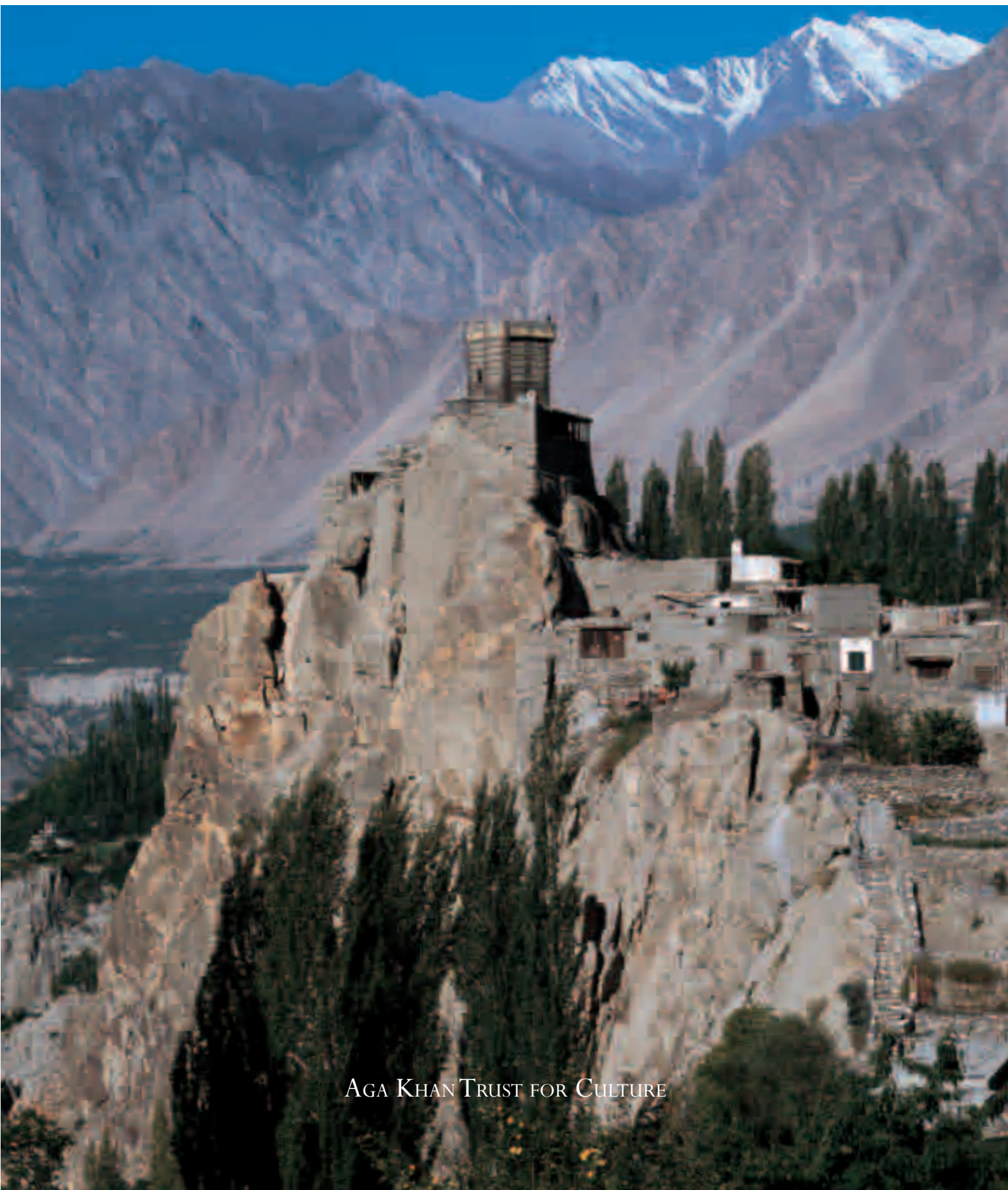


Historic Cities Support Programme

CONSERVATION AND DEVELOPMENT IN HUNZA AND BALTISTAN



AGA KHAN TRUST FOR CULTURE

THE IMAMAT

AGA KHAN DEVELOPMENT NETWORK

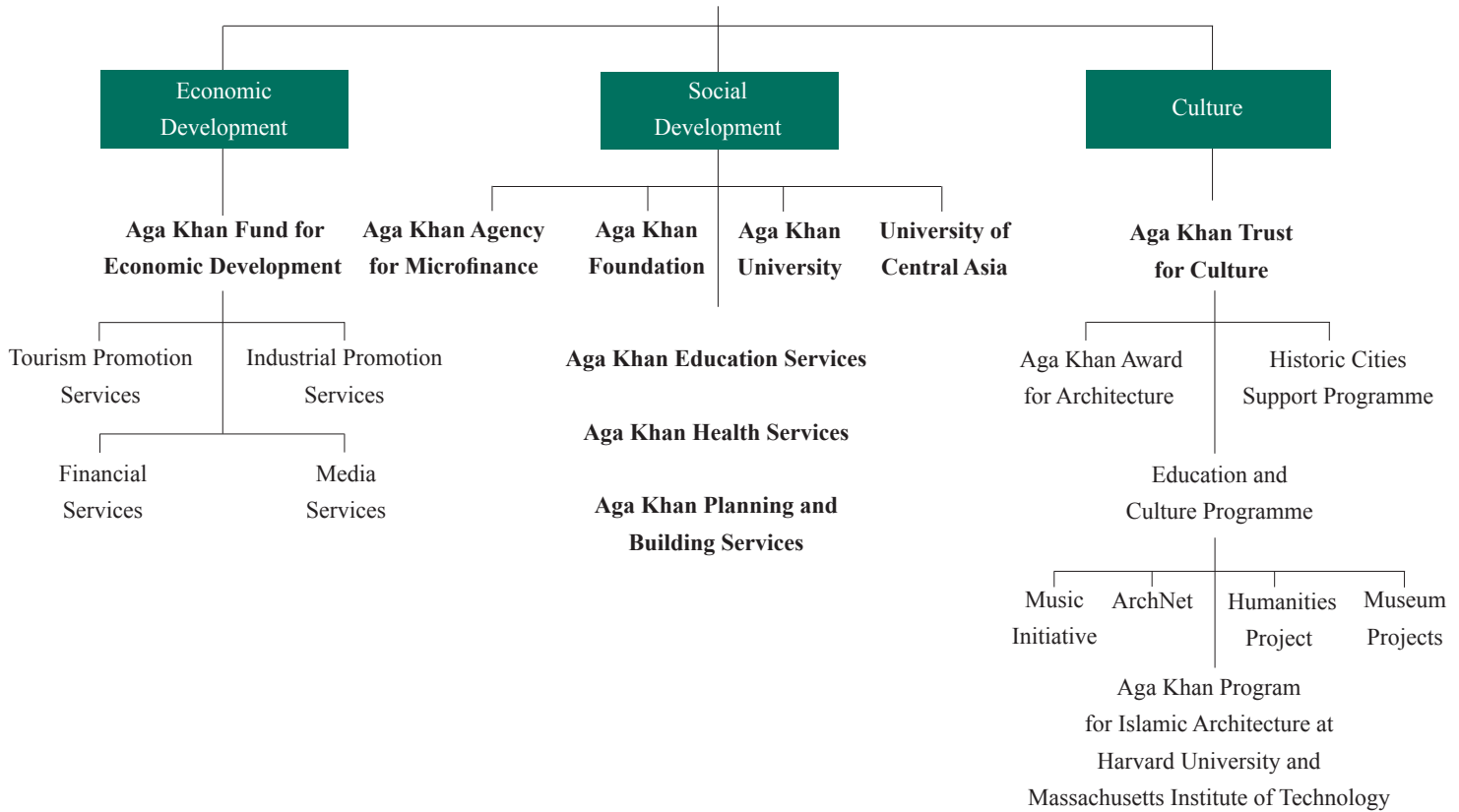


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Hunza and Baltistan, two high valleys located in the upper catchment area of the River Indus and deep within the Karakoram mountain range, abound with spectacular treasures of nature: 8000-metre-high mountain peaks, endless glaciers, rare flora and fauna, as well as beautiful, terraced fields using ingenious irrigation techniques, which attest to the efforts of man to make the best use of nature under harsh living conditions. In spite of their relative seclusion and inaccessibility, the valleys have provided the scene for important movements of cultural exchange. In Hunza, tales about Alexander the Great and his army are still part of living oral traditions transmitted by the village elders, and relations with China, as part of the centuries-old Silk Route system, have remained strong. In Baltistan, there is evidence of old cultural connections with Tibet and with Kashmir, both traditions leaving their imprint on its architectural heritage, which has, in its turn influenced the historic building styles of Hunza.

