

# KABUL

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KABUL

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# INTRODUCTION





Preceding pages, the centre of Kabul is densely built and contains extensive areas of historic quarters and monuments disconnected by recent development.

Above, flanked by a range of historic settlements, monuments and mid-20th-century buildings, Kabul River continues to be the focus of development, 1970s.

Below, Kabul Old City as viewed from the foothills of the Sher Darwaza Mountain, showing the Timur Shah Mausoleum standing in a large square garden (left), 1879–80.



## INTRODUCTION

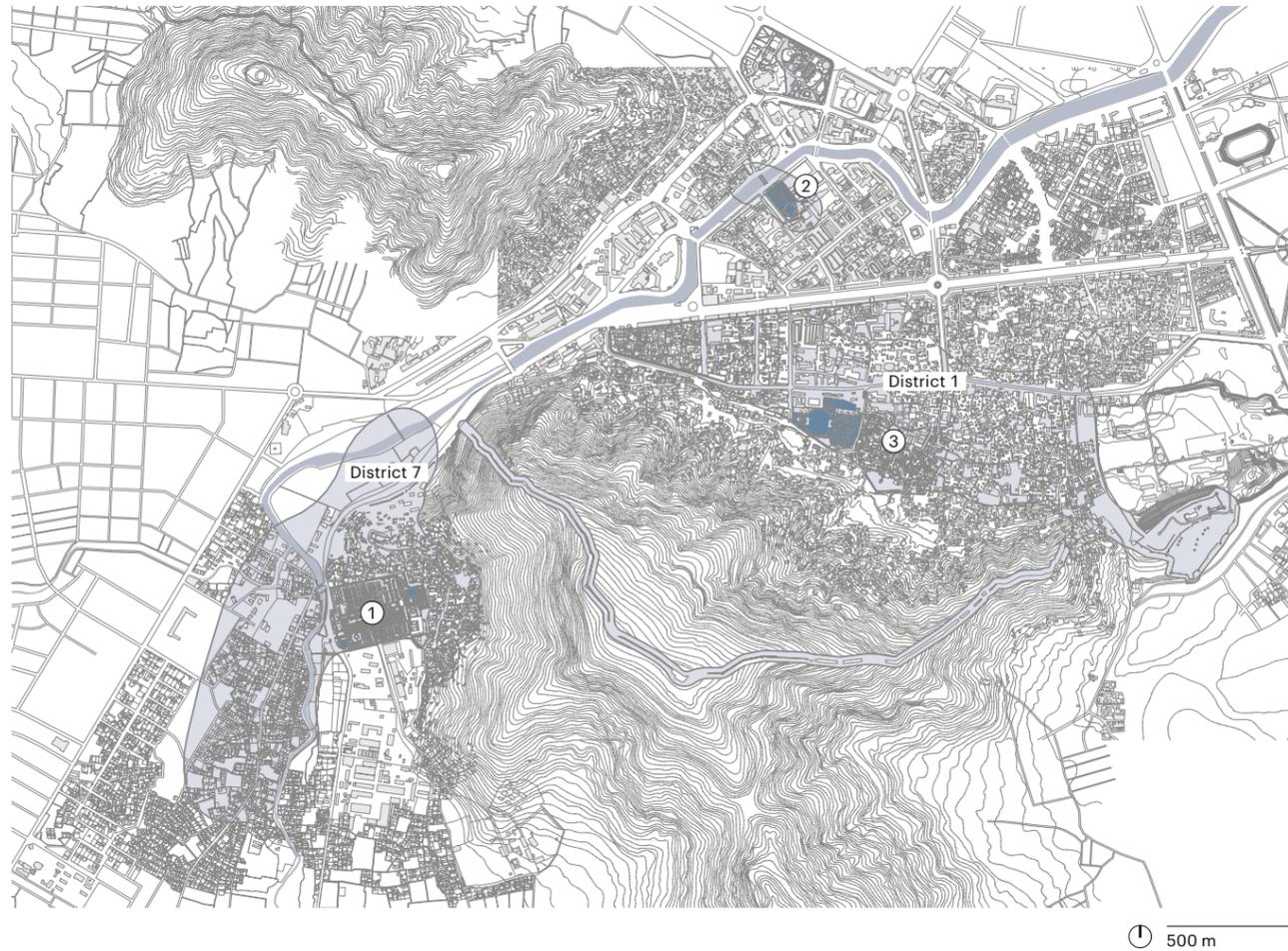
Even before most of the historic fabric of Kabul was laid waste during inter-factional fighting in 1992, the Old City had long been in decline. Architectural remains confirm that a Buddhist settlement, first mentioned by Ptolemy in AD 150, existed in the area of present-day Kabul between the first and fifth century AD. The fortified citadel and walls along the ridge of the Sher Darwaza Mountain bear witness to the turbulent history of the city, control of which passed from Hindu to Muslim rulers in AD 871. At a time when other towns and cities in the region witnessed periods of significant architectural innovation, Kabul remained little more than an outpost during the Ghaznavid and Timurid dynasties. After its destruction by the Mongols in the thirteenth century, Kabul experienced something of a renaissance under the first Mughal emperor Babur, who laid out a number of gardens in and around the city. While the centre of the Mughal emperors was to be in India, Kabul continued to flourish under their rule. In the mid-seventeenth century an extensive covered bazaar, Char Chatta, was built by Shah Jahan's governor, Ali Mardan Khan, who also gave his name to a garden on the south bank of the Kabul River. By the late eighteenth century, when Timur Shah moved his capital from Kandahar to Kabul in the face of unrest following his succession, the city was home to 60,000 people.

Accounts of travellers to Kabul during the nineteenth century describe a dense settlement of mud-walled homes, accessed through narrow alleys divided in parts into sub-districts (*mahallas*) that could be closed off for defensive purposes. Apart from the citadel and homes of rich merchants, the bazaars seem to have been the main landmarks, along with a number of markets (*serais*) used by visiting traders. It was the covered Char Chatta Bazaar that was the target of a punitive raid on Kabul by British troops during the 'War of Retribution' in 1842, who later returned in 1880 to destroy Bala Hissar, the historic citadel which had until then served as the seat of power. This prompted Amir Abdur Rahman Khan to make plans for a new palace on the plain north of the Kabul River, outside the confines of the Old City. By the late nineteenth century Kabul's population had risen to around 150,000, and merchant families who had traditionally lived close to the bazaars began to move out of the Old City. Others followed as new suburbs were laid out from the 1920s onwards to the south and the north-west.

While the historic centre retained its commercial importance for some time, many of the large merchant homes were subdivided, and fell into disrepair. As densities increased, living conditions deteriorated, prompting further movement out to the



Typical courtyard residence in the Old City of Kabul decorated with sliding wooden screens, 1910–19.



**AKTC Area Development Programme, Kabul.**

- 1 Bagh-e Babur (Barbur's Garden)
- 2 Timur Shah Mausoleum and Park
- 3 Asheqan wa Arefan
- Intervention areas

suburbs. A swathe was cut through the dense historic fabric in the late 1940s with the creation of the 'boulevard' of Jade Maiwand through the heart of the Old City, as part of efforts to modernize the capital. With newly established residential and commercial districts to the north and west of Kabul, many of those who could afford to relocate into more modern and larger homes left the congested centre of Kabul in the 1950s. Sustained by a period of development and growth, economic migrants relocated to the capital in search of employment and the population of the city rose to nearly 500,000 inhabitants by the 1960s. Rural migrants seeking more affordable accommodation began to relocate into rental properties in the Old City. In response to anti-government unrest in the late 1970s, historic residential areas in Chindawol and part of Shor Bazaar were punitively demolished in order to gain better access to the southern part of the Old City.

At this time, as part of the utopian master plan for Kabul, government planners envisioned that the entire historic Old City should be redeveloped with multi-storey apartment blocks between wide freeways running along the base of the Sher Darwaza Mountain. The reality on the ground, however, was of a dense traditional fabric that differed little from that described by nineteenth-century travellers. By the time that the inhabitants fled their homes in the face of inter-factional fighting in 1992, the historic quarters of the Old City were regarded by officials as little more than a slum.

It was into this 'slum' that the many families displaced by the conflict began to resettle after 1995 and, on a more significant scale, in 2002. Since then, war-damaged

parts of the Old City have witnessed an incremental process of residential reconstruction that, despite the intentions of official planners, largely follows historic patterns or that of 'informal' hillside settlements.

In this context, in 2002 AKTC commenced a multi-year partnership with the Government of Afghanistan focused on revitalizing historic quarters and public sites in Kabul. Built on more than thirty years of experience working with impoverished communities across the Islamic world, AKTC's Area Development Programmes aim to promote physical conservation as a means to improve living conditions and provide economic opportunities for communities living and working in and around historic areas. In collaboration with local authorities, AKTC's programmes have entailed extensive urban conservation, planning, upgrading and socio-economic initiatives in the Old City of Kabul, the rehabilitation of Mughal emperor Babur's Garden, and conservation of Timur Shah's Mausoleum and the reclamation of its public garden. Subsequent projects have included the restoration of the historic Stor Palace and more recently AKTC has been engaged in rehabilitating the Chihilsitoun Garden, a twelve-hectare public site in the south of Kabul. With additional projects currently in the planning stage, AKTC's reputation as one of Afghanistan's most capable international partners in the cultural sector has been built on more than fifteen years of work to safeguard Afghan heritage and improve living and socio-economic conditions.

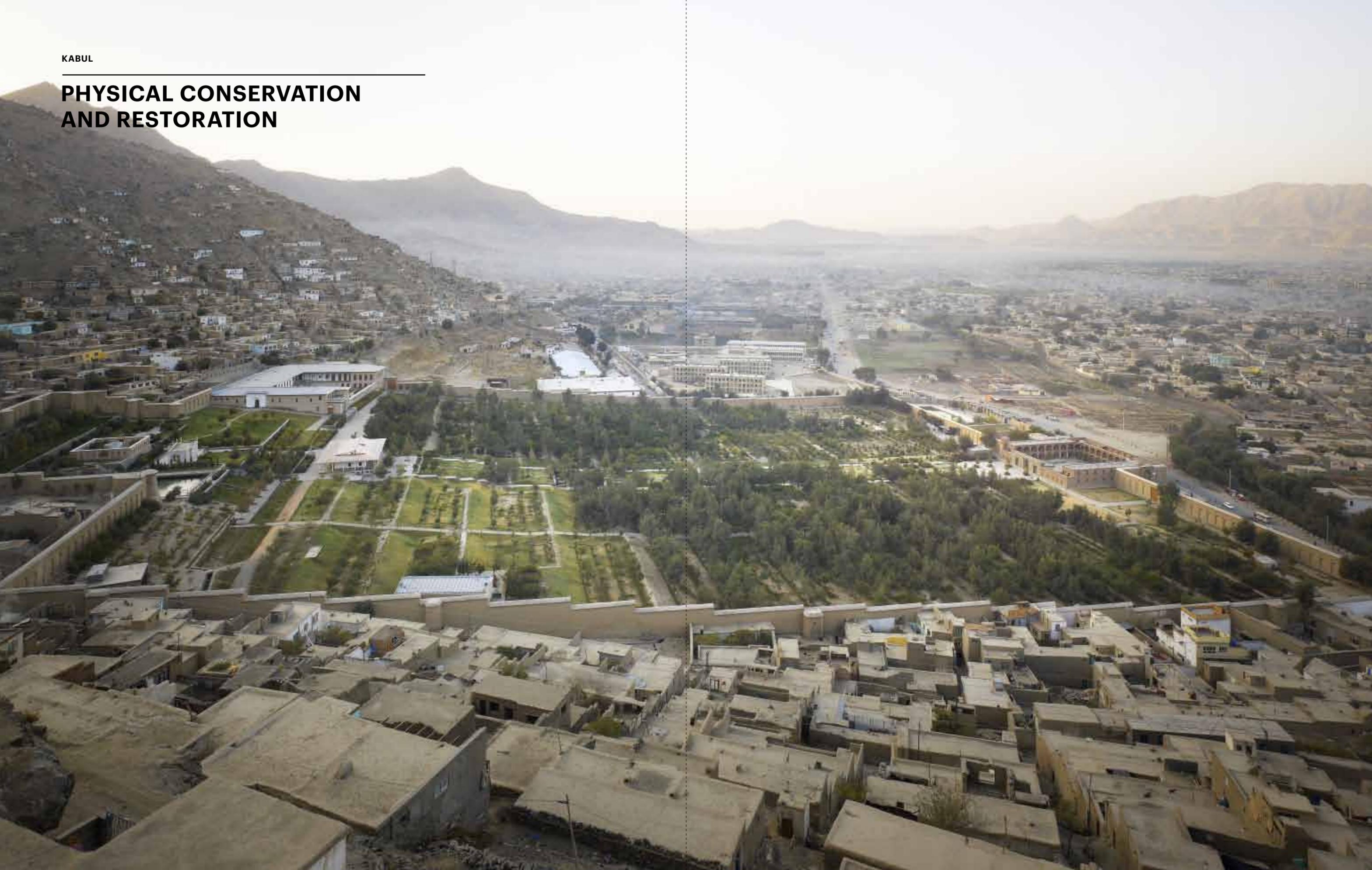
**Above, the upper terraces of Babur's Garden showing the partially collapsed perimeter wall and the Queen's Palace, 1922.**

**Below, Mughal emperor Babur describes constructing an 'avenue garden' in Kabul in the 16th-century *The Baburnama*.**



KABUL

# PHYSICAL CONSERVATION AND RESTORATION





## BABUR'S GARDEN

### HISTORY AND CHARACTERISTICS

In the foothills of the snow-peaked Hindu Kush mountains and the fertile alluvial plains of the Kabul River basin, Zahir-ud-Din Muhammad (“Defender of the Faith”) commonly known by his nickname “Babur” (believed to derive from *Babr*, Persian for “tiger”) — a young Uzbek prince exiled from his native Fergana region in present-day Uzbekistan — laid the foundations of an empire that subsequently became known as the Mughal dynasty. In 1495, at the age of twelve, Babur ascended to the throne of the small principality of Fergana. Like his father, Babur set his sights on extending his rule over Timur’s capital, Samarkand, which he managed to occupy briefly on three occasions. Having unsuccessfully attempted to conquer Samarkand and losing control of his native Fergana in the process, Babur travelled south through the Hindu Kush with a small entourage of followers and captured Kabul at the age of twenty-one, in 1504.

In Kabul, on the south-western foothills of the Sher Darwaza Mountain, Babur set out what might be the ‘avenue’ garden he describes in *The Baburnama*. The layout of the garden included running water, flowers and fruit trees: most of the elements that came in time to be associated with later Mughal funerary gardens, such as those of Humayun, Akbar, Jahangir and Shah Jahan. When he died in 1530, Babur’s remains were transported from Agra to Kabul and were interred within a grave on an upper terrace of the garden around 1540. His successors came to pay their respects at this grave, with Babur’s grandson Akbar visiting in 1581 and 1589, and his great-grandson Jahangir instructing during the course of a visit in 1607 that a platform (*chabutra*) be laid around the grave, an inscribed headstone erected and that the garden be enclosed by walls. Shah Jahan dedicated a marble mosque during a visit to the site in 1647, when he also gave instructions for the construction of a gateway at the base of the garden, which later archaeological evidence suggests was never built.

The site subsequently seems to have fallen into disrepair, as Kabul’s political and economic importance in the region was inextricably linked to the rise and collapse of the Mughal dynasty. When Charles Masson visited the site in 1832, and prepared a drawing of Babur’s grave enclosure, he noted that the tombs had been left to decline and their stones had been taken and used in the enclosing walls. As part of a wider programme of investments in Kabul, Amir Abdur Rahman Khan (r. 1880–1901) rebuilt the perimeter walls of the garden and constructed a number of buildings for his court within the site, thereby transforming an environment that had until then been defined largely by trees and water. Further transformations occurred in the 1930s, when



Preceding pages, laid out on the slopes of the Sher Darwaza Mountain, Babur’s Garden is divided into stepped terraces of sixteen levels, with his grave located at the top of the site.

Opposite page, an oasis of tranquillity surrounded by informal residential development; native species of fruit trees and flowers have been planted in the restored garden.

Above, a watercolour rendering of the central avenue of Babur’s Garden by James Atkinson, 1839.



Top, at more than 1.6 kilometres, the compacted-earth perimeter wall around Babur's Garden employed local masons applying traditional building techniques.

Middle, reconstruction of the central water channels, chutes and tanks in Babur's Garden was based on detailed archaeological evidence.

Bottom, water flows again through Babur's Garden.

Nadir Shah remodelled the 'central axis' of the garden in a European style, with three fountains in stone pools. It was at this time that Babur's Garden was officially opened to the public, and a large swimming pool was constructed on the site of a graveyard north of the Shah Jahan Mosque.

Babur's Garden was much transformed and in a poor state of repair by the time that inter-factional fighting broke out in Kabul in 1992. The conflict quickly engulfed the area around the site, which lay at the front lines between factional fighters, who cut down trees to limit cover, stripped and set fire to buildings and looted the water pumps.

**WORK UNDERTAKEN**

In March 2002, the Aga Khan Trust for Culture (AKTC) signed a 'Memorandum of Understanding' with the then Transitional Administration of Afghanistan for a comprehensive programme of rehabilitation of Bagh-e Babur. The decision to select Babur's Garden for rehabilitation was made on the basis of its importance as a public garden for the inhabitants of the city, together with the historic significance of the site as a key registered national monument and within the wider history of Afghanistan. The goal of the work was to restore the original character of the landscape and conserve key buildings, while ensuring that the garden, which is the largest public open space in Kabul, continues to be a focus for recreation for the inhabitants of the city.

As it was at the front line between warring factions in the 1990s, extensive efforts were required to clear the site of unexploded ordinance and war debris and to mobilize and train a competent team of local professionals. In support of counterpart institutions, including Kabul Municipality and the Ministry of Information and Culture, a joint coordinating committee was established and tasked with facilitating rehabilitation work.

Surrounded by 'informal' hillside residential quarters built on public land over the course of three decades of war, another key challenge for the restoration team was to mobilize the local community and ensure their active participation in and support for the rehabilitation work.

Babur's Garden comprises a walled area of approximately eleven and a half hectares, within which the principal historic structures are Babur's grave and other historic graves, a marble mosque dedicated in the seventeenth century by Shah Jahan, and a *haremsera'i*, or Queen's Palace, and a small pavilion that both date from the late nineteenth century. Built along a slope, the site is divided into stepped terraces containing sixteen levels of various sizes, traversed by ramps and stairs. At its centre, extending from the lower entrance to the upper reaches of the site, the garden is divided longitudinally by a wide formal avenue, known locally as the "central axis". This area is the organizational spine of the site and contains the bulk of the archaeological remains and historic buildings of the Mughal garden, including water channels, tanks and chutes lined with marble.

Although it is not clear how Babur originally defined the extent of his garden, the perimeter walls that now surround it follow the tradition of enclosure of formal Persian gardens. Jahangir's instruction in 1607 that walls be built around several gardens in Kabul included the construction of walls around Babur's Garden. The scale and alignment of these walls has doubtless changed, but surviving sections of compacted-earth (*pakhsa*) walling were surveyed in 2002. With many sections found to be close to collapse, nearly 1.6 kilometres of walls (parts of which are nearly eight metres high and over two metres thick) were rebuilt or repaired by hand using traditional techniques and materials.



100 m

In order to understand the original nature of the landscape, six seasons of joint archaeological excavations were undertaken by the German Archaeological Institute and the Afghan Institute of Archaeology. Architectural elements, from gravestones to parapets and waterfalls, were found to have been altered and reused in a random manner throughout the garden, suggesting a subsequent disregard for their decorative or symbolic value. The dismantling of three twentieth-century fountains enabled excavation to take place along the length of the central axis, where remains of eight rectangular tanks linked by channels, sections of terracotta pipe and stone retaining walls at the edges of terraces were found. Fragments of three carved, marble, waterfall elements of matching dimensions, which had been reused as gravestones, were also discovered. Together, these finds enabled the team to reconstruct

**Key facilities and monuments.**

- 1 Caravanserai complex
- 2 Swimming pool
- 3 Garden pavilion
- 4 Shah Jahan Mosque
- 5 Babur's grave enclosure
- 6 Perimeter wall
- 7 Queen's Palace



**Above, clearance of debris from the destroyed Queen's Palace, prior to its restoration.**



**Below, masonry vaults being reconstructed using traditional techniques and especially prepared square bricks, Queen's Palace.**

**Right, craftsmen work to lay local sandstone on the terrace of the Queen's Palace.**



the central axis and its main water channel, allowing water to flow once more through the site, as it did in Babur's time. This has been achieved without significantly disturbing the surviving archaeological remains, which were protected and backfilled after thorough documentation.

In addition to archaeological evidence, historic descriptions, sketches and images of the garden were used to restore the character of the landscape that originally captivated Babur. The focus of landscaping activities has been on reviving the key elements in the original concept — planting, grading and the restoration of running water along the spine of the garden. Underlying this work was the intention to provide visitors with an exciting visual experience of the garden, as they progress up through the site. Having passed through the lower entrance on the bank of the Chardeh River and entered the courtyard of the new caravanserai, the visitor glimpses the ascending garden through an arched gate in the reconstructed stone wall of the Shah Jahan gateway. Passing through this gate, it is possible to perceive the full extent of the orchard terraces of the garden, rising more than thirty-five metres up the hillside.

The visitor proceeds through the garden by means of pathways and flights of stone stairs on either side of the central axis, along which water flows through a series of channels, waterfalls and pools. This central watercourse is flanked by an avenue of plane trees, as depicted in an early nineteenth-century watercolour of the area by James Atkinson, directing views up the spine of the garden towards the pavilion and providing the deep shade that has long characterized this verdant space.

Each terrace along the central axis forms in itself a small garden, planted with pomegranates, roses and flowering shrubs between areas of stone paving around a pool of water fed from the terrace above. Babur's Memoirs have provided an invaluable source of information about the trees that he planted in gardens in and around Kabul. Based on this description, areas closest to the central axis contain pomegranates, apricots, apples, cherries and peaches, between which are small grassy meadows. At the outer edge of each terrace, copses of walnut trees have been planted along the perimeter walls, over which they will in time be visible from outside the garden.

At the source of the water channels along the 'central axis', a large octagonal tank (replicating the original that has been preserved underground) is flanked by four large plane trees around an area of stone paving. The modern swimming pool that had encroached upon the terrace north of the pavilion was removed and a new swimming pool facility was built outside the garden enclosure, near the lower entrance from the city. On the level above the pavilion, the marble-clad western wall of the Shah Jahan Mosque represents an important visual element, as do the rebuilt dry-stone retaining walls that run across the width of this part of the garden. Cypressess have been introduced to the north of the mosque, while planes and indigenous roses have been replanted alongside the dry trunks of the massive plane trees that once provided shade at this level.

With the original level of Babur's grave terrace restored, the platform is now approached by marble stairs leading up from a formal flower garden to the south, surrounded by a circle of wild cherry trees. Between the outer and inner grave enclosures, Judas (*arghawan*) trees blossom once a year in spring, while plane trees have been planted around the outer enclosure and along the terrace above, where they provide shade near the grave of Ruqaiya Sultana Begum, against a backdrop of towering mud-plastered perimeter walls.

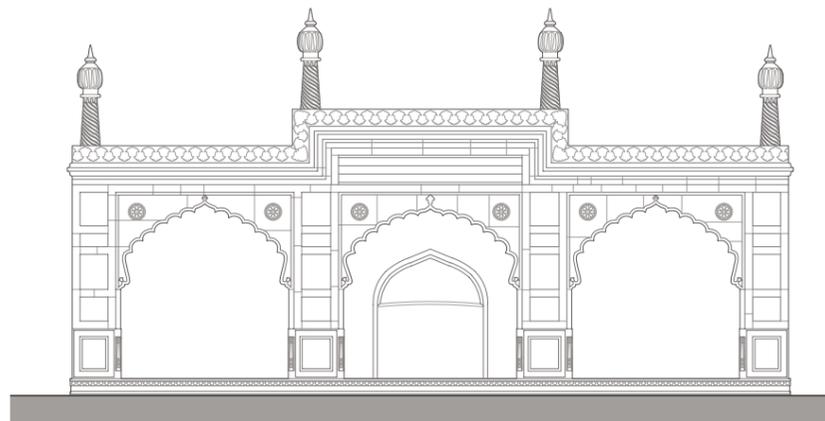
Babur's grave has seen significant transformations since his body was exhumed from Agra for reburial in Kabul, in accordance with his wishes. Apart from the carved headstone erected on the instructions of Jahangir in 1607, which contains an elaborate chronogram that confirms the date of Babur's death in AH 937 (AD 1530–31), few original elements of the grave seemed to have survived. The intricately carved marble grave enclosure recorded in Masson's drawing had apparently collapsed by the time of Godfrey Vigne's account of a visit to the garden, published in 1840, while Burke's photographs from the 1870s show fragments scattered over the grave terrace. Later transformations in the grave area included the erection in the last years of the nineteenth century of an arcaded outer enclosure — subsequently demolished — and the levelling of the southern end of the grave terrace in the 1930s, when the swimming pool was built. In the ensuing years, Babur's headstone had been enclosed in a concrete frame and the grave itself embellished with coloured marble and onyx and covered by a framed shelter.

Based on archaeological excavations and a review of earlier documentation, the work undertaken over the course of the project aimed to re-establish the original character of the grave area in a manner that conformed to international conservation practice. The thirty-one marble fragments found in the grave area yielded important evidence as to the style and workmanship of the original enclosure around Babur's grave. Together with documentary material, the fragments have enabled the reconstruction of the enclosure, carved from Indian Makrana marble used in the original structure, which has been erected *in situ* on the original grave platform. Measuring 4.5 metres square, the elevations of the reconstructed enclosure comprise a central arched opening on the southern elevation flanked by pairs of marble lattices (*jali*)

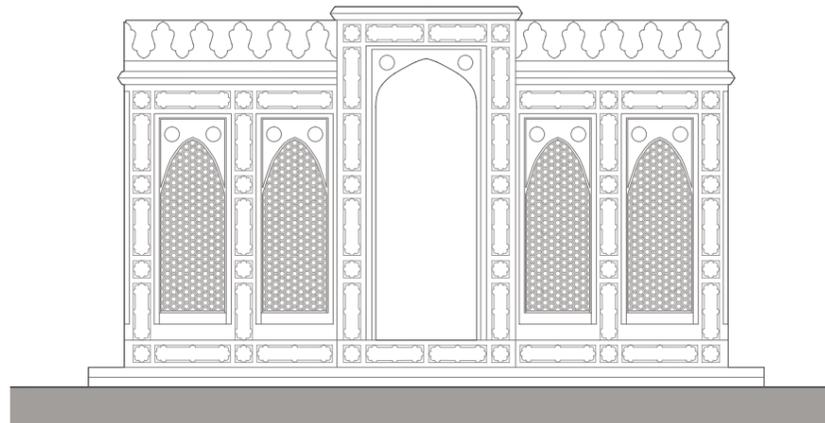
**Above, the caravanserai building at the entrance to Babur's Garden was constructed on the site of a destroyed late-19th-century structure.**

**Below, a new swimming facility was constructed on the external perimeter of Babur's Garden, replacing a dilapidated late-1970s pool within the site.**





2.5 m



1 m

Right, Shah Jahan Mosque, east elevation, and, below, Babur's grave enclosure, south elevation.

Below, the reconstruction of Babur's grave enclosure was based on visual and archaeological evidence including discovery of key sections of the original marble enclosure during archaeological excavations.



screens. Now replanted with Judas trees, the area between the marble screen and the outer masonry enclosure provides a tranquil space in which visitors can pay their respects; and here, among others, the grave of Babur's son Hindal also survives.

Immediately west of Babur's grave enclosure and visible from the site of his tomb, the white marble mosque dedicated by Shah Jahan during his visit to Babur's grave in 1647 is arguably the most important surviving Islamic monument in Kabul. The building retains a fine inlaid marble inscription above its main elevation reading: "Only a mosque of this beauty, the temple of nobility, constructed for the prayer of saints and the epiphany of cherubs, was fit to stand in so venerable a sanctuary as this highway of archangels, this theatre of heaven, the light garden of the God-forgiven angel king who rests in the garden of heaven, Zahir-ud-Din Muhammad Babur the conqueror."

Historic photographs indicate that a number of other buildings were erected around the Shah Jahan Mosque during the reign of Amir Abdur Rahman Khan, when the structure was covered with a traditional earth roof, later replaced by a pitched roof of steel sheeting. By the time the Italian Archaeological Mission began conservation work in 1964, it was deemed necessary to erect a structure of reinforced concrete and brick, over which the marble facing was reassembled. Subsequent lack of maintenance, together with direct war damage, resulted in corrosion of the reinforcement and leaching of salts from the concrete, affecting both the structural marble elements and facing.

Following a detailed survey, conservation of the mosque was initiated in 2003 with the removal of the modern roofing and laying of traditional lime concrete, and



replacement of cracked marble structural elements. Missing sections of the parapet were replaced with original marble elements rediscovered elsewhere in the garden, and the external elevation of the *mihrab* wall was refaced, using some of the original marble pieces that had been laid as paving around the mosque. Staining on the marble elevations was cleaned and graffiti removed, but surface damage sustained during the fighting in the 1990s has been left visible.

The garden pavilion, built at the turn of the century as a place for the royal family to entertain guests, partially covered a large square tank that is mentioned in accounts of Shah Jahan's visit in 1638, and which also appears in nineteenth-century illustrations of the garden. It was looted and burned during the factional fighting in 1992, and initial repairs were begun in 2003 by UN-Habitat and the Afghan organization DHSA. The restoration of the pavilion was completed by AKTC in 2005, and since then it has been used for a range of official functions and cultural events.

While Babur might have camped on platforms similar to that found beside the pavilion, the Queen's Palace (*haremserei*) seems to have been the first permanent residential structure in the garden. Built in the 1890s by Amir Abdur Rahman Khan in a local style permeated by European influences, the complex provided secluded quarters for the royal family around a central courtyard open to the west, with sweeping views of the garden terraces below and across the western plains of Kabul to the Paghman Mountains. Used as a residence for the German legation during World War I, the complex subsequently served as a school and a military store, before being looted and burned during fighting in 1992.

Following the clearing of unexploded ordnance and mines, the collapsed sections of the *haremserei* roof were removed and the entire complex surveyed. Following consolidation of the ruined structure, reconstruction work began in early 2006. While respecting the architectural character of the original building, it was possible to incorporate a range of alternative uses into the reconstructed complex and integrate



Top and middle, the Shah Jahan Mosque is considered by many to be the finest Mughal-era structure in Afghanistan.

Bottom, Babur's grave enclosure reconstructed.

new services and a range of materials. Since its restoration, the Queen's Palace, with its large courtyard, has become the focus for public and cultural events in the garden, generating substantial revenue used for the upkeep of the site.

Photographs of the garden from around 1915 identify a double-storey caravanserai structure built around a courtyard at the base of the garden adjacent to the river. Although the caravanserai no longer existed, archaeological excavations revealed foundations of an earlier structure corresponding to a passage in the *Padshahnama* referring to a building commissioned by Shah Jahan in which the destitute and poor should "eat their food in those cells sheltered from the hardships of snow and rain". This was the inspiration for a new caravanserai complex constructed on the site to house a range of modern facilities required for contemporary visitors to Bagh-e Babur. Drawing on traditional built forms and brick-masonry techniques of the region, it houses an exhibition and information centre, offices, commercial outlets and public facilities.

