome also revealed the use of nails for pegging of tiles, which may have caused further deterioration of the tiles.
- Tomb of Ibrahim Quli Qutb Shah has clear evidences showing tiles in the upper bays on the south side and traces in the east and north side showing complex geometrical and floral patterns with glazed tiles of Green, Orange, Blue, Turquoise, White and yellow.

Impact

Following the successful revival of tile making craft to restore the monuments in the Humayun's Tomb complex, the laboratory tests will be used as a basis to formulate a tile restoration strategy for the Qutb Shahi Heritage Park.



(Left) Archival image of Mohammad Qutb's Tomb from Alkazi Foundation J.H. Nixon, early 1860s with evidence of tilework on the dome, and (Right) View of the tomb now



11.

Petrologic Studies

For an indigenous approach to the conservation of the ashlar stone masonry works, it was necessary to obtain similar kinds of stones for repair. This led to study of available stones from the noted stone quarries.

Outcome

- Various stone quarries were visited upto a distance of 200 kms to obtain the right colour, texture and size of the stones as used originally by the builders.
- Over 20 quarries were visited and over 50 samples of stones were collected and the matching stones were bought and finalised.
- To obtain the right texture of stones, samples of hand chisel dressing were made by local craftsmen and were verified on the site.

Impact

This study led to the identification of local craftsmen who have been in the profession for generations. This has created employment opportunities and generated livelihood for these craftsmen.

(Below) Project team surveying quarried to get the best-matching stone for the conservation works



12. Lime Mortar Centre

Prior to the invention of cement all buildings were built either in lime or mud mortar. Lime stone is the main source of the building lime. Lime has been used as the principal binder for mortars and plasters for the past 10,000 years. To undo the damage caused to historic buildings due to use of modern materials like cement, lime has been used in the conservation of all the monuments in the Qutb Shahi Heritage Park. Stucco Plaster is a key architectural element defining the architectural style of the Qutb Shahi's. Over the years, the lime plaster has been replaced with cement in parts. Lime mortar is also required to carry out all masonry repairs.

Action Taken

- Samples of the existing lime mortar was collected from the monuments and sent for testing.
- Based on the test reports, samples of lime-stones were collected from various sources and tested to check the similarity.
- Similarly, river sand samples from sources up to a distance of 300 kms were collected and tested for similarity of fineness modulus, silt content and bulking.
- A mechanised lime grinding mill has been set up which can produce over 500 cubic feet of lime mortar in a day. Preparation of all lime mortar will be carried out under strict supervision at a single location as the preparation process is both specific and complex as compared to cement mortar which craftsmen are now used to working with.
- For adequate soaking of lime, six tanks were made to contain over 3000 cubic feet of lime.

Impact

A centralised monitoring of lime mortar production has assured the quality of mortar in the restoration works. All necessary tests required for the final finish also have been carried out here.

(Below) A mechanised lime grinding mill has been set up which can produce over 500 cubic feet of lime mortar in a day



13. Visitor Analysis

To develop required facilities and an appropriate landscape design for the Qutb Shahi Heritage Park, studies were conducted to understand visitor activities and movement patterns.

Action Taken

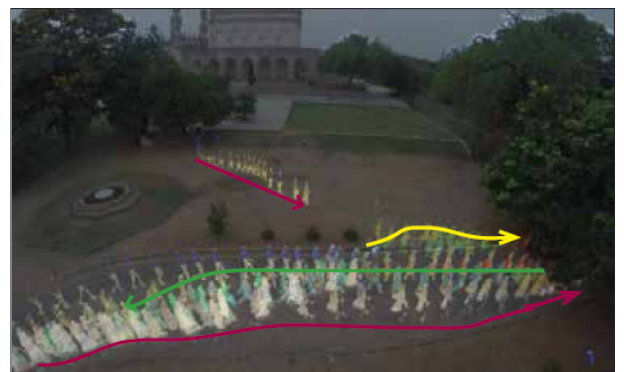
- Allison Anne James, a postgraduate intern with the Aga Khan Program for Islamic Architecture at the Massachusetts Institute of Technology (MIT), researched on this for 70 days.
- With an aim to uncover information about the user-experience of a cultural heritage site in an urban context as a part of its contemporary use, the research focused on the historic preservation master plan for the Qutb Shahi Tomb site.
- Qualitative analysis of videography, photography, interviews and movement-mapping, using a video abstraction tool revealed new information about current patterns of use on the site.
- The study showed patterns of use on the site related to activity, weather and time of day.
- Examples from the study include observations that visitors follow certain pathways to and from tombs and open green spaces, changing the ways that they interact with and understand the historical context of the buildings and the landscape.

Impact

This analysis will be utilised to develop a comprehensive visitor friendly development plan.



(Right) Graphic visualization tracking visitor movement to various monuments on site



14. Conservation Plan

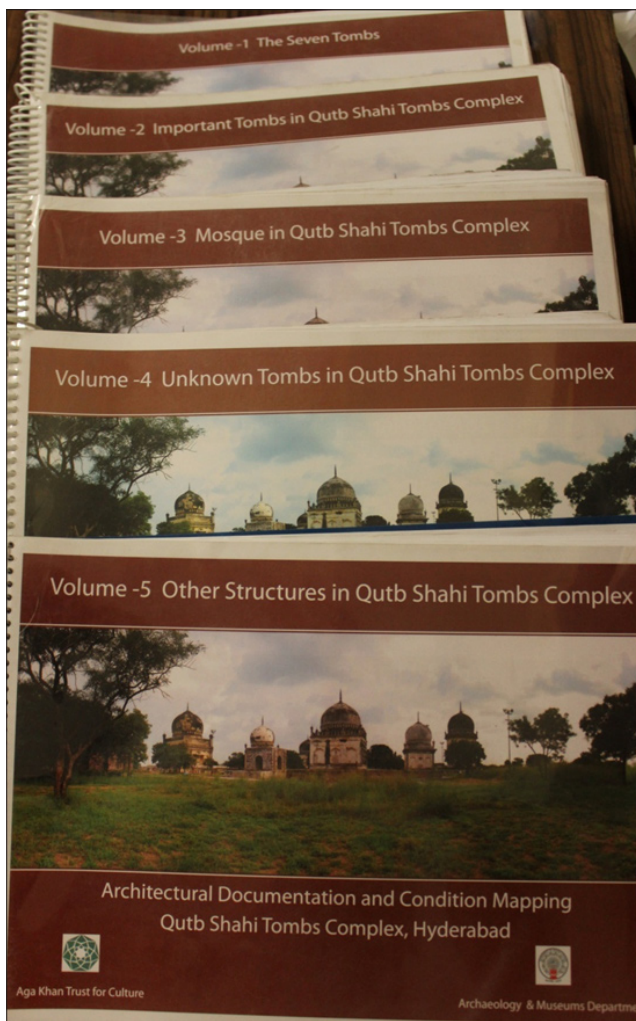
The architectural documentation, preparation of the inventory, preliminary archival research, landscape studies, topographical survey, historical research were used as the basis of preparing a Conservation plan for the proposed conservation and landscape restoration.

Outcome

1. The Conservation Plan, based on a thorough understanding of the site, included the defining of a conservation process as well as the appropriate conservation philosophy.
2. Conservation Plan formed part of the MoU signed to initiate the project on 9 January 2013.
3. Following the MoU, much additional documentation, archival research has been carried out at the site and this has led to further detailing out conservation requirements for individual monuments as well as their garden setting.

Impact

The preparation of the Conservation plan has allowed there to be a reference document for the project team as well as public partners and donors to the project.



Conservation Process

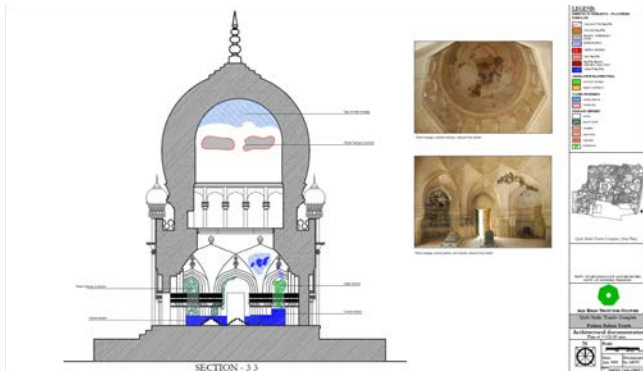
Before any practical work starts, a project must be prepared on the basis of said research and must be submitted to a group of experts for joint examination and approval.
- The Florence Charter, 1981, Article 15

1. Identify the Place

The need for extensive conservation and landscape works in the Quli Qutb Shah Tomb complex was felt necessary to ensure long term preservation, enhance visitor understanding and experience of the Qutb Shahi Heritage of Hyderabad.

2. Documentation & Research

Through 2012, exhaustive recording, documentation, condition assessment, surveys and research exercise was carried out by the multi-disciplinary project team as a precursor to the Conservation Plan that forms the foundation for the project.



3. Statement of Significance

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

4. Conservation Philosophy

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

5. Peer Review

Evaluation of the importance of the elements involved and the decision as to what may be destroyed cannot rest solely on the individual in charge of the work. Additionally, being a related place to the WHS, two international peer reviews have already been held to discuss ongoing works and project team has accumulated significant archival material that will help define an appropriate conservation action for each of the monuments within the complex.

6. Conservation Plan

Following the incorporation of the comments from the review process, the Conservation Plan (text, photographs and drawings) has been circulated for comments by experts. The final Conservation Plan will be available on the Project website and thus accessible worldwide.

7. Allocate Resources/ Manage

Project commenced following sufficient financial resources having been raised. The project has access to technical staff, national and international experts. In order to ensure quality of craftsmanship all works will be carried out by master-craftsmen. Similarly traditional materials –stone, lime, tiles – of quality will be procured.



8. Supervision

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

9. Completion Report & Publication

The conservation project will culminate with the writing of a completion report. In addition the annual report will document works carried out each year.

PEER REVIEWS



The scale of the project, proposed at Qutb Shahi Heritage Park, never before attempted in India, coupled with the desire to return to a craft based approach as opposed to a stated 'preserve as found' approach of the ASI required regular peer reviews by independent national and international experts. Two international peer reviews have already been held to discuss ongoing works and project team has accumulated significant archival material that will help define an appropriate conservation action for each of the monuments within the complex

15. Conservation Peer Review

Following the signature of the MoU in January 2013, the Wakf Tribunal – on the basis of a petition by vested interests – did not allow conservation works to commence until November 2013. Immediately upon commencing conservation works an international peer review was held on 12th and 13th February 2014 to discuss the conservation plan, conservation strategy on individual monuments.

Outcome

1. Mr Gamini Wijesuriya, Project Manager (Sites Unit), ICCROM, Rome led the peer review team which also included Ms Tara Sharma and Ms Radhika Dhumal.
2. Dr MH Talebian from Iran could not join due to non availability of visa in time and Mr Vikas Dilawari could not join due to a last minute cancellation of his flight.
3. The Peer review was attended by officers of the Department of Archaeology as well as the Sir Dorabji Tata Trust.
4. The final peer review report is appended to this annual report.

Impact

The exercise led to significant discussion over a three day period and will be followed up another similar effort in 2015.



16. Landscape Peer Review

Landscape restoration of the core monument area will be a critical component of the proposed project, the landscape master plan of the Qutb Shahi Heritage Park prepared on the basis of topographical surveys, archival research and circulation patterns was peer reviewed on 27th and 28th January 2014

Outcome

- The landscape Peer review was led by Prof. James Wescoat Jr and Ms. Omana Eappen. Prof. M Shaheer, Landscape Architect, led the discussions.
- The archival photographs, poetic references, site inspections resulted in defining next steps towards finalising landscape restoration proposals for specific areas
- The need for archaeological excavations to determine landscape elements presently buried was also defined.

Impact

Additional research requirements and definite locations for archaeological excavations were identified on the basis of which detailed landscape designs will be prepared.



(Opposite Page) Conservation and Landscape peer review by national and international experts discussed every aspect of the proposed conservation works on the monuments and (Right) approach towards landscape restoration at the site

17. Site Exhibit

To enhance visitor experience and share with visitors the intention of the conservation and landscape restoration, an existing building at the entrance zone was converted to serve as a site exhibit as well as project office.

