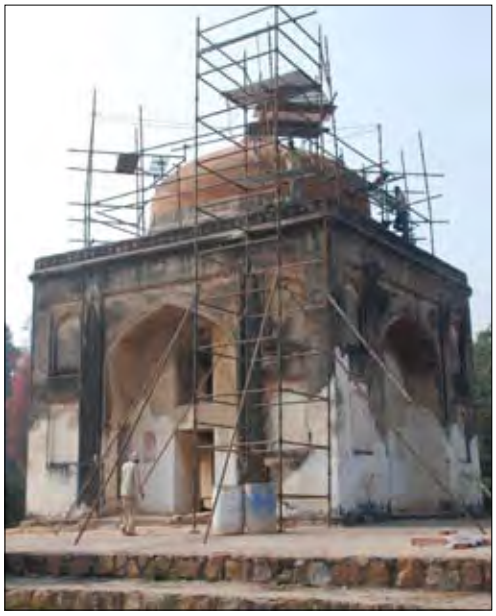
2010

SUNDERWALA BURJ



TASK:

Conservation of Sunderwala Burj

PURPOSE:

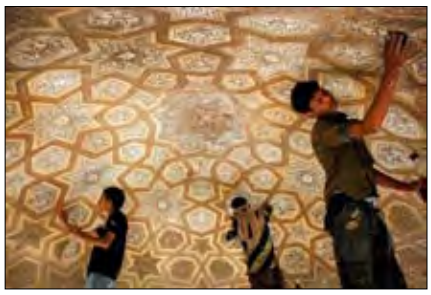
- Restore the architectural character of this significant monument of national importance.
- Enhance the historic character of Sunder Nursery.

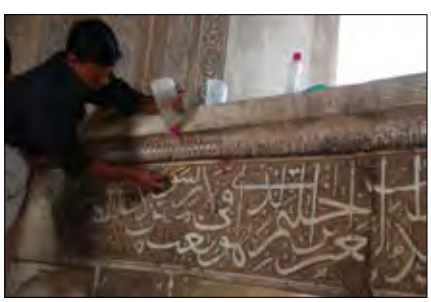
ACTION TAKEN:

- Incised ceiling with star pattern is now cleaned with water to expose the original surface details
- Missing medallions portions on the decorative ceilingare now reconstructed in incised plasterwork
- Quranic inscription is documented to complete the missing inscription and to understand the calligraphy
- Red sand stone lattice screen are now being prepared to be fixed in the arched openings over the doorways.
- The cement or decayed lime plaster on the dome has been removed and a layer of lime plaster applied.
- The lotus finial on the dome has been repaired and reshaped.

NEXT STAGE:

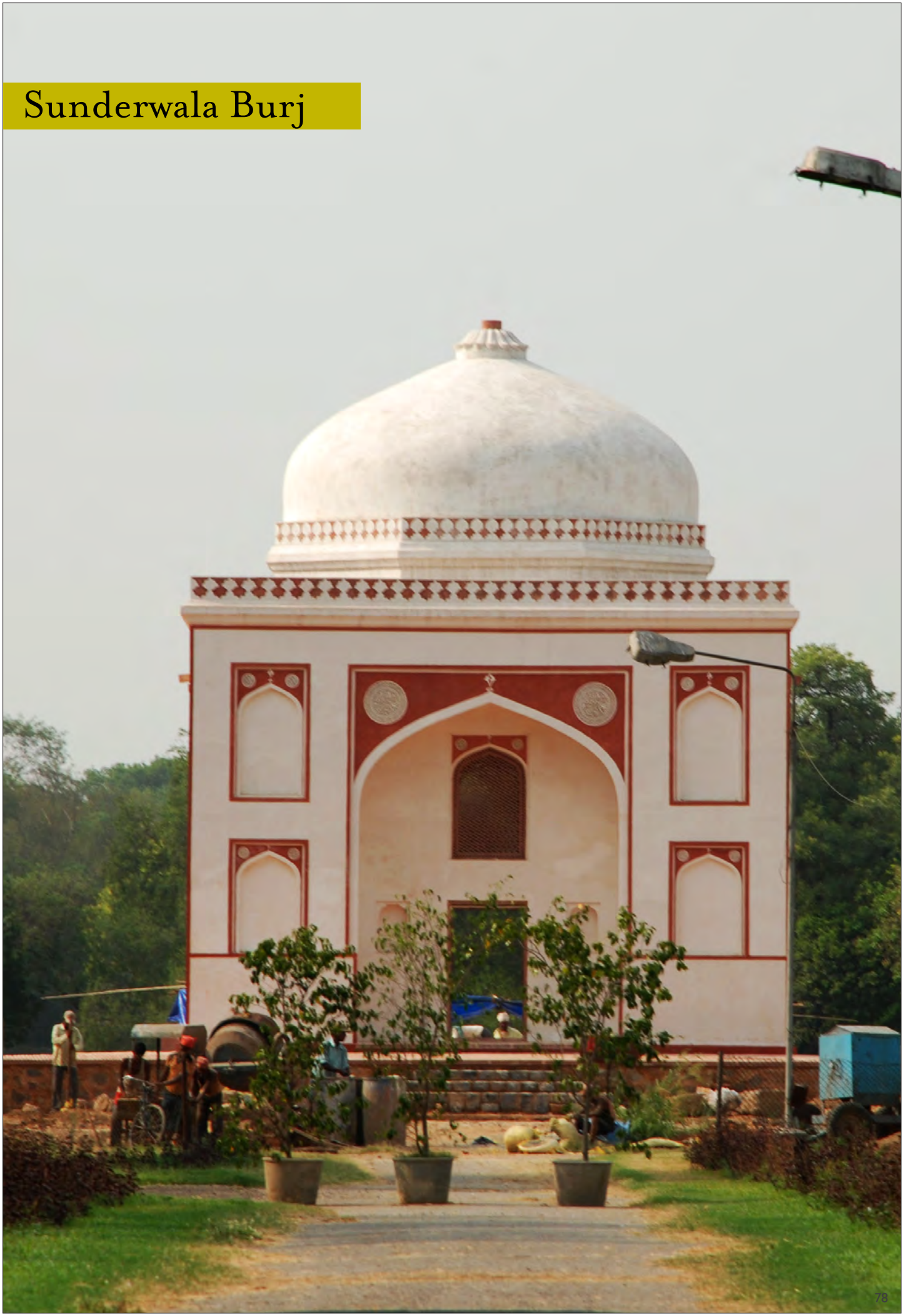
- Repairs on the roof, external and internal wall surfaces are to be carried out.
- In all instances the cement plaster will be removed and replaced with lime plaster
- Parapet walls will be repaired following the original details, including the ornamental patterns discovered on cleaning of the soot.
- Providing projected red sandstone rainwater outlets on the western and eastern side.
- Wooden doors will be fixed on the external openings
- Lime concrete of the terrace will be repaired to make the surface water tight
- Structural repair works will be carried out in the cracks running along the length of the monument
- The extend of the original plinth will be worked out and repaired.
- Red sand stone flooring will be provided on the plinth as well as in chamber.