The restoration of one of Afghanistan's most important historic sites and the largest public garden in Kabul has transformed the previously decaying and partially destroyed site into an authentic Mughal-era garden and a resource for the millions of inhabitants of the city. Following its conservation in 2008, Babur's Garden was added

Top left, the promenade at the base of the Queen's Palace is frequently used for large outdoor events, including the exhibition of local handicrafts.

Top right, public exhibitions held at the Queen's Palace attract thousands of Afghans from a wide cross-section of society.

Bottom left, a performance of the traditional *attan* dance during New Year festivities at Babur's Garden.

Bottom right, cultural programmes are frequently held within the various buildings or outdoor spaces of Babur's Garden.



to the tentative list of UNESCO World Heritage sites. Investments in conservation and rehabilitation continue to attract Afghan and international visitors to the garden and have generated significant employment among the neighbouring communities, whose own investments in self-built housing have been enhanced by infrastructure upgrading. An important secondary objective of this work has been the provision of over 735,000 workdays of employment for on average 350 skilled and unskilled labourers from the surrounding communities.

Conceived as royal property, the fortunes of Bagh-e Babur until the mid-twentieth century depended on investments made by Afghanistan's rulers. After the era of royal patronage, when the site became a public park, its gradual degradation bears out the challenge of meeting the costs of its upkeep from public funds. Realizing that the management and operations of the restored garden posed further challenges, an independent Trust was established jointly with local authorities in order to manage and operate the site. The seventy-five full-time staff members of the Bagh-e Babur Trust (BBT) has ensured that the garden remains accessible to the more than 5.3 million Afghan and international visitors since 2008 and that revenue collected through visits and the hire of facilities is reinvested towards the operation of the site. The establishment of the BBT and its successful management by an Afghan team with direct oversight by the Afghan authorities has provided an important precedent for the sustainable management and operations of historic sites across Afghanistan.

Many visitors to Bagh-e Babur remark that the site represents a symbol of cultural recovery in Afghanistan. The challenge continues to be that of finding a balance between the symbolic and the actual, to retain the unique character of the landscape and monuments while ensuring access to the public for recreation and education and contributing to the recovery of the wider area around the garden.

The restored Queen's Palace building and its landscaped courtyard provide high-quality facilities for a range of social, cultural and educational events.

# Burj-e Wazir Mausoleum

## HISTORY AND CHARACTERISTICS

The Burj-e Wazir, or Minister's Tower, is an imposing funerary structure located on a stone outcrop above the historic settlement of Guzargah outside the northern perimeter walls of Babur's Garden in Kabul. Built in the eighteenth century (late Mughal era), the mausoleum is believed to contain the remains of a prominent local figure, as indicated by the discovery of an intricately carved, red-sandstone gravestone within the building and several other fine marble graves in the immediate area of the structure.

Typical of important masonry structures, four identical arched openings (*iwans*) lead to a small, domed square grave chamber at the centre of which a red-sandstone gravestone was excavated from beneath building rubble. Remains of large sections of painted and gilded stucco decorations were also discovered within the grave chamber. In-depth investigation of the building indicates that the masonry mausoleum may have been built on the foundations of a seventh-century multi-levelled Buddhist stupa, which still retains finely laid flat stonework on two of its external elevations. A theory further supported by the discovery of a stone arched opening leading to a small stone-domed space at the base of the stupa.

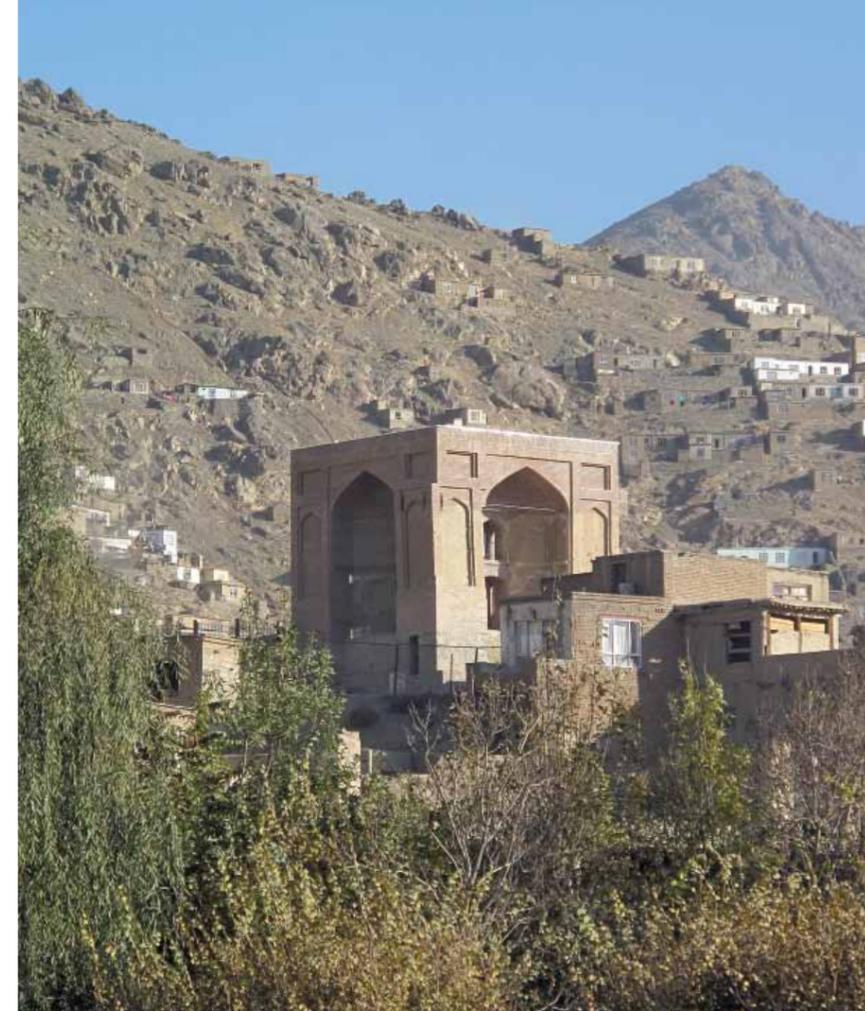
While the structure had been extensively damaged in the armed conflict in the early 1990s, photographs from the turn of the twentieth century show the tower in a ruined state. As the structure was further threatened by modern encroachments built using stone and fired bricks removed from the tower, conservation work started with the preparation of a detailed physical survey of the site.

## WORK UNDERTAKEN

In tandem with documentation work, a team of archaeologists was engaged to identify the remains of the Buddhist-era structure and to undertake excavations at the perimeter of the stupa in order to establish whether additional structures had been built adjoining the site. While excavations established that the structure had stood independently, it became clear that structural stabilization work of both the Buddhist-era structure and the Mughal-era funerary tower were required. A structural breast wall was built in areas where the finished stonework of the stupa had been destroyed, followed by the careful consolidation of finely laid stone elevations. In order to protect the site from the elements and to provide new structural 'piers' for the consolidation of remaining areas of brick masonry, it was decided to reconstruct the funerary tower on the basis of extensive physical and photographic evidence. New sections of



Remains of the Burj-e Wazir, partially submerged beneath accumulated rubble.



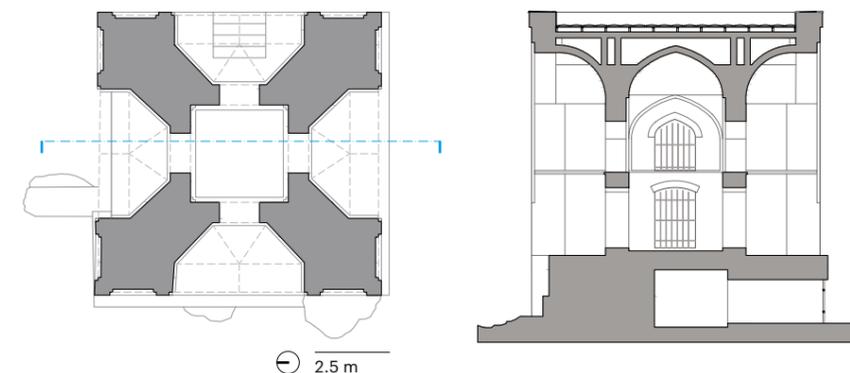
masonry were carefully laid adjacent to the original structure and treated in a manner that would enable visitors to distinguish between old and new brickwork. Once the arches and masonry dome had been rebuilt, a timber substructure was constructed and finished using galvanized metal sheeting. The site was further protected with the construction of a low stone-masonry wall topped with a steel railing. Rising above the village of Guzargah, the restored Burj-e Wazir forms an imposing landmark in southern Kabul. The project also provided an excellent opportunity to train young conservation architects and a team of archaeologists in documentation, archaeology, restoration and project planning activities.

Top left, the restored funerary structure is located on a stone outcrop above Babur's Garden.

Top right, in order to prevent further damage to the original remains of the structure, collapsed sections of arches were rebuilt using traditional materials and techniques.

Above, detailed surveys of surviving areas of the structure enabled an accurate reconstruction of the monument.

Below, first-floor plan and section.





## TIMUR SHAH MAUSOLEUM

### HISTORY

One of the largest surviving Islamic monuments in central Kabul, the mausoleum of Timur Shah marks the grave of the son of Ahmad Shah Durrani, who effectively created the modern state of Afghanistan in the late eighteenth century. Born in 1746, Timur Shah served as governor of Herat before facing off a military challenge to the throne from his elder brother, and then moved his capital from Kandahar to Kabul. After his death in 1793, his son Zaman Shah laid him to rest in a garden on the banks of the Kabul River, but it was not until 1817 that the construction of the mausoleum began. Zaman Shah was supplanted by his brother Shah Shuja and work on the mausoleum, disrupted in the battle for succession, was never completed. As a result, the final finish of the outer dome remained incomplete and small areas of internal plasterwork are the only indication that the rough internal brickwork may have originally been intended as a sub-base for a final layer of decorated plaster finish. Photographs from the late nineteenth century show that the garden (*chahar-bagh*) in which the mausoleum of Timur Shah stood was by then much reduced in extent. In 1904, as part of efforts to modernize the capital, Habibullah Khan constructed a large secondary school, the first in the country, on land to the north-east of the mausoleum. The Habibia College formed part of a range of Neoclassical buildings that stretched in time along both banks of the Kabul River. In 1965, a section of this range was demolished and a municipal park created between the mausoleum of Timur Shah and the river.

### CHARACTERISTICS

Timur Shah's Mausoleum comprises an octagonal structure with two intersecting cross-axes organized on six levels. Above a crypt, in which the grave stands, is a square central space surrounded by an octagonal structure, with four double-height arches (*iwans*) on the main elevations. On the first floor, there are sixteen brick-vaulted spaces of varying size, encircling the central space, with a flat roof above, surrounding the sixteen-sided drum under the domes. Following the central Asian tradition, the mausoleum has an outer dome constructed on a high drum above a ribbed inner dome.

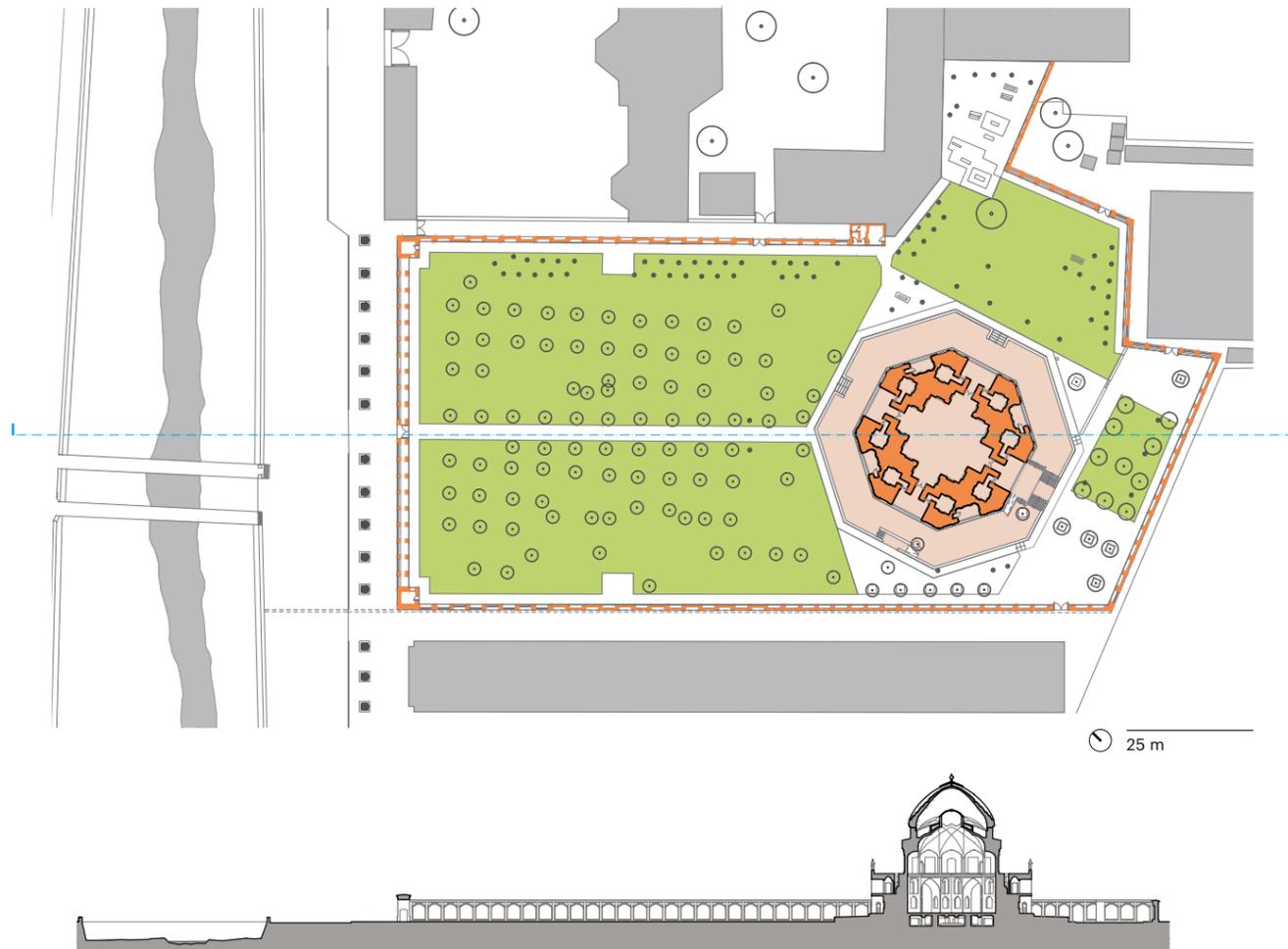
### WORK UNDERTAKEN

Surveys of the structure in 2002 revealed that part of the upper dome had partially collapsed and that rainwater had penetrated parts of the supporting drum. This



Opposite page, the construction of the Timur Shah Mausoleum was abandoned at the end of the 18th century and was then damaged during the conflict, until, in 2005, it was restored by AKTC.

Above, the large square *chahar-bagh*, within which Timur Shah's Mausoleum was constructed, has been steadily built upon since the early 20th century, 1879–80.



Above, Timur Shah Mausoleum and Park, site plan and section.

Below, the remains of a public garden surrounding the mausoleum was occupied by temporary shops located within metal shipping containers.

area was therefore the focus of the initial conservation work, once the damaged roof sheeting and timber structure had been removed. Examination of the upper dome revealed that it had been built in stages, using 'layers' of brick masonry laid in relatively weak lime mortar. After the erection of a bamboo platform over the lower dome, and installation of two temporary tension-reinforcement belts around the drum, a reinforced-concrete beam was poured around the inside, anchored into the brickwork with forty-eight stainless-steel anchors. Unstable sections of brickwork in the upper dome were removed, and repairs undertaken to match the original structure, using specially produced bricks laid in lime mortar. The original geometry, comprising six layers of brickwork at the springing, reducing to two at the apex, was reproduced in the repairs.

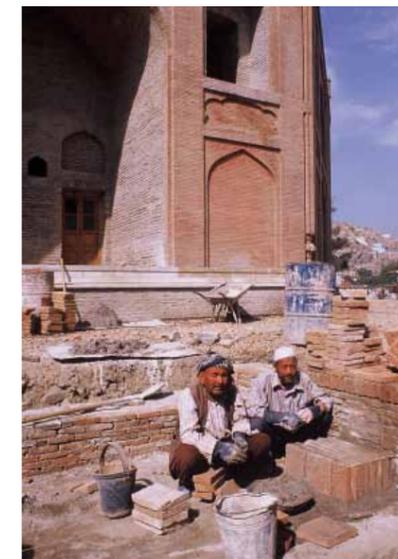
As the final external finish of the upper roof had originally remained incomplete, a new geometry was devised for its profile, based on a harmonic curve that matched the proportions of the main structure. A total of thirty-two laminated timber rafters, measuring up to thirteen metres, were produced to support a new 'shell' roof, which now spans the repaired dome. Timber boards were then screwed in a circumferential pattern over these rafters, prior to the fixing of galvanized sheeting.

While work proceeded on the main dome, repairs were carried out on the flat roofs and supporting vaults. Areas of facing brick on the elevations were also repaired, as



Above, the double-skin dome of the mausoleum had been damaged by artillery fire and required urgent conservation and reconstruction.

Left, teams of masons work to clean and repoint the exposed brick elevations of the mausoleum.



Right, the construction of a low octagonal platform around the mausoleum enabled the redirection of rainwater away from the foundations of the building.



**Above, the repaired finial being raised to the apex of the dome.**

**Below, prior to the installation of galvanized iron sheeting, timber planks were fixed to rafters.**

**Right, curved rafters spanning the length of the masonry dome were constructed on site using laminated timber, lifted above the structure and installed by hand.**

were the soffits of the main vaults, where there was high-quality brick masonry. In order to protect the lower sections of masonry and facilitate public access, a seven-metre-wide brick platform was built around the mausoleum.

During the course of the conservation work, negotiations took place for the relocation of the two hundred or more informal traders who had encroached on what had been the garden around the mausoleum. A range of options was explored aimed at incorporating the traders into a new development in or adjoining the garden of the mausoleum, but these were not endorsed by Kabul Municipality, who relocated the traders in 2005. Since then, a perimeter wall has been constructed to protect the site, which has been planted with an orchard of mulberry trees — matching those seen in historic photographs of the site — and laid out with paths for pedestrian access through the garden.

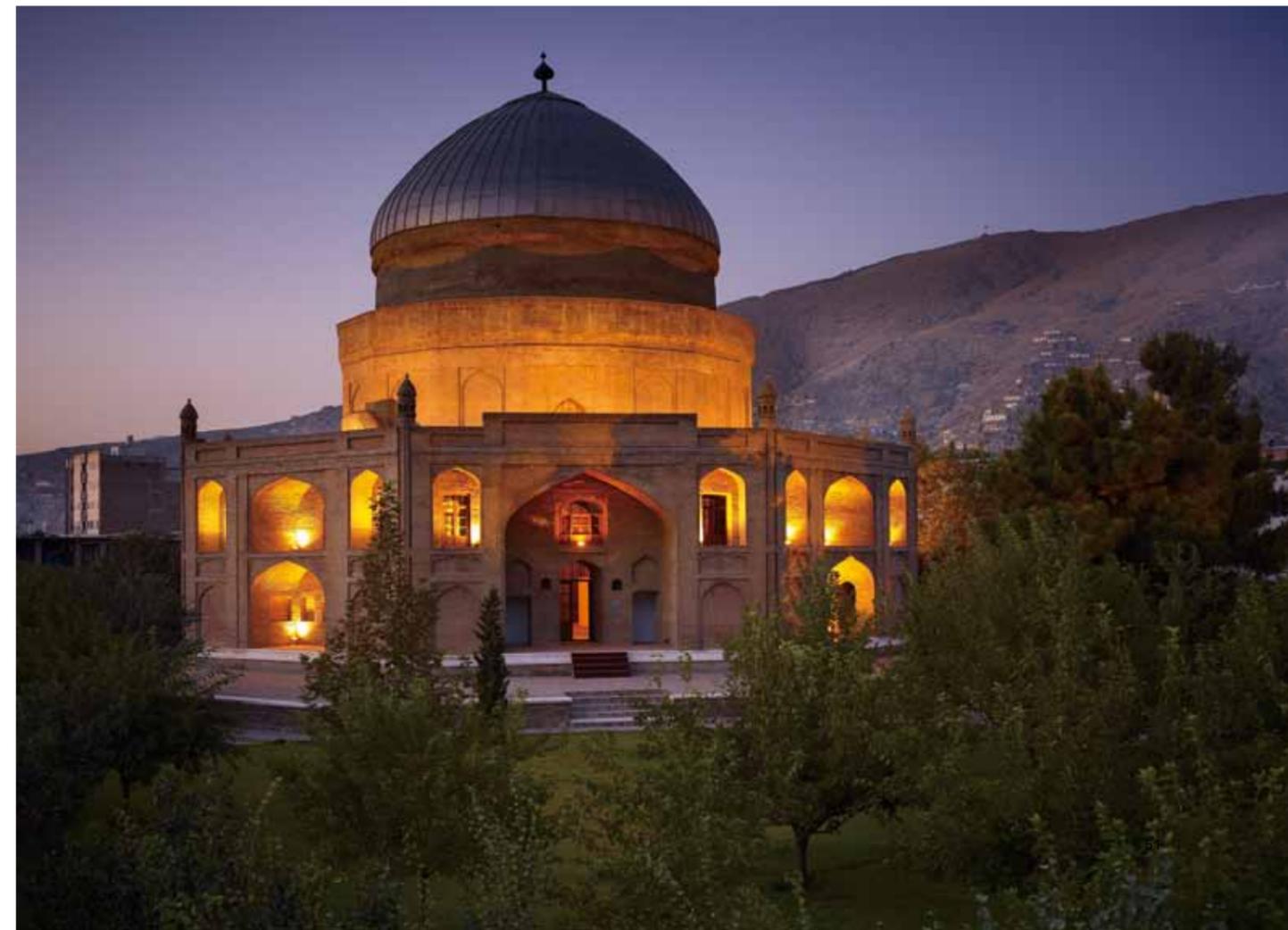
Since its restoration, the central space of the mausoleum has been the setting for lectures, seminars and exhibitions, and a recent agreement with the authorities has established that the space and reclaimed garden will be used for cultural events on a regular basis. Despite the challenging physical and institutional context in which the project was realized, it stands as an example of how an important historic monument can help to encourage a wider process of regeneration in a fast-changing urban setting.



**Left, decorated column bases were originally constructed using shaped bricks cut to size.**

**Right, since its restoration, the mausoleum continues to be used for appropriate public functions.**

**Below, the restored mausoleum is one of the most iconic monuments in central Kabul, and the surrounding park provides much-needed green space in a congested part of the city.**





## KABUL OLD CITY PROGRAMME

### INTRODUCTION

Historically defined as the area contained by the citadel of Bala Hissar and the Sher Darwaza Mountain to the east and south and the Kabul River to the west and north, the Old City of Kabul is composed of historic residential and commercial quarters. Of these, the residential quarter of Asheqan wa Arefan is particularly important to the history of urbanism and the rich building tradition of the region. As in other quarters of the Old City, families of widely differing means have historically lived side by side, with no evident grouping of homes of the wealthy in a particular area. In places where related families inhabited adjacent homes, sections of alleys had doors installed to enable them to be closed off for defensive reasons.

While there is an ingenious variety in the pattern of building, most traditional homes centre on a secluded courtyard, with summer quarters oriented to the north and a south-facing area for use in the winter. Many homes have half-basements used for storage, and constructed of stone masonry, as are the foundations. Walls at the ground-floor level are mainly of mud brick or monolithic compacted earth (*pakhsa*), while a timber-framed system with mud-brick infill (*sinj*) is commonly used for the upper levels. Traditionally, the main courtyard elevations comprised carved timber shutters that could, according to the season and need, be raised vertically within a timber-frame structure. Flat roofs are supported on uncut timber joists, and finished with a mud-straw finish (*kahgil*). In the absence of written records, it is the decorative style of plaster or woodwork that provides clues to the age of a dwelling.

Based on initial surveys of surviving historic homes in Asheqan wa Arefan during 2002, several were identified for possible conservation, based primarily on an assessment of their architectural value and vulnerability. Over the subsequent seven-year period, more than twelve important residential buildings, a large public garden and fifteen historic public buildings — including mosques, shrines, madrasas, traditional hammams, and educational facilities — were systematically restored by AKTC in the war-affected quarters of Asheqan wa Arefan, Chindawol, Pakhtafurushi, Shanasazi and Kuche Kharabat. Collectively these historic quarters are home to more than 30,000 people in one of the most densely populated areas of Kabul.

In addition to the conservation of important architectural heritage, this work has enabled the AKTC team to both deepen their understanding of traditional construction techniques and to develop the skills of a cadre of craftsmen. More than a hundred carpenters, plasterers and masons, trained by AKTC, many of whom live in the



Opposite page, the Peshawari Serai is one of few remaining historic commercial premises in the Old City of Kabul.

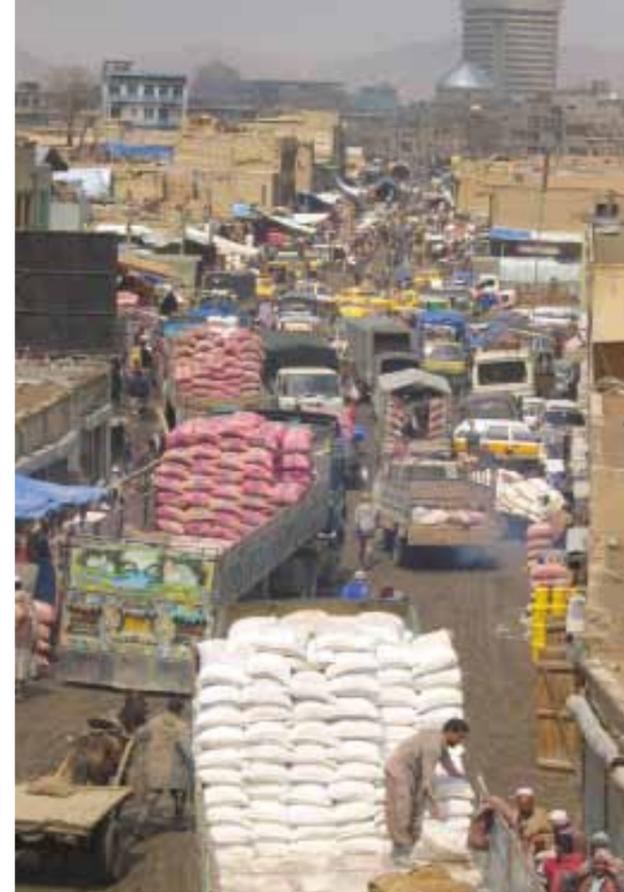
Above, limited public services and an absence of investment in infrastructure has contributed to poor living conditions in the Old City. Significant time is spent collecting and transporting water.



Above, Asheqan wa Arefan neighbourhood: conservation and upgrading improvements.

- Conservation of religious buildings
- Conservation of public buildings
- Full-scale residential conservation
- Small-scale residential repairs
- Building advice
- Public access and infrastructure improvements
- Open public space
- Open green space rehabilitation

Right, socio-economic surveys conducted within the Old City enable a better understanding of living conditions.



Old City, continue to find regular employment — often engaged by local residents for the regular upkeep of their properties.

Much of the fragile stock of traditional housing in the Old City is subdivided and residents, half of whom are tenants, have access to only the most rudimentary services, due to decades of under-investment and neglect, as well as more recent conflict-related damage. In order to address the abject conditions facing the majority of residents in this area, AKTC has provided sustained support for the repair or construction of drains, paving of alleyways and streets, and safer water supplies, improving living conditions and extending the benefits of the conservation programme to nearly 15,000 inhabitants of the Old City.

In parallel with physical restoration activities, a system of small household grants was instituted to assist house owners who had embarked on repairs of traditional or infill homes, but might not otherwise be able to afford to complete such work. In addition to making available essential materials and tools, on-site building advice has been offered in more than eighty instances to owners through this scheme. Aimed at ensuring that the surviving stock of traditional houses does not deteriorate further, and that living conditions (including facilities such as bathrooms) within homes are improved, the household grants have had a significant impact within the neighbourhood.

As important as the physical outcome of conservation and rehabilitation work in the Old City has been, the opportunities provided permitted residents to develop their skills and to find employment. As part of a vocational training initiative aimed at improving family livelihoods, more than 1500 women from the neighbourhood have attended courses in tailoring, embroidery and weaving, along with classes in basic literacy. Over the course of the programme, more than 350,000 workdays of employment was generated for skilled and unskilled labour, most of whom were selected from among communities in the Old City.

Left, the presence of wholesale markets in the Old City has accelerated speculative commercial development, often resulting in historic fabric being destroyed and replaced with modern constructions.

Right, a typical street in a residential area in Asheqan wa Arefan with timber screens on the upper floors of historic, enclosed, courtyard houses facing outwards.

# Asheqan wa Arefan Shrine



The Asheqan wa Arefan graveyard is one of the largest burial sites in the Old City of Kabul and the location of one of its most important shrines.

## HISTORY

The historic residential neighbourhood of Asheqan wa Arefan, named after the graves of two brothers reputed to have introduced Islam to Kabul during the third Islamic Caliphate, in the seventh century, is located directly to the west of the citadel of Bala Hissar in the Old City of Kabul. Historic shrines where revered figures are buried become places of pilgrimage where people offer prayers. They are often associated with healing sicknesses or mental conditions, helping the impoverished or offering protection to the weak.

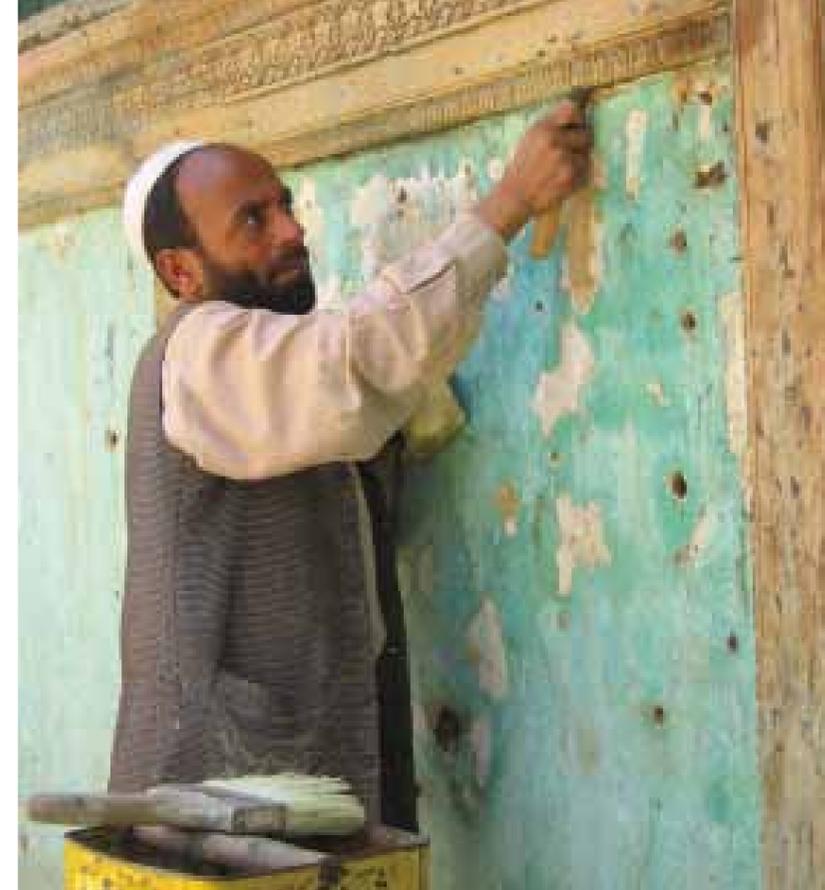
As with other burial sites of figures revered in Afghanistan, the area around the shrine of Asheqan wa Arefan — translated from Dari as meaning “lovers and mystics” — has been transformed over time into an expansive graveyard populated with both the tombs of the well-to-do and the simple graves of the poor. People continue to visit the shrine to offer prayers or pay their respects to this day and the site is important to the religious practices and social customs of the community. Together with an adjacent mosque, the historic complex is home to an important Sufi brotherhood.