Outcome

- Significant renovations were required to be undertaken to convert a building built to serve as a restaurant to serve as a site exhibit to inform visitors.
- A site exhibit includes bilingual panels depicting the chronology of the development of the complex, the settings of the site and the restoration and landscape works planned to be carried out in the complex.
- In addition, Information panels have been put up besides the major monuments or where conservation works have commenced. These contain basic information conveyed through archival images and condition assessment documentation of the monuments.
- Comparative archival and present images of have been put up at strategic locations across the Qutb Shahi Heritage Park.

Impact

Several visitors now spend significant time at the site exhibit and can be noticed reading signage boards installed across the site. The exhibit and signage panels are continuously updated to provide 'up-to-date' project related information.



18. Badi Baoli

‘Badi Baoli’ or large step-well is a functional step well collecting rain water from a large catchment area as well as linked to a network of aqueducts running throughout the site. First built in the 16th century, major additions and alterations were carried out here in the 19th century when the arcaded corridor and passageway running throughout the lower floor as well as stairways were built, significantly raising the level of masonry of the structure.



The initial collapse
March 2013



Further failure
September 2013



After the final collapse
October 2013

Conservation of Badi Baoli

The western face of the Badi Baoli collapsed during the years 2012-13 requiring the structure to be closed to public while major repairs are carried out by the project team.

Stones were segregated and reused in the re-construction of west wall of baoli.



Over 4000 man-days of work done to remove all the debris and loose masonry which amounted 450 cum.

Debris Cleaned

Following the near total collapse of the west side wall, the Baoli was cleaned of all the building debris, which consisted of stones, earth, lime and masonry. In this process the Baoli was de-silting and cleared of any loose portions of masonry wall.



Consolidation of Baoli

RCC raft footing was laid on the existing rockbed, and upto 8 ft long stones were used in the construction of the retaining wall, which were mostly the recycled stones.



For strengthening and safety of the structure, a RCC Raft Footing of 75 cum. was laid at the lower portion of the baoli. 600 cubic meters of stone masonry, 17m high was rebuilt using lime mortar.

Reconstruction of Steps

Reinstated the west side access from the ground level to the lower arcaded terrace of the baoli.



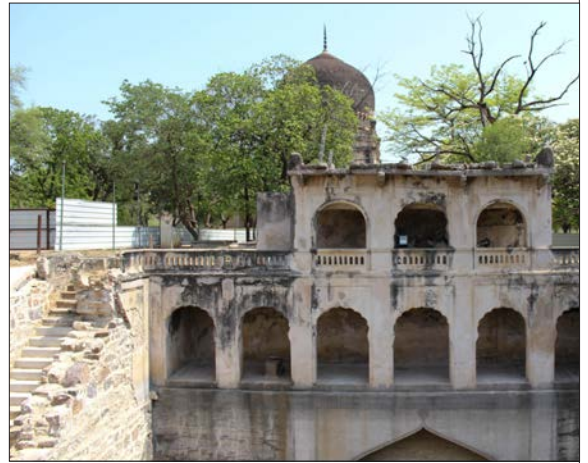
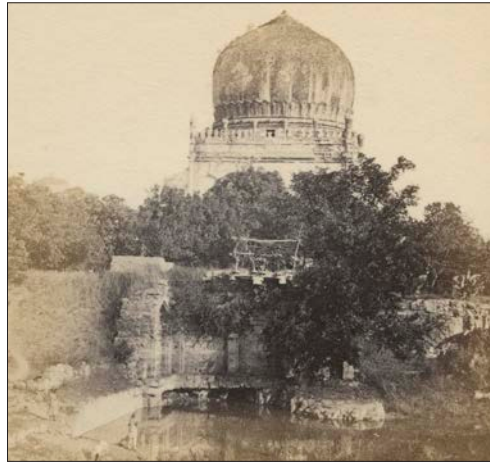
Out of 17 steps, 10 steps along the western wall had collapsed. These granite steps were reinstated.



Re-channeling Surface Water

To ensure surface water drains directly into the baoli through the channel without affecting the structure, a channel of size 2X2 ft was built with adequate slope.





A. Analysis of Collapse

Though the Badi Baoli had small portions of collapse even during the architectural documentation carried out in 2011, it was the most structurally well preserved of all the step-wells found within the complex.

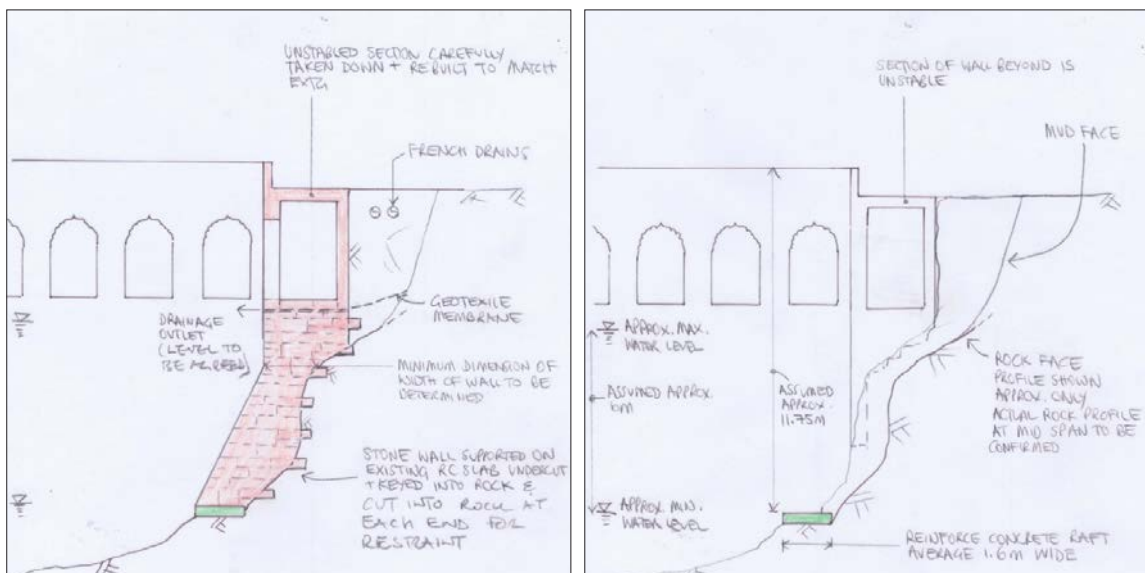
However, with the Wakf Tribunal's orders preventing the commencement of conservation works following the MoU on 9 January 2013, the Badi Baoli suffered significant and repeated collapse during the heavy monsoon rains of 2013. Conservation works could only commence in November 2013 following the Wakf Tribunal's permission for the same.

Outcome

- A study of archival material (Above) revealed that the 'Badi Baoli' was only a tank until the 19th century when the structure was altered and the arcade on the upper level provided where only sloping ground existed originally.
- The slope analysis revealed that large portions of the site were draining into the Badi Baoli and the 19th century arcade and associated masonry had interrupted natural drainage lines.
- Recent alterations of the levels of the setting had further created collection points for large quantities of rainwater which was causing severe pressure on the masonry.

Impact

From the onset of the conservation effort it was evident that in order to ensure long term structural stability alternate systems of water drainage into the Badi Baoli needed to be established.



B. Removal of Debris and De-silting

Outcome

- At the onset, 2, 00, 00,000 litres of water was required to be pumped out and fed into other adjoining step-wells. Following the initial removal, the pumping out required to be continuous to allow the well to dry out.
- Over 450 cubic meters of stone debris and silt was lifted to the ground level from the 21 m deep bed of the Baoli.
- All stone thus lifted was cleaned of mortar for re-use in the re-construction of the collapsed masonry.
- Over 4000 man days of work was required to clear the Baoli of collapsed masonry, existing silt and other accumulations.

(Below) Removal of Earth and silt from the Baoli



C. Re-construction of the Collapsed Wall

Outcome

- With the bedrock at the base of the Baoli having disintegrated to a considerable extent, it was required to build a masonry wall from much deeper than it had previously existed.
- This also required to serve as a retaining wall of the bed-rock and earth as well as support the huge quantum of masonry and was thus proposed to be built as a buttress.
- The masonry required a 1.5 meter wide and 0.5 meter thick RCC raft foundation, 11 meters long at a depth of 22 meters from the ground level.
- The bottom half of the stone masonry, built in lime mortar, was built as a buttress also as not enough width was available due to portions of bed-rock still standing.
- The stone masonry employed stones measuring up to 2 m in length to key into the masonry at several places.
- Up till September 2014 over 600 cubic meters of masonry wall had been built up.
- Collapsed steps on the North West corner of the wall were also re-instated. 10 new pieces of dressed granite stones of the original size 2.5 meters length were prepared to complete the stairs.
- Work was temporarily stopped in September to allow the lime mortar in the masonry to set over the winter period.

Next Steps

- In summer 2015, the reconstruction of the arches, corridor and the roof would commence.
- Removal of cement pointing from the other three sides of the Baoli would be taken up and followed with lime mortar grouting and pointing.

Impact

The reconstruction of the solid stone masonry wall in lime mortar within a very short duration of time was necessary to prevent further collapse and deterioration of the Badi Baoli, three sides of which were still standing.





D. Channelization of the Surface Water

Since the Badi Baoli served as a natural catchment for rainwater from a large area of the Qutb Shahi Heritage Park, it was necessary to make an appropriate arrangement to allow the water into the Baoli. Previous evidence of channelization of rainwater was also found on the ground. However, as this directed large quantities of water down the steps, it was considered to be leading to deterioration and was considered inappropriate.

Outcome

- An alternate channel was built to the west of the masonry wall of the Badi Baoli with an exaggerated slope up to the corridor level following which an open channel was built to direct water into the Baoli.
- The channel was built as a homogeneous structure with the retaining wall so as to withstand the pressure. The channel floor was made of 8" thick lime concrete finished on the 3 sides so as to avoid percolation.
- A manhole was made beneath the corridor to allow easy maintenance.
- From the manhole onwards, the open channel has a granite base slab.

Impact

The creation of an alternate channel has ensured that enormous water pressure on the retaining wall has been mostly negated thus allowing long term preservation. During 2014, over 1 million litres of water has been collected from a rain of 77.5 cms.



19. Tomb of Fatima Sultana

Fatima Sultana was the daughter of Prince Mohammed Amin and Khanum Agha and the sister of the Sultan Mohammed Qutb Shah. The Tomb contains two inscribed graves, one belonging to Fatima and the next grave bears no name. The 19m high tomb sits on a 20.5m square plinth. Each side of the exterior facade consists of three recessed arches, with ornamental stucco plaster with the key stone resembling a lotus bud. The architectural style of the tomb is more evolved over the earlier buildings and includes elements such as petals below the domes and similar decorative patterns on



Plinth collapse at Fatima Sultana's
▼ Tomb in October 2013



A. Plinth Restoration

Following heavy rains in 2013, the southern plinth had partially collapsed, thus severely compromising the structural integrity of the monument. As with the Badi Baoli, conservation works on this monument were taken up on an emergency basis to ensure no further damage occurs to the monument.

Outcome

- A study of the plinth revealed that repairs had been carried out several times and during past repairs inappropriate alterations such as use of mud mortar as well as not reinstating the base band of dressed granite, amongst others, have been carried out.
- The entire section of the masonry for the southern plinth wall as well as sections of the western wall required to be dismantled. This was especially necessary for sections where the base band of dressed granite was missing and required to be reinstated.
- Reconstruction of the plinth was completed using ashlar masonry with lime mortar and then plastered with lime.
- The upper plinth band was re-instated with stone masonry and lime concrete was laid after removal of the existing cement concrete.
- The cement layer, 1" thick, found on the plinth was also dismantled.
- The steps found on the western side were dismantled and rebuilt on the southern side where the entrance to the tomb chamber is located.

Next Steps

- The cement layer on the plinth will be replaced with 30 mm thick granite slabs to ensure long term preservation and preventing future water percolation as this had led to the collapse.
- The ground on all the sides of the plinth would be graded adequately to expose the lower band of dressed stones.