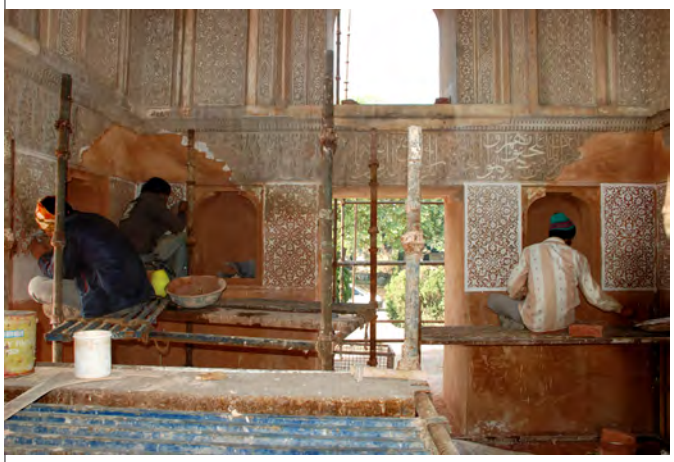
2011

Sunderwala Burj



Sunder Nursery Conservation

SUNDERWALA BURJ



TASK:

Conservation of the Sunderwala burj

PURPOSE:

To revive the lost architectural integrity of the monument which is deteriorated due to inappropriate repair works and material loss and ensure significance is retained with the restoration of the highly ornamental ceiling.

ACTION TAKEN:

- Structural repairs including cleaning of the cracks, stitching and repairing them with lime mortar. Repairing cracks on the dome was not only required to ensure structural stability but also to ensure no further water penetration causes loss of the decorative plasterwork on the ceiling below.
- The four arched openings over the doorways originally had sandstone lattice screens which were missing at the onset of conservation works. These four red sandstone lattice screens were on a pattern used in several buildings as part of the project using traditional building tools and techniques by master craftsmen. Not only do these screens restore the intended architectural character of the building they also prevent entry of birds into the structure thus preventing decay resulting from bird droppings.
- The cement plaster layers from both the internal and external wall surfaces required to be carefully scrapped off and remaining portions of historic plasterwork carefully cleaned.
- Craftsmen were trained to restore missing portions of the decorative plasterwork on the ceiling and medallions and this plasterwork is considered the most significant aspect of the structure the restoration of which has significantly enhanced the architectural and historic character of the monument.

Sunderwala Burj – before conservation. Note that cement plaster and whitewashed facade compromised the architectural integrity of the monument ▶

SUNDERWALA BURJ

▲ *Sunderwala Burj ceiling had suffered due to water seepage and repairs using cement and whitewashing*

... Contd.