## CHARACTERISTICS

With the exception of a two-storey summer and winter mosque built to the west of the shrine in the early twentieth century, the remaining structures of the complex are single-storey, wood-frame (*sinj*) constructions, with extensive use of woodwork, including lattice screens, carved columns and decorated wooden ceilings. The complex is located on a promontory above the Asheqan wa Arefan neighbourhood and is comprised of three distinct levels, the lowest being its courtyard and entrance, where the grave of Khwaja Abdus Samad (Aref) is located. The next level, an open north-facing portico, is accessed from a set of stairs in the courtyard and leads, via an elongated semi-submerged corridor lined with fine wooden lattice screens, to the grave of Khwaja Abdus Salam (Asheq) — located at the highest level of the complex and in the midst of the graveyard to the south of the site.

## WORK UNDERTAKEN

The conservation project was vital in building confidence within the community during the initial stage of AKTC’s programme in the Old City of Kabul in 2002. Building on the experience gained during the conservation of smaller mosques in the area, work was initiated on the Asheqan wa Arefan Shrine complex in late 2005.

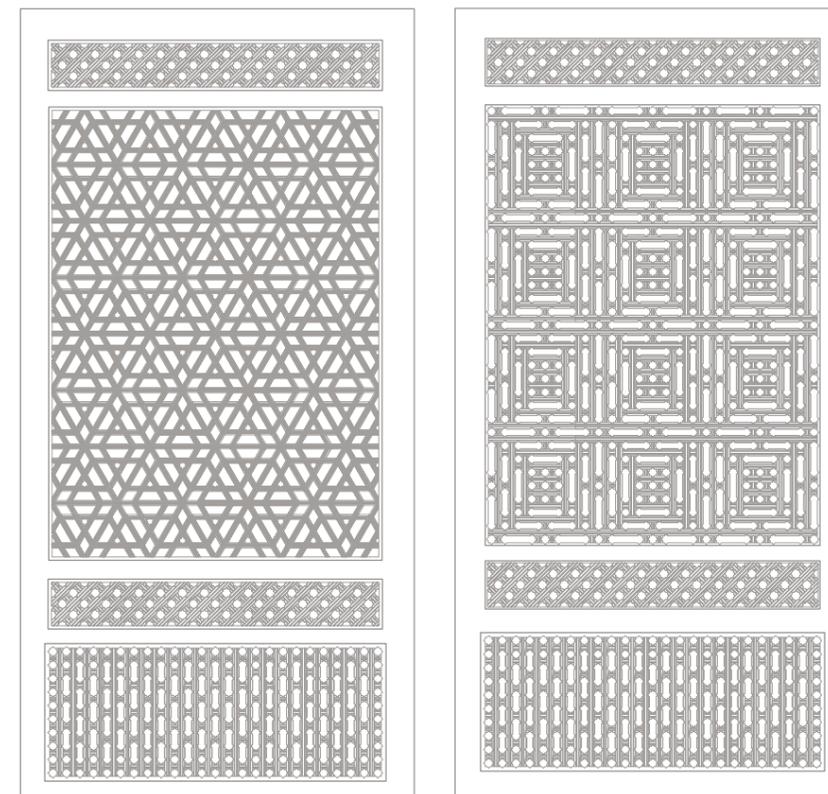


Left, a carpenter stripping layers of modern paint from the wooden decoration of the shrine.

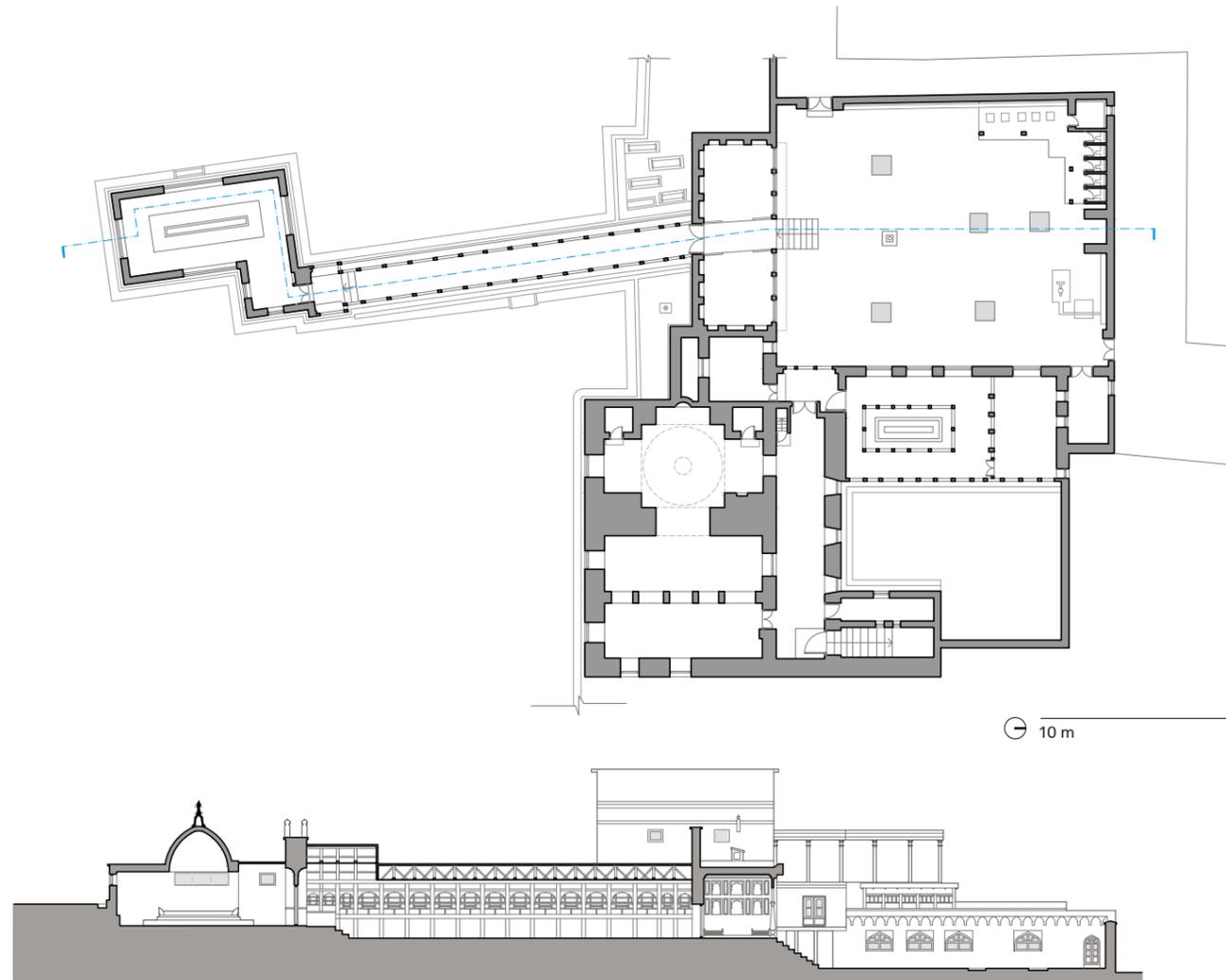
Middle, conservation of the shrine was carried out by craftsmen familiar with traditional construction materials.

Bottom left, intricate timber latticework screens (*jali*).

Bottom right, latticework screens were carefully cleaned and repaired, before being treated with linseed oil and reinstalled.



0.25 m



Asheqan wa Arefan Shrine, ground-floor plan and section.

Found to be in a poor state of repair, the distinctive colonnaded entrance and passage that leads to the grave of Khwaja Abdus Salam (Asheq) required extensive structural repairs, while the lower grave of Khwaja Abdus Samad (Aref), which retains its traditional wooden enclosure, was re-roofed, as were those of the adjoining summer and winter mosques. A stone retaining wall was built along the length of the corridor leading to the grave of Khwaja Abdus Salam (Asheq) in order to protect the timber screens, which were cleaned and repaired, along with the finely carved timber entrance door. During the course of repairs to the plasterwork of the portico, a series of decorated plaster niches were uncovered and restored. The entire roof over the lower grave of Khwaja Abdus Samad (Aref) was rebuilt and its internal plaster and marble decoration restored. Extensive repairs were also carried out on the roof of the adjacent summer mosque, which retained fine decorated plasterwork on the prayer niche (*mihrab*), the domed winter mosque beneath, and its long corridor.

The courtyard of the shrine, which provides an important focus for residents of the area and visitors alike, was landscaped and improvements made to the public water supply and ablution facilities located at its perimeter. Rehabilitation work was completed in late 2007 and the site was transferred back to local custodians who continue to maintain and operate the site.



Above, the entrance portico to Asheqan wa Arefan Shrine, with its series of decorated plaster niches, was uncovered during the course of repairs and restored.

Left, visitors to the shrine are led into a long corridor decorated with timber screens before ascending to the burial chamber of Khwaja Abdus Salam.

Right, an engraved *hamsa* (Hand of Fatima) attached to the main entrance of the shrine.

# Uzbekha Mosque



Children collect water from the courtyard of the Uzbekha Mosque before its restoration.

## HISTORY AND CHARACTERISTICS

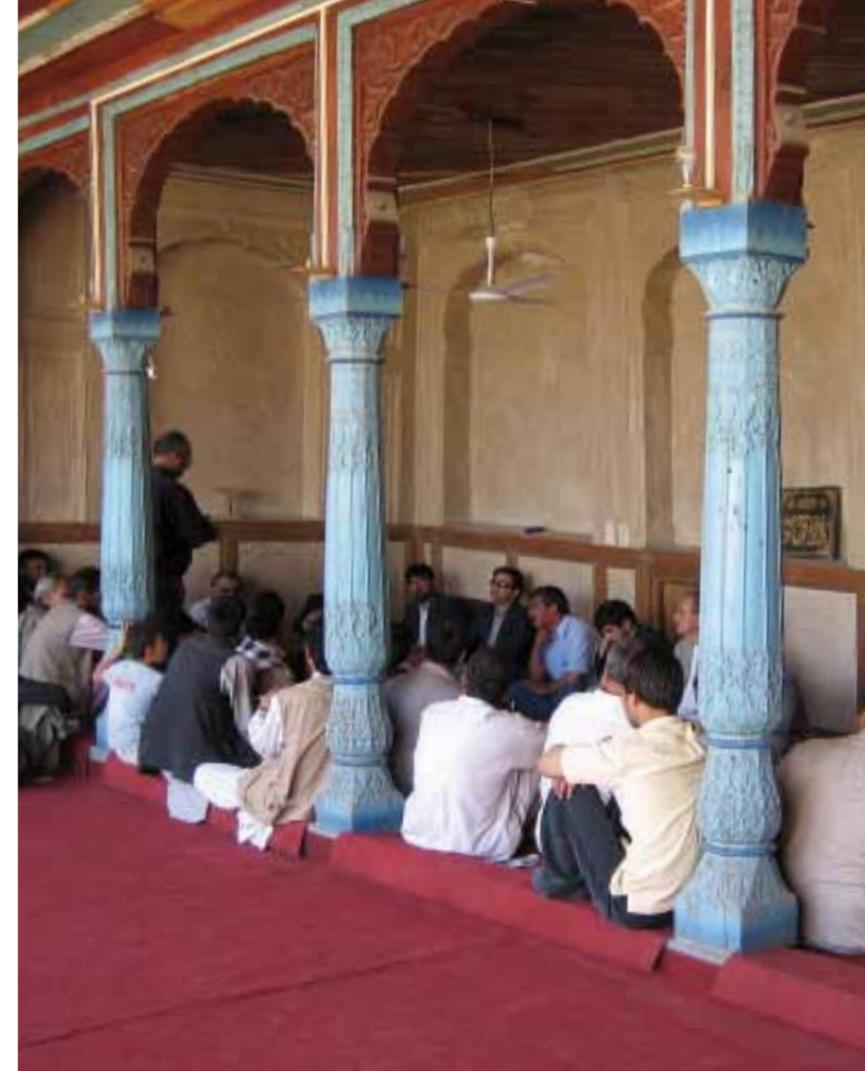
While the history of the Uzbekha Mosque remains vague, the construction located in the centre of the Asheqan wa Arefan neighbourhood probably dates to the late nineteenth century, when there would have been a significant presence of the Uzbek community in the area. The typology of the building is typical of a historic mosque structure found in Kabul, with an upper summer prayer space (originally open to the east) divided by two rows of decorated timber columns above an enclosed and well-insulated winter mosque on the ground floor. As with other mosques in the Old City, the courtyard is used as a temporary prayer space in warmer months. In addition to providing water for ablutions, the well located in the courtyard of the mosque is an important focus for the surrounding community.

## WORK UNDERTAKEN

In order to develop an understanding of traditional construction techniques, physical surveys were conducted on the Uzbekha Mosque — a site that had been extensively damaged due to conflict. As one of the first conservation projects carried out by AKTC in the Old City of Kabul in 2002, the engagement enabled the AKTC team to build a constructive relationship with the recently resettled community, who became key advocates of the wider conservation programme. When conservation work began, few local craftsmen were found to have sufficient experience in the traditional building techniques employed in the Uzbekha Mosque. It was thus necessary to embark on an intensive programme of on-the-job training for masons, plasterers and carpenters.

During the course of initial repairs to the timber roof of the mosque, intricate moulded plaster decoration was found on the walls — hidden beneath layers of modern plaster and oil-based paint — and preserved using traditional techniques. Careful removal of paint from timber columns and arches supporting the roof revealed finely carved, wooden, decorative elements, which were left exposed and sealed using locally available linseed oil.

Although not an original feature of the historic mosque, glazed timber screens on the second-floor courtyard elevation of the mosque were repaired and reinstalled in order to enable use of the upper prayer space during colder months. The traditional hypocaust heating system (*taba khana*) under the floor of the winter mosque was also rebuilt and reinstated, using flat stone plates laid over low brick walls. In addition to the reconstruction of rooms around the courtyard, required for storage and



to house the custodian of the site, the water supply was improved and facilities for ablution were upgraded.

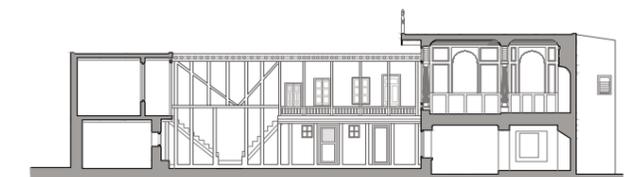
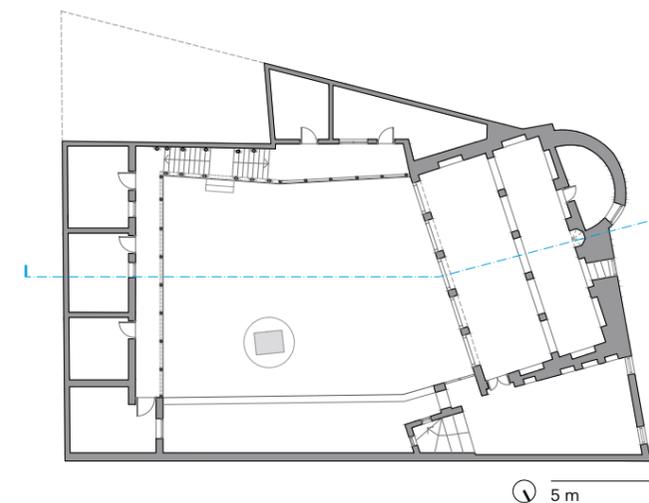
The restoration of the Uzbekha Mosque was completed in early 2005 with the landscaping and paving of the courtyards and has since been in use by the community.

Top left, the restored Uzbekha Mosque provides space for worship and consultative community gatherings.

Top right, damaged areas of the timber ceiling of the summer mosque were replaced.

Above, sections of fine plaster decoration, uncovered during conservation work, were cleaned and repaired.

Below, first-floor plan and section.



## Sedukan Mosque

### HISTORY AND CHARACTERISTICS

Located in the Asheqan wa Arefan neighbourhood, the small historic Sedukan Mosque retains key characteristics of other nineteenth-century community mosques in the Old City of Kabul, including a colonnaded open summer prayer area built above a ground-floor mosque with traditional under-floor heating for use in winter. The name Sedukan (three-shops) is most probably a geographic reference to several commercial premises located at a junction of narrow pedestrian streets adjacent to the mosque. The two-storey building is accessed through a small courtyard lined with an ablution space and room for the custodian of the site. A well, located next to the entrance, provides water for worshippers and potable water for the wider community. As with other mosques, where religious donations or *waqfs* provide for the upkeep and maintenance of the buildings, large areas of the *mihrab* wall of the upper summer mosque were painted over time. Based on the deeply rooted religious beliefs of Afghans and the provision of funds for the upkeep of religious sites, the vast majority of historic monuments that remain unaffected by war or lack of maintenance throughout Afghanistan are those serving religious purposes; such as mosques, shrines, or madrasas.

Constructed using a mixed masonry and wood-frame (*sinj*) technique, with a flat timber roof supported on two rows of decorated timber posts, the Sedukan Mosque was in poor condition at the time of surveys conducted in 2003.

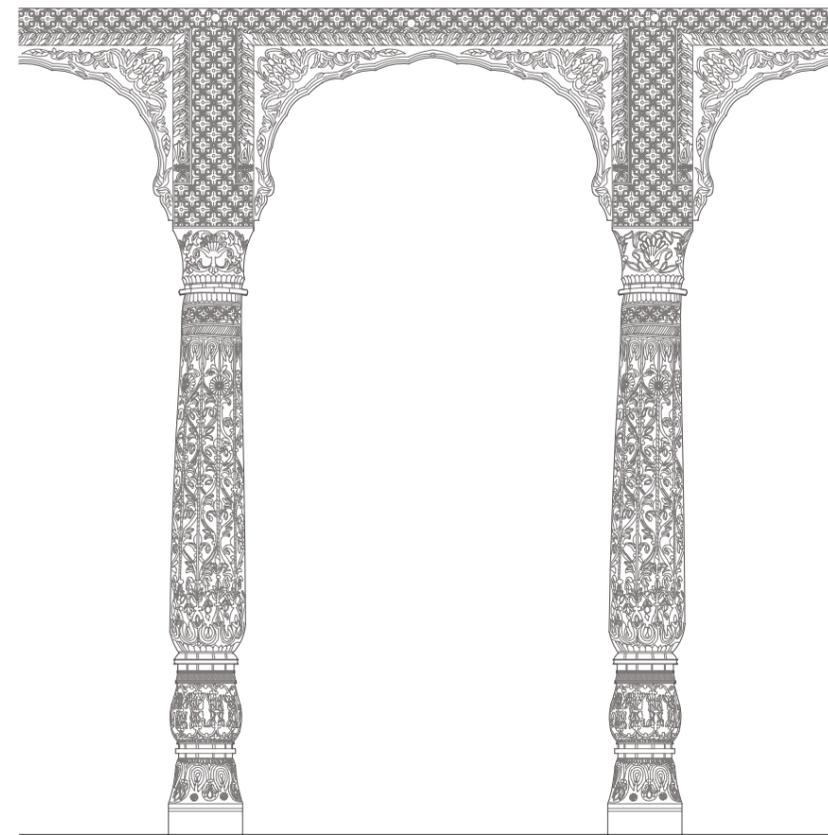
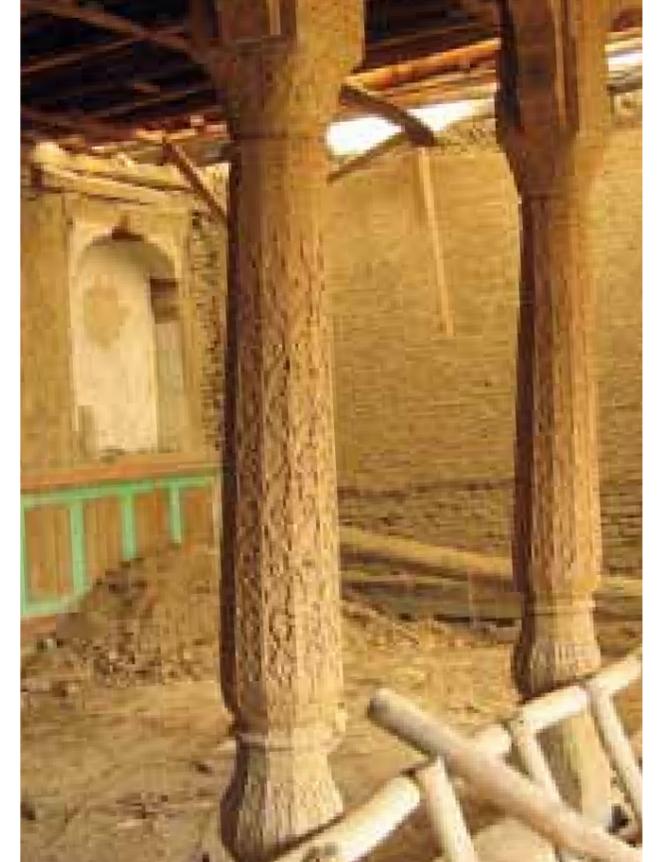
### WORK UNDERTAKEN

Following a detailed physical survey and documentation of the building, which highlighted the elaborate carved craftsmanship on the internal wooden posts, conservation work began in 2004. This entailed rebuilding part of the collapsed southern wall of the mosque, followed by the removal of accumulated earth from its roof and replacement of damaged rafters. Re-roofing work entailed laying wooden decking above the rafters before the application of a layer of waterproofing material, followed by a thick layer of compacted mud (*ghoragil*) and finished with a finer layer of mud-straw plaster (*kahgil*). Sufficient slopes for water run-off were provided and downspouts were constructed redirecting snowmelt and rainwater into drains located in the courtyard.

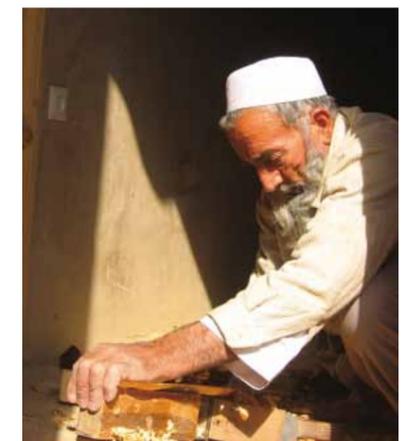
Structural consolidation work included stabilization of stone foundations and replacement of infill brickwork where required. Stripping of interior and exterior paintwork revealed fine details of the original timber craftsmanship, which were repaired



The Sedukan Mosque continued to be used by the local community prior to restoration.



0.5 m

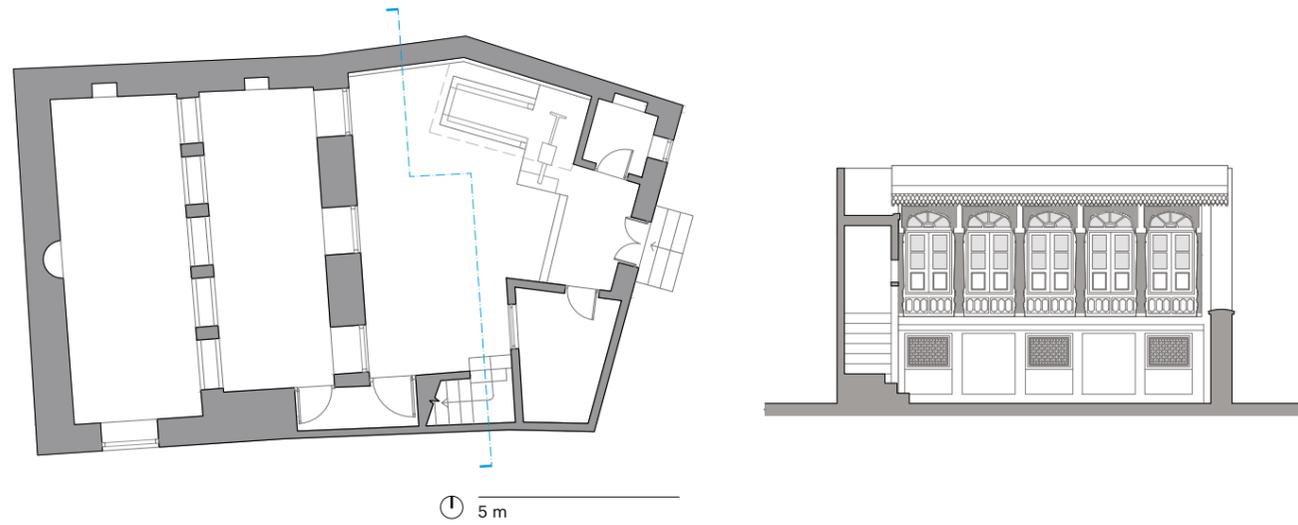


Top left, protective mud plaster being applied to external masonry elevations.

Top right, clearance of debris was followed by the reconstruction of damaged sections of the roof over the mosque.

Bottom left, detailed drawing of intricately carved timber columns and arches at the Sedukan Mosque.

Bottom right, a carpenter at work repairing woodwork elements.



Above, ground-floor plan and section.

Below, left, the small community mosque is frequented by residents of the Asheqan wa Arefan neighbourhood, who contribute to its upkeep.

Right, restoration work included the reconstruction of the roof and internal spaces, followed by the cleaning and repairing of the decorated woodwork.

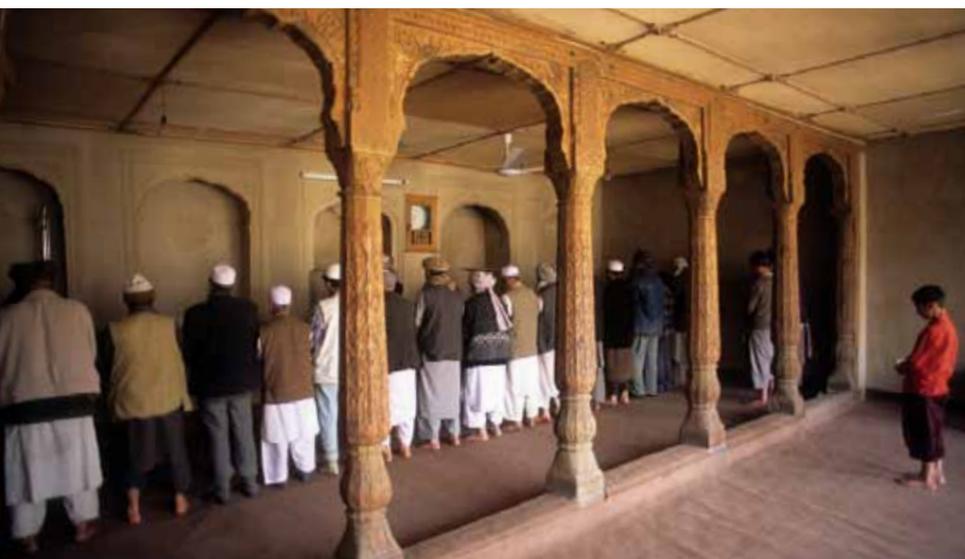
and preserved. This was followed by the repair and replacement of damaged timber elements, rehabilitation of ablution facilities, interior flooring and the paving of the courtyard with fired brick. Linseed oil treatment was applied to all exposed areas of timber for protection. Fine mud-based plasters (*simgil*) were used for interior and exterior wall finishing.

The conservation work offered craftsmen an excellent opportunity to develop their skills in repairing moulded plaster and carved timber decoration. Surveyors and site architects were also able to benefit from practical first-hand experience on the project.

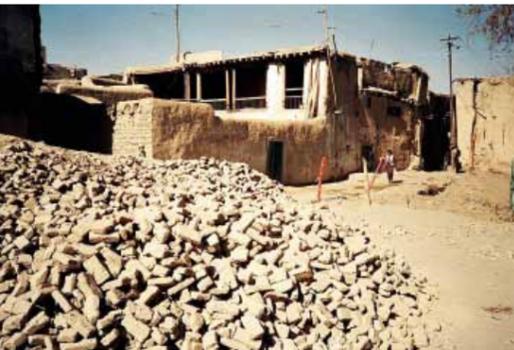


Above, the main elevation of the restored mosque.

Below, a repaired timber lattice screen installed at the entrance to the mosque.



# Chuqurak Mosque



The Chuqurak Mosque was in risk of collapse prior to restoration.

## HISTORY AND CHARACTERISTICS

The Chuqurak Mosque is situated on the southern edge of Asheqan wa Arefan neighbourhood in the Old City of Kabul and represents a typical example of a small community mosque embedded in the historic fabric of the area. While it is difficult to determine a date of construction, based on the building technique and quality of craftsmanship, it was probably built in the early part of the twentieth century. Historic structures built in the Old City of Kabul using traditional construction techniques (*sinj*) and building materials available locally require constant upkeep. Over time, this leads to gradual transformations in historic structures, including expansion of existing buildings or demolition and construction of new sections, making it difficult to provide accurate attributions.

As with many other historic structures in this area, the building had been damaged during inter-factional fighting and had since fallen into disrepair. Having seen other examples of conservation in the neighbourhood, community members approached AKTC requesting support for the rehabilitation of their mosque as part of a multi-year Area Development Programme.

## WORK UNDERTAKEN

Conservation work commenced in 2005 with the clearance of debris from the site, making possible a detailed physical survey. Measures required to restore the building included stabilization of stone foundations, removal of excess earth from above the roofing allowing the replacement of damaged rafters, and reassembly of the structural timber frame and replacement of infill brickwork where required. Structural work was followed by the cleaning, repair and replacement of sections of damaged timber decorative elements and the partitioning of the upper floor to create living quarters for the custodian of the site. Internal elevations of the mosque were levelled by applying traditional mud-straw plaster (*kahgil*) and finished with a fine mud plaster (*simgil*).

External work required rebuilding of the boundary walls, which also included a small corner shop, and construction of toilets and ablution facilities for worshippers. Landscaping activities entailed laying stone paving and planting in the courtyard and the digging of a well for water supply. As part of the restoration process the Chuqurak Mosque and other sites restored by AKTC have been registered as protected monuments with the Department of Historic Monuments of the Ministry of Information and Culture. The building continues to be used by the community.



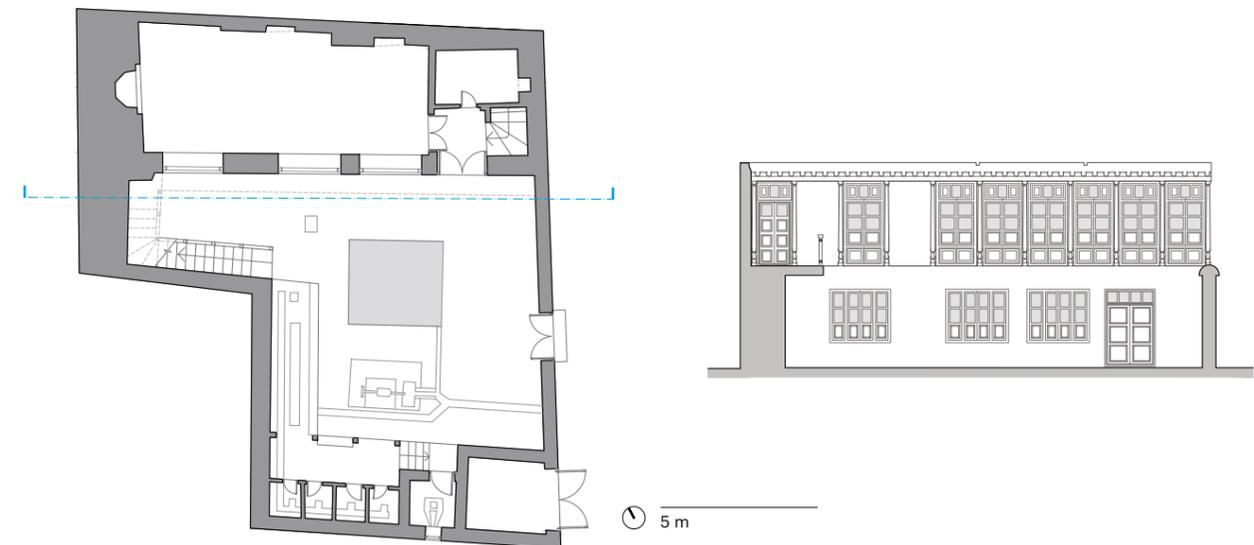
Top left, visible from the street, the restored mosque provides a glimpse into the historic character of the Old City.