(Opposite page) A: Removing cement plaster and restoring historic plaster on the facade; B: Vegetation removal from the dome and facade; C: Emergency repair works carried out on the lower plinth after its collapse in 2013; D: Cleaning of the internal surfaces and restoring decorative motifs; (Below Left) Craftsmen lift stones to build the plinth; (Below Right) Removal of cement concrete from the plinth





(Above) Replastering and repairing of the exteriors

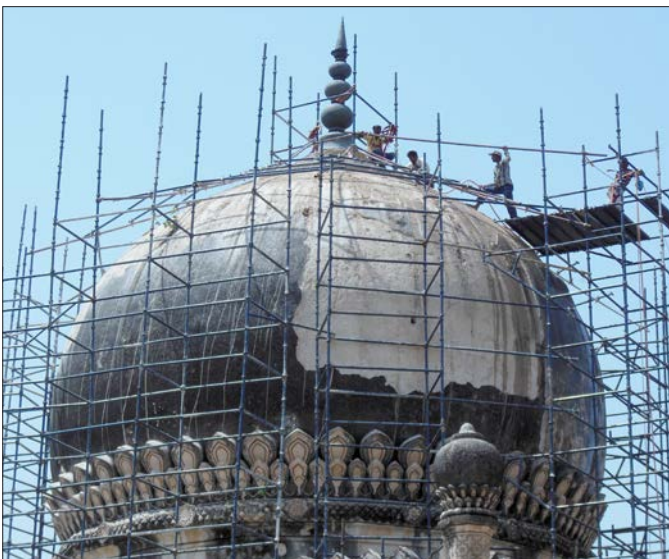
B. Dome & External Surfaces

As conservation works had commenced on the structure it was considered appropriate to complete required conservation works though it had been agreed that a phase-wise approach would be required for the Qutb Shahi Heritage Park structures. The dome plaster was found to be in a state of deterioration and evidently original lime plaster had mostly been replaced with cement during previous 20th century repairs. This has accelerated the decay of the dome surface leading to the development of cracks in plaster. Birds such as parakeets had also created deep nesting holes in the dome masonry. All such factors were leading to seepage visible on the internal surface of the dome.

Outcome

- Rank Vegetation from the dome was removed manually and the spots were treated to prevent the growth of other plants and trees.
- Cement layers and all dead/loose lime plaster was carefully dismantled.
- The finial rings were then repaired and re-plastered with lime mortar and finished with final coat of lime punning.
- The cracks in the dome were first repaired with stitching where required following which the dome surface measuring over 200 sq. m was re-plastered including the final coat of lime punning.
- The petals, intricate lime stucco bands and the drum below the dome have been cleaned, repaired for minor works and demolished and reconstructed in places where theses were inappropriately repaired in the past.
- Alloy chains have now been installed to help improve access to the dome and allow future maintenance.
- Following the dome plaster, the external surface was taken up for conservation works. The finials from the corner minarets at the parapet level were missing and were restored in lime mortar.
- The merlons on the west and the north sides of the parapet have been repaired and finished with lime putty.
- All the missing lime stucco details, bands and medallions on the west side have been repaired.

(Left) Removal of cement mortar from the dome (Right) prior to replastering with lime mortar



C.

Restoration of Internal Surface

The internal surface of the monument had signs of moisture and flakes of lime and the plaster had also fallen in various portions. Following the restoration of the dome, conservation of the internal works was taken up.

Outcome

- The internal surface of dome was dismantled of all the loose plaster as well as 20th century cement plaster layers.
- Wall surfaces were re-plastered and repaired using lime mortar, after which the final layer of lime punning was applied.
- The central medallion under the dome was also measure and repaired. The green colour polychrome found here was restored.
- The arch-posts below the dome were repaired and plastered with lime mortar and finished with lime putty.
- The medallions above the arch quiches, which were found to have black paint in the groves, have been repaired and colour restored.
- Also black polychrome was discovered in the groves at the parapet height and along the traverse ribs above the quiches of the arcade.
- The interior has been completely finished with lime putty and restored.
- Existing 4" thick cement flooring has been removed and 5" thick lime concrete has been re-laid.

Next Steps

The existing entrance doors would be repaired marking completion of the restoration of the internal surface.

Impact

Fatima Sultana's Tomb stands prominently on the entrance zone of the core monument area and the conservation work has not only ensured long term preservation but also helps explain the intention of the conservation project for the visitors to Qutb Shahi Heritage Park.



(Right) As with the exterior surfaces, the interior walls were also stripped of cement mortar and lime plaster applied; stucco plaster patterns required restoration by master craftsmen

20. Tomb of Jamshed Quli

This is the only octagonal mausoleum in the complex with each side of the octagon measuring 5.8 m. The tomb stands on a high plinth comprising an octagonal upper plinth and a large square lower plinth. The main tomb chamber is double storied and covered with a shallow dome with an outer bulbous dome. The two storeys are depicted through projected balconies which have highly decorative stucco plaster works. On the Internal wall surfaces, all levels are decorated with stucco plasterwork. The tomb suffered significant deterioration with the dome plaster crumbling leading to significant water penetration, the wall surfaces covered with cement and paint layers and the ashlar stone blocks missing from the lower plinth.

Prior to commencement of works, the complete facade was covered with a layer of new finish – replacing the historic lime plaster. The thick algae deposits as well as along the rain water flow due to flushed water outlets will be repaired. Proposed works includes restoration of the facade plasterwork, internal dome and decorative features with stucco work and repair of the dome.



April 2013



March 2014



December 2014



Removal of Cement Plaster



Restoring Ornamental Stucco Plaster



Installing Stone Edging on Plinth

A.

Restoration of the External Surface

The exterior wall surfaces of Jamshed Quli's Tomb are highly ornamental with medallions, arch bands, merlons, decorative bands and brackets. A study of archival material reveals that much of the stucco plasterwork on the exterior surface dates from the 19th century and even this had deteriorated to a great extent.

Outcome

- Exhaustive documentation of the stucco plaster patterns was carried out and this was studied to understand extent of variation on motifs.
- A template was prepared to allow scientific decision making on the extent of dismantling followed by restoration. Variation between adjacent patterns on each side was considered acceptable and only in case of excessive deterioration/ use of cement/ variation in excess of 20% between adjacent motifs was replacement considered necessary.
- Conservation works – repairs to restoration – on the highly decorative merlons stucco plaster patterns on the parapet walls on the upper terrace have been repaired and finished with lime putty.
- The brackets under the upper floor have been repaired and finished.
- Walls above the first floor have been repaired and finished with a coat of lime putty.
- The parapet wall on the first floor containing highly decorative medallions, bands and stucco have been repaired and finished with a coat of lime putty.

Next Steps

Installation of appropriate door following removal of the 20th century door.





B.

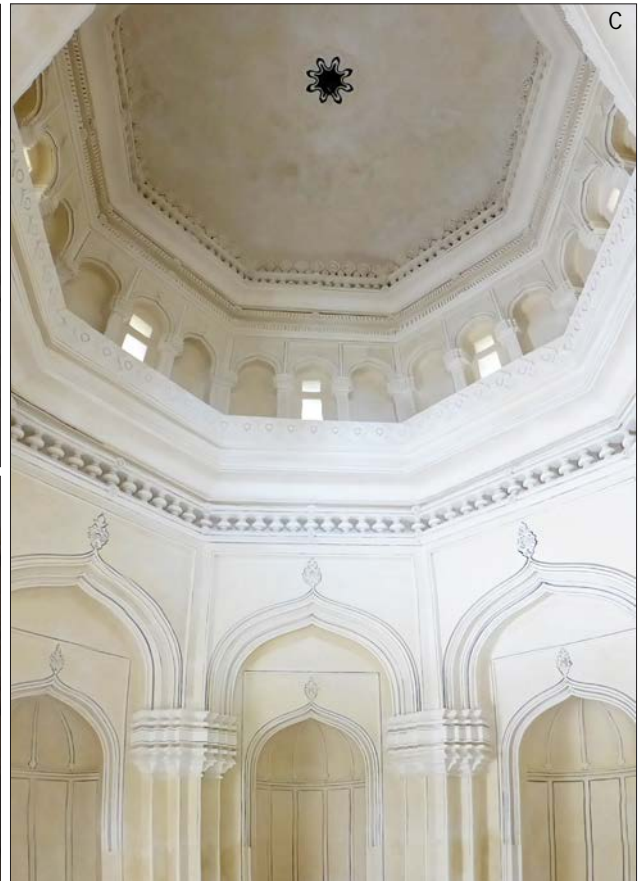
Restoration of the Internal Surface

As with the exterior surface, the interior of the tomb was similarly highly ornate with stucco plaster patterns. The entire surface was covered with lime wash/ paint layers disfiguring the historic character. Swallow nests had caused significant deterioration to the central medallion on the dome.

Outcome

- Over 700 square meters of the internal face of the main chamber was cleaned of algae and bird droppings as well as scrapping of lime wash/ paint layers.
- The central medallion on the dome was cleaned of bird nests and the repairs as well final coat along with natural black paint was re-applied.
- All the highly ornate bands, arches, medallions, merlons and other stucco works have been repaired and finished with a final coat of lime punning.
- Blocked openings at the upper level were re-opened to provide light and ventilation.
- Metal screens have been fixed to the openings to restrict the entry of birds into the tomb chamber.

A: Interior chamber of the tomb before conservation in 2013; B: Detailed documentation of plaster motifs was analysed to determine the conservation strategy; C: Interior chamber after conservation in December 2014. Note that the central arched openings on all eight sides have been re-opened.



C.

Reinstating the Original Plinth

Archival photographs revealed that as with other large mausoleums in the complex, the lower plinth of the tomb had an edging band which had since been replaced with stone masonry. Furthermore, digging of pits on the plinth revealed the original levels to have been significantly raised – by over 25 cms.

Outcome

- Over 100 cubic meters of cement concrete was dismantled from the plinth and the plinth was lowered to its original level.
- Over 150 meters of stones of matching colour were hand chisel dressed on top and sides to match the texture of the existing and were used as plinth edge band.
- 80 cubic meters of lime concrete have been laid on the plinth.
- Steps which were inappropriately placed on the west side of the square and octagonal plinth were dismantled and reinstated on the east side as found in the archival images.
- Over 350 square meters of lime plaster has been done on the plinth wall.

Next Steps

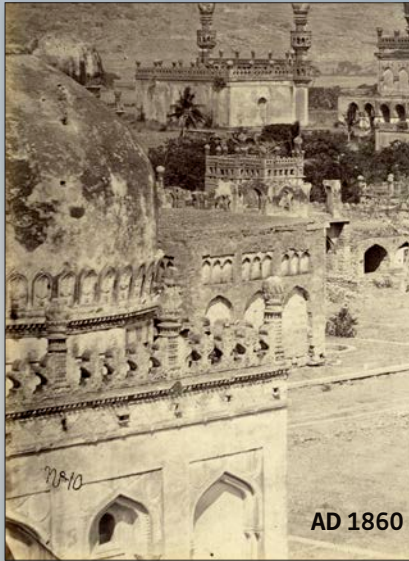
- The entire plinth would be paved with 30 mm thick granite stone laid to adequate slope for water rain water run-off and sustainability of the structure.
- The existing plinth protection would be dismantled and lowered to its original level.

Impact

Extensive conservation works on Jamshed Quli's tomb are nearing completion. These works have not only restored the original builders intention but also long term preservation by restoring elements that had been removed from the structure as well as undoing inappropriate alterations of the 20th century.

(Left) Removal of cement concrete from the plinth to halt further deterioration and (Right) laying of lime concrete





AD 1860



Removal of layers of cement plaster from the facade revealed historic stucco plaster in September 2014

◀ August 2014

21. Tomb of Sultan Quli

Sultan Quli Qutb Shah, who was the founder of Qutb Shahi Dynasty, built this tomb in 1543 A.D., during his own lifetime, as was the custom. His tomb stands on a 1.8m high plinth along with two other tomb structures. The building is square in plan with an area of 11.5m x 11.5m, with its bulbous dome reaching to a height of 16m. Inner grave chamber is square (9.5m X 9.5m) at the lower level which gets converted into an octagonal shape using four corners vaulted chambers. An archival image from the 1860's (*Above Left*) showed the extent of details once present on the Tomb of Sultan Qutb-ul Mulk. However, the existing monument had no details on it, making it a simple and subtle monument. Over two layers of lime and cement plaster were evident on the external surface. Hence, there was need for careful unearthing of the existing plaster for possibilities of getting traces of the ornate plaster work. Loose plaster was removed using small hammers to expose intricate lime stucco works on the South entrance way, parapet, merlons and domes on the minarets.