This unique blend of nature's pristine splendour and the wealth of local building traditions did not escape the curiosity of early Western explorers and scientists, nor has the geopolitical importance of the area gone unnoticed. In the late-nineteenth century, Hunza was an important arena of the "Great Game" – the power struggle between Russia, China and the British Empire. It was not until the late 1970s, however, that the Northern Areas of Pakistan became widely accessible through the construction of the Karakoram Highway between Islamabad and Kashgar. Within just a few years, the new road exposed the inhabitants to the impact of modern Western civilisation.

Today's situation is characterised by the inevitable clash between, on the one hand, an archaic, inward-looking mountain society (whose feudal traditions had lasted until 1974), and, on the other hand, a modern



industrial civilisation with the combined impact of its secular governance systems, mechanisation, capitalist economy and powerful, omnipresent communication tools. Whenever precious but endangered local traditions are exposed to a new (and often disruptive) type of development, fundamental questions arise, such as: How can the shock resulting from the sudden, compressed impact of modern civilisation be absorbed without destroying intrinsic traditional values and achievements? How can the dynamic forces of “progress” be tamed, adapted and integrated into local customs and living traditions? How can the existing cultural resources and social assets of local communities, rather than being ignored or suppressed, be enhanced to become driving factors of a controlled and fruitful evolution?

The projects and activities presented in this publication do not claim to have definitive answers to these pressing issues, nor are they based on any specific ideological premises. Yet, they are conscious of the given context and respectful of the values at stake, and they try to respond in a pragmatic manner to perceived needs and opportunities that emerge through continued dialogue with local communities. Any intervention in such circumstances is experimental by necessity, insofar as it is without precedent. Strategies and procedures have to evolve on the basis of continuous feed-back from the field, because they apply to an environment which is in full transition, moving rapidly from an ancient rural way of life towards more urban living conditions. Moreover, no such intervention can rely on a “static” framework of given parameters, since the reference points are constantly changing as part of ongoing worldwide development trends.

The underlying changes in social and cultural paradigms may not always be explicit but constitute important factors in ongoing development trends. Many of the traditional social conventions, which use to hold the community together in the past have been weakened over the last few decades. Meanwhile, modern governance



tools of a much more abstract nature tend to be substituted for them but are far from being absorbed and internalised by local communities, and are hence not fully effective. The current planning effort, then, has had to operate in a sort of ambiguous institutional vacuum. Arising problems could, however, be overcome by drawing on the cooperation, goodwill and insight of the community and its representatives, and this has added a distinctive social quality to the development process.

In such a situation of transition and uncertainty, cultural heritage has a particular role to play, since it can inspire the self-confidence, social coherence and emotional stability needed to achieve cultural continuity. This, however, presupposes that local communities are put into a position to view their tradition with new eyes: Instead of taking it for granted, they need to assess it and to retain what is of value by conscious choice – which may also involve an initial detachment. Occasionally, they may need to free inherited traditions of old, obsolete and even oppressive connotations, in order to reclaim their deeper meaning and to re-activate vital energies from within. Outsiders can often help in this process of reclaiming cultural identity, precisely because they are detached enough to discern and appreciate values, which those still immersed in old practices may tend to overlook when suddenly confronted with radically new lifestyles and attitudes.

To help release consciousness about the deeper values of a local society's own tradition thus appears to be a matter of dialogue; but an abstract, theoretical discourse will hardly be effective, particularly when it comes to the crucial interaction between people and their built environment. Tangible projects are needed which visualise and demonstrate how certain aspects of a contemporary lifestyle can be reconciled with and incorporated into traditional patterns of life. While strict conservation principles may apply to unique landmark buildings, the traditional historic fabric must be allowed to evolve and to assimilate modern technical facilities, such as electricity and sanitation.

To become productive and socially acceptable, conservation must therefore be made an integral part of development, and vice-versa. This deceptively simple statement is at the very heart of the philosophy of the Historic Cities Support Programme and has guided all its interventions since 1992. The restoration of Baltit Fort as a renewed symbol of cultural identity and civic pride served as the springboard for these efforts. It not only brought employment to the area but also helped revive meaningful traditional building techniques which are now being replicated by people in the rehabilitation of their own houses. Saving the old village of Baltit, beneath the Fort, from being abandoned in favour of scattered and unsuitable modern construction in the precious fields and terraced orchards around the village was the next important step. Moving out the cattle from the houses, paving the streets and providing proper sanitation to each house was a negotiated collective rehabilitation effort which directly engaged the local community in terms of both thinking processes and using their own hands. Eventually, the project became a living demonstration of the fact that old cultural traditions and modern technical resources need not be incompatible.

These endeavours have been highly successful and motivated the community to start thinking about strategic development issues, such as planning of roads and public facilities, general land use, the impact of tourism and the preservation of precious cultural and natural assets as a basis for sustainable economic development. Through this very effort, it has been possible to nurture new institutions such as the Karimabad Town Management Society (TMS) and the Karakoram Area Development Organisation (KADO), followed by the Shigar Town Management Society and the Baltistan Cultural Foundation (BCF). The active participation and follow-up provided by these community-based institutions has been and remains essential to the success of the various projects.



Source: based on map "Northern Pakistan" published by Culture Area Foundation Research Project 1998

Without going into any more detail here, it is worth noting that the implemented projects have set in motion a self-propelled rehabilitation process, which will gain momentum with each step forward. Staff training and education of local communities through the very implementation process has been a major factor in its success. Another factor is the continued support by a great number of institutions and individuals who have been involved over the past years. In particular, I would like to thank the partner agencies who have – conceptually and financially – supported this innovative cultural development endeavour. The Norwegian Development Agency (NORAD) contributed significantly to the village rehabilitation projects in Karimabad and Ganish. It also co-financed the restoration of Shigar Fort and was instrumental in setting up a donor coalition for Baltistan. The Japanese Embassy in Islamabad has generously contributed to the rehabilitation programme in Altit and several historic settlements in Baltistan through its Grass-Roots Assistance Programme. The Swiss Development Agency (SDC) was instrumental in

launching handicraft development projects in both Hunza and Baltistan and in nurturing the growth of corresponding local institutions. Financial contributions from the Getty Grant Program towards the conservation of Baltit Fort are gratefully acknowledged. Finally, cooperation with the International Union for the Conservation of Nature (IUCN) under the sponsorship of NORAD resulted in an innovative linkage between natural and cultural heritage inventories.