Top right, restoration work entailed structural repairs to the timber-frame construction of the mosque.

Middle left, the external perimeter wall of the mosque was reconstructed to incorporate ablution facilities.

Middle right, traditional mud plaster was used to finish external elevations.

Bottom, ground-floor plan and section.



## Dewan Begi Mosque



The Dewan Begi Mosque continued to be used by the community prior to restoration.

### HISTORY AND CHARACTERISTICS

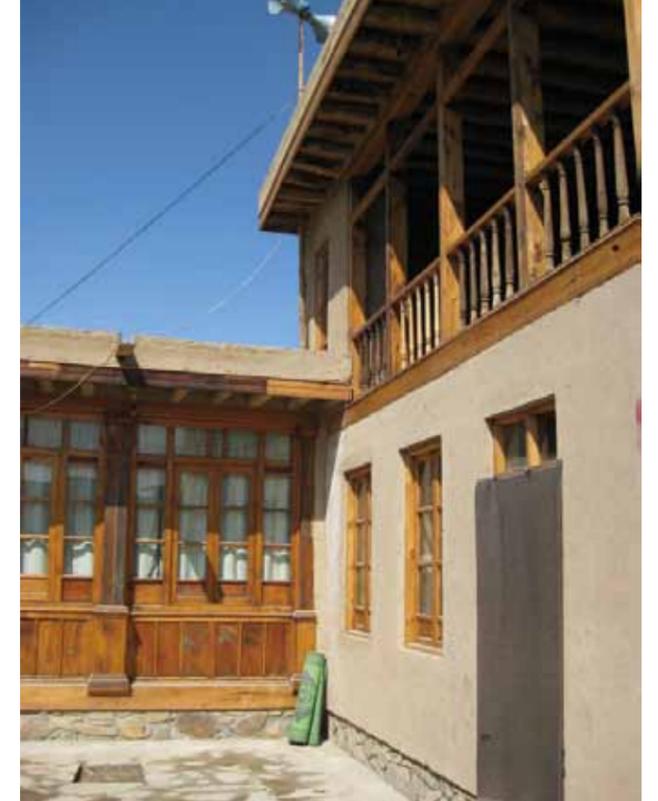
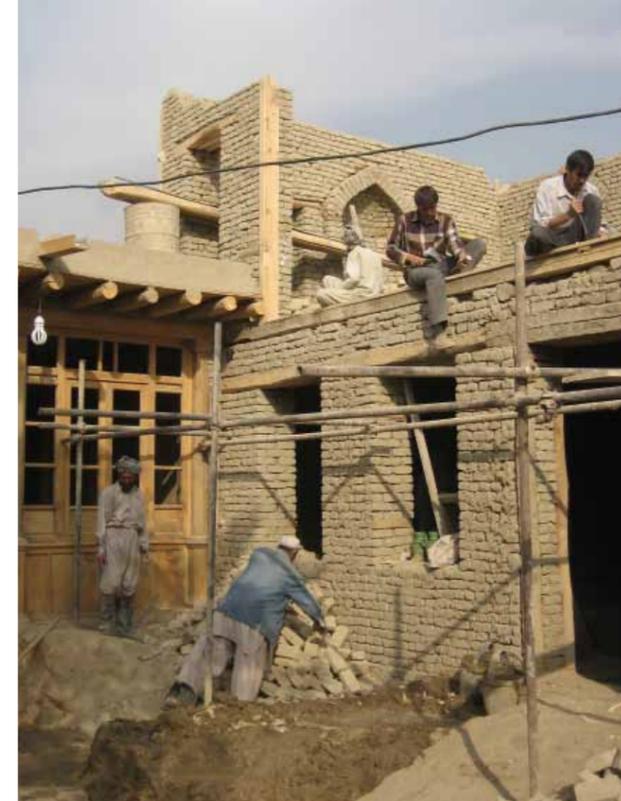
The Dewan Begi Mosque is situated on the western side of a busy shopping street which is the main access road to the residential neighbourhood of Asheqan wa Arefan. Interviews with local elders indicate that the word Dewan (legal court) and Begi (an Uzbek name) may suggest that the mosque was named after a local judge of Uzbek descent named Beg. The complex consists of several spaces for worship, located within an older (possibly late-nineteenth-century) single-storey building on the western boundary of the site and a separate two-storey building on the northern side — which both open onto to a large courtyard with ablution facilities and a central green space.

The single-storey mosque has an unusual typology when compared to other mosques from a similar date due to the fact that both the winter and summer prayer spaces are located on the ground floor. In order to access the winter mosque at the back of the building, worshippers have to pass through the summer mosque. Architecturally, the double insulated space of the winter mosque makes it easier to heat, while the open wood and glass facade of the summer mosque allows ventilation for cooling purposes. The fact that the spaces can be used separately is indicated by the construction of a second prayer niche (*mihrab*) in the wall separating the two spaces.

### WORK UNDERTAKEN

Survey and documentation of the Dewan Begi Mosque started in 2007. Damaged during the conflict, the roof of the open prayer space situated on the upper level of the two-storey building had collapsed and required comprehensive reconstruction. This involved incorporating existing wooden posts with newly constructed posts and rafters and finishing the roof with protective compacted mud and mud-straw plaster. The staircase leading to the second floor was upgraded and secondary prayer spaces on the ground floor were consolidated and made usable.

Conservation work undertaken on the older one-storey structure to the west of the site included the removal of accumulated debris from above the roof and the systematic repair and replacement of damaged rafters. This was followed by the application of protective layers of mud plaster and the installation of downspouts for redirection of rainwater and snowmelt into the courtyard. Several layers of paint applied to the external elevations of the one-storey building were carefully removed, revealing the mosque's original timber fenestration, which was repaired and preserved.

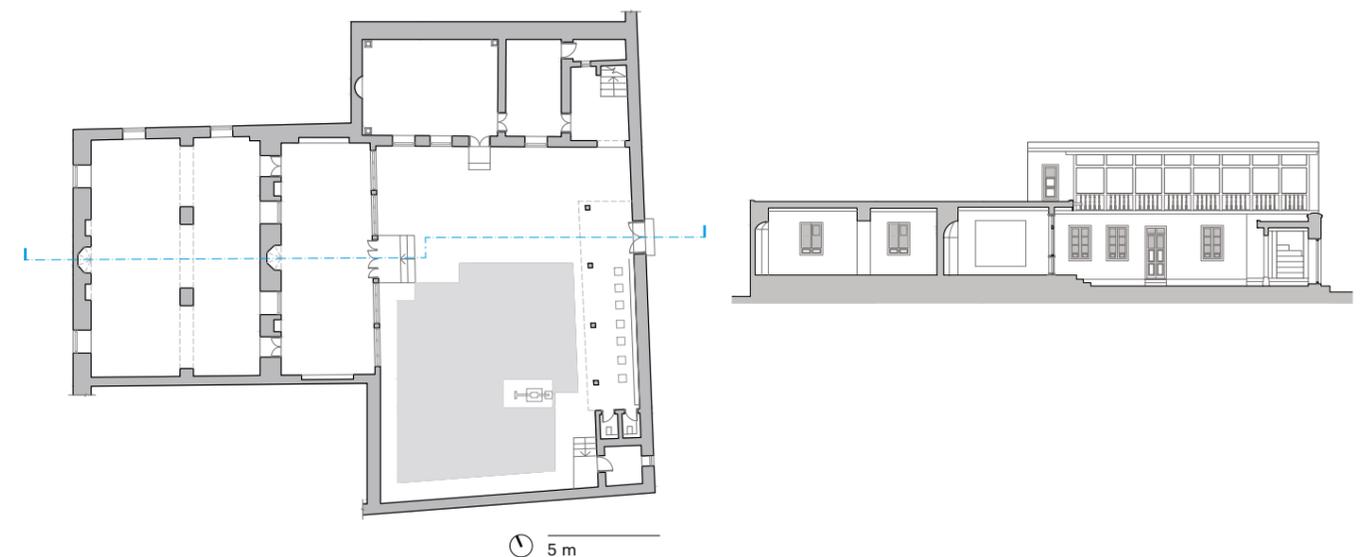


Internal spaces were cleared of debris and load-bearing walls were repaired and consolidated using wooden ties before being finished with a fine mud plaster (*simgil*). A damp-proof layer was installed beneath the flooring, which was finished using a traditional mixture of compacted mud and gypsum and made ready for the laying of furnishings. Newly produced timber doors and windows were installed and sealed using linseed oil. As with other mosques restored by AKTC, provisions were made for the construction of ablution facilities and a deep well that provides water for both worshippers and the community. Landscaping work included paving a large section of the courtyard with local stone.

Left, the upper floor of a later addition to the mosque, which had collapsed during the civil conflict, was reconstructed using traditional techniques and materials.

Right, a previous two-storey addition to the mosque provided space for worship and living facilities for the custodian of the site, seen here after reconstruction.

Below, ground-floor plan and section.



# Chahardah Masoom Shrine



The Chahardah Masoom Shrine was first surveyed in 2004 prior to its restoration by AKTC.

## HISTORY

The Chahardah Masoom Shrine is situated at the end of Kuche Kharabat, the traditional 'musicians' quarter' that adjoins the historic citadel of Kabul, Bala Hissar. Still an important place of pilgrimage, the name of the shrine suggests that fourteen graves might originally have existed on the site. It is said that a historic Qur'an had been kept in the shrine and, during an epidemic in the reign of Amir Abdur Rahman, was carried on an elephant through the city, resulting in an end to the plague affecting the inhabitants. Possibly as a recreation of this occasion, an important religious relic stored within the shrine is carried through the Old City during religious occasions (Nawrouz and Muharram) in a ceremony called "Alam Kashi".

At the centre of the shrine, there is an octagonal platform bearing four children's graves, enclosed by an intricate lattice screen made of timber. Along with other graves that lie within this internal space, the four graves might have formed part of a larger cemetery that still extends to the south and east. Over time, the association of the shrine with small children has meant that women who are not able to conceive children offer prayers at the shrine, while others with ill or disabled children pray for their recovery.

## CHARACTERISTICS

There are indications that the original shrine, built at the base of a steep rocky hillside containing the children's graves, was expanded at a later date to include a separate space for prayer to the north accessed by a large staircase. The original wooden screens (*pataii*) of the shrine area were retained as internal screens when the building was expanded. An arched opening links the shrine space with an elongated prayer space with a prayer niche (*mihrab*) on its western facing wall. Wooden screens are repeated on the northern elevation of the mosque facing the courtyard, where there is an arched brick-masonry building used for cooking food (*langar khana*) during religious festivals.

The present structure of the shrine, probably dating from the late nineteenth century, was badly damaged during the conflict that raged through this neighbourhood when many homes and religious buildings were looted and burned.

## WORK UNDERTAKEN

Rehabilitation work on the Chahardah Masoom Shrine began in 2007 with extensive surveys of its existing state. During the initial stages of conservation work, the roof



Top left, due to extensive structural damage, the roof of the shrine was rebuilt using traditional building techniques.

Top right, damaged sections of the timber screens were removed for repair.

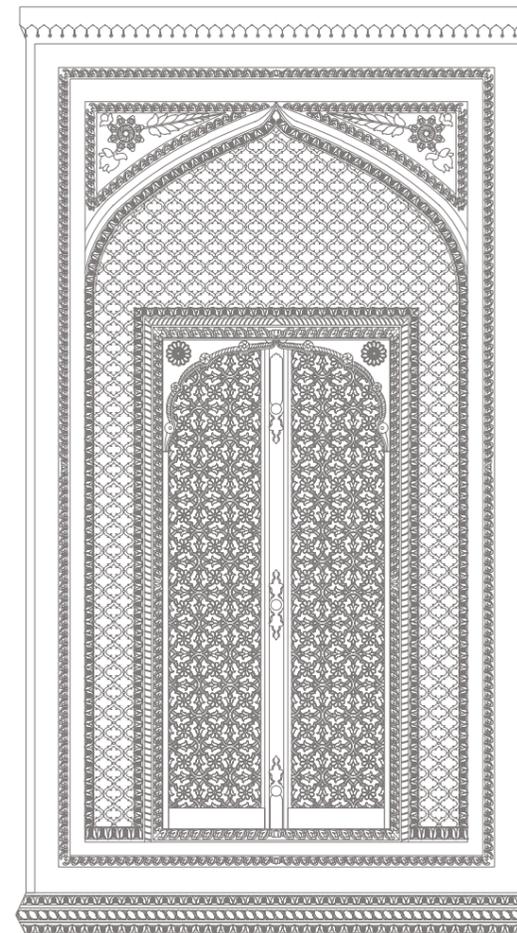


Middle left, assembled as a 'kit of parts', large sections of the woodwork were carefully dismantled, repaired and reinstalled as part of restoration activities.

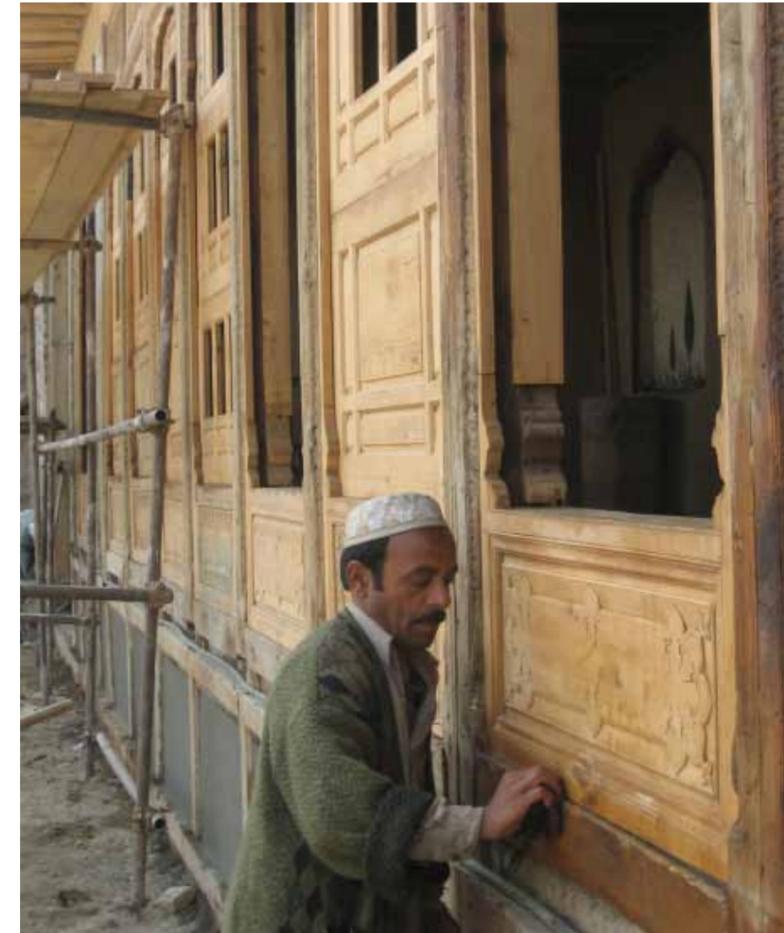
Middle right, carpenters work to reconstruct missing sections of an intricate latticework screen.

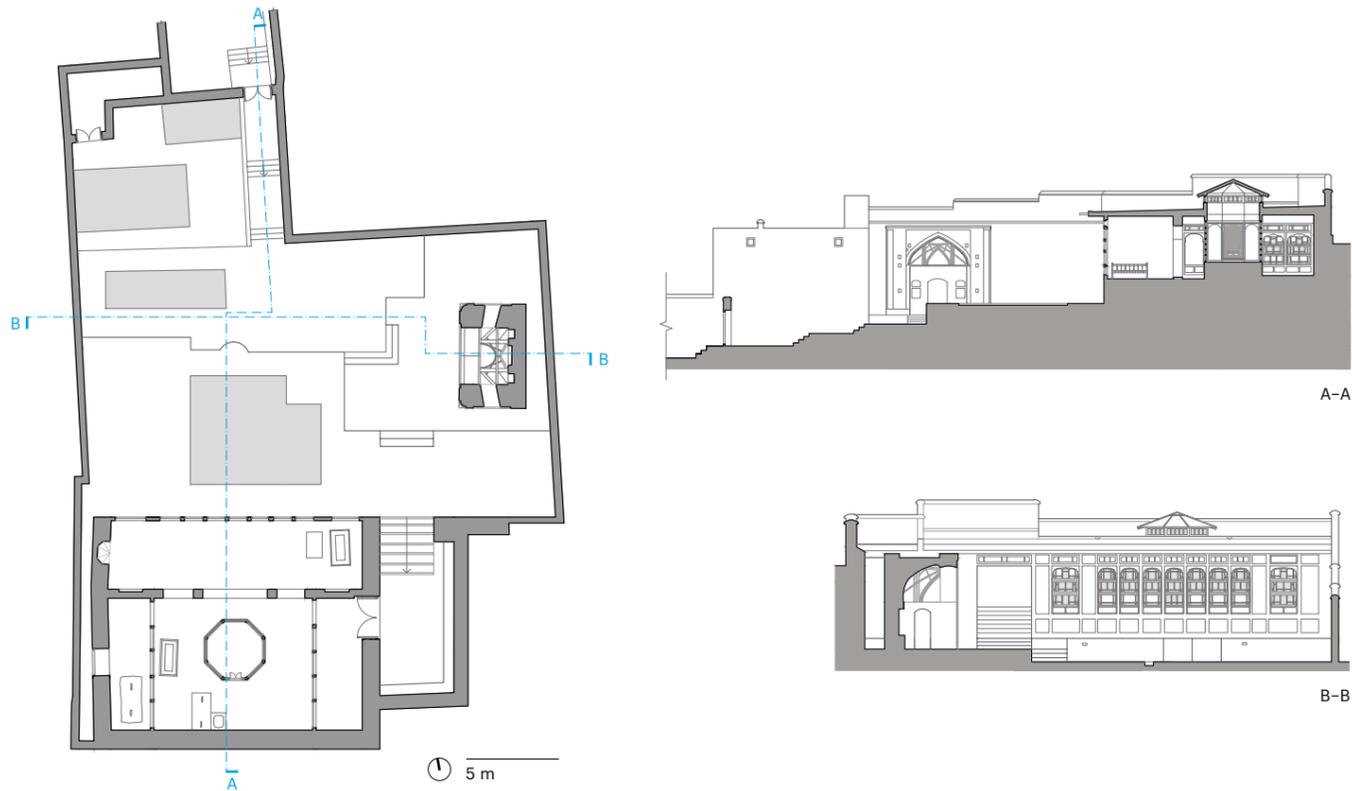
Bottom left, detailed drawing of intricately carved timber screens.

Bottom right, restoration work entailed the careful removal of layers of modern paint, revealing the natural colour and texture of the shrine's fine timber woodwork.



0.5 m





was stripped and key structural timber elements were dismantled to allow for repairs. This permitted the reconstruction of damaged stone walling on the east and south walls of the shrine, and the improvement of drainage from the steep hillside above the complex.

The removal of the roof made it possible to dismantle the central screen, parts of which were cleaned and repaired before being reinstalled. Once the base of the structural frames (most of which proved to be affected by rot) had been replaced, it was possible to refit the rafters over the entire building, fix timber boarding and lay a traditional earth finish prior to the first snowfall. Internal stone elevations of the shrine area were repaired and pointed using a lime-based mortar. Two sections of wooden screens (*pataii*) to the east and west of the octagonal enclosure of the shrine were cleaned. Structural consolidation work entailed the repair of sections of the brick-masonry partition between the shrine and the prayer area to the north, which, together with repair work on the *mihrab* wall, was finished using gypsum plaster. Layers of paint were removed from the main external elevation of the building and the wooden fenestration was repaired and preserved using locally available linseed oil. Internal floor areas of the building were finished with paved brick.

The last stage of conservation work entailed the restoration of the *langar khana* (kitchen), which included the stabilization of stone foundations and repair of the damaged sections of brickwork on its walls and dome. Compatible bricks were produced and used to repair destroyed sections of the building, resulting in the restoration of its original character. With conservation work completed, the courtyard area was paved using local stone. The provision of a well and the upgrading of existing ablution facilities rendered the site usable by worshippers.

Opposite page, above, ground-floor plan and sections. Below, in addition to the conservation of the shrine, physical work included the rehabilitation of the terraced landscape.

Left, built into the mountain, residents of the Kuche Kharabat area seek respite in warmer months by visiting the shrine.

Right, view of the restored octagonal lattice-screen chamber housing several small graves.

## Goldasta Mosque

### HISTORY

Located in the Tandoorsazi quarter — the part of the Old City where traditional clay ovens were once made — the Goldasta Mosque is an exquisite early nineteenth-century religious complex that draws on a range of regional decorative influences. The name Goldasta literally means “an arrangement of flowers”, which may be a reference to the double-column cusped-arch opening at the entrance of the structure, which resembles a floral arrangement. Despite the damage wrought during inter-factional fighting, the Goldasta Mosque was protected by local residents. Since their return to the area, these people prevented the looting of the valuable timber elements and further damage to the plaster decoration. With barely the resources to undertake repairs to their war-damaged homes, however, resettling residents did not have the means to restore their mosque, which continues to provide an important focus for the community.

### CHARACTERISTICS

Effectively comprised of a summer and a winter prayer space, the single-storey mosque was built using a mix of mud and fired-brick masonry, and roofed by timber rafters over which a traditional earthen roof was laid. The main prayer area, which would have been used in the winter months, lies along the western side of the building, with a central prayer niche (*mihrab*) that retains fine plaster decoration and an inscribed marble panel. Most of the roof over this area has collapsed, resulting in damage to the external masonry walls. The summer prayer space is an open-terraced veranda accessed by a staircase from the courtyard. This space is enclosed by a fine, timber, double-column colonnade, which has survived largely intact. This area retained part of its roof, together with the characteristic diagonally laid timber ceiling of the era, as well as traces of the nineteenth-century moulded and carved plasterwork.

Unlike other more typical mosques, there is extensive use of carved or cut marble within the building, including bases of timber columns and inlay in the high wooden skirting that lines the walls of the summer and winter prayer spaces. Surveys indicate that designs on the marble slabs inlaid within the skirting may have been salvaged from other historic sites and recycled for use in the mosque. The reuse of architectural elements or materials is common in the Old City of Kabul and other historic areas.



The abandoned ruins of the Goldasta Mosque prior to conservation.



Top left, carpenters work on site, carrying out repairs to the fine double-column colonnade enclosing the summer prayer area.

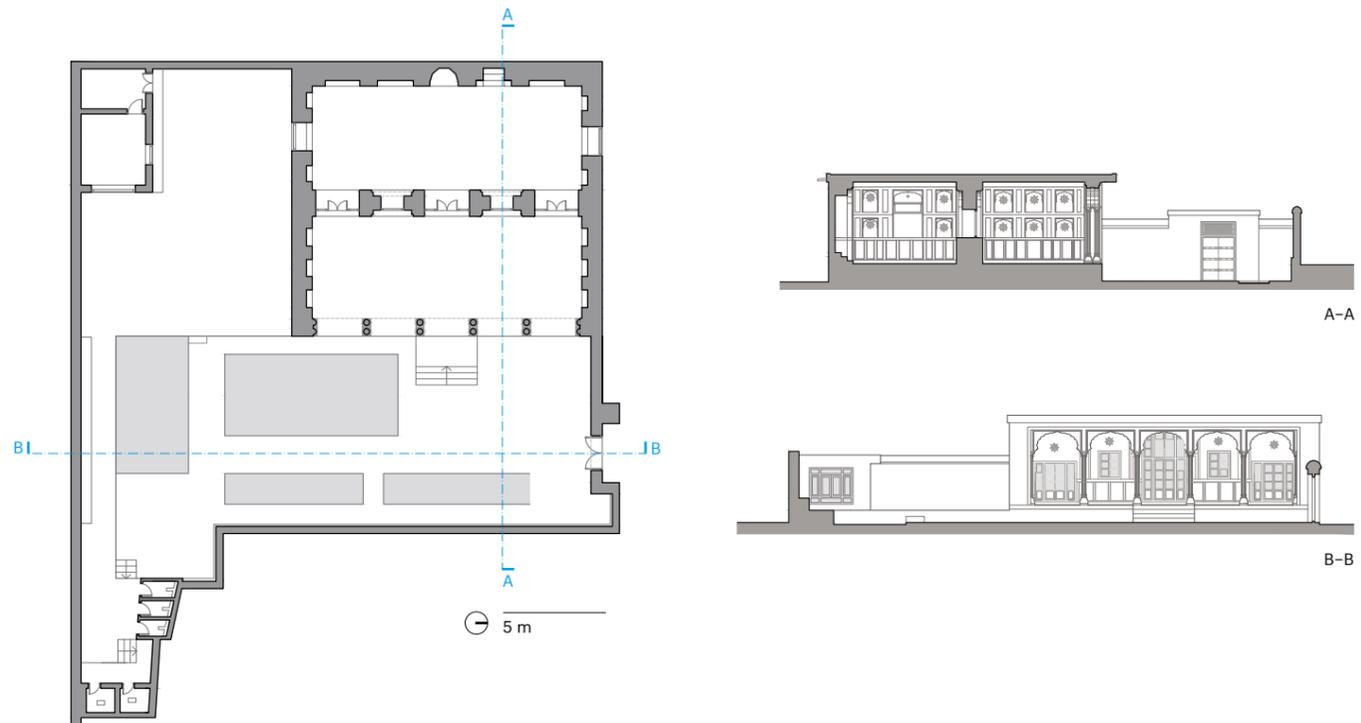
Top right, construction of timber ceiling over the summer prayer area.



Bottom left, preparation of a plaster mould for use to repair damaged areas of decoration.



Bottom right, intricate plaster reliefs being cleaned and repaired.



Above, ground-floor plan and sections.

Below, detail of the double-column capitals and cusped arches built using local cedar wood.

#### WORK UNDERTAKEN

Following initial clearance of rubble and the storage of reusable building elements and materials from the Goldasta Mosque, the entire structure was surveyed and documented in detail. The first stage of conservation work entailed removal of damaged and unstable parts of the brick-masonry walling, followed by essential repairs and consolidation using fired bricks. At this stage, detached sections of decorated gypsum plaster were removed from the internal surfaces of walls, before being documented and safely stored.

Double rows of timber beams (*katiba*) were fixed along the top of all structural load-bearing walls in order to mitigate damage in case of seismic activity, after which roof beams were relaid and fixed in place. Timber boards were then laid across these beams providing a decking for the application of a traditional layered mud-straw roof. The timber colonnade, which had settled as a result of damage to its foundations, was subsequently dismantled using temporary supports, repaired, and reattached to its marble column bases. Timber boarding (some of which was retrieved from the original structure) was fixed to the ceilings of the winter and summer prayer areas. With the structure of the mosque repaired, conservation focused on the restoration of the internal finishes, including extensive areas of moulded plaster. In addition to cleaning and repairing existing areas of plaster, new moulds were prepared and used to replaster areas that had been completely destroyed. When the bulk of the internal plasterwork was restored, the floor of the external prayer area was paved with fired bricks, and the internal space paved with traditional lime concrete. The construction of ablution facilities, a water well, and a separate space for the custodian of the site preceded the paving of pedestrian areas in the courtyard using locally available stone.

In reference to the name of the mosque, areas were prepared directly opposite the main elevation of the building for the planting of beds of roses.

Conservation activities provided an opportunity for on-the-job-training for craftsmen and Afghan professionals in traditional building practices and techniques.



Above, view of the restored mosque showing the elevated summer prayer area.

Below, view of the restored mosque showing timber arches and plaster decorated niches.

## Pakhtafurushi Madrasa



Pakhtafurushi Mosque prior to conservation.

### HISTORY AND CHARACTERISTICS

The Pakhtafurushi Madrasa was built in the early twentieth century as an extension to one of the largest communal mosques in the Old City of Kabul and takes its name from a complex of ‘cotton bazaars’ located adjacent to the site. Built around a large courtyard planted with mulberry trees, two single and double ranges of fifty-two interconnected spaces — built using brick-masonry domes — had nearly all collapsed when the complex was surveyed in 2003. With large openings towards the courtyard, skylights built into domes and clerestory windows where possible, the internal spaces of the madrasa benefit from an abundance of natural light making it an ideal place for study. The massive masonry walls provide insulating thermal mass and the high spaces of the construction, with several openings, enable rapid ventilation — both features ideally suited to the climate of Kabul where temperatures fluctuate significantly between seasons.

### WORK UNDERTAKEN

An agreement was signed with the Ministry of Hajj and Religious Affairs in 2005 for the madrasa’s restoration, with the intention that it should serve the surrounding neighbourhood as an early childhood centre — incorporating religious education and possibly health services. A second building attached to the north-west corner of the main mosque, containing toilets and ablution facilities, had been identified as being in need of essential repair and reconstruction work.

Focusing on the structural stabilization of the partially destroyed structure, rehabilitation work entailed consolidation of stone foundations, repair to networks of arches supporting the domes, and ultimately the reconstruction of a majority of all fifty-two domes in fired brick using traditional masonry techniques. Once the domes were constructed, an external layer of lime mortar was applied in order to waterproof the building. Rainwater and snowmelt were redirected into downspouts and a channel was built in the courtyard that contained and enabled the flow of water away from the building. Newly produced timber windows and doors were installed in existing arched openings and the external gypsum plaster decoration was restored using traditional techniques. Internal spaces and the courtyard were paved with durable fired brick, laid in slopes to direct water towards surface drains.

The final stage of work entailed cleaning and repairs to the public ablution facilities, the existing septic tank and surrounding areas to the west of the toilet block. Additional remedial repairs were carried out on the roof of the adjacent main mosque



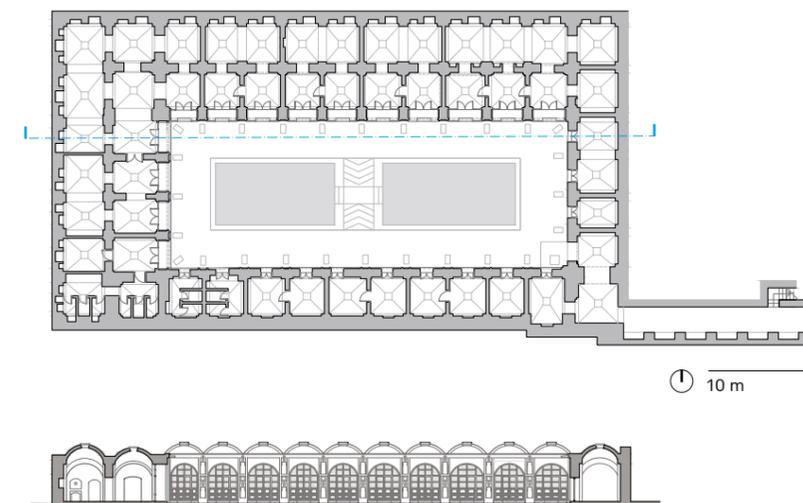
in order to stabilize the structure and prevent further deterioration. Since completion of work in 2007, the madrasa is being used as a facility for the religious education of some 250 youths. About 150 of these students live in adjacent neighbourhoods, while the madrasa provides boarding for the remaining students whose families live outside Kabul.