A.

Exposure of the Underlying Details

The archival images of 1860s depicted the Tomb of Sultan Quli Qutb external surface to be covered with ornate lime stucco works on the walls. The arches were crowned with medallions. The minarets had ribbed plaster and the merlons were studded with highly ornate lime stucco. However, mid-20th century repairs have obliterated original details and the tomb was found covered with a layer of cement plaster.



Outcome

- Careful cleaning and dismantling of the plaster on both internal and external wall surfaces revealed traces of original lime stucco as well as incised plasterwork on elements such as the merlons, petals on the springing point of the dome, domes of the minarets, on the arch bands, spandrels of the arches, amongst others. .
- All the capitals of the recessed arches still have traces of the ornate plaster.
- On top, the petals below the dome were found to be of a different size and design which was changed with layers of later additions. These petals have been cleaned to reveal traces of the ornate plasterwork.
- The top layers of the bulb on the minarets were carefully removed to reveal the three different patterns of ribs on them. It was determined that the corner minarets were of one pattern while the central minarets on the west-east sides and north-south sides were of the same pattern (Top Right).
- Similar careful removal of recent layers from the merlons on parapet walls have revealed 3 different highly ornate lime stucco works on them. There are three sets of merlons on each side with the central merlon on one pattern and those on its either side of the same pattern.

Next Steps

- Based on the revelations found on the surface, patterns will be traced and are proposed to be restored wherever found missing.
- The original designs found on the minarets will be repeated in pattern as revealed.
- Patterns visible in the archival images on the band below the merlons will also be restored.

Over 2 layers of cement, brick and loose lime plaster carefully removed using small hammers and chisels on the external surfaces and revealed intricate lime stucco works on the springing of dome (Left) and east entrance of the tomb (Right)





(Left) 20th century cement plaster from the dome and walls will be removed and replaced with a traditional lime plaster

B.

Repair of the Dome

The dome had over 10 cm thick layer of cement plaster. This has caused further deterioration of the monument. The drum had loose lime plaster which was damaged at various portions.

Outcome

- Around 200 square meters of cement plaster was dismantled from the dome.
- Removal of cement plaster revealed loose portions and holes which were filled with lime concrete and stone and finished with rough plaster.
- 5 cm thick lime plaster was applied to the dome surface upto the top of drum and finished with a final coat of lime punning.
- The drum was cleared of the loose lime plaster revealing original layer of intact lime plaster.



(Left) 6" thick layer of modern plaster with brick infill was removed from the dome prior to replacing with lime plaster



C. Garden Enclosure

An arcade visible on the west of Mohammed Quli's Tomb seemed to relate to Sultan Quli Qutb Shah's tomb. Additionally, historical texts refer to his tomb enclosure being considered a place of refuge.

Outcome

- Archaeological excavations carried out adjoining to the existing arcade have revealed that the arcade was indeed part of an enclosure wall of the tomb-garden
- On the southern side the ground level is today 2.8 m higher than it was in the 16th century when this enclosure wall was built.

Next Steps

- To carry out further excavations to reveal original extent
- To reveal sections of the wall during landscape restoration works.

IMPACT

The original shape of the dome has now been revealed which was otherwise changed by the cement plaster. This has marked the beginning of the restoration works which would be carried out in this structure. Planning for the garden restoration within the square enclosure wall would need to incorporate 16th - 17th century alterations to the landscape but to dismantle 20th century alterations.



(Above) Excavation carried out in November 2014



(Left) Excavations unearthed enclosure wall for this tomb on all four sides, giving evidence of the garden enclosure which will be restored. At places, the depth of wall goes down to 7ft from the present ground level.

22. Abdullah Mosque



Many of the Qutb Shahi sultans and nobles built scores of mosques throughout their period, one such mosque is the Abdhullah mosque situated at the north of Abdullah's Tomb built during the king reign. It is flanked on two sides with two large minarets and two smaller minarets at the back - a feature which started from the period of Muhammed Quli Qutb Shahi - which is also seen at the Char Minar. The style and architectural details in the monument dates to the highly evolved period of the Deccani Style of architecture.

Inappropriate 20th century repairs had caused significant deterioration to the structure and the mosque committee approached the Wakf Tribunal seeking urgent repairs by the Department of Archaeology. AKTC was in turn requested to undertake the repairs.



Outcome

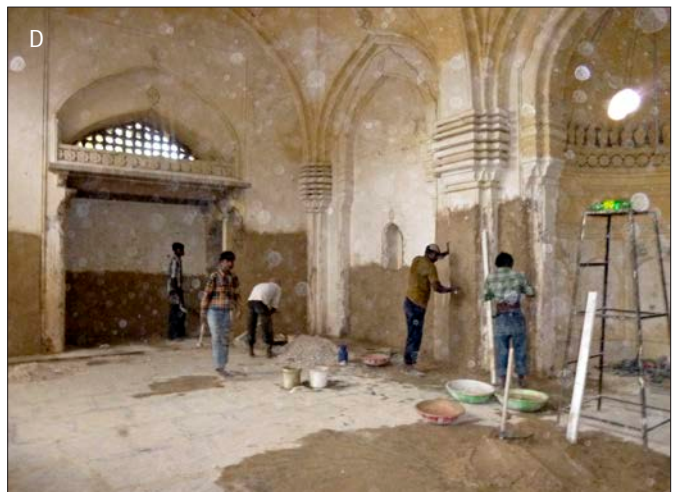
- Following investigations, over 40 cm of cement concrete and loose lime concrete weighing over 120 tonnes was removed from the roof of the Mosque.
- The existing water spouts were cleared of vegetation and repaired to ensure quick disposal of rainwater.
- Following which 15 cm of fresh lime concrete was laid on the roof to adequate slope and to original levels.
- The loose plaster from parapet walls were dismantled and fresh lime plaster was applied to the internal surface of the parapet wall.
- The damaged and broken stone chajjas below the parapet wall were repaired.
- The loose and damaged plaster from the external surface from the ground upto the parapet chajjas was dismantled on the west, north and south side.
- Fresh coat of lime plaster was applied to the external surface from ground upto the chajjas. This required over 600 square meters of wall surface to be plastered.
- Missing dressed stones on the base of front minarets were replaced with stones of similar texture and colour. 15 damaged stones were replaced.
- The lattice screens on the north and south side were repaired.
- All the cement plaster from the internal surface was dismantled.

- The cells were cleaned of the debris exposing the decorative dressed stone columns.
- Fresh coat of lime plaster was applied to the entire surface up to 2 meters height exposing the dressed stones.
- The internal surface above 2 meters was cleaned with soft tools and brushes to expose the original lime surface clearing the algae and lime wash.

Next Steps:

- Restoration of the highly ornate merlons on the parapet walls.
- Restoration of the lattice screens in the openings on parapet walls.
- Final finish of the external plaster.
- The missing details on the minars would be replaced and repaired.
- The damaged portions of the front surface would be restored.
- The existing paving outside the monument would be lowered to its original level based on evidences on site.
- Restore the roof medallion.
- Restore the internal surface completely with final finish of lime putty.
- Repair the internal stone flooring
- Lower the level of the external courtyard to expose steps to mosque chamber

A: Opening of rainwater spouts; B: Vegetation removal; C: Replacing missing dressed stones on the base of minarets; D: The internal surface have also been cleaned of the cement and a coat of lime plaster is now being applied.



23. Tomb of Muhammad Quli Qutb Shah



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. Well versed in Persian, Urdu and Telugu, he composed verses with clarity of thought and pure diction.

The majestic tomb built in AD 1602, is one of the largest tombs at the Qutb Shahi heritage park complex reaching to a total height of 60 m. 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 entire area.

A. Restoration of the Dome

One of the largest dome in the complex, this has developed cracks and large portions of plaster have also fallen from various portions. Based on a top to bottom approach, it is necessary to fix the dome marking the beginning of the conservation works on the monument. The dome over 10 meters in radius and over 15 meters in height has an approximate area of 1600 square meters.

Outcome

- The erection of scaffolding on this huge dome has been started in the last week of December.
- Owing to the huge size and the design of the structure, the scaffoldings have to be erected with caution which is expected to complete in around 60 days.
- Around 50 sets of scaffoldings have been erected.

Next Steps

- Complete the erection of over 800 sets of scaffoldings around the dome for the commencement of works.
- Install alloy chain on the dome which would ease the vertical movement as well as future maintenance of the dome.
- Commence with the restoration works on the dome.
- Following repairs to the dome, conservation works on the mausoleum will be carried out as with those nearing completion at the tomb of Jamshed Quli Qutb.

(Above) Scaffolding constructed to remove cement from the dome and exteriors and restore the facade

B.

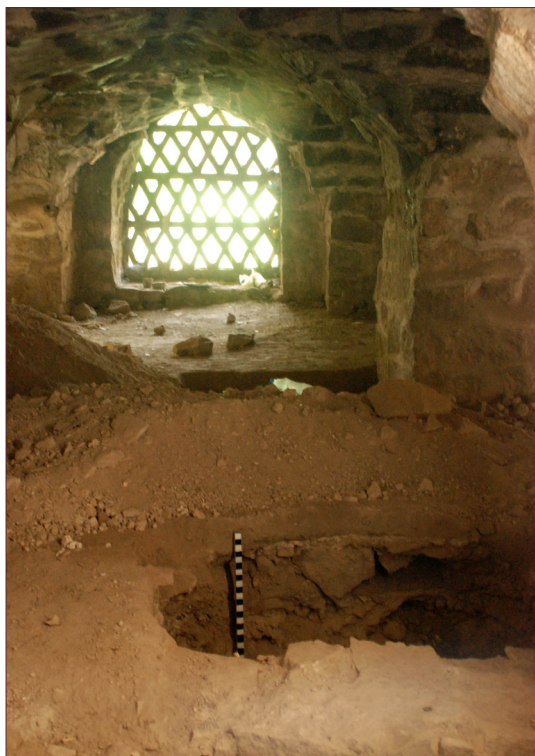
Discovery of tiles in the crypt

The crypt of the monument was covered with inappropriate stone flooring. Also, the original levels of the monument had been tampered. The entry to this monument looks quite inappropriate as compared to the grandeur of the monument. To determine the levels and understand the nature of the support, it was necessary to make trial trenches at strategic locations. This would also provide some clues of a grander entry.

Action Taken

- Trial trenches were made at strategic locations at the crypt of the monument to reveal the linkages of the supporting structure to the main structure.
- Trial trenches however revealed heaps of tiles which might have fallen from monuments. They had been covered with earth.
- Five different colours of tiles belonging to the Qutb Shahi period were found.
- Some of the pieces of tiles had multiple colours and patterns similar to the ones remaining on the Tomb of Ibrahim Quli.
- Literature studies revealed the mention of the use of tiles on this monument.
- The samples of tiles have been sent to laboratory along with other tiles for testing of composition and dating of the tiles.

(Below) Several trial trenches were made in 5 locations in the lower chamber of the monument to help determine the original level at the chamber level as well as get a better understanding on the structure of the monument. One of the trenches revealed a heap of glazed tiles of different colors like orange, yellow, white, turquoise, blue, green, grey and violet.





24. Tomb No. 18

The Qutb Shahi Heritage Complex also houses many smaller tombs structures which belong to the nobles, ministers and members of the royal family. The names of these tombs are unknown and hence they have been numbered in the inventory. Tomb 18, a small rectangular tomb measuring around 10 meters by 4 meters with a small dome in the middle lies to the south west of the Tomb of Jamshed Quli. The tomb is marked with recessed arches and opening on each side.