While direct community involvement was essential for the successful implementation of the various projects described in this publication, support from local government agencies was equally important. Their relevance will increase in the future, particularly regarding legal back-up for the decisions of the Town Management Societies and public-sector investments in infrastructure, schools, hospitals, etc. In this respect, a fruitful cooperation with successive Chief Secretaries of the Northern Areas and the Public Works Department has already been put in place over the past years. Without their continued cooperation and support, many of the presented programme achievements would have been impossible.

Panorama of the Hunza valley (Courtesy of the National Geographic Society).

Map of the Northern Region of Pakistan, with Hunza located north and Baltistan south-east of Gilgit.



THE CONSERVATION OF BALTIT FORT

Richard Hughes, Conservation Engineer



View in 1984 of Baltit Fort in a fragile state, before restoration works began in 1992.

THE ENVIRONMENT

The Hunza Valley, a region within the Northern Areas of Pakistan, close to the border with China, reflects the dramatic terrain of the Karakoram Mountain Range, one of the world's most actively forming landscapes. The Karakoram mountains, created by tectonic forces associated with continental drift, are raised by more than one centimetre each year. At the same time, geomorphological erosion processes continue to take place, making the Indus river one of the world's greatest transporters of stone and sediment. Prone to natural disasters – floods, rock falls, avalanches and land slides – the area also offers spectacular and ever-varying vistas of steep slopes, rugged peaks, snake-like glaciers, and precipitous gorges. Within a radius of 100 kilometres, 32 mountain peaks range in height from 5,500 to 7,500 metres, making this the most rugged area in the world.

Prior to the late 1960s, there was no access to the region, and tracking overland on foot from the villages of Gilgit to Baltit used to take up to four days:

“For nearly half a mile it was necessary to scramble over rocky ledges, sometimes letting oneself down nearly to the water’s edge, then ascending three-to-four hundred feet above the stream, holding on by corners of rocks, working along rocky shelves three-to-four inches wide, and around projecting knobs and corners where no four-footed animal less agile than a wild goat could find a path.” (From J. Biddulph, “Tribes of the Hindu Kush”, Calcutta 1880.)

Habitation in the Karakoram mountains testifies to the endurance of its inhabitants. The entire valley floor is a mountain desert, with only 100 to 200 millimetres of rainfall per year. Granular soils have no organic content and thus support little vegetation except for shrub growth. Originally, the precipitous mountain slopes above 2,000 metres were heavily wooded, but these resources have been long ago depleted for fuel and building materials. The early settlements, nomadic at first, were all set on stable sites near stream waters or not too far above the main valley floor. Expansion to higher and more exposed areas was made possible by bringing water from the nearest glacial streams via channels cut into and traversing the mountain-sides for up to ten kilometres. These contoured water channels are wonderful examples

Left page: Baltit Fort in 1996 after restoration, sits proudly looking out over the Hunza Valley and the upper village of Karimabad.

of local engineering, ensuring until today the survival of the villages by irrigating their terraced fields.

“The villages are in clusters of little stone huts, and in many hamlets there is a tower three storeys high. Most of the huts are diminutive, with rooms only eight or ten feet in diameter, and an entrance door two feet wide and two-and-a-half feet high. In the lower rooms one can barely stand up, but there is a notched pole used as a ladder to an upper room which is less cave-like. Many of the upper rooms are made in wattle, sometimes plastered over with clay. The mosques are of similar construction to the houses, but of more woodwork, large front verandas, and much beautiful ill-finished carving.” (From A. Neve, “Thirty Years in Kashmir”, London 1913.)

THE SITE



Villagers reinforcing the walls of an irrigation channel, which parallels the river below.

Beyond the main gorges of the lower Hunza valley, the landscape suddenly opens into a broad, green valley edged with continuous, mighty, grey scree slopes more than 1,000 metres high and perhaps 15 kilometres across their base. The valley has no single floor, but is a complex arrangement of partly denuded terraces, plateaux, side gorges and slopes of many angles. Yet, most of the distant landscape is green and testifies to the remarkable achievements in farming over the last 1,000 years. Only on the lower flood plains can flat land be found with fields large enough to now be ploughed with a tractor. Everywhere else, the sides of the valley are terraced with minute, meandering fields, all supported by typical rubble walls. Roundish field stones, meticulously graded for size, are carefully located to form the walls. Poplar and willow trees punctuate the landscape and somewhat mask the fields, but introduce a vertical element in contrast to the low contours created by the terrace walls.

Baltit Fort is located at the top of a natural amphitheatre formed by such terraced slopes, and the site was carefully chosen to control water extraction routes from the Ultar water channel (*nullah*) behind. Water discharge from this catchment is fed throughout the district, sustaining agriculture and, in turn, habitation. Today, as always, water is carefully controlled and monitored by appointed village committees. Hereditary rights on water are complex, and have become more so as systems of secondary and tertiary channels have been added to the primary routes and as inheritances have repeatedly divided the surrounding fields into a jigsaw puzzle of ownership.

Baltit village, re-named Karimabad by its inhabitants in honour of the Aga Khan, is a very old settlement, and the size of the Fort which domi-



nates the village grew in response to the expansion and importance of the settlement. The villages of Ganish and Altit, the other two original settlements of Hunza, are said to share a common ancestry with Baltit, resulting from migration into Hunza from Gor, an extremely old village located south of Gilgit, high up in the hills facing Chilas. Ganish village is situated on a plateau on the edge of the main river gorge, surrounded by large, fertile fields, and still today retains very much of its original form. Altit village also developed around a fort, and is built in a commanding position on a white marble bluff 600 to 700 metres above the main river. Yet the focal point of the valley has always been the fort at Baltit.

“In the afternoon we were taken to see the old Palace, which is surely the most impressively situated mediaeval castle in the world. Its three storeys are built entirely of timber (if the building had been of stone it would have been destroyed by earthquakes long ago) and stands on a crag, around the base of which cluster picturesquely the not less ancient wooden houses of the Wazir and other functionaries. Immediately behind the castle is an abyss, the bottom of which cannot be seen however much you crane your neck, and close behind that again rise ice-crowned cliffs

Aerial view of Baltit Fort (before restoration) above the village. The terraced slopes of the steep peak can be seen, as well as the stairway leading to the entrance.

Typical housing clusters with terraced agricultural fields.





Above: Baltit village and the fort pictured in 1934.

Below: Mir Nazim Khan and his retinue in front of the royal dais in 1926. (D.L.R. Lorimer)

and glaciers to a height of 24,000 feet above the sea, second only to those of Rakaposhi in appalling perpendicularity. The woodwork of the castle's interior is black with age, and the balustrades are highly polished by the touch of countless hands; nor is this surprising, for the palace is six hundred years old. On the top floor we found a suite of guest rooms, simply furnished with bright-coloured modern Kotan rugs and chairs locally made and carved. On the walls hang portraits of former Mirs and photographs presented to the Mir by "Sahibs" of his acquaintance. There is also a little collection of clocks, cups and other souvenirs of European friendships, and a few heirlooms such as a richly damascened sword and dagger handed down from Mir to Mir for centuries. But the glory of the Mir's castle is the view from its windows." (From C.P. Skrine, "Chinese Central Asia", Methuen 1925.)

When visited in 1979, Baltit Fort seemed a labyrinth of dark, smelly and dusty rooms. All the roofs were decayed and pierced by holes, renders were full of cracks, and walls were leaning precariously outside of the foundation lines. Yet, the fort had an undeniably unique and distinctive character. The massive structure remained delicately poised atop the soil cliff, and revealed wood construction detailing purposely arranged to better resist earthquakes. The archaeological value of the site and structure was important, yielding strong evidence of a continuous historical past and very little evidence of modernity. More importantly, the building still dominated and controlled contemporary life in Karimabad and Hunza. For the consultant team of Richard Hughes and Didier Lefort, the structure, although in precarious condition, was a masterpiece of craftsmanship, thoroughly adapted to climate and function, and the focus of the village settlement. The team considered it important not only to preserve the fort for posterity, but also for the valuable lessons it might provide for environmentally suitable building technology in general, as well as for building programmes being contemplated in the region.