Top, used by local children for religious education, the restored madrasa is organized around a central courtyard planted with mulberry trees.

Above, built using thick masonry walls and domes, the internal restored spaces of the madrasa are ideally suited to the climatic conditions of Kabul.

Left, ground-floor plan and section.



## Shanasazi Mosque and Hammam Complex

### HISTORY AND CHARACTERISTICS

Located in the area of the Old City associated with the production of wooden combs (*shana-sazi*), the conservation of the Shanasazi Mosque and Hammam complex formed part of a wider programme of work undertaken by AKTC in the Shanasazi quarter of the Old City. The Shanasazi Mosque is believed to originally date from the late eighteenth century and consists of the main mosque building, an outdoor summer mosque attached to its southern facade and a smaller building, which can be accessed via a separate courtyard on the eastern boundary. A second two-storey building accessed from the east is used as additional prayer space and a religious education facility. Together with the traditional Shanasazi Hammam, located adjacent to the northern wall of the mosque, the complex provides much-needed services for the community. Traditional bathhouses, or hammams, play an important role in urban centres across the region, where few homes traditionally had washing facilities, causing residents to rely on communal spaces. With the provision of piped water to homes, the demand for these facilities decreased, but a significant proportion of families who live in the overcrowded conditions associated with historic quarters still do not have access to adequate washing facilities at home.

The Shanasazi Hammam follows a typical configuration of semi-submerged rooms grouped around two major brick-domed spaces, which would have been kept at different temperatures, together making up the communal bathing areas. A series of open tanks from which water would be scooped by bathers is placed between these central spaces. Sourced from a well on the site, water is heated in a large bronze vessel situated over an *atish khana* (literally, fire-room), a subterranean space beneath one of the outer walls of the bathhouse, where wood fires are lit. Heat and smoke from the *atish khana* is led through a hypocaust system of masonry ducts (*taba khana*) running under the main spaces of the hammam, which serves to maintain the temperature and humidity that is characteristic of such traditional bathhouses.

### WORK UNDERTAKEN: MOSQUE

Following a detailed physical survey of the mosque building in 2009, structural repair work was undertaken entailing the strengthening and stabilization of stone foundations, the rebuilding of collapsed masonry walls, and reconstruction of the roofing structure. During removal of timber wainscoting and ceiling woodwork, more than twenty-five carved timber joists dating from an earlier mosque on this site were discovered together with white marble column bases in the Mughal style. The main



Above, the ruined Shanasazi Hammam was being used as a waste dumping site before its restoration.

Below, left abandoned due to its condition, the Shanasazi Mosque required extensive structural repairs.

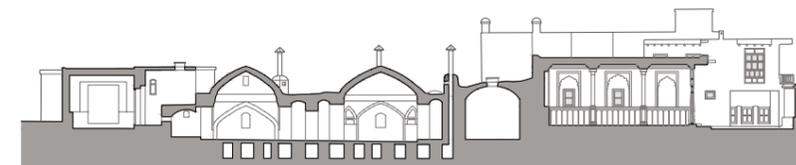
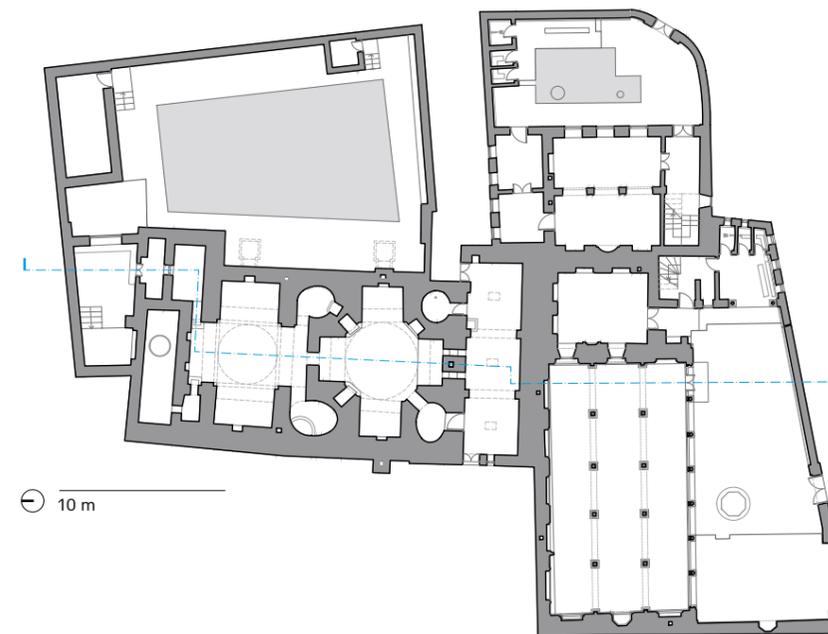


elevation of the mosque, containing intricately carved timber columns and arched fenestration, was carefully repaired *in situ*. Later additions on the main elevation and internal walls of the mosque were removed, revealing original characteristics of wooden and plaster decorative elements that were systematically conserved. Exposed sections of masonry walls were finished using traditional fine mud plaster (*simgil*) and gypsum plaster applied to the *mihrab* niche. The internal floors were levelled and a lime-based mortar was applied as a moisture-proof finish, enabling the custodians of the mosque to install locally procured furnishings in the area. In the courtyard, several Mughal-era, marble, column bases unearthed during excavations were incorporated in new stone paving. Ablutions and toilet facilities were built and an existing well was upgraded on the perimeter of the courtyard.

In 2011, repairs were completed to a smaller building that adjoins the main building to the east. This double-storey structure, which probably dates from the early twentieth century, is an integral part of the Shanasazi Mosque complex and has been in use since for religious instruction and prayer.



Partial reconstruction of domes and an internal view after completion.



#### WORK UNDERTAKEN: HAMMAM

In 2008, agreement was reached with the owner of the Shanasazi Hammam in the Old City of Kabul to reconstruct and recommission the derelict property as a community-managed facility. Rehabilitation work started with the clearance of accumulated debris and waste so that the condition of the existing structure could be assessed. Excavations revealed two brick-domed spaces surrounded by smaller rooms for private bathing and services. Once cleared of waste and rubble, the system of under-floor ducts for heating the hammam was found to be largely intact. A boundary wall was constructed before structural repairs were carried out on damaged sections of brick-masonry domes and external load-bearing walls. On completion of the external building work, the hypocaust flooring, chimneys and vents were reconstructed. Internal elevations of the hammam were replastered using a damp-proof lime mortar and marble flooring was installed throughout the space.

With all facilities required to operate a traditional hammam put in place and the conservation of the mosque completed, both facilities are open to residents of the surrounding neighbourhoods. Several hundred women and children make use of the hammam on a weekly basis on payment of a modest fee. Moreover, the revenue generated is reinvested in upgrading of drainage in the surrounding neighbourhood, extending the benefits of the operation to a wider area.

Opposite page, restoration of the mosque entailed structural repairs, followed by the conservation of timber fenestration and plaster decoration, as well as landscaping work.

Top left, ground-floor plan and section.

Top right, conservation of the elaborate timber columns and arched windows required replacement of damaged sections of the cedar woodwork resulting in a clear distinction between original and newly constructed areas.

Above, believed to have been remodelled in the mid-20th century, the internal space of the mosque has a contemporary character, with square columns and wooden panelling on its walls.

## Ulya Madrasa

### HISTORY AND CHARACTERISTICS

The construction of the Ulya Madrasa was endowed by the mother of Afghan king Amir Amanullah Khan (r. 1919–29), on the occasion of his ascension to the throne in 1919. Located in the Shor Bazaar quarter and built on the site of an earlier religious structure, the madrasa represents one of few remaining examples of public architecture from the 1920s in the Old City. Built at a time when Afghanistan had established steel-manufacturing facilities, reflected in the use of steel trusses, pressed-iron roof sheeting and decorated metal air-extraction vents, the building represents the convergence of traditional architectural form and modern materials.

The building is comprised of a large open space enclosed by load-bearing masonry walls and steel-truss roof. Probably inspired by the large factories being built at that time, the extruded open section of the main space is contained at either end by two traditional constructions in the form of masonry towers associated with fortifications. These heavy 'book-end' towers are in stark contrast to the lightweight steel materials used elsewhere in the building. Moreover, this contrast and differences in the type and size of masonry used may point to the fact that the towers — or at least one tower — possibly precede the date of the madrasa constructed by the king's mother. It would not be unusual for later buildings to incorporate elements of a previous structure, particularly when they can serve a purpose — in this instance, as a minaret for the call to prayer. The typology of the building generally reflects standard one-storey mosques, with a larger summer and a smaller winter prayer space facing a wall with a prayer niche (*mihrab*) and an external landscaped space.

A small three-step marble pulpit (*minbar*) is located adjacent to the *mihrab* of the main prayer space. Resembling a mosque more than a madrasa, which would generally contain smaller spaces for study and living quarters, the building was used by the community for prayer with the east-facing veranda supported on metal columns and offering additional prayer space during warmer months.

Despite significant damage and being a clear danger to the community using the site, residents intervened to protect the building during the course of a municipal road-widening project that threatened to destroy a section of the structure.

### WORK UNDERTAKEN

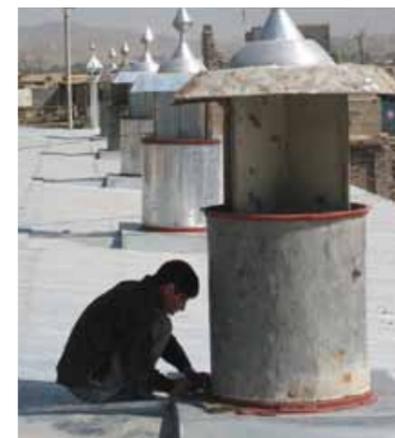
As part of AKTC's wider Area Development Programme in the Old City, conservation activities commenced in 2009 with the preparation of a detailed physical survey, followed by the removal of debris and rubble from the site.



The Ulya Madrasa and Mosque continued to be used for religious education prior to its restoration.



Ad hoc temporary structures were carefully demolished and work commenced to strengthen and consolidate sections of the building that had been damaged. This included reconstructing sections of brick-masonry walls and stone foundations and enabled the carpentry, steel repair and installation work to begin. A new perimeter wall was built and facilities for use by worshippers and custodians were incorporated in the site. Large sections of the metal roofing and the steel trusses had been damaged beyond repair and these elements were reconstructed on site, where a



Above, children from the local community receive instruction on the veranda of the madrasa.

Left, built as a congregational mosque able to house up to 400 worshippers, original ventilation covers were repaired and reinstalled as part of the work done.

Right, carpenters work to construct new joinery under a newly constructed steel roof, resembling its original early 20th-century steel trusses.



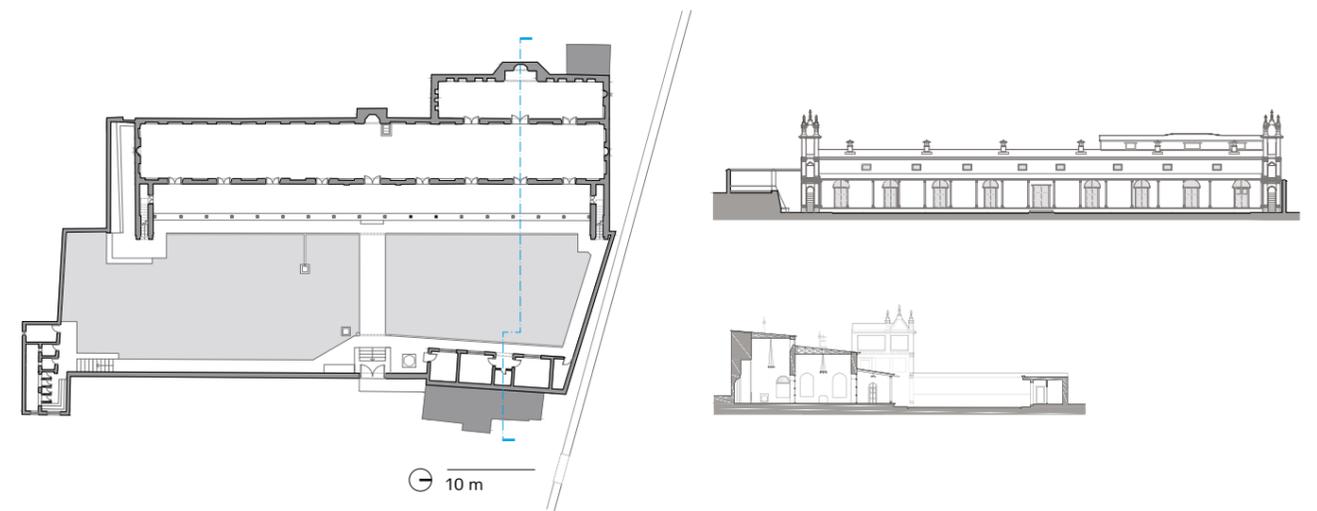
Above, the restored madrasa provides the largest congregation prayer space in the Old City and is often used for community gatherings.

Opposite page, ground-floor plan, east elevation and section.

steel workshop was established as part of the project. New corrugated-steel sheeting was applied on wooden decking attached to repaired steel trusses. Gutters were installed and downspouts enabled the redirection of rainwater and snowmelt into soak-away pits in the yard. As a final element, original decorated ventilation stacks were repaired and were installed on the roof along with newly produced elements. Broken or missing steel columns in the veranda were replaced and steel trusses were fabricated and installed as part of reconstruction of the covered area. Internal finishes required the application of a lime-based plaster, followed by laying appropriate flooring. Fabrication and installation of wooden doors and windows followed and a new wooden ceiling was installed — suspended from steel trusses — enabling better insulation facilitating the use of the space in colder months.

The courtyard was carefully landscaped with stone-paved pathways, trees and plants, preserving existing graves in parts of the site. Pathways connect the main building with the newly built ablution and sanitary facilities on the southern perimeter, and to the rooms built for custodians of the site near the western perimeter wall.

Following the completion of comprehensive restoration and landscaping, the Ulya Madrasa was handed back to representatives of the Shor Bazaar community and the site continues to be used for community gatherings, prayers and religious education.



# Wasay House



The Wasay House was close to collapse prior to restoration.

## HISTORY AND CHARACTERISTICS

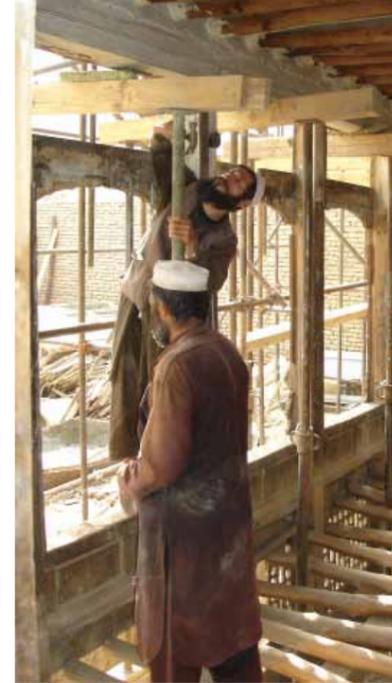
The Wasay House is located in the densely populated quarter of Asheqan wa Arefan, and is one of the few historic homes to have survived intense conflict and periodic neglect, retaining the fine timber and plaster decoration that was characteristic of traditional homes in the area. This is one of the oldest houses identified and it was close to collapse, only the south-facing range of the original courtyard complex had survived. Occupied continuously by descendants of the same family since the late eighteenth century, it is thought that parts of the Wasay House underwent several phases of transformation and expansion. For extended families, the local custom is to add rooms or expand houses to accommodate male children who tend to stay in parental homes after marriage. This results in homes that undergo frequent change. While sections of some homes might indeed be older, traditional mud-brick and timber-frame (*sinj*) construction requires significant upkeep. Comparative examination of photographs from the late nineteenth and mid-twentieth centuries suggests that many homes in the Old City were replaced or expanded using traditional techniques. As a result it is very difficult to give accurate date attributions to buildings in the Old City of Kabul.

Historic photographs of the dwelling enabled the project team to ascertain the original decorative scheme, on which basis the documentation and restoration of war-damaged parts of the internal moulded plaster decoration — including a series of recessed niches (*chini khana*) used for the display of porcelain — and timber screens was made possible within the main space on the first floor.

## WORK UNDERTAKEN

The building, has served as a demonstration of repair, conservation and infill techniques to other homeowners, and as a test bed for training craftsmen and young professionals. While only the south-facing range of the original courtyard complex had survived, this structure retained fine decorative details on the main elevation and inside the upper space.

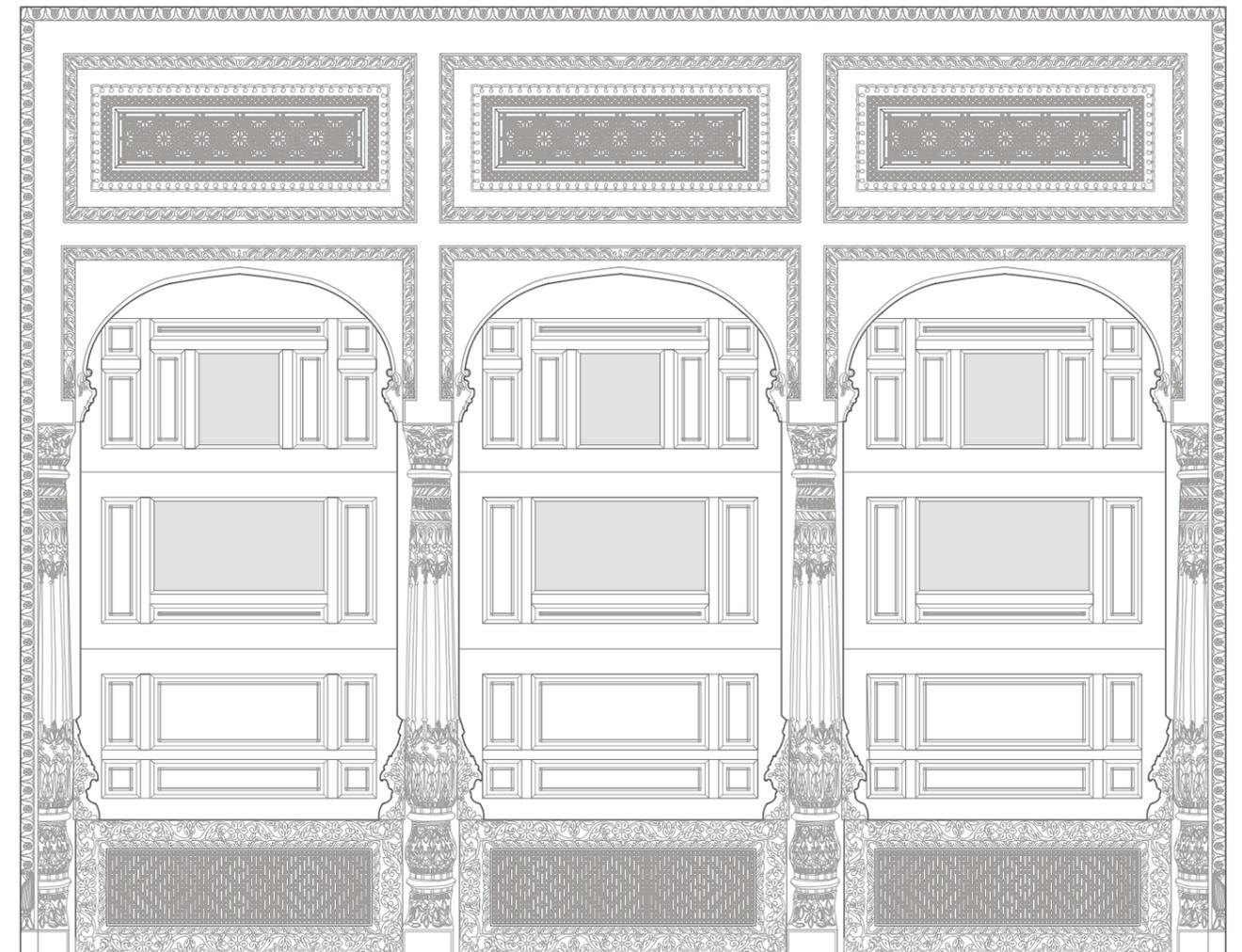
As the house was occupied at the time of documentation, a series of single-storey rooms were built across the courtyard to the south in order to house the family during the course of the conservation work. When this work commenced, the first task was to remove thick layers of earth material from above the roof, prior to installing temporary props beneath the timber structure, which had undergone serious deflection due to the added weight, causing structural failure in a mud-brick gable



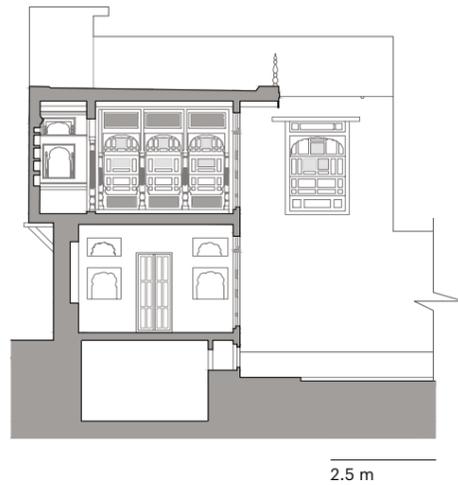
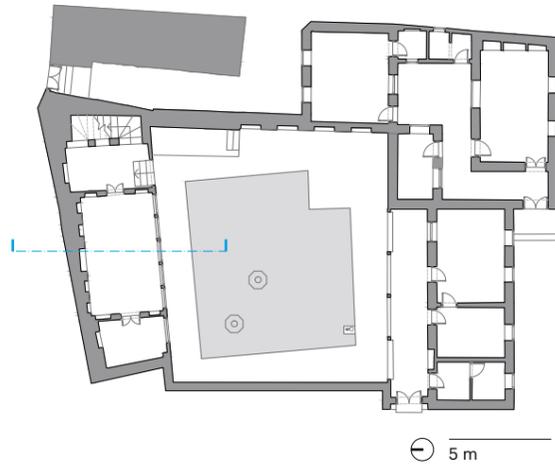
Left, following the removal of accumulated debris and damaged areas of the masonry walls, the timber-frame structure of the house was lifted into place using hand-operated jacks.

Right, carpenters work to reconstruct missing sections of an intricate latticework screen.

Below, detailed elevation.



0.5 m



Above, the Wasay House was restored to be used as originally intended, with an upper living area with sliding screens for use in warmer months.

Below, over the course of AKTC's conservation programme in the Old City, community gatherings were often held in restored premises in order to demonstrate the benefits of conservation.

Top right, ground-floor plan and section.

Opposite page, built using a combination of woodworking techniques, the Wasay House is arguably one of the finest historic homes in the Old City of Kabul.

wall. Adding layers of mud-straw plaster to the roof of a dwelling is a common practice that prevents water from seeping into the building. But this traditional technique requires owners to also remove layers of plaster every ten years, failing which, the added weight of layers of plaster risks causing structural failure.

Once the gable wall was rebuilt, the timber frame was gradually shifted back in stages close to its original position, to regain its stability. To limit damage to plaster decoration in the upper space, sheets of soft polyurethane foam were fixed over the walls during the course of shifting the frame. Once upright, excess plaster and whitewash was carefully removed by hand, exposing sections of fine moulded decoration. This enabled the reconstruction of a replica decoration surviving on the internal east elevation of the space. As with many homes of this era, a series of recessed *chini khana* could be found in the main space, which was divided by carved timber screens. Following restoration of the internal plaster, work began on repairs to the two levels of sliding timber panels (*patai*) that make up the south elevation of the house. Damaged sections of carved woodwork were replaced in places, and new shutters were made from cedar wood (*archa*) and installed. Following the completion of conservation, the dwelling was returned to its owners, who presently occupy the house.

Here, as in other conservation projects, the documentation of the building has enabled a better understanding of the diversity of construction and decorative techniques used in the Old City over the past 120 years.



# Shukur House

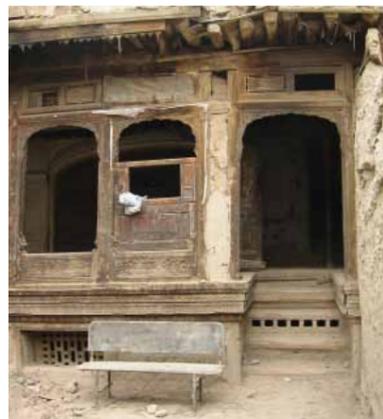
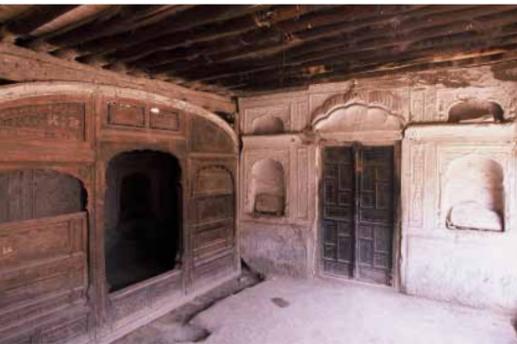
## HISTORY AND CHARACTERISTICS

The Shukur House had been occupied by the same family since the late nineteenth century and was only abandoned at the onset of conflict in Kabul. Returning from a refugee camp in 2004, the owners had lost hope of being able to reoccupy the family home due to the amount of damage incurred in their absence. As the family had grown in number over the years, it was not possible for all members to live in the same building. Support was provided by the AKTC team for the construction of an infill unit using traditional materials, consisting of two rooms and a kitchen, across the courtyard from the original historic house. Once the owners had built an extension to their home and could vacate the historic section of the building, rehabilitation work commenced with a detailed physical survey of the property.

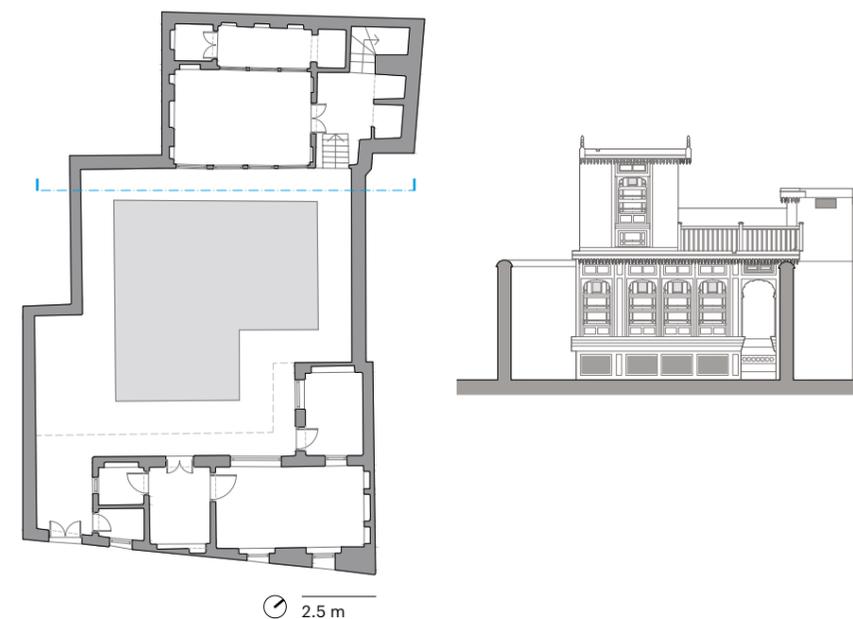
Built on a comparatively small plot for homes of the era, the steep parcel made it difficult to orient the internal spaces of the house towards the south where they would benefit from natural sun in winter months. Demonstrating the ingenuity of traditional builders, this obstacle was partially resolved by changing the orientation of the upper level of the house — perpendicular to the lower floor — facing exposed elevations to the north so that the space could be kept cool in warmer temperatures. While the ground floor necessarily needed to adjust to the topography, the upper floor was given a more beneficial layout.

## WORK UNDERTAKEN

Restoration work required complex structural retrofitting and stabilization of the traditional wood-frame construction. Large sections of the masonry walls had to be replaced with fired brick and the upper floor of the house was rebuilt, retaining original architectural elements. Chronic structural problems had forced occupants to fill openings with mud brick for fear of collapse of a wall. These areas were consolidated and historic windows were reinstalled enabling the upper floor to benefit from cross-ventilation in the warmer months. Internal gypsum plaster decoration was carefully cleaned and damaged sections repaired using fine mud plaster (*simgil*). Timber columns and screens were cleaned, repaired and preserved using linseed oil. Conservation work was completed in 2005 and the dwelling was returned to its owners, who presently occupy the house. As part of the conservation process, historic homes restored by AKTC in the Old City are registered as national monuments with the Ministry of Information and Culture, providing protection against further destruction and technical support for maintenance.



The Shukur House retained much of its internal original decoration prior to conservation.



Top left, repair to the timber-frame construction of the house entailed removal of damaged sections of timber and retrofitting of wooden reinforcement.

Top right, built into a sloping hillside, the Shukur House benefits from multiple orientations, with the upper floor facing east.

Above, the main living quarters have deep recessed niches for storage of household items.

Left, ground-floor plan and section.

## Ruhullah House



### HISTORY AND CHARACTERISTICS

The Ruhullah House is a fine early twentieth-century family home, with carved timber decoration on the external elevations and exquisite moulded plaster decoration in the rooms of the southern wing. Even in its partially collapsed state, the Ruhullah House stood out from the surrounding fabric, with its large courtyard and decorated timber screens — some of which retain their original coloured glass — and fine internal plasterwork. Looted and abandoned during the inter-factional fighting, the building was in very poor condition when first surveyed in 2003.

Like many other merchant houses in the Old City, most of which have now disappeared, the dozen or so rooms of the dwelling were built at different times, and show the evolution of decorative styles since the early 1930s. The grandfather of the present owner, who may have been the original builder, served as an imam in King Nadir Shah's court, and is said to have commuted from the Old City to the Arg Palace by camel. The distinction of the owners of the house is further borne out by the domed baths (hammam), complete with an ingenious water supply system. The present owner Haji Ruhullah, now in his early seventies, recalls weekly family bath days in the hammam space. For most residents of the neighbourhood, animals were an important part of life in the house. A small stable was constructed in the basement, where the current owner's father kept two horses and raced a flock of pigeons from the roof.

### WORK UNDERTAKEN

The rehabilitation of the Ruhullah House entailed the rebuilding of the eastern wing, the reconstruction of its roofs, and the restoration of the timber screens on the south and north courtyard elevations. Work commenced with the removal of debris and careful dismantling of timber architectural elements for repair in a carpentry workshop established in the courtyard of the building. Decorated wooden structural posts and fenestration was stabilized *in situ*, cleaned and repaired before wooden joists were reattached internally to support floors and the roof. Infill walls were reconstructed and existing sections of masonry walls with stucco decoration were stabilized and repaired. Roofing was constructed using traditional methods and materials before face boards and timber railings were installed. Exposed surfaces of timber decorative features were preserved and missing sections of sliding shutters were fabricated and installed.

Restoration work was completed in 2006 and the house was returned to its owners, who had been living in another area of the city.