Outcome

- This small tomb was in an advanced state of deterioration and required significant conservation works.
- The loose plaster and cement was removed from the building manually using hand tools.
- The structure was largely repaired in the past using mud mortar and had lost its structural stability.
- The building was grouted with lime mortar to fill the cracks and cavities.
- The building was then re-plastered using lime mortar consisting of coarse sand particles, hay as an adhesive and lime to add additional strength to the building and then cured.
- The cement and loose lime plaster from the dome was dismantled.
- Similarly, the concrete form the roof was also removed manually.
- Fresh lime concrete was laid on the roof to adequate slope.
- The clogged rain water spouts which were cleaned and repaired.
- The dome was replastered with lime mortar and finished with thin layer of lime punning.

(Below) Intensive conservation works included removal of cement plaster from internal and external surfaces, followed by replastering with lime mortar. A plinth protection and granite steps have also been added.





A: Replastering dome in lime mortar; B: Adding granite plinth protection; C: Replastering internal surfaces with lime plaster; D: Cement flooring replaced with stone

- All the decorative details on the drum of the dome was repaired and finished.
- The chajja were found to have been inappropriately installed and sloping inwards causing severe water percolation to the monument. This was corrected by laying lime concrete on the chajja to adequate slope to ensure the outward flow of water.
- Based on the revelations of the details on arch bands and following the structural strengthening of the monument, the external surface was re-plastered and finished with lime putty reinstating the bands.
- Traces of dressed stone band on the plinth level were found. Following which, dressed stone bands of matching texture and colour were reinstated on all sides of the monument.
- The surface was cleaned using a soft brush and water manually revealing the details.
- The loose plaster and cement were removed and repaired with lime plaster.
- The archways were corrected and missing grooves and details were re-instated and restored.
- The final coat of lime putty was applied and the building was completed.
- The internal cement floor was dismantled and lime concrete was laid to slope over which granite stone slabs have been laid marking the completion of the restoration of the internal surface. Identification of the depth of the plinth was done by making trial trenches after which the height of the plinth was decided.
- Plinth protection of 1.5 meters width was made around the monument.
- Three dressed steps made of granite were installed on the eastern side of the monument entrance to create access to the tomb.

Impact

Completed conservation works on the structure have ensured the structural stability as well as long term preservation. The structure after conservation also significantly enhances the historic character of its setting.

25. Tomb No. 15

Located to the west of the Tomb of Ibrahim Quli, this monument is situated in a cluster of 10 monuments. Measuring around 12 meters square, the lower plinth has a raised octagonal plinth measuring around 3 meters on each side. The monument is marked with only masonry pillars for both the square and the octagonal plinth up to the roof. The roof has a shallow dome and terrace bounded by a 75 cm high parapet wall which has ornate arch bands on the external surface.

Outcome

- Loose lime plaster and concrete was carefully dismantled from the dome and the terrace.
- Fresh lime concrete was laid on the terrace to adequate slope.
- The dome was re-plastered and the internal surface of the parapet wall was also re-plastered.
- Rain water spouts which had vegetation growth were carefully repaired.
- Repair of the arch bands on the external surface of the arch band is being undertaken.
- The inner dome of the monument suffered several structural cracks which may have been caused to due to removal of some base stones of the octagonal plinth. All the surfaces had signs of deterioration of plaster and the original details of the monument were visible only in parts.
- The dome has been grouted with lime mortar to add strength to the monument.
- The loose plaster from the monument was manually dismantled.
- A coat of base plaster has been applied on the entire surface and allowed to dry for the final layer of lime plaster.

Next Steps

- Complete the restoration works of the dome and the external surface of the dome and finish it with final coat of lime putty.
- Install stone rain water spouts on the existing water spouts.
- Adequate flooring of the plinth and installation of steps on the east side.

(Left) Replastering of external portions where cement or loose lime plaster was removed; (Right) Loose lime plaster and concrete was removed from the dome



26. Mosque No. 14

The complex is dotted with several mosques built adjacent to graves. Located to the South east of Jamshed Quli's Tomb, Mosque 14 also is a part of the cluster of 10 monuments.

A typical mosque measuring around 16 meters in front and 6 meters on sides, the front facade of the mosque was found largely intact. However, the external facade on the rear and the north and south sides had signs of cracks in plaster and were loose. The roof was also found to be leaking and signs of moisture could be seen on the internal side of roof.

Action Taken

- The roof concrete was dismantled and 10 cm thick fresh lime concrete was laid.
- The external surface plaster was dismantled and fresh lime plaster was applied to the rear and the north and south sides.
- The internal surface which is intact was cleaned of the dust.

Next Steps

- Final finish of the internal surface with a coat of lime putty.
- Repair of the merlons and other decorative medallions on the front face.
- Final finishing of the external surface with a coat of lime putty revealing all the ornate details.



(Above) The external surface plaster was dismantled and fresh lime plaster was applied to the rear, north and south sides



27. Emergency Works

Removal of Rank Vegetation from Structures

Most of the monuments in the complex have developed vegetation on the domes, walls and terrace. This was due to the habitation of birds, their droppings and stagnation of water. The monuments lacked basic maintenance. Hence, on emergency, to avoid further deterioration of the monuments, there was a need to take necessary measures.

Outcome

- All the vegetation growing on the structures including Tombs, Baolis and Hamam were cleared and treated organically to avoid future growth.
- Alloy chains were installed in most of the domes to ease future maintenance.
- The rain water spouts in most of the terraces were cleared of silt and vegetation.

Next Steps

Removal of vegetation from structures not taken in hand for conservation will be repeated on an annual basis to prevent further deterioration.

Impact

Water stagnation on the terrace has been resolved and installation of alloy chains has helped for future cleaning.

(Below) Almost each of the 72 monuments had a profusion of vegetaton causing excessive damage. On the larger structures 20 feet of roots have been removed. This exercise will require to be undertaken annually untill conservation works are completed.



ARCHAEOLOGY

The tomb area conceals below its surface a number of archaeological remains of various structures such as: processional gate, summer house, enclosure wall and aqueducts etc.

A typical mosque measuring around 16 meters in front and 6 meters on sides, the front facade of the mosque was found largely intact. However, the external facade on the rear and the north and south sides had signs of cracks in plaster and were loose. The roof was also found to be leaking and signs of moisture could be seen on the internal side of roof.



28. Area North of Hamaam

The summer house was excavated during the year 1969-70 up to 1972. Over a period of years it was again buried under the debris and vegetation.

Outcome

- The area of the 'Summer House' was cleared of debris.
- So far, remains of a mosque, attached rooms and steps, water systems have been revealed.
- The plan of the site has been prepared and it has been photographically recorded.
- A terracotta pipe was found running and it was traced up to a length of 40ft.
- Grain storage vats have been revealed.

Next Steps

Pointing to consolidate the structure to arrest vegetation growth.

(Below) An extensive labyrinth of structures have come to light in the section north of the Hamaam. These include many living quarters.



View of Qutb Shahi Heritage Park in 1860 from roof of Jamshed Quli's Tomb. The South Gate once served as entrance to the site through a ceremonial passage for the dead, Source: Alkazi Foundation



29. South Processional Gate

In archival photograph of 1860 it was evident that there was a processional path way connecting the Golconda fort with the tomb complex. In order to ascertain it, the area was excavated and the processional pathway was exposed.

Action Taken

- Careful removal of earth has led to the pathway and retaining walls to be revealed
- The exposed remains have been photographed and measured drawings conducted.

(Below) Scientific trenching at the South Gate



30. Exposure of Aqueduct

An aqueduct belonging to the period of Qutb Shahi dynasty was exposed partially from the northern side up to the southern side of the site along its western edge.

Outcome:

- Photographic documentation of the revealed aqueduct has been completed and measured drawings are being carried out.
- Clearance of the water channel suggests that the water flowed from south to north and not the other way as popularly perceived

Next Steps

- Removal and resetting of the stone blocks covering the channel.
- Pointing to strengthen the structure and water tightening so that the vegetation growth is arrested.

(Below) The Qutb Shahi aqueduct was traced and exposed. On the basis of the study of the slope of the floor level of the aqueduct, it is reasonably felt that it was for conserving the water inside Bagh-i-Faiz. The exposed length of the aqueduct measures 246 meters.



31. Training in Archaeology

The archaeological excavations were used as an opportunity to conduct short term training programmes for students of history about archaeology, architecture and techniques of excavations.

Outcome

- To date, 26 students have attended training programmes. Of these 16 students from Maulana Azad Urdu University (inclusive of 4 professors) and 10 students (including one research scholar) from Hyderabad University.
- As part of the field training, students were introduced to Qutb Shahi history and architecture.
- Students were also given rigorous training in laying out the trenches horizontally and excavating the site with pick axes, shovel and carrying the earth.

Impact

- Students were introduced to the practice of Archaeology and were able to overcome concerns leading to at least five students expressing their intention to pursue higher courses in Archaeology.
- As the students were informed of the strong link of such a course with Tourism Management, four students wished to pursue opportunities in the tourism sector.
- The Deccan studies of Maulana Azad Urdu University is now thinking of widening the appeal of the Deccan study centre by inviting students from Andhra, Karnataka and many other universities. In this connection they expressed their willingness to provide lodging and boarding to such students who are coming from other universities.



32. Tile Analysis

The architectural documentation revealed glazed tiles on the 3 monuments - Tomb of Ibrahim Quli, Tomb of Mohammad Qutb V, Tomb of Abdullah. This needed further documentation and analysis of the tiles.

Action Taken

- Each of the Tombs has been extensively documented with the tile work being traced and measured along with condition assessment.
- Sample of glazed tiles have been collected from the monuments and have been sent for testing to Research Laboratory for Archaeology and the History of Art at Oxford University to understand the tile composition and tile making process.

Next Steps

Based on the laboratory test results confirming the composition of the tiles, these tiles would be manufactured in the Humayun's Tomb Complex, New Delhi where AKTC has already engaged in making tiles for the monuments.

Impact:

- Tomb of Abdullah showed signs of glazed tiles of 5 different colours i.e. orange, blue, white, green and yellow on the top columns on the corners of the upper storey, as well as around the flower bands on the first storey.
- On the Tomb of Mohd. Qutb V, tiles, revealed below the current plaster layer, once covered the entire dome as well as exterior bands and merlons below the dome. The colours found are Blue, Turquoise, Green, Yellow and White. The dome also revealed the use of nails for pegging of tiles, which may have caused further deterioration of the tiles.
- Tomb of Ibrahim Quli Qutb Shah has clear evidences showing tiles in the upper bays on the south side and traces in the east and north side showing complex geometrical and floral patterns with glazed tiles of Green, Orange, Blue, Turquoise, White and yellow.

(Below) Each of the tombs have been extensively documented with the tile work being traced and measured along with a conditional assessment



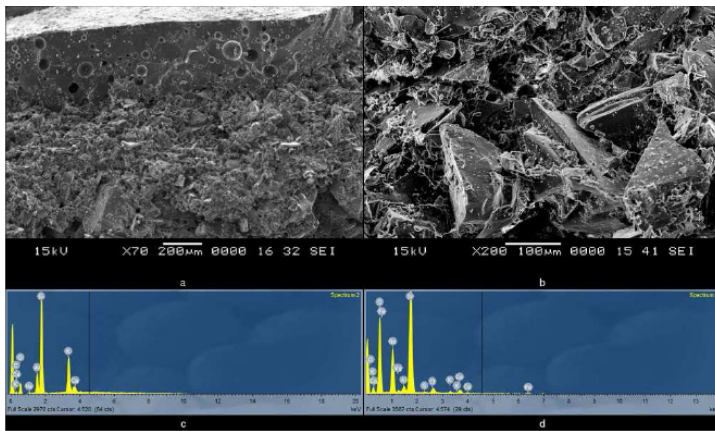
Petrographic characterisation of seven glazed tiles from the Qutb Shahi Heritage Park,

Research Laboratory for Archaeology and the History of Art (RLAHA), Oxford University

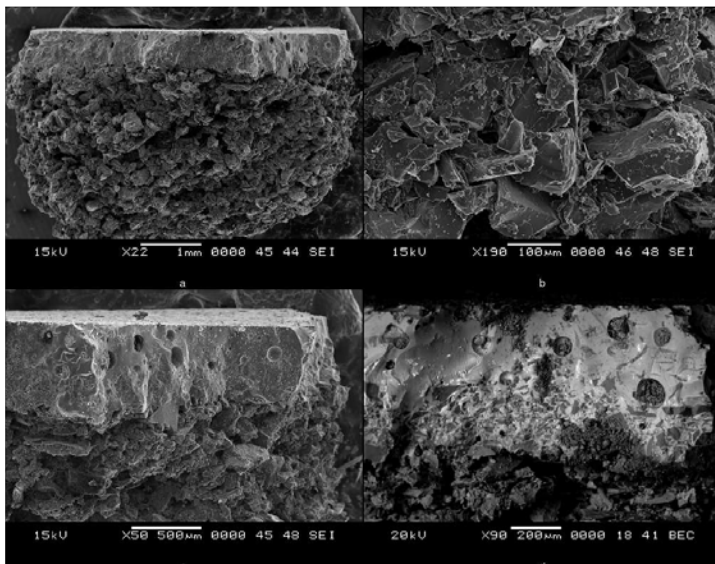
A petrographic study was made of seven glazed tiles from the site of Quli Qutb Shahi Heritage Park with the aim of:

1. To determine the type of clay used for the tile body
2. To comment on the firing temperature and kiln atmosphere
3. To determine the glaze type (lead, alkali etc)
4. To determine the glaze colourant
5. To determine the microstructure of the body-glaze interface to comment on the length of firing and whether the tile was fired once or twice.