THE HISTORY OF THE FORT

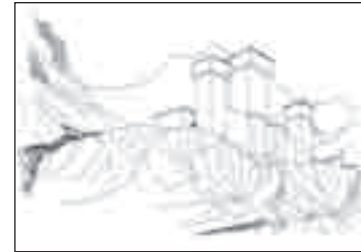
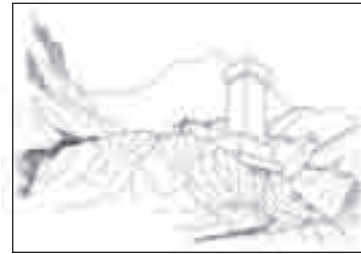
More than 70 phases of construction have been identified by archaeological techniques during the survey and conservation of Baltit Fort. Since one of the earliest phases of Baltit has been dated by Carbon 14 tests to more than 700 years, it is now clear that the present building grew as a response to local and external pressures. The original glacier moraine pinnacle was first settled by one or two single-storey houses, one with an attached defensive tower. This form of house was common throughout the valley, and examples are still to be seen in the Indus valley to the south of Gilgit. Attached to the houses would have been animal pens – an overall cluster configuration much like that still seen

in the historic core of Karimabad village. As a result of many additions, the two properties were merged together, perhaps with tunnel-like passageways between them.

This complex then became the core of a grand Fort that changed several times in response to its growing importance. Baltit was clearly at a vital control point over the water supply out of the Ultar water channel, and no doubt the Fort owner was growing rich from booty obtained by raiding the trading routes between Persia and China some 300 kilometres to the north. As a result, the Fort was transformed several times, adding various towers and then a second storey. Some stages in the development of the Fort can be seen in the illustrations at right, which in turn can be related to details observed within the analysed historic structure. It was probably less than 150 years ago that the present west facade was built – perhaps to replace the rather decayed inner curtain wall or to generate a grander appearance. The external walls in the east side of Baltit are known from late-19th century photographs to have been considerably different – a series of linked walls formed by the rear walls of the earlier houses.

The present front wall overlooking the village thus is a rationalisation undertaken in the early years of the 20th century when the Mir gentrified the whole top floor of the vernacular Fort to transform it into a palace, with many features drawn from British colonial buildings of the Punjab. The first floor level was left much as it had been in the 19th century, and the area for women and the Mir’s bedroom, on the second floor, behind the grand reception rooms, were also maintained in a traditional arrangement. These now constitute some of the finest rooms in the Fort and have been left untouched. Other second floor rooms were modified for the Mir’s private use, with the installation of fireplaces and Western furniture, and the use of wallpapers, curtains, and cement renders. The remodelling also included the introduction of a semi-round royal dais, mud-block walls, coloured glass windows, the Tibetan-style lantern, wood-planked and decorated ceilings, and wall-mounted fireplaces in many of the modernised rooms. Two roof mosques were removed, leaving the last one that has now been fully reinstated. Finally, one major four-storey tower was demolished at the north end of the Fort, as witnessed by a blocked doorway in the present north facade.

The remodelling of Baltit Fort during the early twentieth century was often undertaken without considering the structural system of the lower rooms. For example, it was found during the conservation works that the upper level walls were mis-aligned with regard to those below. While this helped to generate the more spacious rooms where important



*Hypothetical evolution of Baltit Fort, depicting the various building stages and ending with its current condition.
(Diagrams: Richard Hughes.)*



Second floor courtyard with rearside of the Mir's waiting room and access to the roof terrace. On the roof, the Tibetan type lantern of the waiting room and a small prayer hall (see also page 21 and plans on page 27).

international guests could be received and entertained, it resulted in structural deformations. The impressive structure of the Fort as seen today is the end product of all these changes, which had to be respected in the conservation project, even if they were less than 100 years old.

When first inspected, the fort had been empty and not maintained for almost half a century – hence the leaning walls, roof holes and graffiti all over the mud-stained, white-washed renders. Most possessions of monetary value had been long ago transferred to the Mir's present palace, or given away or stolen. Only a variety of faded photographs and a range of local items, all in battered condition, remained within the deserted shell of the fort, providing some charm for the occasional visitors.

If the fragile structure had been permitted to collapse, Hunza clearly would have lost its major landmark and an important part of its cultural identity. The Aga Khan Trust for Culture engaged the team of Hughes and Lefort in 1985 to develop proposals which would save Baltit Fort from further decay, and to formulate an imaginative programme for the full-scale conservation of the complex. Early support for the project had been granted by the Royal Geographical Society as a complement to its 1980 International Karakoram Expedition, and significant additional funding for the early survey, documentary research, and project formulation was provided by the United Nations Development Programme (Pakistan) in 1984. The emphasis was placed upon preservation of the monument, employing high quality conservation technologies known in Europe. Additional importance was given to preserving the timber

Western Elevation



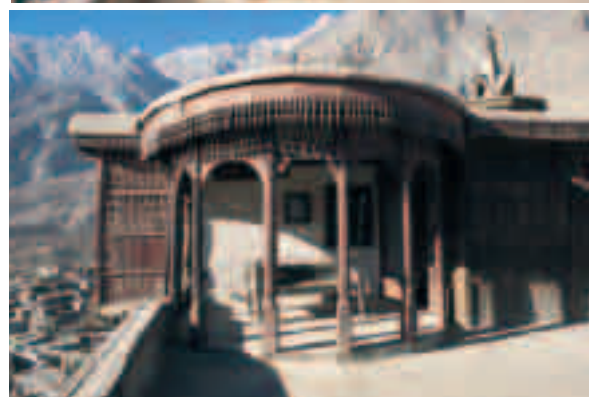
lacing and cribbage work, as a means of demonstrating the value of this unique engineering and construction system in resisting earthquakes and of reviving traditional local skills and crafts.

CONSERVATION PRINCIPLES AND PROCEDURES

Before implementing the conservation plans for the Fort, an appropriate legal mechanism had to be set in place to transfer Baltit Fort from private to public ownership. This was achieved through the creation of a new public foundation, the Baltit Heritage Trust (BHT), which would take responsibility for the fort's future maintenance. The transfer was greatly facilitated by the generosity of the Mir and his family, who had owned the fort for centuries. A preliminary programme for the re-use of the restored fort as a museum was established in consultation with the BHT, which was also given responsibility to secure long-term funding for the fort operation. These objectives were endorsed by the Getty Grant Foundation, which provided additional funding for the conservation of the fort through the BHT in 1991.

The physical conservation of the fort was conceived by the Trust and the consultants to meet several inter-related objectives: through the rigorous application of the highest international standards of conservation throughout all phases of the work, it would serve as a demonstration of excellence not only in the Northern Areas but throughout Pakistan and the region. Training of local personnel in the principles and methods of conservation would establish a pool of qualified professionals capable of undertaking further restoration projects in the future; special research would also stimulate the study and understanding of other important structures in the Northern Areas, and encourage scholarly exchange, dialogue and publication; and finally, the wider range of expertise required to achieve the project would act as a stimulus and provide training in a broad range of sciences, from geology to archaeology, from engineering to timber construction techniques, and from museology to public and community administration.

The conservation of Baltit Fort was planned in stages. To begin with, work was undertaken to determine and then remedy the structural problems around the foundations and load-bearing walls. This reinstatement then allowed for conservation of the architectural fabric and finishes, followed by the insertion of new elements required for the new uses and safety of the existing structure. In practice, the reinstatement phase was often amalgamated with the engineering repairs: for example, while a wall at the south end was still being under-pinned with new foundations,



The royal dais and the projecting balcony added in the early-20th century, before and after restoration.