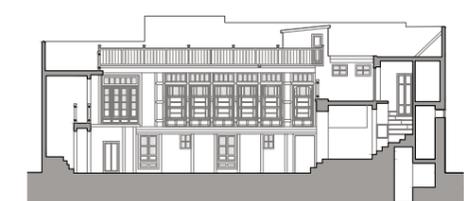
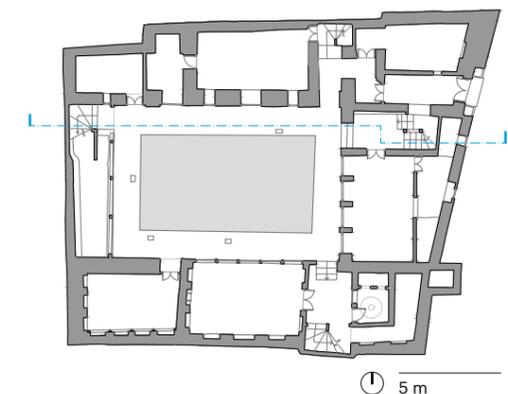
The Ruhullah House is one of the largest historic homes in the Old City, prior to restoration.



Above, built within the dense fabric of the Old City, the restored house is organized around a private internal courtyard.

Below, a carpenter's apprentice at work repairing timber screens.

Right, ground-floor plan and section.



# Jelan House

## HISTORY AND CHARACTERISTICS

Built in the historic fabric of the Asheqan wa Arefan neighbourhood, the Jelan House is an excellent example of a modest early twentieth-century family home, with three wings and a veranda on the eastern side organized around a central courtyard. The rooms on the second floor are either decorated with fine moulded plaster, as on the southern side, or timber screens (*pataii*) which form the facade on the northern wing. As the main residential quarter in Kabul in the late nineteenth and early twentieth centuries, where working classes would have lived and worked, the construction of such homes would have employed the same craftsmen as those working on larger, state-funded projects. It is believed that the carpenter of the Jelan House was later employed on the construction of the Darulaman Palace, which, if accurate, would mean that the house was built in the 1920s. Abandoned during the conflict in Kabul, it was partially occupied at the time when AKTC conducted initial surveys in 2004.

## WORK UNDERTAKEN

With residents continuing to occupy the house during conservation, work proceeded in phases requiring the completion of one segment and the relocation of the family into restored quarters — before the next section of the building could be restored. Rehabilitation of the Jelan House entailed the removal of debris and careful dismantling of timber structural elements for repair. Decorated timber posts and screens were stabilized and repaired *in situ*. Where damaged, infill walls were reconstructed and existing sections of stucco decoration were stabilized and repaired. Roofing was constructed using traditional methods and materials and timber railings were installed. Timber decorative features were preserved and missing sections of sliding shutters and screens were fabricated and installed. Restoration work was completed in 2007 and the house was returned to its owners, who presently occupy it.



The Jelan House was partially occupied by multiple families prior to restoration, who remained in the residence throughout all the work.

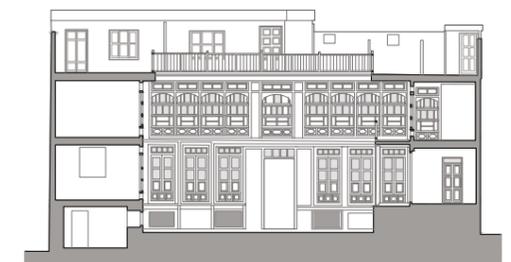
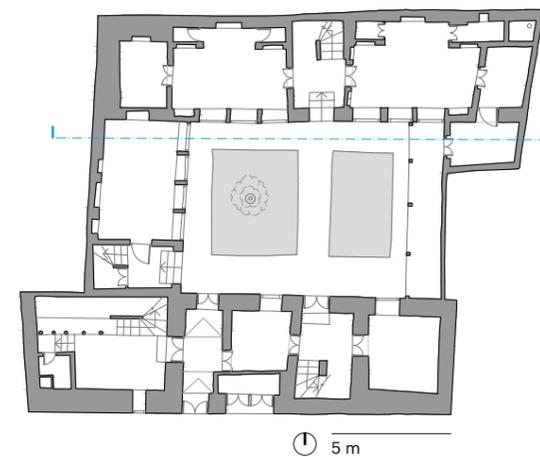


Left, the Jelan House and all of the other sites restored by AKTC have been registered with the government as national heritage, providing a measure of protection against future changes to its character.

Above, returned to its occupants following restoration.

Below, damaged sections of decorative stamped plaster were consolidated *in situ*.

Bottom, ground-floor plan and section.



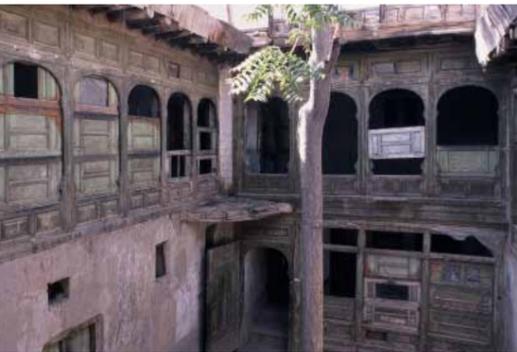
# Shekeba House

## HISTORY AND CHARACTERISTICS

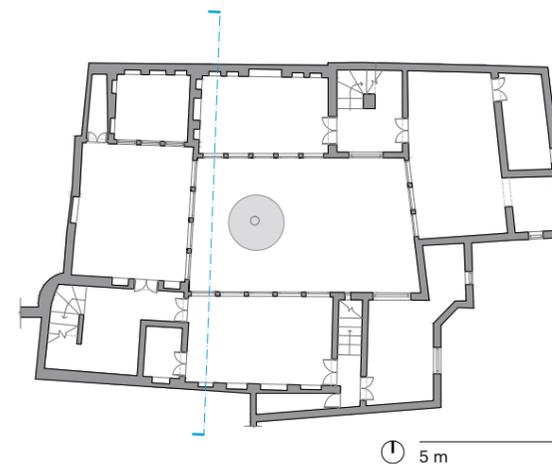
The Shekeba House is accessed from a narrow, winding street in the Asheqan wa Arefan neighbourhood, where a number of historic homes were restored by AKTC. This compact early twentieth-century family home is arranged around a central courtyard. It was built in at least two distinct phases — as evident in the changes in floor levels between various wings of the building. The plan reveals three staircases leading to the different wings, making it possible for members of the same family to occupy it separately. Named after the current owner who purchased the property in 2002, the house features carved timber decoration on external elevations as well as internal timber partition screens (*pataii*) and moulded plaster decoration.

## WORK UNDERTAKEN

As with other historic homes restored by AKTC, the main cause of damage in structures built using traditional methods is subsidence of masonry walls or deterioration of timber structural elements due to a general lack of maintenance. Areas affected by the intense conflict in Kabul were often abandoned for an extended period, which resulted in further deterioration of structures that might otherwise have been easily repaired. Traditional homes use the *sinj* construction technique and are built as a 'kit of parts', with timber-frame elements and wooden fenestration fabricated in workshops and then installed *in situ* on top of masonry walls, where the final layers of masonry infill and roofing are applied. Full-scale conservation of traditional structures requires the careful removal of damaged masonry and the repair of the timber 'skeleton' of the building before the application of new masonry and final finishes. The Shekeba House required extensive rebuilding of the eastern wing, which had subsided, and the reconstruction of an entire timber screen on the south courtyard elevation. Over the course of AKTC's work in the Old City, wooden architectural decoration, including screens and shutters, was salvaged from dozens of destroyed properties that were beyond repair. These items were often repaired and reinstalled in historic homes that were being conserved and that had similar architectural features. Building and conservation work was completed in 2006, when the property was handed back to its owner. Since then the property has changed hands again and is currently being used as a permanent storage for a collection of historic architectural artefacts and decorative items intended for public display.



The Shekeba House prior to restoration.



Above, internal living spaces are separated by timber screens, which can be opened to create larger spaces or closed to provide privacy.

Left, first-floor plan and section.

Below, stamped plaster decorations were cleaned and consolidated as part of restoration activities.



## Rambu House



Above, the Rambu House was spared the worst during the conflict that destroyed large parts of the Old City. However, lack of maintenance and having remained vacant for prolonged periods resulted in damage to the structure of the house, which was in a poor state prior to conservation.

Opposite page, the restored house will enable a younger generation of occupants to better understand and become custodians of their built heritage.

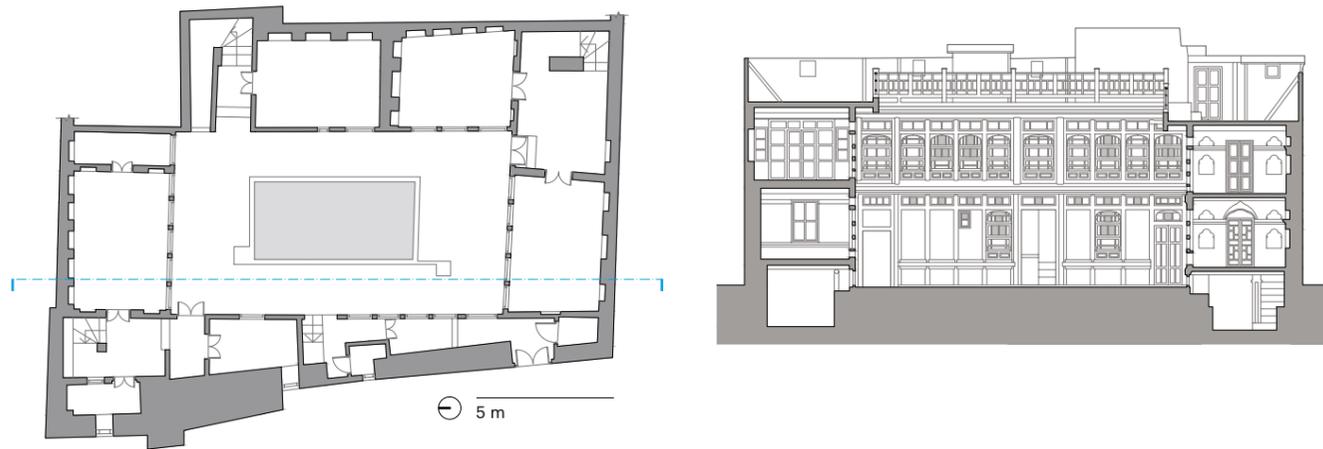
### HISTORY AND CHARACTERISTICS

The Rambu House is an extraordinary late-nineteenth-century family home, with carved timber decoration on all four courtyard elevations, as well as fine moulded plaster decoration on both floors. Located in the historic fabric of the Asheqan wa Arefan neighbourhood, which is documented as having the highest concentration of historic structures in the Old City, the house is organized around a central courtyard and accessed through an arched opening on a narrow street. Upon entering the property from the congested pedestrian thoroughfare, visitors are often surprised by the unexpected scale and grandeur of this building. While the uniform elevation of the courtyard suggests that internal spaces are linked as a single dwelling, four separate staircases lead to individual units that may have been occupied by up to twenty members of the same family. Courtyard houses enable families to carry out their daily routine in the privacy of their homes and are widespread throughout the Islamic world. As with other homes in the area, the rooftop area of the Rambu House is also used regularly by the family for airing laundry, drying foods and — as is generally the case for inhabitants of the Old City — for keeping and flying trained pigeons. Like the Ruhullah House, the Rambu building also contains an area for bathing (hammam) that was only available at the time in affluent homes. A basement level running the length of the building that is partially below grade would have been used for the storage of foods, goods and possibly for housing animals.

### WORK UNDERTAKEN

At the time surveys were conducted in 2003, nine households inhabited the Rambu House. The building was in a poor state of repair and presented safety concerns for the families living there, and restoration commenced in 2006. As with other homes restored by AKTC, the project was divided into phases enabling families to continue to occupy various segments of the house during the conservation process. Condition assessments had revealed severe structural problems in the western wing of the property, which became the focus of the first phase of building. Damaged sections of the house were temporarily propped up using jacks and scaffolding, while affected areas of masonry construction were removed and rebuilt. Timber posts and joists were examined for decay and replaced where necessary before a protective layer of tar was applied to sections embedded in masonry walls to prevent future damage. Wooden boards were placed above timber joists and covered with a layer of straw-matting, before a final layer of compacted mud was applied to internal floor areas and





Above, ground-floor plan and section.

Below, conservation work to the street elevations of houses restored by AKTC contributed to preserving the quality of public spaces in the historic quarters in the Old City.



finished with a mud-straw plaster on the roof. Compacted mud has traditionally been applied in thick layers as a thermal insulation material, offering good resistance to the transfer or loss of heat.

Once the masonry elements of the building had been consolidated and the structure provided with a roof, conservation work focused on internal plaster decoration and timber fenestration. Original sections of the woodwork were carefully dismantled and transferred to a carpentry workshop established in the courtyard of the property, where they were cleaned, repaired and later reinstalled. Sections of the facade that could not be removed for structural reasons were repaired *in situ* and sections that had been damaged beyond repair were replaced with newly constructed cedar elements. Once all the wooden elements had been repaired and installed, linseed oil was applied as a protective layer against damage from rain. As with many homes of this era, a series of recessed niches used for the display of porcelain (*chini khana*) was found in the main space. Together with other areas of plaster decoration, these were carefully cleaned and conserved. Sections of plasterwork that had become detached from the masonry walls were consolidated *in situ*.

Sections of the building that had been fully conserved were returned to the occupants and work commenced on areas they had vacated. In this manner the conservation project was completed in mid-2007, after which the courtyard area was re-paved. In addition to conserving the historic property, new toilets were added and an existing well in the courtyard was upgraded.



Above, occupied by nine families unable to relocate, restoration work was phased, enabling the families to remain on the premises during conservation.

Below, restoration work provided an opportunity for training young craftsmen and apprentices in traditional building techniques.

# Akram House



A large family home, the Akram House had been damaged in the conflict and was vacant prior to conservation.

## HISTORY AND CHARACTERISTICS

Located on a corner near the Asheqan wa Arefan Shrine, the Akram House occupies one of the largest plots in the neighbourhood and is comprised of three wings arranged around a large internal courtyard. As with other large properties owned by distinguished families, this house benefits from a separate bathing (hammam) area and a small stable located at its entrance. Built in the early twentieth century, its original owner is believed to have been a banker working for the Ministry of the Interior. The three wings of the house are accessed by separate staircases, making the residence ideal for housing visitors or an extended family. A high retaining wall encloses the southern perimeter of the courtyard, separating the house from other residential properties located on a substantially higher level. This difference in levels may have prevented the owners from building the fourth wing of the house that would have enclosed the courtyard.

Like many other properties in the area, the building had been damaged during the conflict in 1993 and since then had fallen into disrepair.

## WORK UNDERTAKEN

As part of AKTC's multi-year conservation programme in the Old City, the Akram House was initially surveyed in 2003, with conservation and structural repair work commencing in 2007. The construction of a new stone retaining wall at the southern boundary became necessary in order to stabilize the neighbouring property on the hillside. Rebuilding and conservation work focused on stabilizing masonry foundations and walls, followed by the conservation of fine plaster decoration and timber crafted fenestration. Sections of plaster decoration that had become detached from the masonry walls were preserved and reattached following consolidation work. Wooden structural elements were stabilized *in situ*, with detachable screens and shutters dismantled and repaired before being reinstalled.

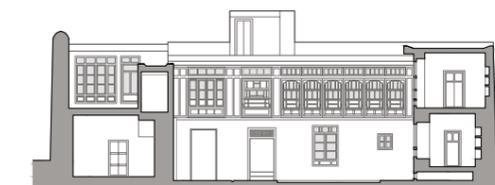
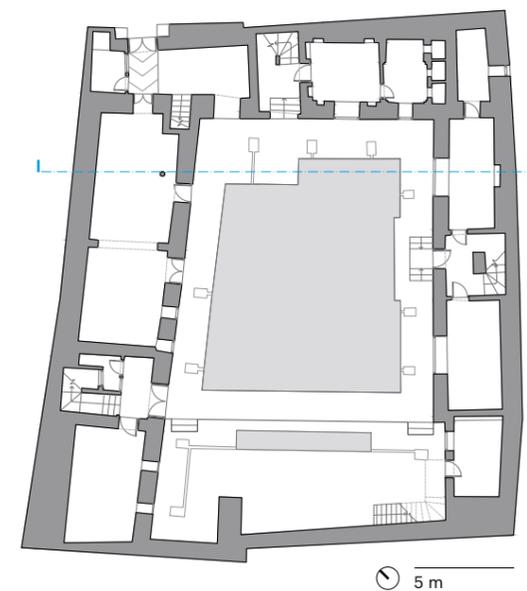
Restoration work was completed in 2009 with the paving and landscaping of the inner courtyard. An agreement was reached with the owners of the Akram House, who had been living outside the Old City since the 1990s, to enable AKTC to use the premises as a vocational training centre in the area. The property serves to enable students from the Asheqan wa Arefan neighbourhood to receive training in traditional crafts such as flat weaves (*kilim*), sewing and embroidery, along with supplementary literacy courses.



Above, arched timber screens were repaired on site and reinstalled prior to the application of a finishing layer of plaster on the main elevation and the roof of the house.

Below, ground-floor plan and section.

Following pages, since 2009, the Akram House has been used to provide crafts training and literacy education to young girls and women from the community.





# Khaluddin House

## HISTORY AND CHARACTERISTICS

Located on a hillside in the Asheqan wa Arefan neighbourhood, bordering the Akram House to the north, the Khaluddin House has panoramic views over the Old City of Kabul. Accessed via a narrow passageway, the original three-sided historic house had been extensively damaged — with only the southern part surviving at the time AKTC carried out survey work in 2003.

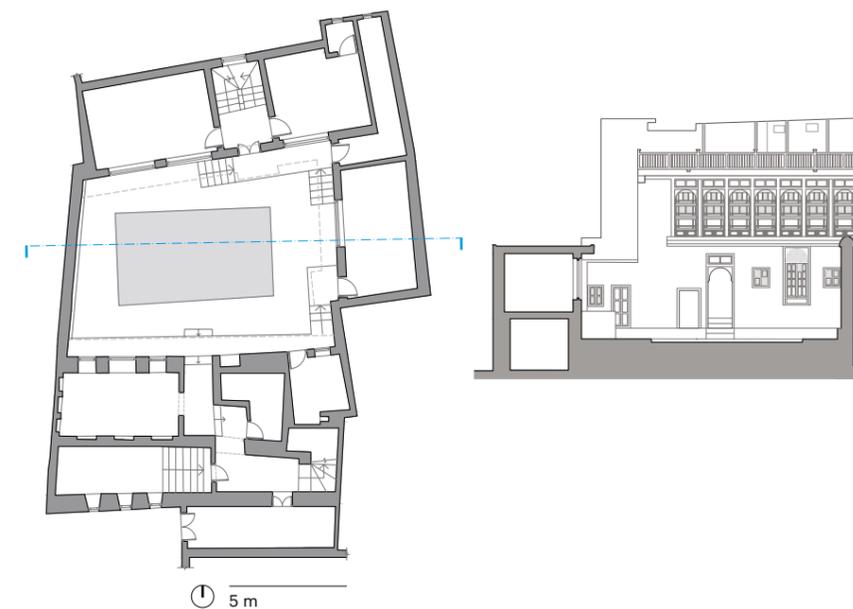
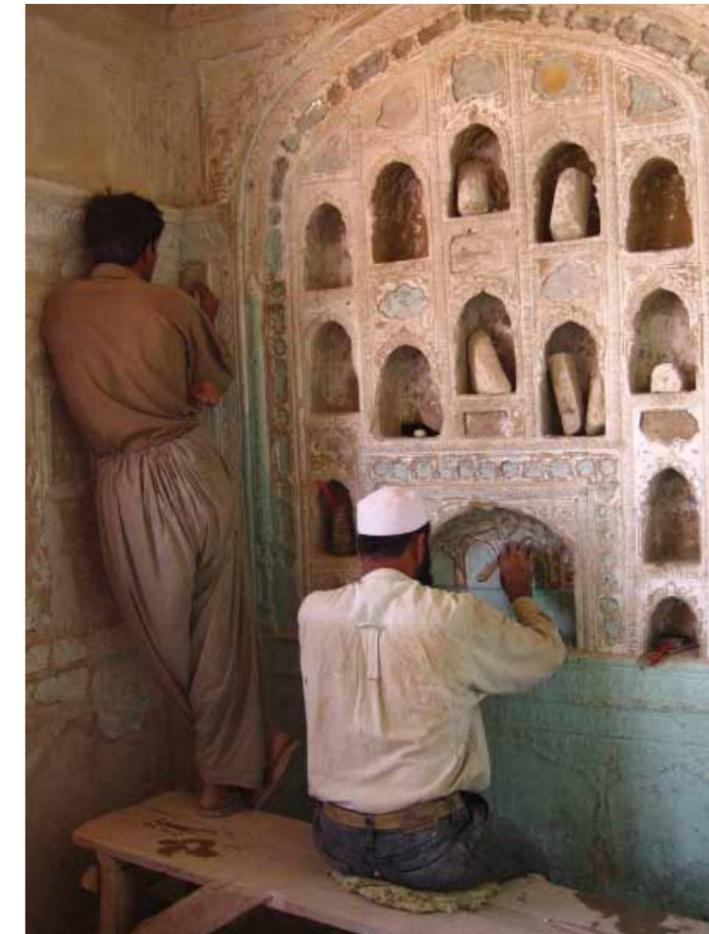
The southern wing consists of two floors, both of which have a main living space that opens onto the courtyard, with smaller rooms attached to its sides. On the ground floor, the traditional heating system (*taba khana*) and a fireplace were found but were not functioning at the time. The main living space on the first floor contains two smaller spaces (*pesh khana*) on opposite sides, which are separated by timber partition screens (*pataii*). Traditional niches (*chini khana*) with richly decorative plasterwork containing different coloured mirrors are set inside the mud-plastered walls. Connected to the north side of this room is another space that contained fine plasterwork and a specially decorated ceiling (*hakkaki*) where small intricate pieces of wood are joined to form a larger field pattern. One of the smaller spaces also contained a decorated plaster ceiling, unique among the houses restored by AKTC in the Old City, which regrettably had been destroyed prior to conservation.

## WORK UNDERTAKEN

Restoration by AKTC started in 2006 with the stabilization of the south wall, followed by the repair or replacement of timber facade elements and repair work to the roof structure and covering. Internally, the chimney and fireplace on the ground floor were repaired, and ceilings and walls were replastered. On the first floor, special attention was paid to the restoration of the fine plasterwork and repair of the damaged or missing sections of decorated timber. Teams of carpenters established a workshop on the second floor of the house, enabling them to dismantle damaged sections of the woodwork and replace missing or repaired elements. During the final stage, the courtyard was paved with local stone and landscaped with greenery. Restoration work was completed in 2008 when the property was registered as a historic monument and handed back to its owners.



Built into the hillside, the Khaluddin House prior to restoration. Unusual for historic residences in the Old City, decorative elements in the house included plastered and inlay woodwork ceilings.



Top left, carpenters work to restore timber partitions.

Top right, layers of modern paint had to be carefully stripped before repairs could be undertaken on decorative plaster elements.

Bottom left, ground-floor plan and section.

Bottom right, the restored elevation of the main house.



# Muneeb House

## HISTORY AND CHARACTERISTICS

The Muneeb House is located to the north of the Asheqan wa Arefan Shrine and is one of the smaller historic houses in the area, consisting of three wings of two to three-storeys that enclose a small courtyard. As with other houses in the Old City, limitations related to the irregular plot presented problems for a building with a square courtyard. In the Muneeb House this problem was elegantly resolved by the original builders through gently tapering the western range of the building. Varying the thickness of the external load-bearing wall also helped make the spaces more rectilinear in this wing of the building. Badly damaged during inter-factional fighting in the early 1990s, the Muneeb House was in need of extensive repair when AKTC carried out property surveys in the area in 2003.

## WORK UNDERTAKEN

Work on the house started in early 2007 with the removal of doors and windows, followed by stabilization of the structural load-bearing walls and roofs. A condition assessment had shown that the upper floors of the south wing, stretching over the street and forming a passageway for the public, had to be entirely rebuilt. Rooms on the roof level, which traditionally served as an extension of the living space during the summer months, were reconstructed using traditional building methods.

In order not to lose usable space through the construction of internal staircases, an external wooden veranda — accessed from the courtyard by an open staircase — was constructed with direct links to living spaces. Though in bad condition, all three facades showed fine timber decoration with elements of the highest craftsmanship on the east-facing facade. Repairing these timber screens (*pataii*), and in particular their intricate latticework and finely carved wooden frames, was a major challenge for AKTC's carpenters and craftsmen. After finishing rebuilding and conservation work, the existing well in the courtyard was repaired and a water pump was installed to provide a clean water supply. Paving of the courtyard and installation of surface drains allowed for the collection of surface water for washing and cleaning. Registered as a historic monument, the restored Muneeb House was handed back to the owner in 2008.



Initially surveyed in 2003, the structure of the Muneeb House was found to have been damaged during the conflict in the area. The multi-level home retained large sections of its original timber screens.

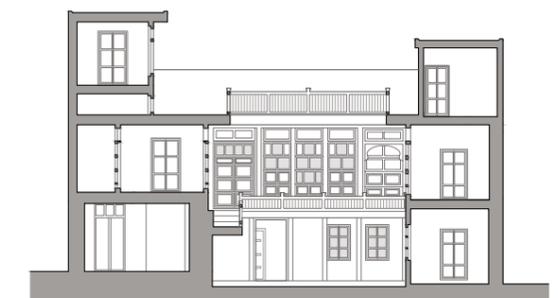
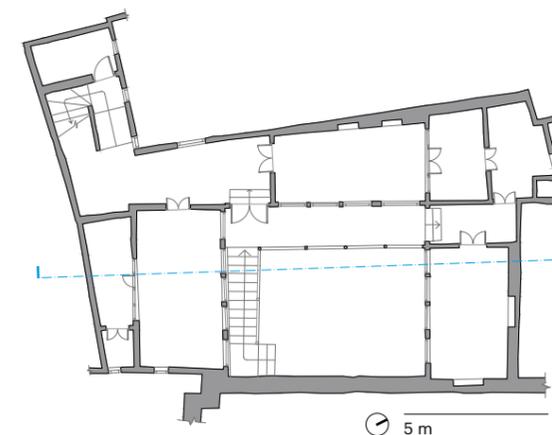


Above, courtyard elevation of the Muneeb House after restoration.

Left, a craftsman laying mud bricks between the timber-frame construction, a technique widely used in traditional homes in the Old City.

Right, view of interlinking spaces on the second floor of the restored house.

Below, first-floor plan and section.



# Amin House

## HISTORY AND CHARACTERISTICS

Located directly opposite the Akram House in the Asheqan wa Arefan neighbourhood, the Amin House dates from the early twentieth century and continues to be inhabited by the descendants of the carpenter who originally built the house, replacing an earlier single-storey dwelling on the site. The three-storey structure includes a basement that is partially below grade and that was used for storage. The main elevations of the house were constructed with characteristic, vertical, sliding, timber shutters (*pataii*). Intended as two separate dwellings with independent access stairs, the house was occupied by the original owners at the time of the survey and eventual conservation. Damage caused by the conflict and the subsequent period of neglect had resulted in extensive decay and staining of upper areas of the main timber elevation, which had remained exposed to rain.

## WORK UNDERTAKEN

Following a detailed survey and condition assessment, conservation work began in early 2004. The first stage of work on the Amin House involved removing infill materials, including damaged sections of partition walls and the roofing, from areas of the building that had subsided, in order to carry out repairs to the timber-frame structure. The next phase required mechanically raising the timber-frame construction in order to rectify settlement in the foundations that had affected the stability of the structure. This was followed by repairs to the load-bearing mud-brick external walls and replacement of infill masonry between the timber-frame structure (*sinj*) of the upper levels. The house was re-roofed using traditional techniques and materials, before moulded plaster and carved wooden decoration and ceilings were carefully cleaned and consolidated. Before the building could be returned to its owners, the courtyard was paved with fired bricks and a well was built to provide residents with clean water.

Conservation work on the Amin House took place in phases, with the family remaining in it, providing the opportunity to document oral history related to the development of the dwelling and the wider area. Information gathered in this process formed part of a larger oral history project conducted in the Old City.

Experienced craftsmen previously trained on similar projects conducted by AKTC were able to complete conservation of the Amin House in less than six months. Projects similar in scale and complexity required more than a year at the onset of AKTC's work in the Old City in 2002, demonstrating the significance of on-the-job training provided for local craftsmen and apprentices.



Owned by the descendants of the original builder, the Amin House prior to conservation.

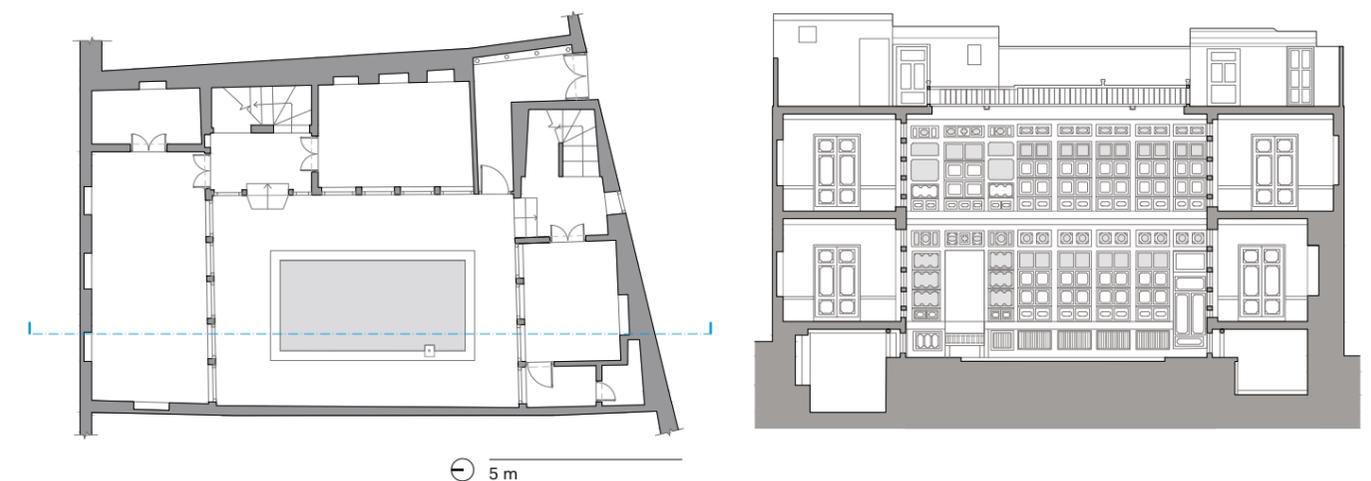


Left, the restored Amin House provides shelter for the sixth generation of the same family.

Above, masons and carpenters lay a new protective roof over the residence.

Below, internal walls being repaired or renewed where necessary.

Bottom, first-floor plan and section.



# Qala-e Moeen Afzal Khan

## HISTORY AND CHARACTERISTICS

Dating from the early twentieth century, the Qala-e Moeen Afzal Khan is a large fortified residential complex located near Babur's Garden. It was built by Afzal Khan, who was a deputy minister (*Moeen*) at the Ministry of the Interior during the reign of King Amanullah Khan and later under Nadir Shah. Typical of fortified homes (*qala*) found outside the Old City in Kabul, at a time when vast swathes of the city remained as gardens or agricultural land, the house has an extended residential block with interlinking rooms (on two floors) and two symmetric two-storey towers (*burj*) at the corners of the high perimeter wall. While members of the family would have had access to the large square garden at the centre of the complex, a separate visitor's entrance and associated entertaining spaces were located near the main entrance to the *qala*.