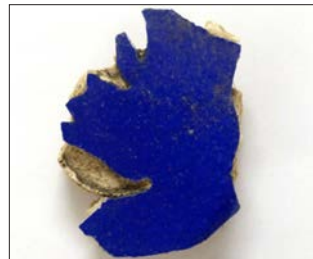
The tile samples were first observed using a simple low-power binocular microscope to record their macro characteristics. Detailed compositional and microstructural analyses were then performed using a Jeol 5910 scanning electron microscope (SEM) equipped with an Oxford Instruments Inca 300 energy dispersive X - Ray analyser (EDA).

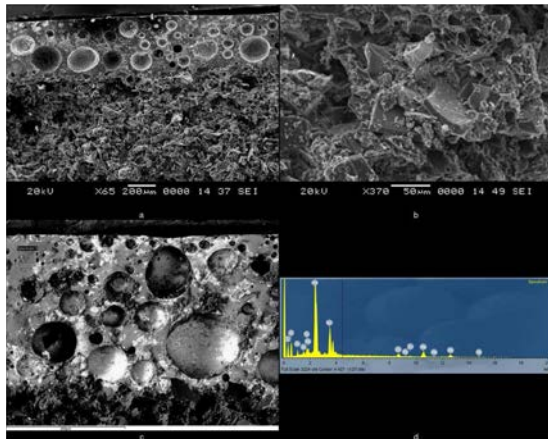


Dark Blue Tile

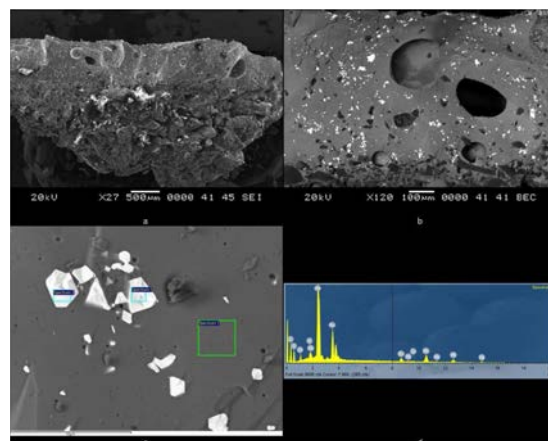


Sky Blue Tile

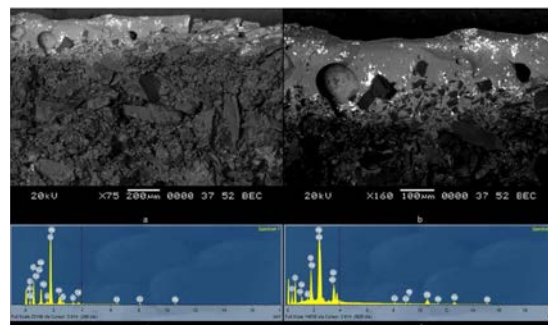




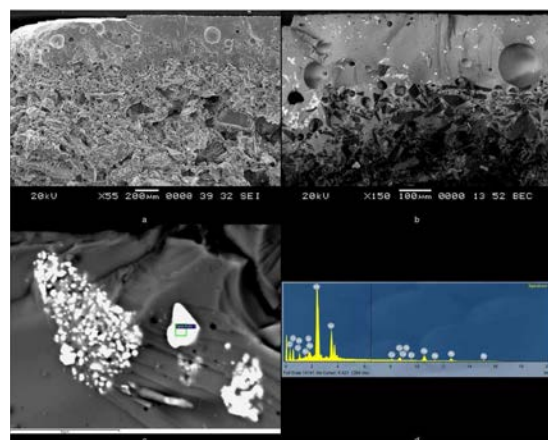
Yellow Tile



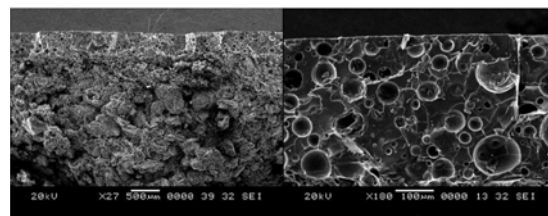
Orange Tile



Light Green Tile



Blue Green Tile



White Tile



Proposed Parking Layout at Qutb Shahi Heritage Park



33. Parking

At present the Qutb Shahi Heritage Park lacks parking facilities for visitors. To facilitate the needs of vehicular parking for the Park, a parking area has been proposed along the main access road – with the assumption that Deccan Park will eventually be re-integrated with the heritage area which it was once a part of.

Outcome

- Detailed parking design has been provided by AKTC to the Greater Hyderabad Municipal Corporation.
- The parking would cover over an area of 8000 square meters.
- This 230 meter long parking would house 10 Buses, 80 Cars and 100 Two- wheelers
- Separate entry and driveways have been designed for the buses, cars and two wheelers.
- The design has been evolved in a way to retain all the existing native trees on the site.
- GHMC has sanctioned an amount of 2, 00, 00,000 INR for the construction.
- The necessary working drawings, technical specifications have been finalized and the estimates have been provided to the GHMC for floating of tenders.

Next Steps

It is hoped GHMC will construct the parking in 2015.

PROJECT TEAM

QUTB SHAHI HERITAGE PARK, HYDERABAD

Aga Khan Development Network

Mr. Ratish Nanda, Project Director

Mr. Rajpal Singh, Chief Engineer

Dr. K.K. Muhammed, Project Archaeological Director

Mr. Yoshowant Purohit, Project Manager

Mr. K. Ganesh Reddy, Project Support Officer

Ms. Poornima Balakrishnan, Conservation Architect

Ms. V. Sridevi, Finance Officer

Ms. Lipi Bharadwaj, Project Photographer

Mr. Rajendra Patnaik, Consultant-Office Secretary

Mr. M.V. Bharathi Prasad, Consultant-Site Engineer

Mr. Vinod Kumar, Field Supervisor

Mr. Mohd. Ayaz Khan, Consultant-Archaeologist

Mr. Shaik Sayajuddin, Consultant-Archaeological Draughtsman

Ms. Jyotsna Lall, Senior Programme Officer

Ms. Archana S Akhtar, Programme Officer, Design & Outreach

Mr. Somak Ghosh, Finance Manager

Mr. Deepak Padhi, Programme Officer, Monitoring & Evaluation

Landscape Consultant

Prof. M Shaheer,

Shaheer Associates, Landscape Architects

Consultants

Ms. Anuradha. S. Naik, Conservation Consultant/ Archival Research

Ms. Asiya Khan, Consultant, Tree Survey

Mr. Stuart Tappin, Stand Consulting, Structural Engineer

PROJECT TEAM

PUBLIC AGENCIES 2014

Department Of Archaeology & Museum

Mr. B.P. Acharya, Principal Secretary, (T&C) FAC

Mr. Govinda Raj Emmadi, In-charge Executive Director, SZ, Tourism Advisory Council

Mrs. Sunita Bhagwat, Director-in-charge

Mr. B. Srinivas, Director-in-charge

Former Directors

Prof.P. Chenna Reddy

Mr.Sabya Sachi Gosh, IAS

Mr.D.Manohar

Mr. B. Srinivas ,IFS

Dr.Rajat Kumar,IAS

Dr.P.Gayathri

Dr.G.V. Ramakrishna Rao

Mr.Kantila Dande, IAS

Dr. G.V. Ramakrishna Rao

Prof.K.P.Rao

Mr.B.Srinivas,IFS

Mrs.Chandana Khan,IAS

Mr.B.Srinivas,IFS

Mr. M. Raheem Sha Ali, Deputy Director Engineering

Mr. B. Narayan, Assistant Director, Conservation/Engineering

Mr. Brahamachari, Assistant Director Technical

Mr. Padmanabhamam, Assistant Director Technical

Mr. Narshimha Rao, Photographer

Quli Qutub Shah Urban Development Authority

Mr. Somesh Kumar, IAS, Special Officer Commissioner & Administrator

Mr. Chandra Mohan, Secretary

Ms. M. Lalitha, Assistant Director of Horticulture

Greater Hyderabad Municipal Corporation

Mr. Somesh Kumar, IAS, Commissioner

Dr. Satyanarayana, IAS, Zonal Commissioner, Central Zone

Mr. Bala Subramanyam Reddy, Zonal Commissioner, South Zone

Mr. Jayanth, Assistant Municipal Commissioner

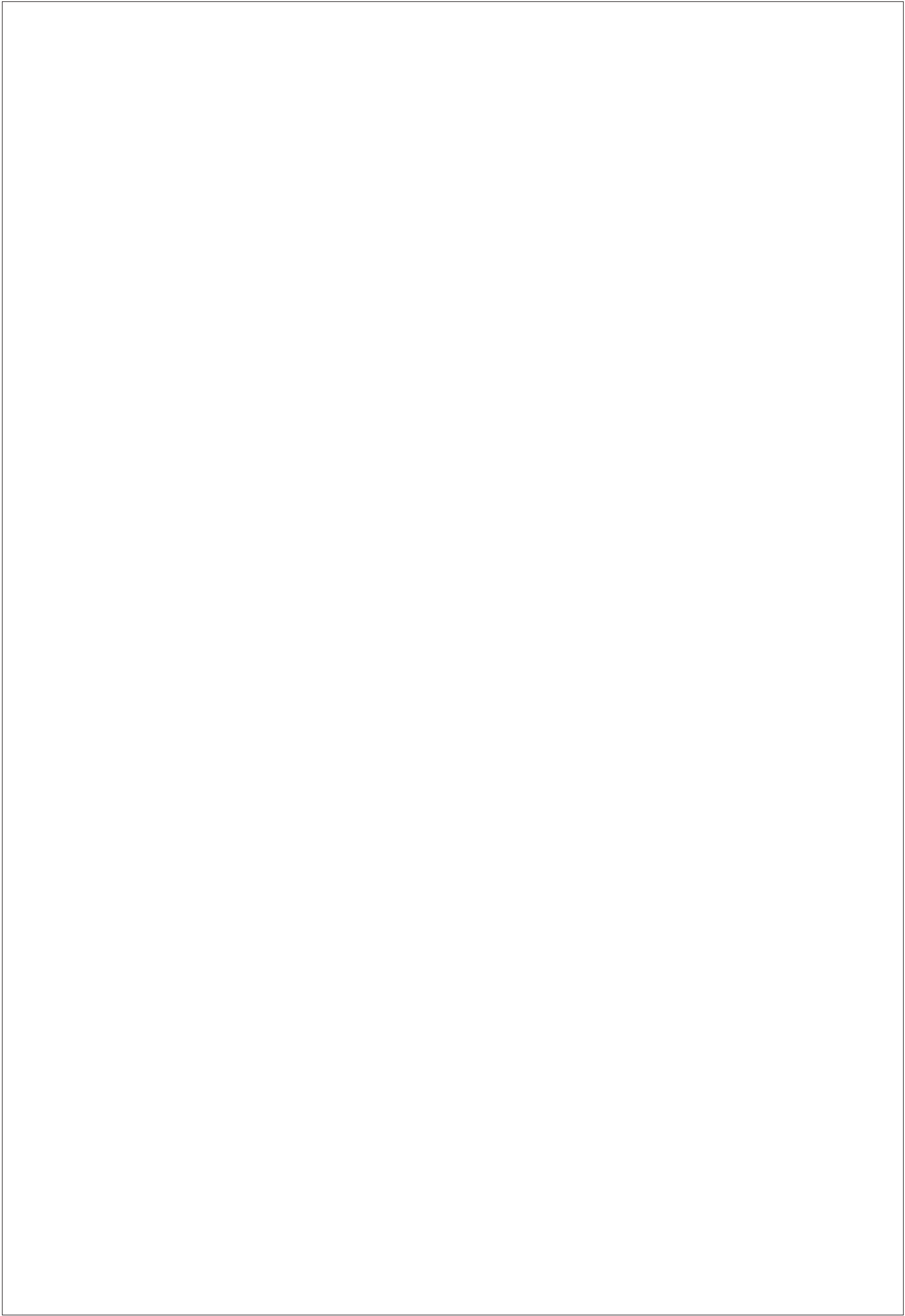
Mr. S. Devendra Reddy, Chief City Planner