Above: The scaffolded Baltit Fort during restoration works.

Below: Repairing the terraces and retaining walls below the fort (see page 15) and anchoring them in the slope was a major initial task.



the emergency stairs at the north end were being inserted, and, in the middle, render was being variously patched and white-washed. Some of the early problems faced in the project were due to the hidden nature of most structural defects, which were difficult to assess prior to the actual works. Since this was to be the first conservation project undertaken in the Northern Areas, the project was conceived as a learning process for everyone involved. The remote location of Hunza, and the distance from regional administrative and finance centres in Karachi, and the Trust headquarters in Geneva, added operational complications which had to be overcome.

A site team of young Pakistani architects, most of them from the Northern Areas, was composed under the leadership of the consultants Richard Hughes and Didier Lefort. Because heavy engineering was to be the focus for the first four years of the site programme, a resident structural engineer was also engaged. The site workers were all drawn from the local community. Supplementary training for a number of young architects and engineers was provided through conservation courses in Europe, during the less-active winter months. The Aga Khan Housing Board, with its proven building experience in these areas, took on the responsibility for construction management.

From the inception, it was agreed that if the conservation was to surpass emergency actions to prevent collapse of the fort, the scope of interventions would have to be judged by prevailing international standards. Thus, an important objective was to ensure that the conservation retain the historic character and appearance of the fort. Careful records were kept to document the entire project and the restoration process before, during and after each component of work, and particular attention was paid to record and describe those elements made of non-durable materials. Even the drawing conventions were designed beforehand, and a drawing style more archaeological than architectural was adopted to better reflect the character of the building. Samples of the original materials were taken and preserved to be available for the future study of all walls, floors and ceilings that were examined and repaired. Similar principles were applied to the investigations below ground level, and soil samples and all discovered artefacts were documented and retained as museum resources.

Another guiding principle was to base the restoration of missing features, such as those essential for safety and structural reasons, on sound archaeological evidence. When new elements were required, the modern materials and techniques employed are readily distinguishable, such as in the metal grille floor, for example, or the emergency staircase.

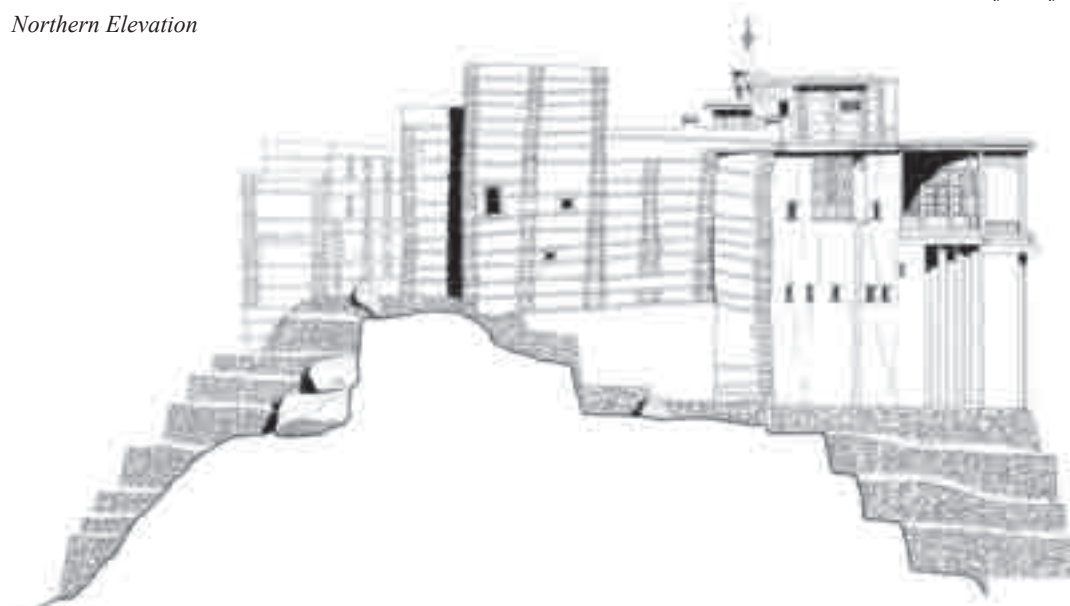
These new elements comprise features of the contemporary history of the building, and have been undertaken in ways sympathetic to the original structure. Modern techniques were used whenever interventions could not be achieved to appropriate levels of safety with traditional technology. Following considerable research, experimentation and design, modern materials were determined necessary for the tie-ropes, soil-reinforcement and stabilisation, and wood preservatives. The utilisation of “Parafil” tie-ropes and “Geo-mesh” soil-reinforcement are the first application of these technologies in historic buildings anywhere in the world. None of these conservation works involved alteration of the original structural system or its proven resistance to earthquakes. If an attempt had been made to make the building stiffer or more flexible, the risk of future damage due to ground movement would have been potentially greater. This is well demonstrated by the southwest tower, which was and still is a free-standing structure, not tied to the rest of the building.

All modern insertions needed for the re-use of the Fort were designed in such a fashion as to permit them to be removed or altered, if necessary, in the future, without damage to the adjacent components of the original fabric. This was readily achieved for most new components, such as the emergency stairs and grille floor, but was not always possible or practical. One example of alternatives adopted was



Restored retaining walls at the foot of the fort.

Northern Elevation





*Stripping the interior of the building
“to the bones” in order to analyse
structural defects.*

the grouting of internal cavities to stabilise the cores of some walls. Another intervention was the installation of a new, suspended floor for the area foreseen as a public library. This scheme permits visitors to view beneath it and inspect the archaeological features discovered during the early engineering works.

No compromise was permitted on the treatment of the west and south facades. Traditionally, these timber and rubble walls had been left exposed, and were later covered with mud render. In about 1900, Mir Mohammed Nazim Khan, perhaps under British influence, had the walls white-washed. The resulting impact, from a distance, of the white-washed facades against the otherwise grey, mountain backdrop became one of the most renowned and cherished aspects of the fort. Some consideration was given to returning these walls to their earlier character, but this would also have required the removal of many other features and was therefore abandoned in favour of the soft, white render seen today.



STRUCTURAL PROBLEMS

Early investigations showed that the most significant defects of the fort resulted from the interaction of the structure with the ground. Some of the defects resulted from siting, since the earliest phases of the building were erected on top of the moraine, where the soils are hard on surface and feature large boulders. Deep foundations were required on slopes where the in-situ soils are loose, and thus the foundations were designed to also act as retaining walls. Similarly, deep foundations were required on areas where fill had been deposited to extend the size of the site, or thrown off the roofs onto the slopes during maintenance. In some instances, ground works did not exist, such as for later additions that were put up as minor extensions, or for rooms built over pre-existing retaining walls of unknown foundation character.

Generally, the original foundations were roughly formed with rubble stone, not put together particularly well, and with longitudinal timber beams (cators) that were placed casually, and not always crafted in a well-carpentered system. For example, most cross pieces were actually bits of irregular logs, occasionally not pegged to the longitudinal cators. The foundations were normally no wider than the walls placed above them, and do not display the use of timber box work (cribbages) that characterises the superstructure. The overall footing system is therefore fairly discontinuous from the walls above. However, the complex system provides some flexibility, therefore accommodating substantial settlement and bridging between extremely soft soils and hard boulders.



Monitoring structural movements during restoration works.