Built using a mix of materials, including compacted mud (*pakhsa*), mud and fired bricks, and timber joists, the house retains key characteristics associated with traditional building techniques and typologies, though it was influenced by European architecture of that era. Photographs taken of Babur's Garden in the 1920s show the fortified property in the distance, where it stands as one of two buildings in the area — surrounded by large tracts of agricultural land. In the second half of the twentieth century the residence was used as a school and later divided and sold separately, before sustaining heavy damage during the conflict in 1993–94, when it had been transformed into the headquarters of a local armed faction. A one-storey dwelling was built sometime in the 1970s on the south-eastern corner of the internal garden of the *qala*, destroying a segment of the fortification wall.

## WORK UNDERTAKEN

As part of supporting conservation around Babur's Garden, AKTC surveyed the property in 2005 and shortly afterwards undertook the conservation of the historic residential complex. In agreement with the current owners of the subdivided property, internal partition walls were dismantled commencing a phase of clearance and removal of debris and rubble. While some work had been carried out after 2002 on the main residential block, the southern tower of the *qala* required structural consolidation and partial reconstruction. From the remains of the original architectural features, it was possible to restore the southern tower to its previous character. Segments of a high perimeter wall built with compacted mud was partially reconstructed and restored. Because it was not possible at the time, the second



Above, the Qala-e Moeen Afzal Khan is an important example of fortified residences prevalent across Afghanistan.

Below, built in the early 20th century, the fort was occupied by warring factions and damaged extensively during the early 1990s.



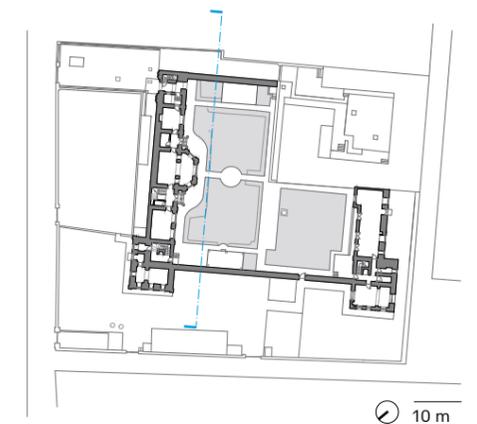
Left, one of two restored residential towers, partially connected to a compacted-mud wall enclosing its large garden.

Right, spaces within the fort have been used to train members of the surrounding community in vocations such as tailoring, carpentry and masonry.

Bottom, site plan and elevation, main residence.



residential tower was reconstructed in 2011, completing the restoration of what remained of the original dwelling. As a fine example of residential architecture of the early twentieth century, the complex was registered as a historic monument with the authorities.



# Shutorkhana Hammam



The Shutorkhana Hammam is one of several historic public baths located in the Old City, seen here prior to conservation.

## HISTORY AND CHARACTERISTICS

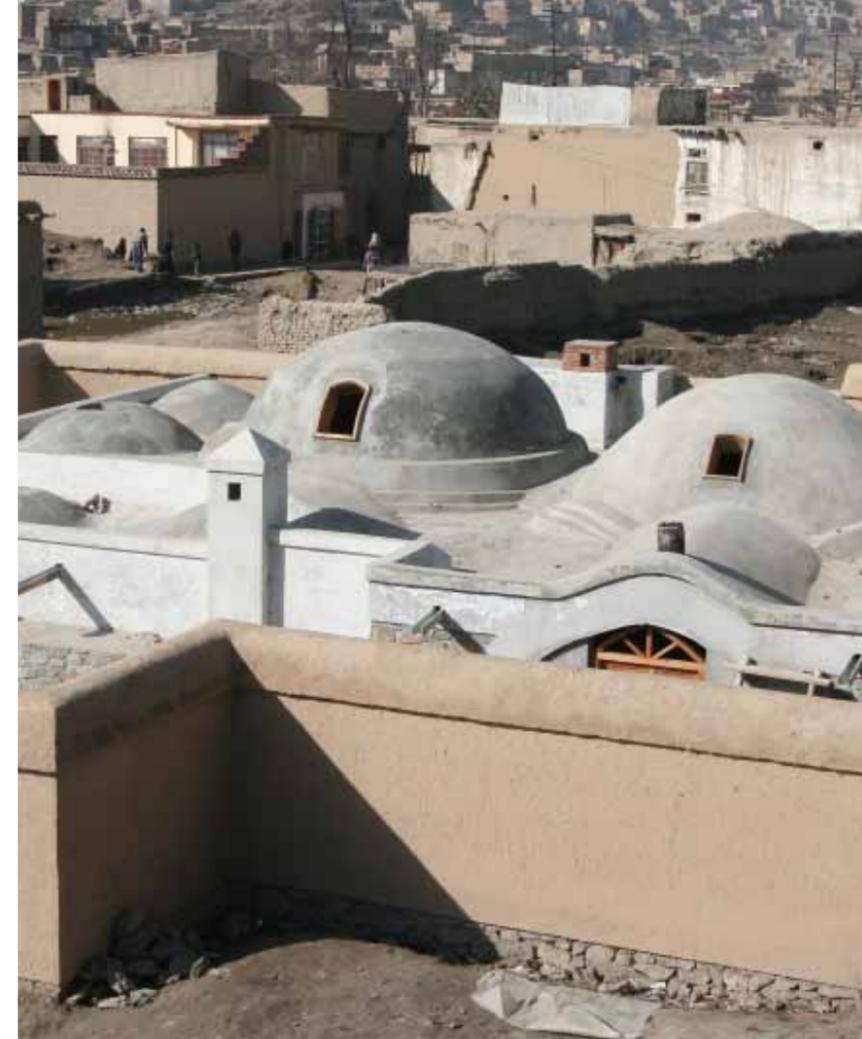
The Shutorkhana Hammam is one of only three surviving traditional bathhouses in the Old City, only one of which was operational at the time AKTC conducted a survey of the building. The name refers to an open market located adjacent to the site that dealt with the sale and exchange of camels (*shutor*). A privately owned facility, it had fallen into disrepair when the area was depopulated, and suffered direct damage during the subsequent conflict. In residential parts of the Old City, where living conditions are generally poor, twenty per cent of the inhabitants do not have access to bathing facilities, while a majority of those that do have these facilities at home face chronic shortages of water or lack the materials with which to generate heat. Access to a public bathhouse positively impacts family health and hygiene.

The hammam follows a typical configuration, with rooms that are partially below grade grouped around two major brick-domed spaces covering the communal bathing areas that are kept at different temperatures. In between these central spaces, a series of open masonry tanks allow users to access hot or cold water during the course of bathing. Water was sourced from a well on the site, and heated in a large copper vessel situated over an *atish khana* (literally, fire-room), a subterranean space under one of the outer walls of the bathhouse, where wood or other fuel fires are lit. Heat and smoke from the *atish khana* were led through a hypocaust system of masonry ducts (*taba khana*) running under the main spaces of the hammam. This system serves to maintain the temperature and humidity that is characteristic of such traditional bathhouses.

## WORK UNDERTAKEN

Having obtained agreement from the owner of the ruined hammam for its reuse by the community, the semi-underground structure was excavated and surveyed.

A significant amount of rubble and earth was cleared from the site, before damaged parts of the masonry structure could be dismantled and fully repaired, along with ancillary spaces around the central domed chambers. Upon completion of the external building work, the hypocaust flooring, chimneys and vents were reconstructed. Internal elevations of the hammam were replastered using a damp-proof lime mortar and marble flooring was installed throughout the space. Following the construction of a new vaulted entrance area and changing rooms, the hammam was made ready for public use.

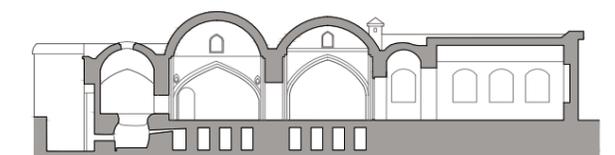
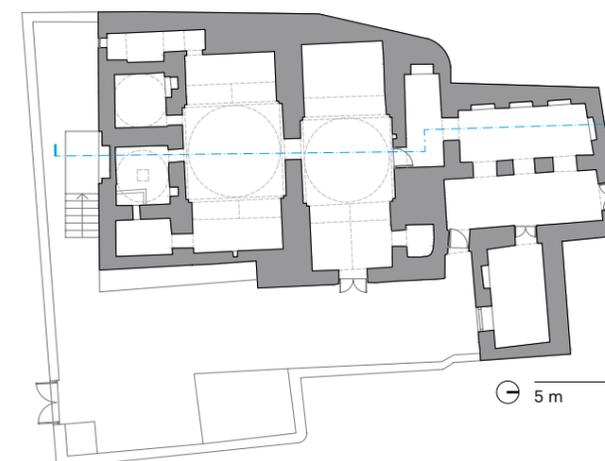


The Shutorkhana Hammam is visited by up to 250 people on weekdays, with about 400 on Fridays. The proceeds of the lease of the hammam are used for additional upgrading work within this neighbourhood, based on priorities set by the community. The Shutorkhana Hammam is an example of how rehabilitated historic buildings can meet the contemporary needs of urban communities.

Left, the restored hammam has been operated under a community led initiative entailing the reinvestment of proceeds towards upgrading activities in the area.

Right, physical work included the partial reconstruction of semi-submerged masonry domes.

Below, ground-floor plan and section.



## Bagh-e Qazi

### HISTORY AND CHARACTERISTICS

Named after a famous judge, the 3.5-hectare Bagh-e Qazi (Judge's Garden) is the largest public green space in the congested centre of the Old City. Qazi Dawlatshahi began his career in Herat as a judge, imam and, crucially, as private tutor to young Prince Timur in the mid-eighteenth century. When his pupil ascended the throne and became known as King Timur Shah, the Qazi followed him to Kabul and became one of his trusted advisers. He was eventually promoted to the position of Supreme Judge (*qazi-ul-qozat*) and his legacy was remembered through the garden he established in the Old City of Kabul. After Mohammad Nadir Shah's ascendance in 1929, the garden was used as an ice reservoir and later converted into an ornamental garden and planted with numerous trees. The garden sustained heavy damage during the conflict in the early 1990s, when the adjoining historic fabric was extensively destroyed and the area became largely depopulated. In 2009, a large portion of the site was occupied by temporary structures used to store and distribute grain, while the remaining area was used by local authorities and the surrounding community as a waste dump.

### WORK UNDERTAKEN

Reclamation activities had to be divided into two phases; the first phase on the parcel of land that had been used for waste, and the second on an adjacent property where more than three hundred traders occupying temporary structures awaited relocation to permanent sites by Kabul Municipality.

Over the three years required to transform the site into a public park, work included the removal of thousands of tons of waste and rubble, to be replaced by rich agricultural soil on a site that had been contaminated by significant pollution. The construction of a wall around the perimeter of the garden was followed by the demolition of three hundred ad hoc buildings, paving the way for the levelling of earth upon which a sports field was eventually created. A large water reservoir was built to feed a newly established network of surface irrigation channels linked with paved pedestrian pathways throughout the site. Gardeners worked to replant the site with species of hardy trees (mulberry, eglantine, poplar and oleaster) and plants that could withstand high levels of ground pollution and thrive in the rocky composition of the soil. Visitor facilities were upgraded and a nursery was established to support future planting in the park.



Above, the historic Bagh-e Qazi, located adjacent to the Asheqan wa Arefan neighbourhood, had fallen into extensive disrepair and was used as a waste dumping site.

Below, parts of the site were used to construct temporary wholesale storage buildings, which remained unused due to environmental problems, including chronic flooding.



The reclamation of Bagh-e Qazi resulted in the transformation of a derelict site, which presented significant environmental and health concerns for the inhabitants of the Old City, into a public garden that could be used by the more than 30,000 inhabitants of the area for recreation and sport.



Above, the project has contributed to significant improvement in the environmental quality of the area.

Left, as part of rehabilitation activities, a perimeter enclosure wall was constructed to prevent further dumping of waste.

Right, hardy local species of flowers and trees, including mulberry, were planted in areas where the polluted earth had been replaced with suitable agricultural soil.



## STOR PALACE REHABILITATION

### HISTORY

Built as a one-storey garden pavilion in an orchard to the west of the royal Arg Palace during the reign of Amir Abdur Rahman Khan (1880–1905), Stor Palace (also known as the Qasr-e Storay or Place of Stars) was expanded on at least three known occasions. Stor Palace was Afghanistan's first Foreign Ministry building following the signing of the Treaty of Rawalpindi in 1919, by which Afghanistan became an independent sovereign state reclaiming its right to administer its foreign affairs from British authorities. Part of the building was subsequently used as an office by the intellectual and reformer Mahmoud Tarzi, who became Afghanistan's foreign minister. The palace housed offices of the Ministry until 1965, when most functions were relocated to a modern marble-clad building built to the north. Since that time the palace had been in use intermittently, most recently to store used equipment and documents.

Poor workmanship and the use of inappropriate materials during the third phase of the expansion of the palace had resulted in extensive damage to the roof area and the main elevations of the building. Ad hoc internal partitions created using material recycled from other buildings had caused extensive damage to decorated wooden ceilings, which had been painted over several times. By the time a physical survey and condition assessment were prepared by AKTC, the palace was dilapidated, with many areas of the building affected by structural problems and damage resulting from water seepage from the roof. The area surrounding the palace had been transformed into a road and re-asphalted on several occasions without removal of previous layers of road construction, resulting in the partial covering of the palace beneath forty-five centimetres of asphalt. This resulted in extensive damage to lower sections of the brick-masonry construction, which, together with vibrations caused by the regular traffic of heavy vehicles, had caused areas of the palace to subside.

### CHARACTERISTICS

Originally built as a single-storey pavilion enclosed by a deep-set arcade in the late nineteenth century, the first extension to the pavilion involved the construction of a two-storey brick-masonry building with an arcaded portico during the reign of Habibullah Khan (1905–19). This construction was located to the east of the original pavilion, significantly expanding the functional area of the palace by providing two large spaces for gatherings, accessed through a symmetric 'imperial' staircase. Radically transforming the architectural character of the modest nineteenth-century pavilion, the extension was built using high-quality materials such as pressed-metal



Opposite page, view of the restored Stor Palace building and the fine cast-iron decorative elements used along its terraces.

Above, built as a late-19th-century pavilion, the palace was expanded ahead of Afghanistan attaining its independence in 1919, and on at least two occasions afterwards, 1925.

Below, the palace remained partially used and extensively transformed by ad hoc repairs prior to conservation.

ceilings, elaborately decorated woodwork on low panels along walls, fenestration, and fireplaces. Fireplaces were made using colour-glazed gypsum tiles decorated in floral patterns and polished-brass decorative elements, which were also used to support railings along the main staircase. Cast-iron elements were used to create railings attached to metal columns on the balcony of the second floor, accessed through an exquisite cast-iron spiral staircase for service staff. On the ground floor, a large arched portico on the eastern elevation was used for dropping off guests, who entered the building through a marble staircase.

A second extension, built to the west of the pavilion in 1915, added further functional space by providing a large formal gathering hall. Complementing the architectural design of the first extension, the hall was organized around a central double-height space with clerestory windows surrounded by a lower perimeter zone leading to a marble stage area. One of only a handful of buildings in Kabul to use counter-weighted sash windows on the ground floor, hand-operated steel mechanical levers enabled control of the clerestory windows near the ceilings. Accessed separately from an entrance with a portico on the western elevation, the hall was connected to the rest of the building through an open-terraced colonnade.

Added as ‘book-ends’ to the original pavilion, the two phases of expansion incorporated the main external elevations of the smaller pavilion within the large gathering hall and the split-level staircase space. Introducing modern construction technology, both extensions employed structural metal decking, I-beam reinforced ‘jack arches’, and steel roof trusses.

Further expansion work carried out in the 1940s did not conform to the quality or standards of earlier extensions. Two circular masonry ‘turrets’ were added on the western elevation of the building, enclosing the arched portico. At the same time, a second floor was built above the original pavilion, completely encasing the nineteenth-century structure. Materials used for this intervention were recycled from



Above, restoration work involved stripping modern paint from the decorated timber ceilings.

Left, extensive structural repairs were made to the roof of the building.

Right, above, the timber ceiling above the main reception hall was repaired and treated with beeswax.

Right, below, restoration work within the building entailed removal of paint from marble and stone surfaces.



other structures. Brick sizes varied and wooden beams and coverings were found to be remnants of doorframes and panels.

Finally, it is understood that alterations to the main elevation undertaken in the 1970s entailed the repointing of external brickwork with cement-based mortar.

Modern cement pointing had to be removed from the external brick elevations, before the surfaces were repointed using a mixture of lime-mortar paste and brick dust.

#### WORK UNDERTAKEN

Based on the preparation of a detailed condition assessment in 2013, a comprehensive programme to conserve and rehabilitate Stor Palace was designed and implemented by AKTC. In order to establish the sequence and extent of the various phases of expansion work and enable the formulation of an accurate design programme, a comprehensive physical survey of the existing building was carried out using three-dimensional laser-scanning technology. Information gathered through the process was analysed and a programme of building archaeology was created and implemented in order to establish a baseline for the beginning of conservation activities.

Conservation and reuse designs prepared by AKTC aimed to highlight the distinct architectural features of the various phases of expansion in a manner that enabled visitors to discern the characteristics and styles of each period. Conveying the history of the building through a reading of its architectural characteristics — including the most recent work undertaken by AKTC — became the guiding principle of the conservation project.



Above, a canopy was constructed over the entrance into the main reception hall in an area of the building that had been expanded in the mid-20th century.

Below, designed to link a series of multifunctional spaces, the palace extends more than ninety metres in length.



Left, main spaces are surrounded by a deep, shaded colonnade that prevents direct heat gain in warmer months.

Right, the roofscape of the building reflects its multiple phases of expansion and had to be extensively reconstructed as part of rehabilitation work.

Below, a spiral staircase allows for service of the second-floor rooms.

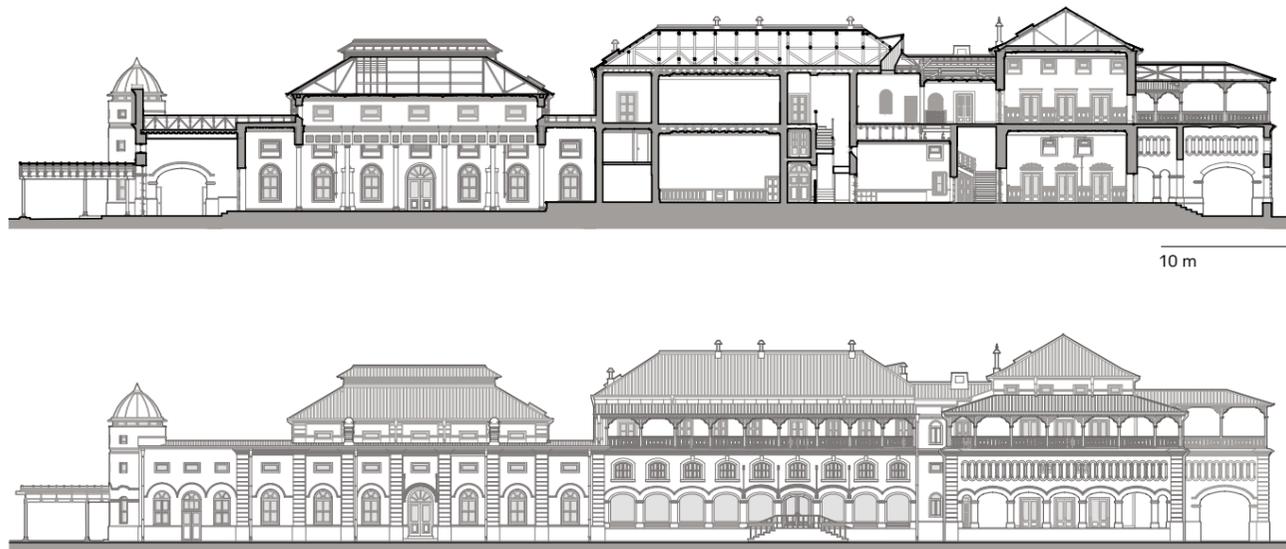
To this end, the structural consolidation of existing walls, floors and roof trusses became the first priority of the rehabilitation activity. In areas where significant damage had occurred, sections of the building were carefully dismantled and reconstructed using comparable materials. Large areas of the roofing structure that had been damaged or that had been built using inappropriate details were strengthened through the insertion of reinforced-steel framing. Once the structural elements of the roof were consolidated, timber decking was added and protected with a layer of tar-paper. Corrugated galvanized metal sheeting was applied to the roof and a network of gutters and downspouts was added.

Simultaneous to civil and structural work, AKTC teams carefully removed inappropriate elements from within the palace, revealing the original features of the building, which were cleaned and repaired. Sections of internal plasterwork that had become detached from masonry walls were cleared and conservation teams worked to clean and repair intricate wooden decoration. Architectural elements, such as cast-iron railings and stairs, were dismantled and removed to a specially designed workshop for cleaning. Other features that could not be relocated off site were cleaned *in situ* and protected during construction using plastic and foam. Following the construction of an intricate network of scaffolding, separate teams of masons worked to remove cement-based pointing from all external fired-brick elevations. Once completed, the main elevations of the building were repointed using traditional mortars matching original materials. Pointing styles and techniques associated with the different phases of construction were incorporated, making it possible to distinguish sections of newer construction from earlier areas.

Internally, historic features — including coffered timber ceilings and fenestration, cast-iron and brass elements, decorated fireplaces and original marble floors — were meticulously cleaned, repaired and protected. Inbuilt furniture, including large decorated wood-frame mirrors and cabinetry, was also cleaned and protected with beeswax. Thick layers of paint were removed from the surface of pressed-metal ceilings, followed by repair of areas corroded by rust, before the application of filler material and repainting of the ceiling on the ground floor. Although damaged, the pressed-metal ceiling located on the first floor of the palace was not corroded, making it possible to leave the burnished metal exposed.







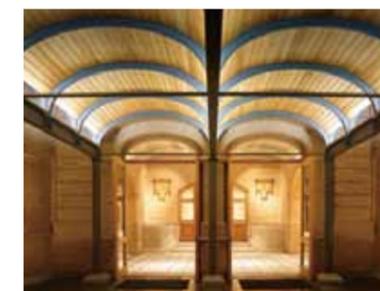
Preceding pages, main reception hall following restoration.

Above, latitudinal section and south elevation.

Newly constructed elements were only considered where they would significantly enhance the use of the building, and then only when the construction could be distinguished from the original historic architecture. New entrance canopies were added enabling staff and visitors of the Ministry to safely access the building. A free-standing wooden construction at the entrance to the main hall serves to provide a reception space, while the upper section of the construction is used to control lighting and sound systems during functions in the hall. Lighting systems were designed to be functional and require very little electricity. Uniform modern LED lighting fixtures, providing ambient indirect light, were procured and installed inside. The selection of suspended lighting fixtures was based on reducing their visual impact within the space and in relation to the highly decorated ceilings. External floor-based up-lights have been installed around the perimeter of the palace, highlighting its austere brick elevations. A state-of-the-art and highly efficient underground heating system was installed throughout the building, making it possible to retain original architectural decorations on walls and the ceilings. Sufficient electrical, sewage and water infrastructure was added to enable the simultaneous use of sections of the palace for multiple, independent functions.

Landscaping activities aimed to redress the relationship of the palace to its immediate environment, including its integration with two large garden areas to the south. Asphalted areas that had increased the ground levels by more than forty centimetres around the palace were removed, followed by the construction of stone-paved pathways and a one-way road network — transforming the space around the palace into a large pedestrian-friendly zone.

This high-quality restoration of an important monument established a significant architectural precedent for both Afghan and international professionals, in a post-conflict development environment that often does not encourage innovation.



Above, layers of modern paint were removed from the surface of embossed metal ceilings, restoring their original finish.

Left, oxidized brass railings were restored to reflect the original character of the building.

Right, above, steel elements used to construct a new entrance canopy were fabricated locally.

Right, below, the design of the entrance canopy reflected the arched openings of the palace.



## CHIHILSITON GARDEN

### HISTORY AND CHARACTERISTICS

Chihilsiton Garden is a 12.5-hectare public site, located four kilometres south of Babur's Garden, on the same range of foothills of the Sher Darwaza Mountain. Historic documents are believed to refer to this area as early as the sixteenth century, describing an outpost where Mughal troops were stationed in orchard gardens below a hillside settlement along the Kabul River.

A panoramic sketch produced in 1876 by a British military cartographer shows a hillside residential cluster in the same area, surrounded by large trees, possibly indicating a formal garden on the site. Historic maps from the same period refer to the settlement as "Hendaky", which was also the name of the small pavilion built on a stone outcrop above the garden by Amir Abdur Rahman Khan (r. 1880–1901) for his son Habibullah at the end of the nineteenth century. With a royal pavilion on the site, it is believed that this was the time that the garden was delineated and a wall constructed at its perimeter. Early twentieth-century photographs of the pavilion show an elongated rectilinear building (with one circular end) surrounded by a deep arched veranda with forty columns (*chihil-sitoo*n) built above a series of terraced platforms with views onto the Chardeh plain. With newly built royal residences (*arg*) at the centre of the city, the pavilion remained unoccupied and occasionally served as a state guesthouse. The most prominent visitors who stayed in the building were members of the British Boundary Commission (charged with negotiating the northern boundaries of Afghanistan).

Upon his ascension to the throne in 1904, Amir Habibullah Khan (r. 1901–19) expanded the site, establishing at its centre a formal axial garden with marble fountains and paved walkways. As part of this work, the pavilion was expanded into a two-storey double-height rectilinear building, retaining only twelve of the original forty columns of its covered veranda and, ironically, renamed it the Chihilsiton Palace. The flat roof of the original pavilion was replaced by a system of pitched roofs, and the shallow, fan-shaped flights of steps gave way to heavy lateral staircases with cast-iron railings.

The palace was damaged during the armed conflict that led to the succession of Nadir Khan (r. 1929–33), but later repaired and reused as a summer palace and state guesthouse. The building was once again transformed during the reign of King Mohammad Zahir Shah (r. 1933–73) when two squat towers were added and the external facades of the building were modernized. Used at that time primarily as a state guesthouse, dignitaries who resided within the Chihilsiton Palace included heads



Opposite page, a vast nursery space has been developed to support the planting of indigenous trees and flowers at the Chihilsiton Garden.

Above, the Chihilsiton Garden and Palace seen here in an early 20th-century photograph, 1925.

Below, built as a garden pavilion with forty columns, the Chihilsiton Palace was expanded on two separate occasions before being largely destroyed during the civil conflict in Kabul.

of state, most notably US President Dwight D. Eisenhower (1959) and Soviet Premier Nikita Khrushchev (1955, 1960).

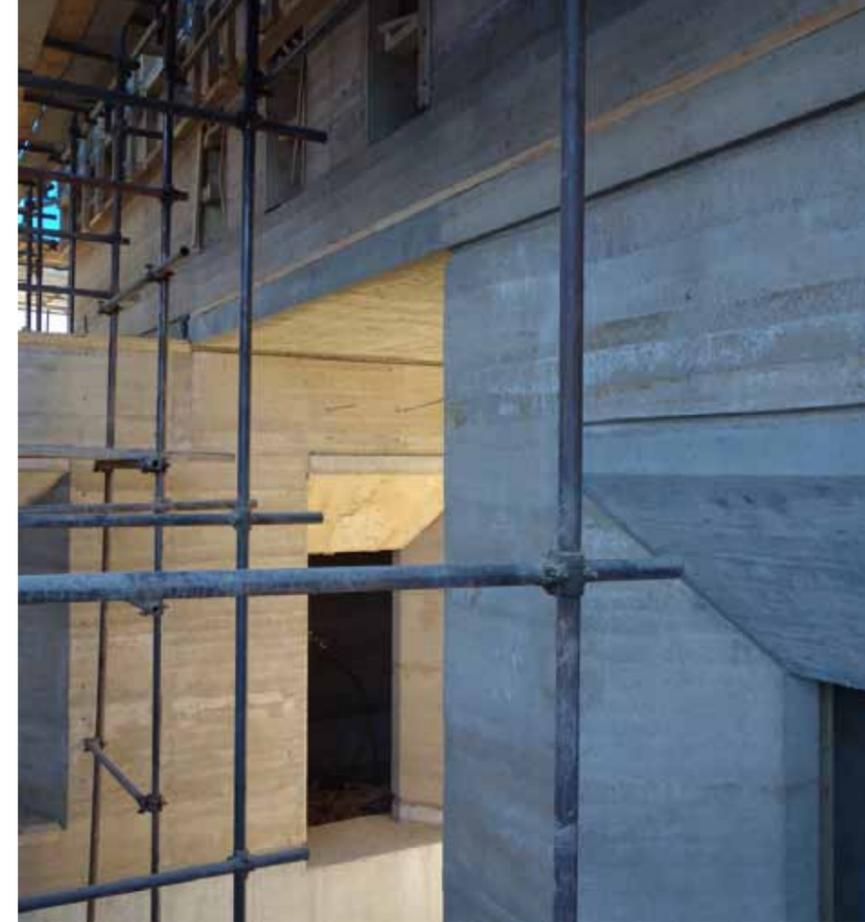
By the 1960s and 1970s, due to the increasing importance of the building as a place of accommodation for foreign diplomats, the government further invested in adding spaces for receptions, banquets and state dinners. A modern L-shaped building was constructed to the east of the palace, which provided additional space for accommodation and banqueting services. The Chihilsitoun Palace remained a hub for government activity in the 1980s, mainly used to convene press conferences with local and foreign media. During the initial days of the Soviet occupation in 1979–80, President Babrak Karmal reportedly took refuge in the Chihilsitoun Palace and was guarded by tanks and anti-aircraft guns. During the conflict that ensued, the building was targeted and heavily damaged. The site remained unused in the years that followed, and was further destroyed and looted during the conflict in Kabul in the early 1990s.

Chihilsitoun Garden — as it is defined today by a low brick wall — seems to have been greatly reduced in size by the construction of roads around its perimeter. Historic descriptions indicate that the garden had extended to sloped areas to the east of the site, where a pigeon tower had been built on a stone outcrop. Since the 1980s, informal settlements have been erected on these hillside areas by those displaced by conflict or economic migrants. While historic photographs depict the garden as being overgrown, planted with deciduous vegetation including mulberry and plane

**Left, destroyed sections of the palace being repaired by masons as part of ongoing rehabilitation work.**

**Right, above, carpenters preparing timber-frame doors and windows, which will be installed in existing and newly constructed buildings.**

**Right, below, a worker prepares existing surfaces for structural retrofitting and repair.**



trees, in the 1950s and 1960s species of evergreen pine and cedar trees were heavily planted in pockets throughout the site. The frequent use of buildings located within the garden for royal or state functions meant that Chihilsitoun Garden remained intermittently accessible to the public throughout the twentieth century. During the period in the late 1970s, when the president's offices were located within the palace, the garden was closed altogether to the public. The central formal garden, which had included large areas of lawns planted with indigenous flowers and shrubs and sand-stone pathways and stairs, was in disrepair at the time of surveys conducted by AKTC in 2014. Unlike Babur's Garden, where the natural landscape was heavily scarred by the ravages of conflict, large parts of the horticulture of Chihilsitoun Garden survived periods of neglect and intentional destruction.

Sloping gently towards the north, the garden has historically been irrigated by a surface channel sourced from the Logar River some five kilometres to the south. More recently, disposal of household waste (generated by the spread of informal settlements along the hillsides) in the channel has polluted the water source, which is no longer suitable for irrigation purposes — particularly in a public garden with large groups of children. Since 2002, the site has been cleaned and irrigated using water mechanically extracted from deep wells, ensuring its partial use by the community mainly for recreation and sport. Yet insufficient services and the absence of management oversight have prevented women and young children from entering the site. Based on the successful rehabilitation and sustainable operation of Babur's Garden, in 2015 AKTC commenced a multi-year rehabilitation programme in Chihilsitoun Garden with the intention of providing high-quality public spaces for social and cultural interaction, educational programming, and sport and recreational activities.

