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Aga Khan Trust for Culture, with co-funding of Sir Dorabji Tata Trust and in partnership with the Archaeological Survey of India undertook the conservation of Humayun’s Tomb and associated structures during 2007-2011.
BACKGROUND

In the latter years of the 20th century, the Humayun’s Tomb site suffered from a condition that had befallen many World Heritage Sites. Its gardens were worn, its masonry cracked, and the stonework broken or incomplete, the ruinous appearance resulting in few visitors to the site. The competition for resources made restoration of cultural sites an unpalatable position for many authorities. The challenge, therefore, was to find ways for cultural sites — many of great beauty and tourist interest — to sustain themselves.

Around the same time, the Aga Khan Trust for Culture set out to prove that heritage sites could not only sustain themselves, but could become catalysts for the revitalisation of historic districts. In India, AKTC began by restoring the gardens of Humayun’s Tomb, as a gift to India by His Highness the Aga Khan on the occasion of the 50th anniversary of independence. Following the completed garden restoration in 2004, AKTC expanded its activities to encompass an urban renewal project that comprises the adjoining areas of Hazrat Nizamuddin Basti, Sundar Nursery and the Humayun’s Tomb complex.

At the centre of the project is Humayun’s Tomb, built in the 1560’s to a far grander scale than any other tomb in the Islamic world, which was the precursor of the famed Taj Mahal. Once, Humayun’s Tomb stood in isolation on the outskirts of the city, but today is surrounded by the city. It continues to be an auspicious place because the Mughal builders chose to build Humayun’s Tomb at this site owing to its close proximity to the Dargah of Hazrat Nizamuddin Auliya. Several other garden-tombs were built abutting Humayun’s Tomb in the 16th century, including seven within Sundar Nursery.

In 2004, H.E. Dr Manmohan Singh, Hon’ble Prime Minister of India, while speaking on the successful garden restoration, requested that “…more public-private partnerships be evolved to maintain and restore our nation’s heritage”.

To fulfil the Prime Minister’s request, AKTC returned to the Humayun’s Tomb–Nizamuddin Basti area in 2007 to undertake conservation works on several significant monuments while simultaneously undertaking significant socio-economic and environmental development initiatives.

CONSERVATION PROCESS

Before undertaking conservation works, a significant archival research programme, coupled with meticulous documentation, was initiated, including the use of 3D Laser Scanning technology. An exhaustive condition assessment carried out by a multi-disciplinary team of conservation architects, archaeological engineers, and historians, revealed that although the Mausoleum and its associated structures were in a relatively stable structural condition, they were however, in a severe state of material deterioration wherein architectural details used by the Mughal builders had been compromised by 20th century repairs carried out using inappropriate modern materials.

The conservation works thus aimed at restoring the architectural integrity and the original Mughal splendour by using traditional building craft skills of masons, plasterers, stone carvers, and tile makers – all of whom would be working with the traditional materials. In view of the scale of work to be carried out and with a major departure from a ‘preserve as found’ approach, a Conservation Plan detailing all the proposed works was peer-reviewed at the outset by international experts.

CRAFTSMANSHIP

Conservation works on all structures within the enclosed garden posed a number of significant challenges. To begin with, the scale of the structure is very large. Over 200,000 man-days of painstaking work by master craftsmen – following the evidence of original architectural elements that remained – were required to restore the splendour.

On the roof of Humayun’s Tomb, water seepage was of a primary concern. To prevent further water seepage, masons carefully filled the joints of the grand white marble dome prior to plasterers restoring the plasterwork on the inner face of the double dome. In addition, stone-carvers manually removed a million kilograms of concrete, 40 centimetres thick, from the roof in order to restore the original levels and reveal buried architectural elements.

Almost the entire sandstone terrace of the upper platform required lifting. Major structural cracks were carefully stitched prior to resetting 5400 square metres (5800 square feet) of sandstone to original patterns and slopes. Stone-carvers also lifted 3700 square metre (40,000 square feet) of stone from the plinth, which was buried under 20th century interventions of cement. To reset the heavy stone blocks, some of which weighed over 2500 kilograms required up to 15 craftsmen to lift.

The contrasting red-white surfaces of the mausoleum, achieved by the use of red sandstone with white marble inlay, is the defining architectural element of the Tomb. Each stone of the facade was scientifically analysed to determine the most appropriate strategy: repair or replacement. Stone-carvers used traditional hand tools to match the original finish of the stone; similarly masons also used traditional building techniques to reconstruct the 42 arched recesses of the garden enclosure wall that had collapsed in the 20th century.

The use of cement during 20th century interventions altered the significance of many structures in the complex. Cement plaster as much as 15 centimetres thick that was causing significant damage to the stone masonry had to be painstakingly removed from the Northern and Eastern pavilions, the walls of the Western and Southern gateways, and on the ground level facade of the Mausoleum. To restore these structures, over 20,000 square metres (225,000 square feet) of wall and ceiling surfaces was re-plastered using lime mortar, prepared in a lime wheel with additives such as molasses, egg white, fruit pulp or marble dust. Lime plaster, applied in layers, with the final layer being one millimetre thick, and used by the Mughals to mimic white marble.
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