Left page: The original “cage” construction of load-bearing walls, stripped of defective stone and mud infill which is to be replaced. To the left, a more recent layer of the western outer wall, now being tied to the opposite outer wall by a tensile cable.



Right: Diagram of the typical construction of buildings in the Northern Areas, with reinforcing “cribbage” structures in the corners and horizontal “cators” stabilising the walls.



The central first floor arrival lobby of the Baltit Fort before and after restoration. The stairs lead up to the second floor terrace and the royal dais.

It is clear that the early builders understood and appreciated the qualities of the soil and were able to match building loads to soil strengths. Over the centuries, however, the structure of the Fort underwent continuous change, often by the addition of second-storey rooms, or peripheral rooms lower down the more unstable slopes. The overall result was the superimposition of additional loads on foundations designed for single-level structures. The surcharging of some walls was not helped by additional superstructure walls placed eccentrically on the ones below.

The increased load pattern helps to explain the structural deformation which occurred at different times throughout the history of the Fort. Some immediate movement would have occurred at the time of construction, as the foundation soils readjusted and consolidated themselves. The stabilisation of the structure was enhanced by the carotors and cribbage work, which allowed for the redistribution of loads at foundation levels, since the elasticity of the wood resists settlement. The cribbage system ingeniously channels forces away from weak spots to areas where foundations could be more firmly sited, and provides corner rigidity. Along with the square pegs which the cribbage system features, distortion of its square form into a trapezium is made difficult and provides far greater strength than quoin systems in rubble stone walls. The cribbage work, with its system of well-pegged joints, may also have some capacity to act in tension, thereby helping to resist uplift forces induced during earthquakes.

The engineering programme was based on a concept of 13 work stations that divided the fort into structurally independent units. Each station comprised a portion of the main facade and the set of rooms located behind it. At each of the 13 stations, work followed successive steps in a similar agenda: survey, investigation, structural remedy, reinstatement and documentation. Interventions followed a progressive sequence, beginning with temporary and preparatory works followed by treatment of the foundations. The conservation of wooden wall elements then led to structural strengthening, the replacement and/or reinforcement of stone and mud mortar infill, and the treatment of surrounding retaining walls. Finally, the replacement and/or conservation of roofs and floors was followed by the reinstatement of finishes.

Work proceeded on two or more adjacent work stations at the same time. Stabilisation of the south and north ends of the Fort was undertaken before proceeding to the west and east facades, where most of the structural work was anticipated. This sequence also allowed experience to be gained prior to beginning work on the walls that were dramatically out of plumb and temporarily supported to prevent risk of failing. The

concept of work stations also responded to the shortage of scaffolding, which was to be moved as work progressed from station to station.

The greatest problems were presented by the main, west facade, which showed active and old signs of severe tilting and bowing; column supports had already been inserted below the cantilevered verandas in the 1930's and 1940s to resolve some of these problems. For the current work, the complex series of walls which comprise the west facade was first stabilised at the two ends, thereby helping to anchor the middle section where there were most problems. It was already known that the western end of the southern wall had settled by some 40 centimetres. During the works, movement was reactivated as a result of exceptionally heavy rains, and further demonstrated the major faults in these foundations that had been built over very soft soils. However, the southwest tower proved very stable during the rains, indicating that the soil below could support new foundations.

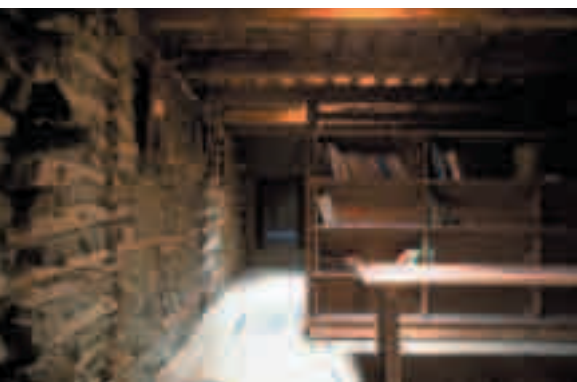
REPAIR WORKS

In 1994, work was resumed to complete restoration of the west facade. The white-washed render, most of which had become detached due to bowing, had to be removed in light of structural failures discovered behind. Since the wall was so thin – less than 40 centimetres thick – it was necessary to passively restrain it with temporary “Parafil” ropes across to the other side of the fort. This permitted excavation of the high ground level in the rooms behind, and the walls (including some at the higher level) were dismantled as necessary and then permanently tied or slightly pushed back, as appropriate. The in-fill of the walls could then be replaced, and the inside ground levels re-established, incorporating “Geo-mesh” reinforcement. This is a high-strength polymer mesh that helps redistribute horizontal loads as vertical forces, thereby relieving lateral pressure on the walls. External and internal renders were only reinstated in 1995, after the building had had time to readjust in response to the new interventions.

The south facade was stabilised by the insertion of new foundations at both ends; the middle section was left to span between the new foundations, easily achieved due to the horizontal timber catwalks. The new foundations are vertical columns of cribbage timber and stone sunk to hard moraine at six metres below ground level. Their construction was difficult and complex, and relied greatly on the courage and dexterity of the workers. The deep excavations required careful reinforcement with struts, since the ground was loose and contained large boulders; the walls above the super-structure walls, many thousands of kilograms



Baltit Fort from the north (back) side, facing the ravine, after restoration was completed.



Above: The defensive guards' gallery running along the western front of the Fort, now part of the exhibition circuit.

Below: The study room and library installed in one of the former guestrooms.

in weight, were temporarily supported on gigantic needle beams and hydraulic jacks, and left suspended while work took place below.

The two southeast towers were found to be pulling away from the main structure, which was not surprising as they turned out to have been built with no foundations at all. The tower walls were also left suspended while new foundations were inserted beneath them, with reinforced concrete bases made as large as possible so that the load could be widely distributed and not, as before, acting only vertically downwards. The walls above were then tied to the main structure so they could effectively act as buttresses. Since four metres of soil were located behind the south facade, the ground level of the rooms behind was lowered, with the intention of inserting “Geo-mesh” soil reinforcement to reduce the potential of bowing. During these works, however, important archaeological features were discovered, and the internal grade was therefore left at the reduced level to permit view of the archaeological remains. A suspended timber floor was provided for the area, which now serves as a library.

The north end of the Fort proved to be more stable, with foundations resting a small depth below ground on hard moraine. Throughout the site works, the existing cracks had moved little more than one millimetre. Therefore, work on the north facade was fabric repair only. Though the timber frame was still sound, the wooden members were somewhat distorted due to exposure, and to the falling-out of stone, in the lower levels, and of mud blocks in the higher level. The insertion of the new emergency staircase provided the opportunity to rectify some of these distortions and to use stabilised soil blocks, especially designed to replicate the originals, since the north facade is a superb demonstration of construction phases and techniques. Limited underpinning was necessary in the two northern corners to provide some extra security to the structure.

While it had been relatively easy to detect localised soil weaknesses as signalled by defects, it was sometimes not possible to rectify the underlying problems, for several reasons. First, some areas of loose soil were very deep, often more than five metres, and excavation to such depths would have jeopardised more stable soils in adjacent areas. Second, drilling holes for grouting for stabilising the foundations was ruled out, since water flush systems would have caused soil settlement, and air flush would possibly have moved around the stones and damaged the drill holes. Third, grouting of a cavity-prone material would have risked surcharging the ground, thereby making the settlement larger, not smaller; it could also have caused bowing in nearby retaining walls as



the grout found its own way downward into uncharted soil conditions. In cases where walls were found to be settling or where soil was particularly loose, one technique employed was to increase foundation widths to stepped strip footings, thereby reducing bearing pressures. Another technique was to span weak areas below the foundations with timber cators, in a fashion similar to placing lintels above window openings. Important interventions were required at foundation level, as many sections of the fort lacked foundations altogether, or those that existed were built on very soft soils composed of loose rubble or straw debris. Considerably more effort was required at the south end of the Fort than had been expected, due to the provision of a modern library and because of the discovery of archaeologically important structures.