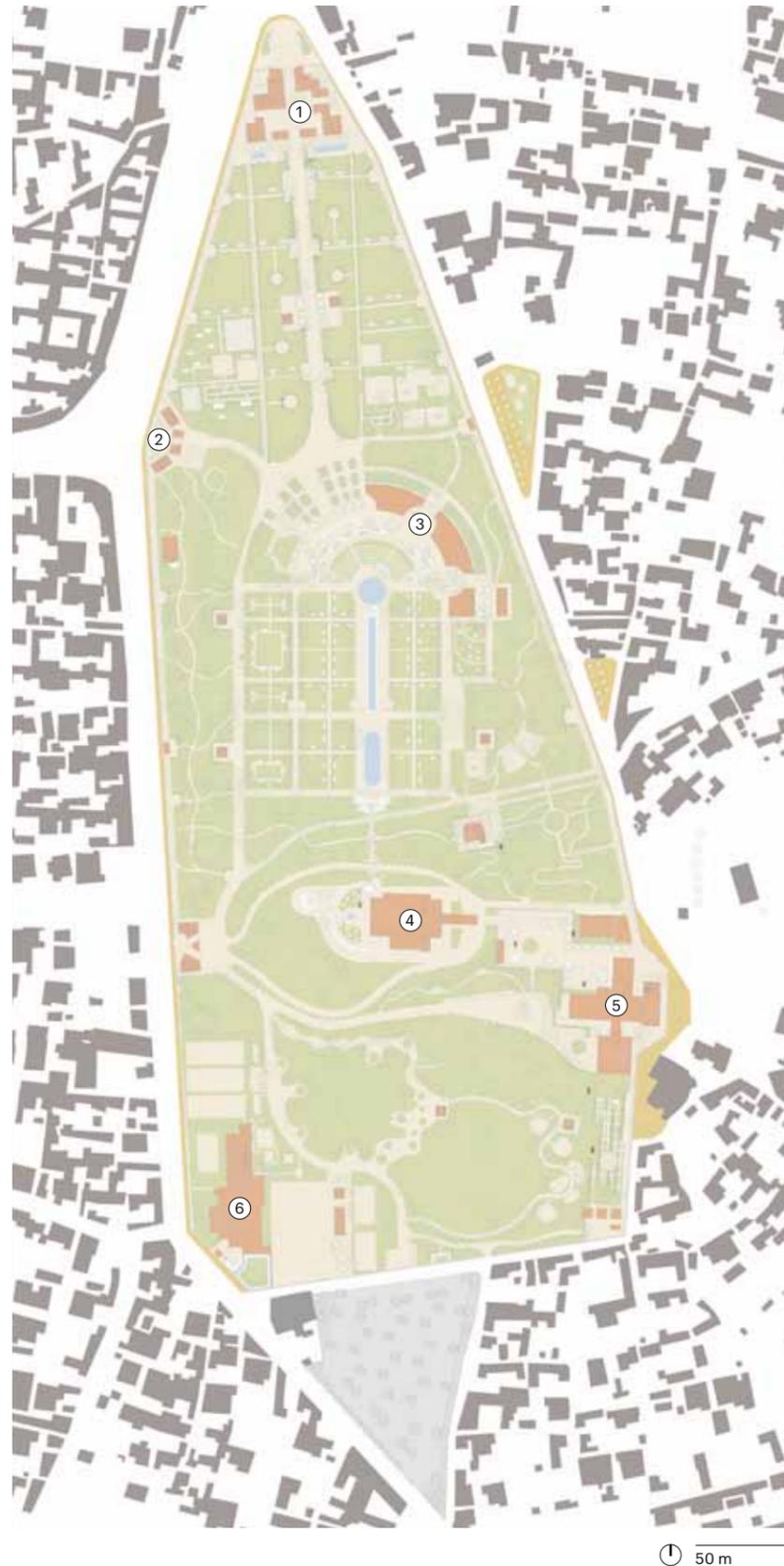
**Left, newly constructed rammed-earth buildings will provide a range of visitor and operational facilities for the garden.**

**Right, above, teams of workers prepare areas of rammed-earth construction.**

**Right, below, provisions have been made to enable rehabilitation work to continue unabated throughout colder months, including the erection of large hangars over construction areas.**

A rendered master plan of Chihilsitooon Garden showing visitor facilities and the sequence of spaces, including a formal garden at the centre of the site, which provides visitors with a wide variety of experiences.

- 1 Main entrance/administrative block
- 2 Secondary pedestrian entrance
- 3 Outdoor amphitheatre and exhibition space
- 4 Chihilsitooon Palace
- 5 Annex and auditorium
- 6 Sports fields and facilities



#### WORK UNDERTAKEN

A tripartite agreement with Kabul Municipality and the Ministry of Information and Culture has ensured the active participation of Afghan institutions in a rehabilitation programme through the formation of a coordinating body. Furthermore, the agreement provides the legal basis for the establishment of a management structure for the garden after rehabilitation work is completed. Chihilsitooon Garden will be managed by the newly formed Kabul Historic Gardens Trust, which will have a mandate to operate the city's historic public gardens, building on nearly a decade of experience gained through the sustainable operation of Babur's Garden.

Following the preparation of a detailed physical survey and the finalization of an organizational plan for the site, architectural and landscaping designs include provisions for the construction of new buildings and open spaces. In addition to constructing new buildings for these purposes, existing buildings (including Chihilsitooon Palace) will be restored and made functional for public use. Based on detailed surveys and responses to questionnaires completed by visitors to other gardens, including

Above, administrative building, latitudinal section and elevation studies.

Below, left, local stone being prepared for use in pathways and as cladding on buildings.

Below, right, masons laying dressed stone near the amphitheatre.

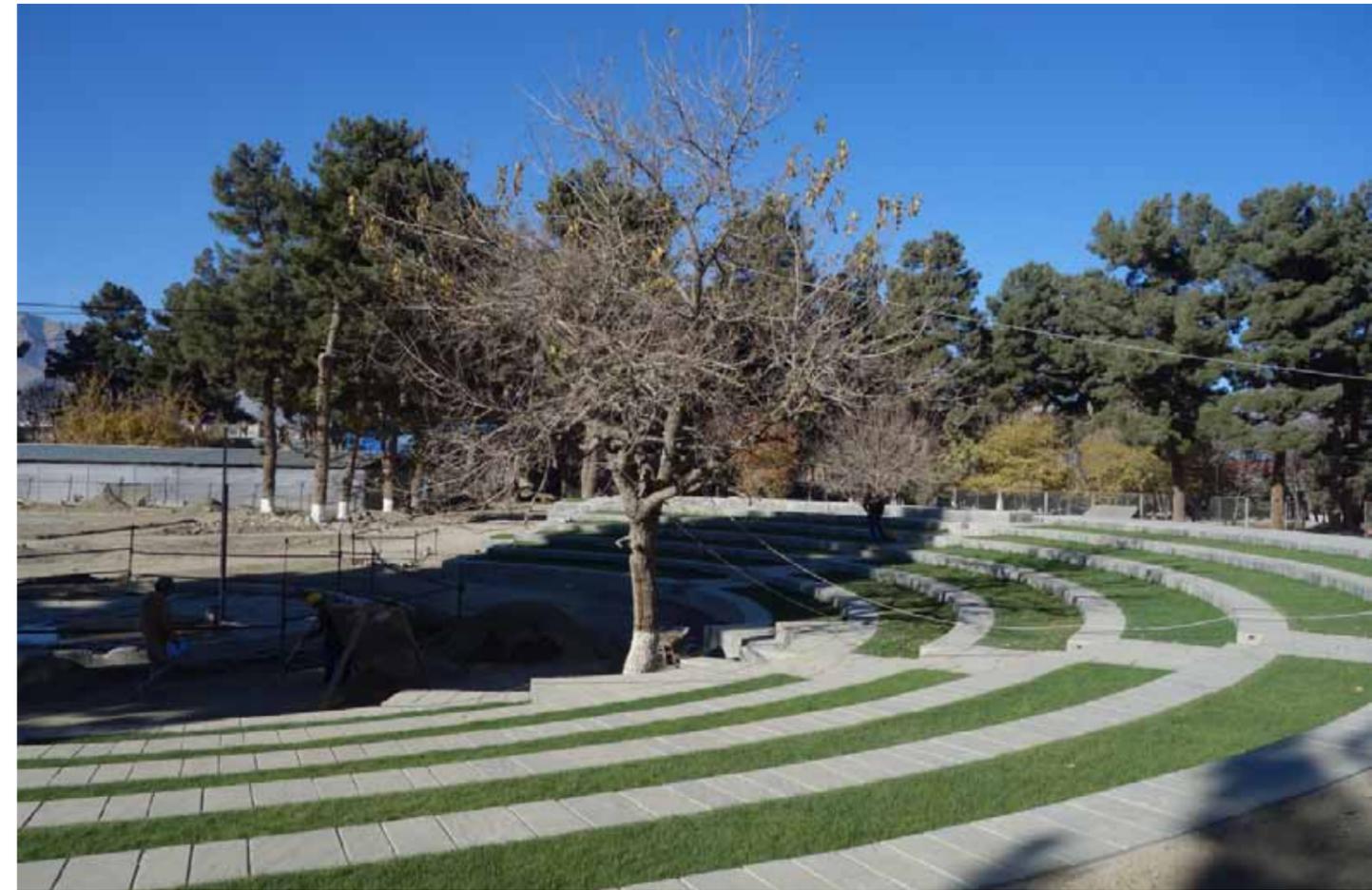


Babur's Garden, sufficient provisions have been made for public services such as food and beverage areas, public toilets and visitor facilities.

Landscape designs call for the integration of a variety of disparate spaces, used for different purposes, within a wider network of paths and services that allow for a diverse set of experiences within a rational system of circulation and usage — such as separate areas for sports activities and family picnic sites, an outdoor amphitheatre, and the historic formal promenade (containing original marble fountains), which will be restored and made functional again. In order to support the continued use of the site for sports activities, a distinct zone has been designated to contain cricket batting areas, volleyball fields and football pitches. Additional services have been provided to enable sports teams access to changing facilities and showers, promoting the use of the sports fields for competitive matches. In addition to supplying saplings for maintaining the stock of trees and plants within the garden, a commercial horticulture nursery will be constructed in order to generate additional revenue towards the upkeep of the garden.

In order to promote traditional building techniques, new buildings within the garden will be built using ecologically sustainable reinforced rammed-earth construction. Found to have been used in parts of Afghanistan as far back as the second century AD, rammed-earth structures are highly suitable to the climatic and ecological environment in the region. Reinforced with a variety of material, including bamboo, steel rebar and concrete-frame structures, buildings constructed with rammed earth

Assembly of lightweight, steel-frame roofing structure.



are able to withstand moderate earthquakes. While capable of withstanding wide variations in temperature, the characteristics and workability of the material enable a wide range of rich architectural designs.

New structures will provide essential space for the administrative and maintenance teams of the garden, while increasing the capacity of the site to hold multi-purpose events and gatherings. An indoor auditorium will be built as an extension to the existing annex space, which will provide a facility for welcoming up to three hundred people year-round for conferences, presentations or performances. A gallery and visitor centre will be added within the site, enabling cultural organizations and individual artists to exhibit their works to the public. The multi-purpose space can also be used to display and market handicrafts and locally produced merchandise. Retail, food and beverage premises have also been included in the design of new structures in order to ensure that sustained revenue for the operation of the garden can be generated through the hire of these spaces. Provisions have been made for on-site utilities, which will ensure that the garden is properly maintained with limited usage of water and electricity, and septic systems that will filter wastewater through subsurface leach fields.

When complete, the rehabilitated Chihilsitoun Garden will provide users with high-quality landscapes and building spaces capable of containing and promoting the rich and diverse forms of social, cultural and economic expression manifested in Afghanistan.



Above, a newly constructed outdoor amphitheatre will provide spaces for public and cultural events within the garden.

Below, a computer-generated view of public exhibition spaces currently being constructed at the Chihilsitoun Gardens.



## AMIR ABDUR RAHMAN MAUSOLEUM AND MOSQUE

### HISTORY AND CHARACTERISTICS

Zarnegar Park in central Kabul is thought to originally have been part of an orchard garden laid out by Ulugh Beg, Babur's uncle, in the fifteenth century. In the late nineteenth century, Amir Abdur Rahman Khan commissioned several buildings on the site, comprising a garden pavilion and several residences, including the Zarnegar Palace. After the amir's death in 1901, his son and heir Habibullah Khan transformed the pavilion into a mausoleum, which has since been referred to as Amir Abdur Rahman Khan's Mausoleum. With its onion-shaped central dome, elaborate brick minarets and parapets, this building is an early example of the Indian architectural style in a public building in Kabul.

During the reign of Amanullah Khan, the mausoleum was used as a public library, and reportedly looted during the uprising in 1929 that drove him from power. In the Zarnegar Chamber, located in a separate building to the south of the existing mausoleum that gives the park its current name, Afghanistan's independence was proclaimed in 1919, after the signing of the Treaty of Rawalpindi. Used by the Ministry of Education until the 1960s, the Zarnegar Pavilion was demolished on the orders of Zahir Shah when the municipal park was created. Other structures that stood on the site seem to have fallen into disrepair after the death of Amir Abdur Rahman Khan, and only one part of the Gulistan Serai, a single-storey building with distinctive external plaster decoration, survives and is now used by the Municipality as offices.

### WORK UNDERTAKEN

Since the mid-1990s, the building was used as an office for the Department of Historic Monuments which, in 2005, requested AKTC's support in conserving the mausoleum. Physical surveys were prepared for the mausoleum and a small triangular mosque adjacent to it, which also dated from the late nineteenth century. It was found that infiltration of water from the roofs of both buildings and around the gutters and downpipes had caused extensive damage within the structures.

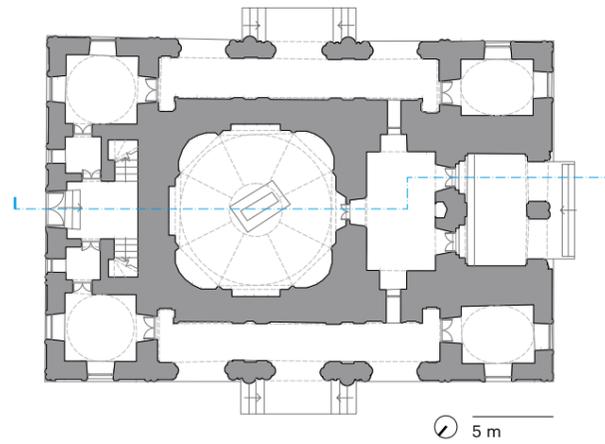
When urgent conservation work began on both structures in 2005, modern concrete slabs were removed and damp areas below the concrete were left to dry out before structural repairs were carried out to damaged sections of the masonry domes beneath. Once complete, the cavities between domes were backfilled with brick fragments and a layer of porous lime concrete was laid before being finished with flat fired-brick paving. Damaged sections of iron sheeting over the main brick dome and the two porte cochères of the mausoleum were repaired, along with downpipes and



Opposite page, conservation work on the mausoleum included repairs to the roofing and restoration of the original painted colours of the building.

Above, the form of the Amir Abdur Rahman Mausoleum was inspired by 'onion'-domed buildings commonly associated with Russian architecture, 1925.

Below, Zarnegar Park prior to rehabilitation.



Above, masons prepare fixings for installation of decorative brickwork on the mosque located adjacent to the mausoleum.

Below, public toilets were constructed using traditional forms and materials.

Right, ground-floor plan and section.

gutters on both structures. Following repairs to the roof of the mausoleum, modern whitewash was removed from parts of the main elevations, exposing layers of ochre and blue paint, which are thought to be part of the original colour scheme of the pavilion built by Amir Abdur Rahman Khan. Sections of decorative plaster decoration on the facades were also cleaned, and timber windows and doors repaired or replaced.

In addition to the conservation of these monuments, AKTC implemented a landscape rehabilitation project within Zarnegar Park resulting in the planting of saplings — including planes (*panja-chinar*), almond and mulberries, along with flowering shrubs, such as indigenous roses. Newly laid stone paving created an axis on the south side of the mausoleum, leading to a new entrance that was created on the south perimeter of the park. In addition, stone slabs were laid to create pathways up the slopes of the two raised mounds that existed in the park, where seating areas were created for visitors. A new deep well and installation of a water pump linked to underground piping and surface channels enabled effective irrigation across the park. A shallow well was fitted with a hand pump for use by the public, including worshippers at the newly restored mosque.

At an early stage of the rehabilitation programme, it was clear that the absence of public toilets was a major issue on a site visited by thousands of people a day during the summer months. In response to these needs, two separate blocks of toilets were built in locations within the park where access would be easiest for maintenance.



Above, the mausoleum of Amir Abdur Rahman is situated within Zarnegar Park, which was rehabilitated by AKTC.

Left, a durable baked-brick surface was laid over a waterproof layer of lime concrete on the roof of the mosque.

Right, local stones laid on edge were used to construct a durable pathway within the park.



## MILMA PAL MOSQUE

### HISTORY AND CHARACTERISTICS

Dating from the late nineteenth century and built as part of a wider programme of work in Kabul, the Milma Pal Mosque is located within the Bagh-e Bala, a landscaped hillside area believed to have originally been laid out as a Mughal garden. Together with the Bagh-e Bala Palace, which was the favoured summer residence of Amir Abdur Rahman Khan towards the end of his life, the architecture of the Milma Pal Mosque represents a synthesis between the Afghan vernacular and European design influences that characterizes royal buildings of that era.

The building is arranged as a large open space subdivided into ten interlinking bays grouped in two rows of five bays each, with two larger central bays on axis with the prayer niche (*mihrab*). The internal painted plasterwork around the *mihrab* and on the main elevation of the building is a fine example of simplified decorative work that draws on much older patterns. Built using a combination of fired bricks (arches) and mud bricks (domes), a galvanized metal roof had been added in the mid-twentieth century.

Flash floods from the steep hillside above the mosque caused the accumulation of soil and debris behind the western *qibla* wall, resulting in the build-up of moisture in the masonry walls causing extensive damage to internal plasterwork. Compounded by the seepage of water into mud-brick masonry domes from leaks in the metal roof, which resulted in the partial collapse of the central dome, emergency consolidation and conservation work commenced in 2009 with the preparation of detailed surveys and a condition assessment.

### WORK UNDERTAKEN

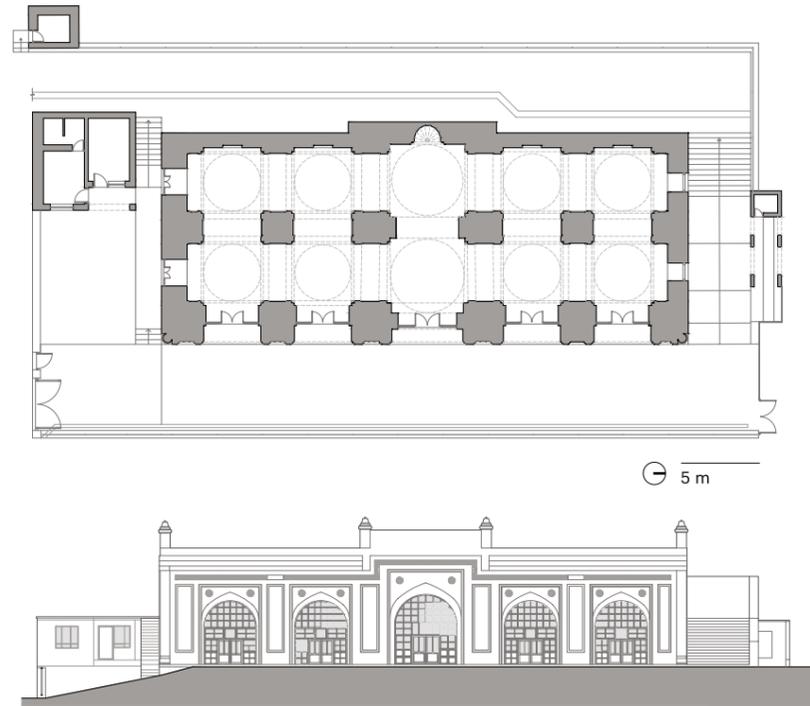
In order to prevent further damage to internal spaces, the first stage of work focused on repairing the galvanized metal roof of the mosque. The previous corrugated sheeting — much of which had fallen into disrepair, due to poor fixing and lack of maintenance — was stripped in phases, in order to enable a detailed examination of the uncut timber joists beneath. Repairs were carried out to strengthen the wooden substructure, over which new timber boarding was fixed and sections of existing and new corrugated metal roofing was reattached. Lengths of coping and corner edges around the metal roofing were redesigned to prevent penetration of water and to allow for run-off into fixed points linked to surface channels on the ground.

Once the roof of the building had been repaired, internal conservation work was carried out on the partially collapsed dome that was rebuilt with mud bricks produced



Opposite page, the main elevation of the late-19th-century Milma Pal Mosque prior to restoration.

Above, galvanized iron roofing erected over the mosque had been damaged, resulting in the collapse of one of the mosque's domes due to water seepage.



Top, ground-floor plan and main elevation.

Left, newly formed iron sheets being laid above timber planks.

Right, damage to the timber substructure on the roof of the building was repaired.

on site using soil collected during clearance work. Areas of damaged decorative plasterwork around the *mihrab* and on the main elevations of the building were carefully consolidated and repaired. Damp sections of undecorated plaster that had separated from the *qibla* wall were stripped and the area left to dry, before new plaster finishes were applied. The timber fenestration of the mosque was carefully cleaned and repaired followed by the application of a final layer of whitewash on internal and external elevations. In order to prevent future seepage of water into masonry walls at the back of the mosque, the area was paved using flat stones and a drainage channel was added to divert water away from the building.



Above, situated on a terraced platform along a steep site, work entailed the construction of water diversion drains for flash floods.

Left, a craftsman at work inside the mosque repairing timber woodwork.

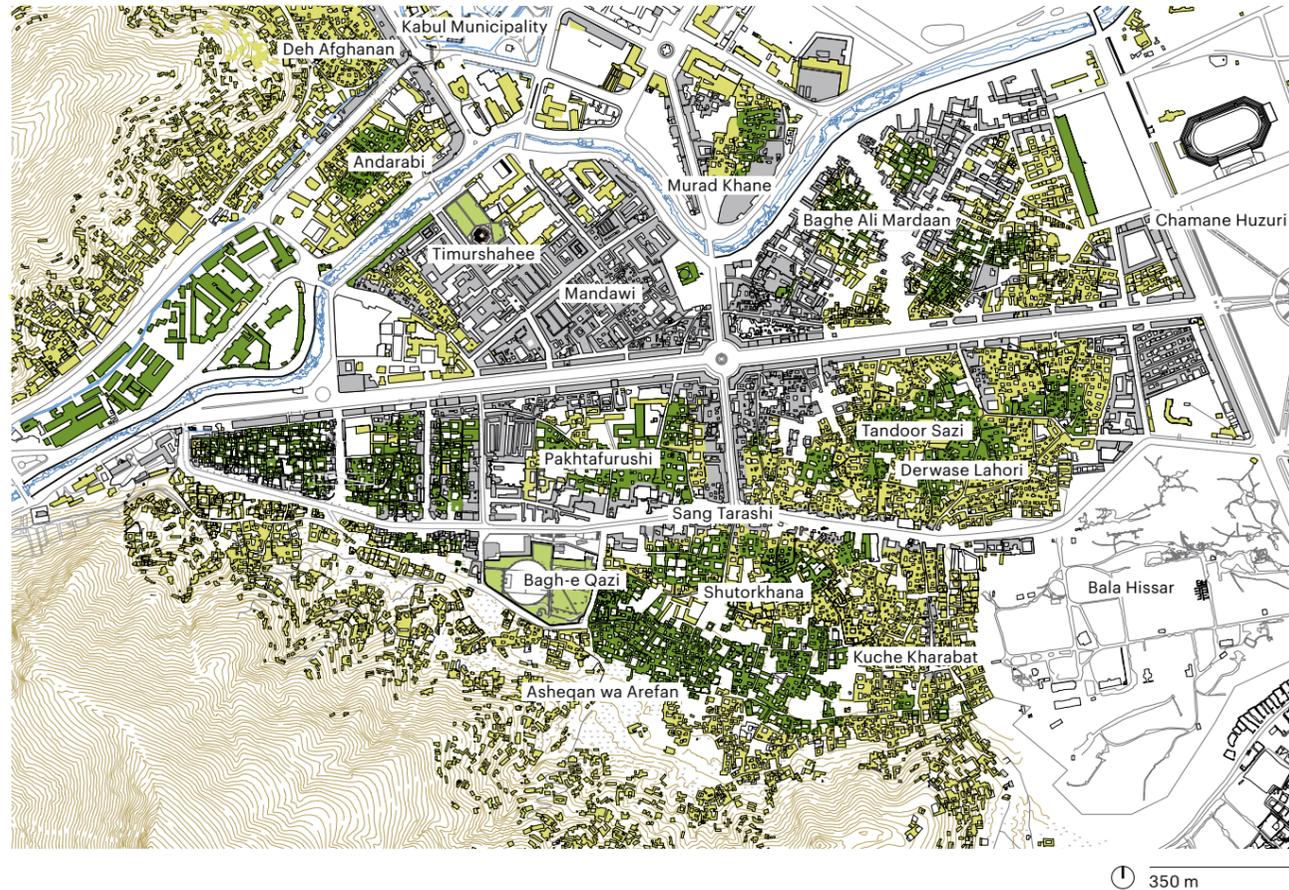
Right, sections of decorative plaster damaged by rainwater were repaired.

KABUL

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**PLANNING, UPGRADING  
AND ACCESS IMPROVEMENTS**





Preceding pages, restoration of public spaces and streetscapes as part of AKTC's conservation programme in the Old City.

Above, mapping of historic areas and quarters, Kabul Old City.

- Key surviving historic areas
- Traditional residential areas in rapid transformation
- High-density commerce in rapid transformation

Below, poor and inadequate infrastructure is one of the main causes of health-related problems in the Old City.



### PLANNING

The construction boom that Kabul has witnessed since 2003 continues to generate employment for those engaged in the many commercial construction sites in the city. In the Old City, however, four out of five residents are recent immigrants, many of whom rely on casual employment in the adjacent bazaars that, at best, provide meagre and insecure wages. The subdivided homes of the Old City are one of the few places in the centre where such immigrants can find affordable rooms to rent. Whereas the bulk of new migrants had in the past built basic homes for themselves in the informal settlements on vacant government land, this is now less accessible. Rising prices have forced families seeking affordable shelter to the outer margins of the city, where there has been negligible investment in public infrastructure and, with few opportunities for employment, many families now face impoverishment.

In the context of a process of urban recovery that since 2002 has been largely ad hoc and uncontrolled, AKTC works with Afghan institutions and residents to prepare neighbourhood plans to guide reconstruction and development within specific quarters, while ensuring that such initiatives are consistent with wider planning processes for the metropolitan area of Kabul. An important contribution to the planning process was made through the formulation in 2005 of a joint planning framework for the residential neighbourhood of Chindawol, which remains under intense pressure from commercial development in adjoining areas. Initial mapping of land use, infrastructure and services was followed by a series of intensive participatory planning exercises with municipal staff and representatives from Chindawol, leading to identification of development priorities over a five-year period, along with assignment of institutional responsibilities.

In order to address the issue of responsibilities for planning and urban management, an Old City Development Commission was formed in 2004, with a view to ensuring more effective collaboration between concerned institutions. With participation from ministerial and municipal staff, academics, professionals and community representatives, the Commission serves as a clearing house for information and provides a valuable platform for consultations between professionals and residents on critical development and technical issues. Its efforts to contribute to the process of planning, however, have been less successful, due both to a lack of professional capacity and persistent institutional rivalries.

As pressure on urban land and housing mounts, and uncontrolled 'development' encroaches on the surviving historic fabric, the future of the Old City requires action



Above, construction of hillside stairs as part of access improvement work around Babur's Garden.

Below, removal and disposal of accumulated waste from public drains in the historic areas in the Old City.

at a variety of levels: formulation of effective national policy on urban heritage; and the promotion of consultative processes of planning. Also needed is more effective urban management; the enhancement of professional and craft skills; technical support for families to repair or upgrade traditional homes; and the promotion of economic activity to enable residents to afford these.

The various initiatives being undertaken by AKTC in the Old City of Kabul require combined efforts on different levels: contributing to policy formulation in the ministerial domain; promoting effective urban governance among municipal staff; facilitating participatory area planning with all stakeholders; defining neighbourhood priorities with community representatives; identifying affordable ways of repairing or upgrading homes with individual owners; and training Afghan professionals and craftsmen in conservation and project management. In all of these discussions and negotiations, it remains important to maintain a balance between conservation and development, that is, basing interventions on a sound understanding of the past while allowing for new needs and opportunities to emerge, in response to the aspirations and resources of local residents.

Despite an official ban imposed in 2002 on new construction in the Old City, pending the formulation of a rehabilitation plan, commercial redevelopment has proceeded along Jade Maiwand and other main roads, while the reconstruction of traditional residential property has quietly continued inside many quarters and along the steep hillsides above the Old City. With property values rising throughout the city, pressure to lift the ban has mounted from owners and developers. While officials, who earlier advocated comprehensive redevelopment of the Old City, now accept the need for safeguarding key areas (which has been enshrined in the draft Afghan national urban strategy), their institutions have limited capacity to undertake the analysis and negotiation required in the formulation of a workable rehabilitation plan.

#### UPGRADING AND ACCESS IMPROVEMENTS

A critical component of AKTC's Area Development Programme focuses on the upgrading of basic infrastructure and services in the Old City and around key historic sites such as Babur's Garden and Timur Shah's Mausoleum and park. Due to decades



Above, joint planning exercise with government officials, professionals and community representatives.

Left, construction of storm-water drainage around Babur's Garden led to a significant reduction in the destruction of hillside settlements.

Right, construction of suitable drainage and alleyways and installation of potable water pumps have contributed to an improvement in living conditions for many in the Old City.



Meeting of the coordination group responsible for planning and upgrading activities around Babur's Garden.

of under-investment and neglect, as well as more recent conflict-related damage, much of the fragile stock of housing in these areas is subdivided and residents have access to only the most rudimentary services.

In order to address the abject living conditions facing the majority of residents in these areas, since 2002 AKTC has invested in repairs or construction of drains, paving of alleyways and streets, and provision of safer water supplies, benefiting nearly 25,000 inhabitants. These interventions have generated significant employment within the resident communities, which have also benefited from a range of measures aimed at promoting small-scale economic activity, especially among women. Together with the jobs created through conservation projects, these investments have contributed to the process of recovery across these quarters, where self-built repair and infill construction is on the increase.

As part of efforts to improve living conditions for the residents, nearly six kilometres of underground and surface drains have been repaired or rebuilt, while an area of more than 22,000 square metres of pedestrian alleyways and streets has been paved within the historic fabric of the Old City.

In the residential area surrounding Babur's Garden, where sustained conflict had caused widespread damage to the housing stock, more than 9.5 kilometres of storm-water drainage have been created and two kilometres of access improvements have been made, including the construction of hillside staircases that allow communities access to water and other services. Investments made by AKTC in upgrading and improving public infrastructure have encouraged homeowners to rebuild or improve their properties. With a significant rise in property prices in recent years, further affected by the proximity of residences to the restored Babur's Garden, the socio-economic status of communities living around the garden has greatly improved.