- Lime plastering has been completed on the external and internal surfaced after removing the cement plaster layers and replacing it lime plaster with a finish layer of lime punning (lime +marble dust) using matured lime putty mixing with traditional additives and marble and treating with to get a finish layer.
- Restoring the red polychromy decorative patterns work has been completed which included cleaning of historic wall surfaces on external façade to expose the underneath layers of polychromy plaster and restoring them where required as per original designs.
- Dome repair works included removing cement plaster from the external surface and replastering with lime mortar and cleaning and restoring missing portions of the highly ornamental interior ceiling.
- The plinth of the Sunderwala Burj was repaired in the early 21st century. This was found to be inappropriately sized when compared with archival images.
- It was also discovered that the foundations of the tomb were very shallow thus making the plinth significant for structural stability.
- Following architectural modelling on the basis of documentation and archival photographs appropriate size and height of the plinth were worked out.
- The original plinth was dismantled and the new plinth edge built in stone masonry in lime mortar.
- Red sand stone paving have been provided, in preparation of the last number of visitors expected here on the plinth and the chamber of the tomb, replacing the concrete flooring that existed here.
- Red stones used for the paving, are hand chiselled and fixed with lime mortar after the consolidation of the base layer.
- Wooden doors have been installed in the four openings. It is proposed to fit a metal grille on the inside face of the east and west opening to allow visitors to see the decorative ceiling.
- The Quranic inscription on the lintel level was carefully repaired including restoration of the inscription in matching calligraphic style prepared by a resident of Hazrat Nizamuddin Basti and approved by scholars. Ornamentation within the inscription was not restored in missing parts.

NEXT STEPS:

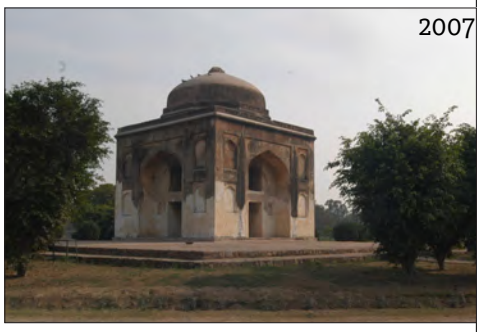
Task completed

Sunderwala Burj ceiling after conservation with missing portions carefully restored ▶

2015

Prior to major repairs carried out in 2003-07

Cement repairs undertaken in 2003



2003 repairs disintegrated, requiring second phase of cement repairs

Sundar Burj: Looking New?

Conservation works on Sundar Burj were completed in 2012. As with several other structures in the Humayun's Tomb – Nizamuddin area of Delhi, here too conservation works included removal of 20th/ 21st century cement layers to reveal and restore original Mughal architectural elements and materials.

Though the cement used in earlier repairs had accelerated the deterioration of the softer 16th century lime plaster, it provided an appearance of '*ruin*' which was confused by many to represent '*age*' or '*historicity*' and thus be of value.

By contrast, the conservation works were carried out using traditional materials authentic to the building such as lime mortar used by the 16th century builders. All conservation works, including removal of 20th century cement were carried out by master craftsmen familiar with traditional building crafts handed down since centuries in India.

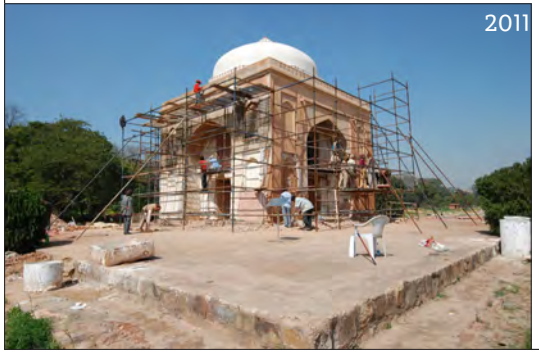
Though the first few layers of lime plaster are prepared with a mix of lime with sand and brick dust , the final protective layer of lime plaster – only 1 mm thick – is composed of only lime and marble dust – both white in colour - and used by the 16th century builders to mimic the more desirable and expensive marble appearance. This application of the final plaster layer as part of the conservation effort was essential both to ensure long term preservation and respect (and thus restore) the architectural intention of the original builders.

Though intricate ornamental details of the monument were mostly lost and required to be carefully and painstakingly restored – the resulting '*new*' appearance of the historic building caused concern for some regular visitors accustomed to the ruinous look of 21st century cement.

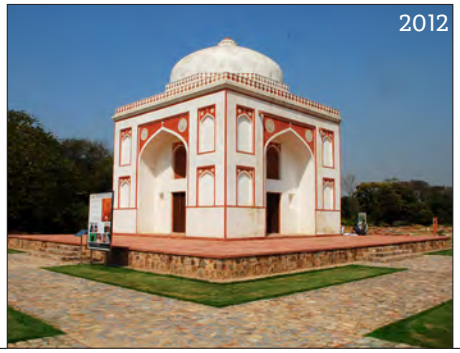
From the onset of the project there was agreement that artificial means such as chemicals would not be applied to give a fake antique appearance to the monuments and instead the natural processes would be allowed to restore a layer of patina – organic growth - that during monsoons would naturally grow on the traditional lime plaster mixed with traditional organic additives such as egg white and fruit pulp, jaggery in the layer below. The organic growth also enhances the protective nature of the final plaster layer as it fills up any cracks that would have developed in the lime plaster

Within two years from the completion of conservation works the patina of organic growth has returned to the dome of Sundar Burj.

Removal of cement plaster applied in 2003-07



Replastering in lime mortar in 2012



Patina of age returns