The timber cator and cribbage systems were better preserved than first considered. Major decay was only encountered at limited locations – at roof beam ends and just below ground – where rain had consistently penetrated. In most walls, the cators were found to be sound; though somewhat distorted, they were structurally stable under the existing

The uppermost terrace of the restored fort, with the lantern of the Waiting Room, the small prayer hall and the northern defensive tower.



View of the western front side of the restored Baltit Fort, from the steep stone-paved walk-way leading up from the village. The windows and balconies of the early-20th century additions are clearly seen. (For interior views see pages 23 and 29.)

engineering conditions. Although initial estimates forecast replacement of 10% of the structural timbers, replacement of only 2 percent was actually required. Additionally, the soundness of the timbers required a lesser quantity of the imported “Boracol” preservation chemical, and the surplus is now available for long-term maintenance. Considerable restructuring of the west facade had been predicted, due to its severe outward tilt of 1.3 metres. However, these early estimates were later reduced since the cator and cribbage systems provided excellent restraint, and tying the walls with “Parafil” rope allowed them to be kept relatively intact.

The cator system proved to be particularly effective in restraining the lateral pressure of earth-fill located behind outward bowing walls. This condition was encountered particularly in the south and west facades, though surplus fill was partially removed to lessen the lateral loading. One alternative employed was to excavate and replace the earth with fill laminated with geo-textile material. This solution was adopted in cases of structural deformation where it was not possible to strengthen the existing walls with additional cators and cribbage columns.

A major weaknesses of the fort, like most houses in Hunza, was the decay of wooden roof beams and planking and rush roof-covering due to the penetration of rainwater. Engineered for ease of construction and maintenance, rigidity and wall connections were of little concern in roof construction and, not surprisingly, reveal no conception of the potential for roof structures to act as shear plates to resist torsional motion during earthquakes. Considerable research was devoted to improvement of the fort roof coverings, particularly to help prevent rainwater penetration, as well as scuff and damage caused by the shoes of visitors. Although not frequent, rainfall in Hunza can be quite intensive and damaging, since the soils do not contain any clay, a natural cementing agent that impedes water infiltration. Regular maintenance will still be required to ensure the long-term durability of the roof coverings. Replacement of the soil surface on the roofs will be needed at intervals of about five years in order to ensure impermeability.

At the same time that the walls of the second floor were undergoing conservation, teams worked on replacing the numerous roofs. Most were dismantled, and each and every piece of wood was carefully drawn and marked on a large-scale plan, thus permitting reinstatement to the original position and allowing the specification of necessary conservation treatments. The removal of the roofs also facilitated works undertaken on the supporting walls below, and for the amelioration of more effective drainage gradients in the new coverings.

STRUCTURAL MONITORING AND MAINTENANCE

Since 1984, the entire fort has been continuously monitored to determine the extent and location of structural movement. Displacements in the form of visible cracks were measured and monitored for two years prior to the engineering works. In areas where active movement was found, scientific instrumentation was employed for more precise monitoring, allowing movements as small as 0.1 millimetres to be detected on a daily, weekly or monthly basis. For the project team, changes of two-dimensional movement of more than two-to-three millimetres were given priority attention. The instrumentation recorded movement at the location of cracks but, since the fort has a timber frame, the cause of the movement can often be located at some distance from the visible effects, and shifts may result in sudden and abrupt cracks. Later during the works, electrical gauges were installed to identify those locations where increasing strain could cause sudden jolts and thus instantly increase the separations made evident by the cracks.



*Above: The Queen's ("Rani's")
summer courtyard on the
second upper floor.
Below: A detail of the restored
western bay window.*





BALTIT FORT MUSEUM AND CULTURAL CENTRE

Didier Lefort, Architect / Exhibition Designer



Above: Waiting room attached to the Mir's reception room, with the Mir's ceremonial robe on exhibition (after restoration and conversion into a museum).

Left page: The restored former kitchen of the fort, displaying traditional utensils donated by families from Karimabad.

Apart from its importance as an historic monument, Baltit Fort has great cultural and symbolic value for the local community and constitutes a major economic resource for tourism. Re-use of the fort, therefore, had to respond to a variety of concerns: it needed to meet the constraints imposed by architectural conservation; it needed to enhance and promote the cultural values of a living (and evolving) culture; it needed to contribute to the economic opportunities for the residents of the village; and it needed to generate sufficient income to sustain its operation and maintenance costs. Accordingly, the main uses selected for the restored fort were those of a museum and active cultural centre with associated facilities. The fort is expected to act as a focal point for research on local traditions, and as a centre for exchange between international institutions interested in the Northern Areas in need of a base for their field work. The “Hunza Silk Route Festival”, a recent initiative of the Aga Khan Cultural Service (Pakistan) supported by NORAD – the Norwegian bilateral aid agency – will create a framework of activities which will establish direct synergies with the cultural centre at Baltit Fort.

TRANSFORMING A PRIVATE RESIDENCE

Converting a private residence into a public facility always entails functional and architectural problems. This is particularly true in the case of a historic building, and even more so with a structure that has grown as an accretion of narrow houses following the typology of local domestic architecture, with constricted interior passages and low doorways. Installing a museum and cultural centre at Baltit Fort, therefore, required a certain number of difficult decisions and occasional compromises between traditional structures and modern uses. For the purpose of creating viable circuits for visitors, it was necessary to open a few new connecting doors, to add an emergency staircase, and to introduce plumbing and lighting for basic facilities. A small kitchen has also been created in a side room of the former women's quarters, to enable special functions to be held in this attractive space which can accommodate up to 25 persons for concerts of traditional music and similar events. Such functions have been introduced without causing harm to the original structure.

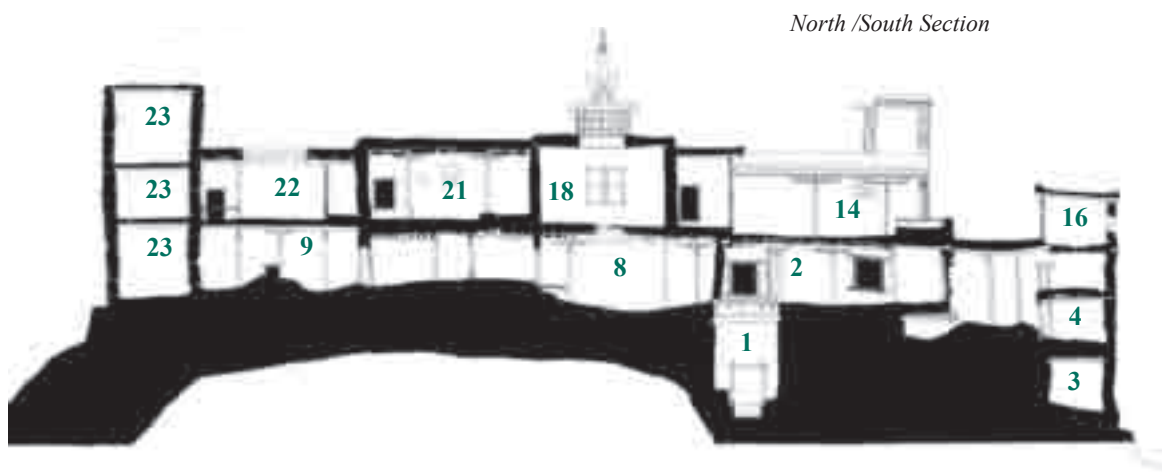
The re-use project was facilitated by the fact that five old houses adjacent to the fort had been acquired by the Aga Khan Foundation to provide