Mr. Srinivas, Additional Director, Heritage wing

Mr. Ashwini Kumar, Superintend Engineering, Project Central Zone

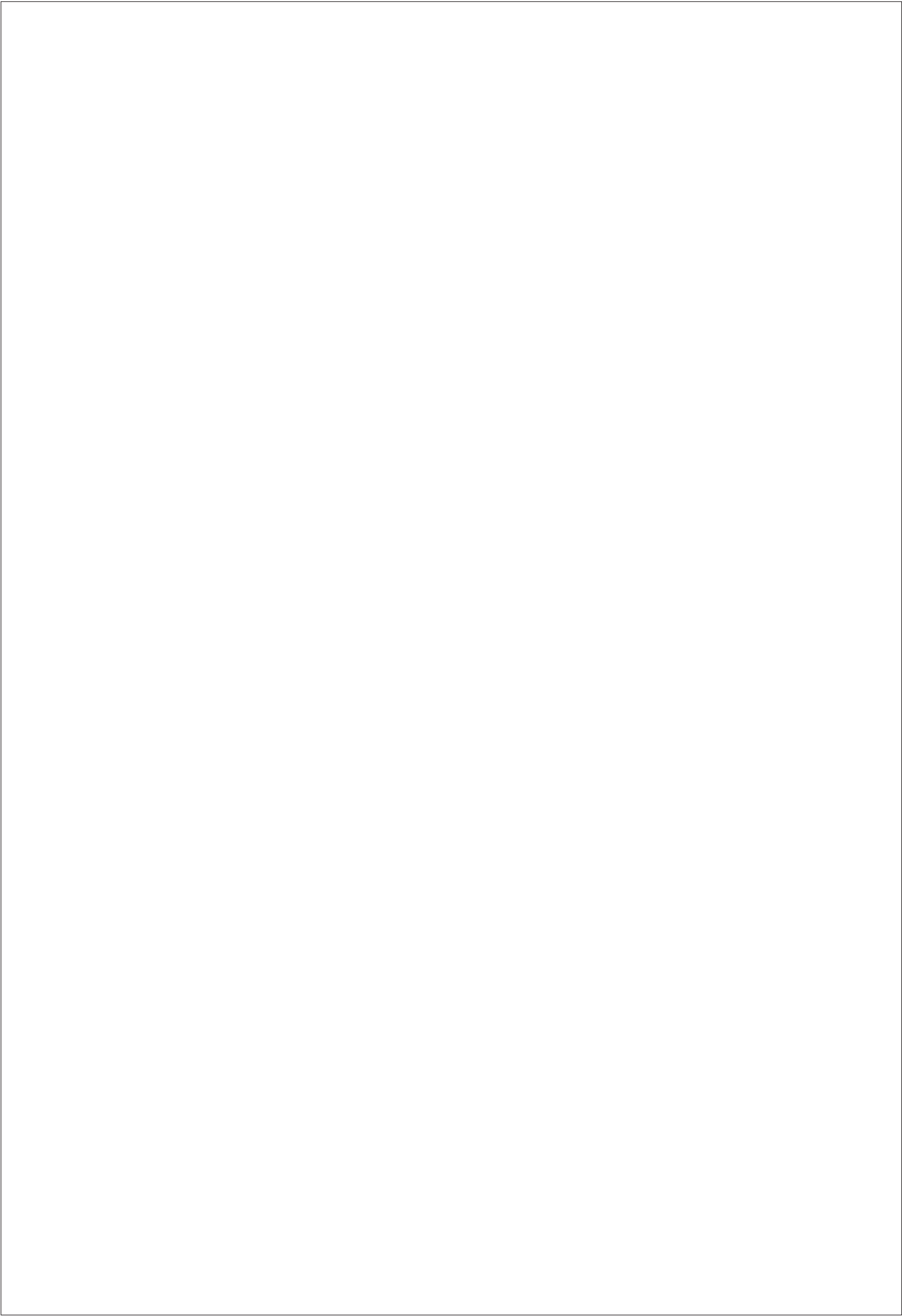
Mr. Pradeep Reddy, Executive Engineer

Mr. Sanjay Torvi, Conservation Architect



Annexure

QUTB SHAHI HERITAGE PARK: PROJECT BRIEF





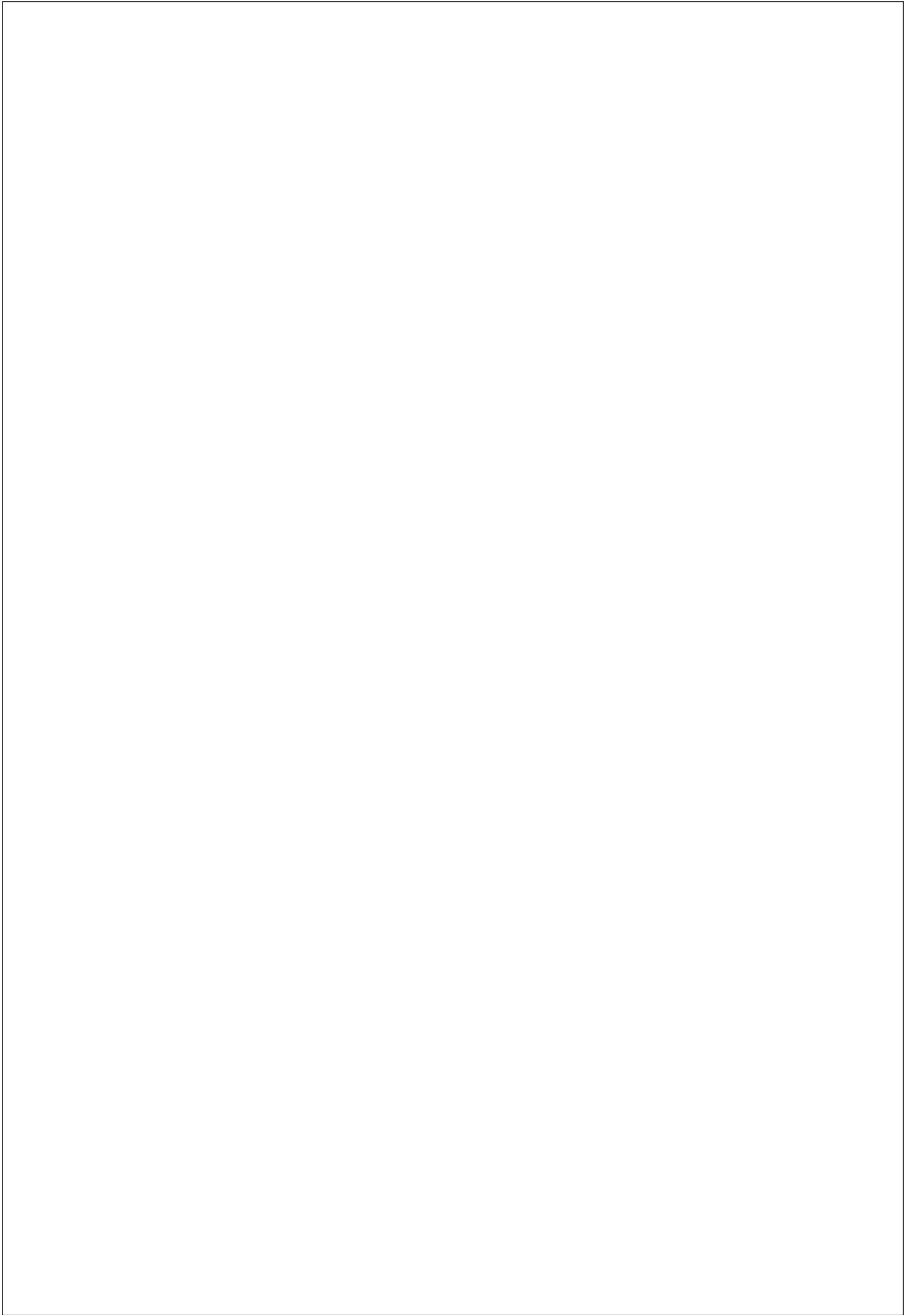
AGA KHAN TRUST FOR CULTURE



**QUTB SHAHI HERITAGE PARK,
HYDERABAD, TELANGANA, INDIA**

PROJECT BRIEF

2014





Early views of the site show the Qutb Shahi Tombs in a wide expanse of land. Paintings (Middle) also depict the intimate relationship and proximity of the Tombs Complex to the Golconda, which served as a stronghold of the Qutb Shahi dynasty as their kingdom continued to expand (top and middle); glazed tiles formed a significant architectural element (bottom)

INTRODUCTION

Nestled at the foot of the majestic Golconda Fort, the Qutb Shahi Heritage Park is spread over 106 acres. This necropolis of the Qutb Shahi dynasty, that ruled the region for 169 years in the 16th – 17th centuries, includes 40 mausoleums, 23 mosques, 6 *baolis* (step-wells), a *hamam* (mortuary bath), pavilions and garden structures set within a heritage zone of international significance. No other ensemble of structures in the Deccani kingdoms of Ahmednagar, Berar, Bidar, Bijapur or Gulbarga includes as many monuments of striking grandeur and complexity reflecting a unique synthesis of architectural styles.

On 9 January 2013, Government of Telangana's Department of Archaeology and Museums, the Greater Hyderabad Municipal Corporation's Quli Qutb Shah Urban Development Authority, Aga Khan Foundation and the Aga Khan Trust for Culture signed a MoU that, over a ten year period, will enable conservation of all monuments and landscape restoration of the Heritage Park. Following the MoU, Sir Dorabji Tata Trust & Allied Trusts have provided required funding for the conservation works on ten major monuments.

HISTORICAL SIGNIFICANCE

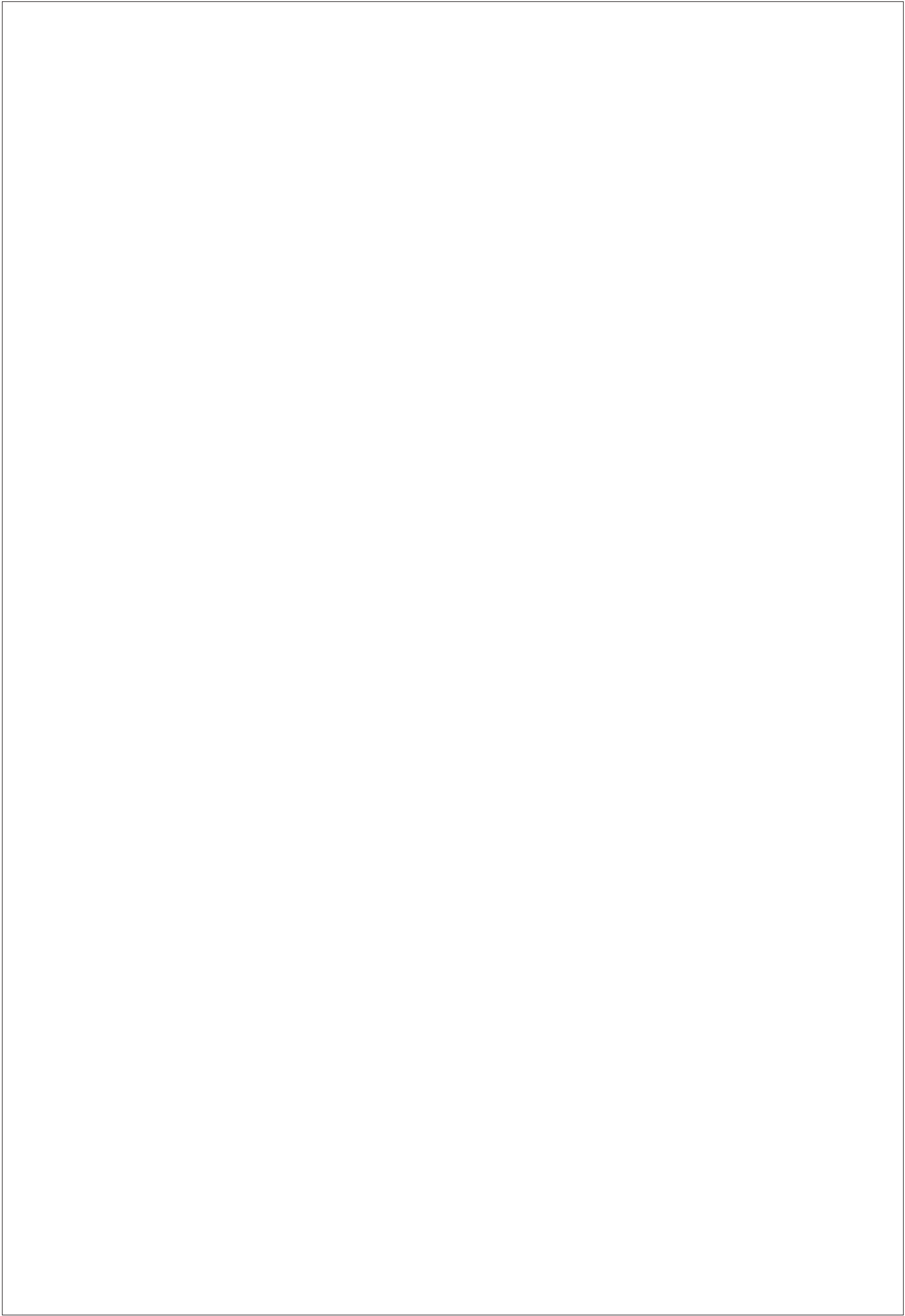
The Qutb Shahi dynasty ruled present-day Hyderabad region from 1518 AD to 1687 AD, and was founded by Sultan Quli Qutb-ul-Mulk. As great builders and patrons of learning, the Qutb Shahis' strengthened Golconda - one of India's most formidable citadels. The funerary architecture of the Qutb Shahi Tomb complex evolved through their rule with most of the mausoleums built by the rulers and their family during their own lifetimes. Similarly, they encouraged the development of Indo-Persian and Indo-Islamic literature and culture in the kingdom.

ARCHITECTURAL SIGNIFICANCE

The monuments in the complex blend Persian, Pathan and Hindu architectural styles and are built with local granite. Surfaces of the historic buildings are ornamented with intricate incised plasterwork and few monuments also bear glazed tilework. The tomb structures are derivations of the geometrical designs of the earlier Bahmani tombs of Bidar though the stucco ornamentation carried out here is more intricate and on a far greater scale. During the Qutb Shahi period, these tombs were held in great veneration.

PROJECT OBJECTIVE

Conservation Proposal: Through 2012, exhaustive recording, documentation, condition assessment, surveys and research exercise carried out by the multi-disciplinary Aga Khan Trust for Culture team as a precursor to the Conservation Plan that forms the foundation for the project. Over 2000 drawings of the monuments alone have been prepared, in addition to



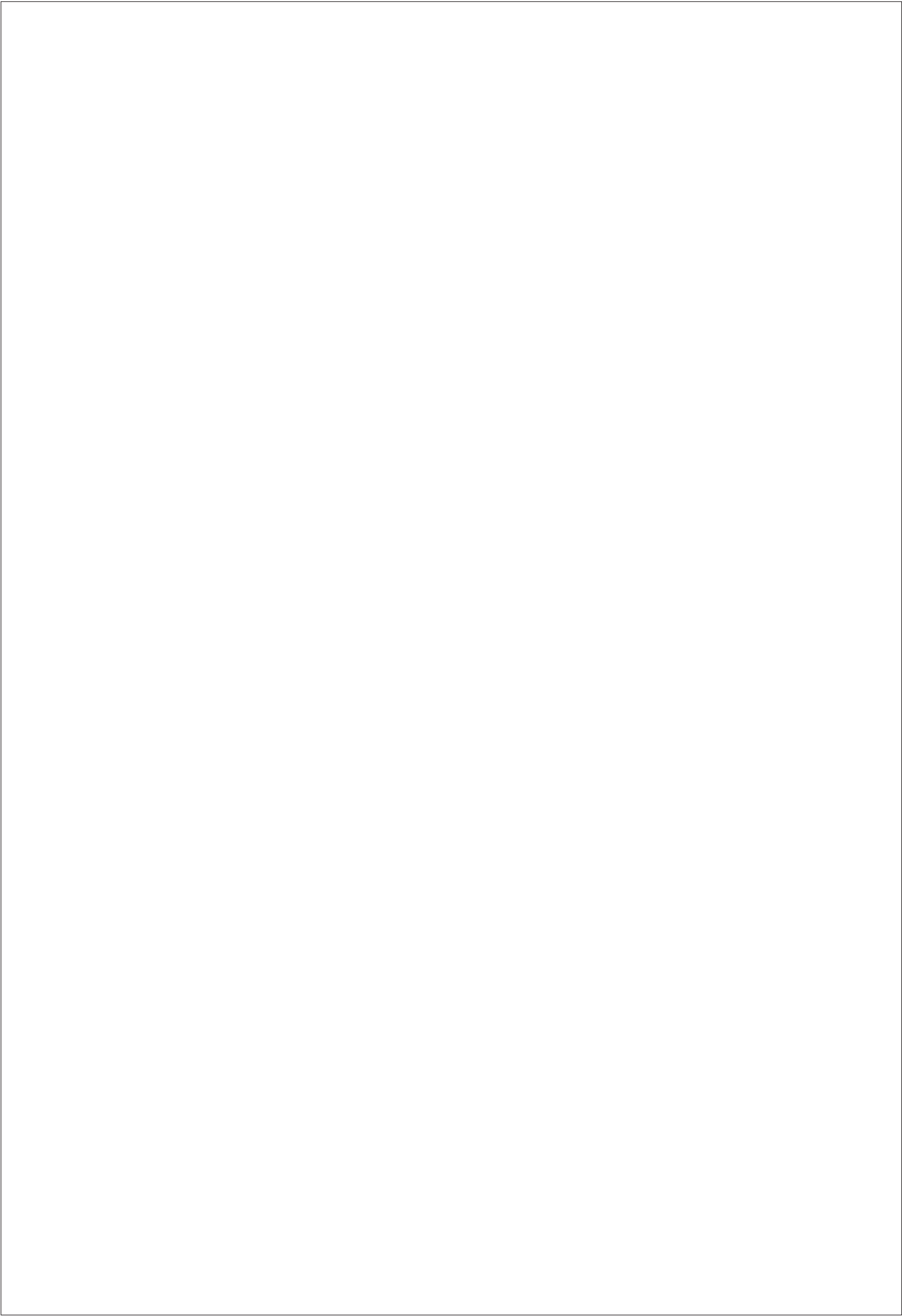
Routed in the Indian context where building craft traditions have been passed from father to son for centuries yet respectful of UNESCO emphasis on retaining authenticity, the conservation works will be implemented by master craftsmen. This are expected to generate over 300,000 man-days of employment for master craftsmen working with stone, lime and ceramic glazed tiles, thus leading a revival of building crafts in the region. No works will be based on conjecture and every effort will be made to ensure conservation efforts are explained through on-site exhibits leading to an enhanced understanding and cultural significance.

Conservation works will be carried out in a phased manner to ensure only portions of the site are inaccessible to visiting public at any given time. With its experience in Delhi and projects worldwide, AKTC believes that high degree of supervision by architects, engineers and master craftsmen trained/experienced in handling conservation works is critical to ensuring a proper understanding of the monuments and thus to ensure success of the initiative.

Conservation works required to be carried out on structures located within the Quli Qutb Shah Heritage Park range from preservation of original material fabric to reconstruction of collapsed building portions such as the step-wells. The intention of the conservation works is to ensure the significance of the site is preserved and the architectural integrity is maintained which on occasion will require removal of modern material inserted into the built fabric.



Conservation works commenced after (Top) exhaustive documentation, condition assessment, surveys, research was carried out by the multi-disciplinary, followed by emergency repair works at Badi Baoli and Janashd Quli Qurb Shah's Tomb (middle and bottom)





CONSERVATION WORKS : Conservation works could commence only in November 2013 when a Wakf Tribunal order prohibiting works was lifted following the collapse of the Badi Baoli and some other structures.

As a priority, over 600 cu.m. of stone masonry walls of the Badi Baoli were rebuilt prior to monsoons in 2014. Conservation works here included removal of 400 cu.m. of collapsed masonry from within the well in a dangerous operation.

At Jamshed Quli Qutb Shah's Tomb, the removal of deteriorating cement plaster from the domed surface and restoration of traditional lime mortar was carried out to prevent further water ingress which was causing significant cracks. The stucco plasterwork is also being restored on both the internal and external wall surfaces as is the stone edging of the lower plinth – clearly visible in archival images. On the request of the local community emergency repair works have also commenced on the Abdullah Qutb Shah's mosque, the roof of which was leaking and from where over 400 mm of cement concrete weighing over 110 tones was manually removed.

Two international peer reviews have already been held to discuss ongoing works and project team has accumulated significant archival material that will help define an appropriate conservation action for each of the monuments within the complex

LANDSCAPE ANALYSIS AND STUDIES

The proposed landscape masterplan, based on site surveys and available archival material, is aimed at an enhanced setting for the monuments and an improved internal visitor circulation. Significant area will be dedicated for ecological zones on the northern and southern sections of the site coupled while reviving water structures, leading to a significantly improved environment within a densely populated city. Ecological trails will allow visiting school children, to have an improved understanding of heritage and ecology issues.

A detailed vegetation survey is being undertaken, to record species, height, spread, girth and condition of each individual tree to inform the landscape plan.

The proposed landscape plan would appropriately utilize the space of the 'Deccan Park' as a generously proportioned entrance zone hence establishing an effective presence on the public road, and avoiding the present anomaly of the indirect approach that does not encourage an even spread of visitor activity across the complex. Judicious modification and re-organisation of entrances and paths will increase accessibility of the older parts of the complex and allow visitors to easily traverse the whole site and understand its sequential development rather than restrict their experience to only a part. A path system based on the history of the place would play a vital role in enriching the visitors' experience of this large, deep and complex historical site.



(Top) Mr. Somesh Kumar (IAS), Commissioner, Greater Hyderabad Municipal Corporation (GHMC) with AKTC team discussing works at the site ; (Bottom) Proposed Landscape Masterplan for Qutb Shahi Heritage Park

For more information please visit www.akdn.org or contact the Aga Khan Trust for Culture, Qutb Shahi Heritage Park, Towlichowki, Hyderabad 500 008, Andhra Pradesh. Email: aktc@akdn.org; Tel. +91 040 645 40 070

Creating An Indian Urban Conservation Model

People's Engagement

Inclusive And Sustainable Development

Improving Quality Of Life

Upgrading Infrastructure To Provide Basic Amenities To All

Improving Physical And Social Infrastructure

Technologically Driven Innovations

Creating Employment Opportunities

Boosting Tourism

Building Heritage Awareness

Environmental Development

Showcasing Hyderabad/Deccani Ecology

Restoring World Heritage

Craft Based Conservation

Conservation-Led Development