1. Entrance staircase
2. Arrival lobby and grain storage
3. Prison
4. Guards' room and guards' gallery
5. Court room (Office)
6. Guestroom (Library)
7. Kitchen
8. Living room (Audio visual)
9. Queen's apartment
10. Old tower (Emergency staircase)
11. Staircase landing
12. Royal dais
13. Wasir's dais
14. Musician's veranda
15. Armoury
16. Guard room
17. Open terrace
18. Waiting room
19. Mir's drawing room
20. Mir's living room and veranda
21. Mir's bedroom
22. Queen's summer apartment
23. Store rooms
24. Queen's summer bedroom
25. Guest rooms
26. Apartment for newly married couples
27. Living room
28. Toilet

space for ancillary facilities. One of the houses close to the street leading up to the fort has been transformed into a ticket office, another one into a small coffee house with public toilet facilities and the others into store rooms and additional showrooms and workshop facilities. As in the case of the fort itself, these functional changes have been carried out with preference for “minimum intervention”, and with high respect for the historic features of the buildings, which have not been altered in substantial ways.

CREATING A MUSEUM

The planning of the museum and the research facilities in the fort was undertaken with the intention not to overshadow its main architectural features, which themselves constitute the main focus of attention. Thus, the traditional rooms at the lower floor, with their attractive carved timber columns and beams, have been kept as they were, and highlighted by integrated light fixtures. No modern showcases or modern exhibition items were foreseen, except artefacts which relate to the traditional functions of the fort, such as wooden trunks and various utensils. Meanwhile, the more neutral and less decorated rooms, such as those along the defensive gallery between the two subsequent front walls of the fort, are used to exhibit documents relating to the history of the area and the building, including the conservation process of the fort. The gentrified, more palatial rooms on the second floor provide the ideal setting to exhibit what was left of the private collections of the Mir. Special features are some of the old carpets used in the fort (partly of Kashgar origin), furniture, ceremonial robes, and weapons, all placed in their original context.



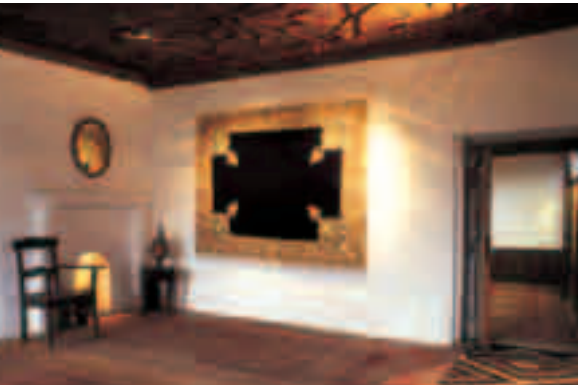
Second Floor



First Floor



Plans of the two upper floors of Baltit Fort, as well as north/south section (left page). The legend on the left page mentions the traditional room functions, with new uses mentioned in brackets.



Above: Former reception room of the Mir, with ceremonial embroidery on the wall.

Below: Former Queen's ("Rani's") apartment on the first floor, now exhibition space for traditional timber furniture and utensils.

Wherever possible, existing niches and shelves have been adapted for exhibition purposes, complemented by a number of newly designed showcases providing security and good lighting. The massive timber frames of the new showcases respond to the predominance of wooden elements in the structure of the fort.

An important part of the collection, particularly the vernacular artefacts of daily use such as stone vessels, wooden utensils, metal work, furniture items and clothing, were donated by the residents of Karimabad, following an appeal launched in fall 1994. Other items have been purchased from the local bazaar or from individual owners, with the help of grants provided by NORAD. The present collection (partly on exhibit, and partly stored for research purposes) is intended to grow over time, and to include significant specimens of local arts and crafts as well as typical imported artefacts relevant to the local customs. However, the cultural centre not only preserves and exhibits items of the traditional crafts but also endeavours to revive and promote these crafts in order to foster cultural continuity and to create new development opportunities for local crafts persons. A new initiative in this domain was begun



in spring 1995 by the Aga Khan Cultural Service (Pakistan) and the Karakorum Handicraft Development Centre, with support from the Swiss Agency for Development and Co-operation. Products of this craft promotion project are exhibited in the rooms surrounding the upper terrace of the restored fort.

The main rooms of the cultural centre have been accommodated on the first floor, around the small courtyard which is reached by the stairway leading up from the main entrance. A traditional living-room (*ha*) with a covered-up roof opening serves for audio-visual presentations, while on the other side of the courtyard, on the southern end of the building, a library and study centre have been accommodated, with their floors suspended above the excavated archaeological areas of the fort. The library contains a basic stock of publications relevant to Hunza and the fort, and is expected to become a study centre and field base for national and international research missions, to be supported by a number of international academic institutions. Establishing a guesthouse for researchers from overseas in a traditional house not far from the fort is also being considered.



The “colonial” living room of the Mir (early-20th century) with projecting bay-window, attached to the much older bedroom (below), which uses the shape of a traditional Hunza house.





STEERING THE TRANSFORMATION OF THE PHYSICAL ENVIRONMENT IN HUNZA

Masood Khan, Planning Consultant



*The terraced village of Baltit/
Karimabad from above, with house
repair in the foreground.*

The restoration of historic landmark buildings such as Baltit Fort has greatly increased the attraction of Hunza and Baltistan for tourism, while lending local culture a renewed legitimacy in the face of powerful factors of change introduced over the past few decades. From the inception of AKTC's restoration activities, it was recognised that the new economic forces associated with development and tourism, if not properly controlled, could spoil the impressive natural setting and the cultural heritage, which are the Northern Area's major resource base in this new context. Economic progress and well-being are to a certain extent dependent on preserving the outstanding environmental qualities of the valleys. Development therefore needs to be guided in order to sustain these essential assets. Over the past years, the Historic Cities Support Programme, through the Aga Khan Cultural Service-Pakistan (AKCS-P), has initiated a broad community-based effort to achieve these objectives. In Hunza, this initiative began in the Karimabad and Ganish areas, and was then followed up in Altit. In Baltistan, it started with Shigar village, and is being replicated in other valleys such as Khaplu. The following description of these initiatives gives some emphasis to Karimabad, as the ground-breaking and most extensive attempt at community-based planning and conservation undertaken by AKTC.

KARIMABAD: A CONTEXT OF RAPID SOCIAL AND ECONOMIC CHANGE

Until the late-nineteenth century, Baltit – the old name for Karimabad – was a tightly clustered fortified settlement surmounted by the Fort. What remains of the clusters of houses, huddled together at the foot of the Fort, are the two ancient villages of Diramishal and Khurukshal, named after the Diramiting and the Khurukutz, two of the four ancient tribes of Baltit. These villages were bound in dependence and servitude to the power of the ruler in the palace Fort.

As late as the mid-twentieth century, the Northern Area was one of the most isolated of the world's populated regions. In the early 1960's came the first winds of change: the old pony track linking Gilgit to Karimabad was widened to enable access by jeep, and, at the urging of His Highness the Aga Khan, the young men of Hunza began to join the Pakistani army. As serving or retired personnel of the army, they returned with education, and with technical and organisational skills.

*Left page: View of Karimabad
and Rakaposhi mountain from the
balcony of Baltit Fort.*



Above: The main street in lower Karimabad which now serves as a bazaar.

Below: Plan of Karimabad identifying architectural and scenic assets to be preserved.

They brought back to these isolated valleys their experience of a different modern world and a transformed consciousness.

The changes affecting the region and its people began to intensify after the Karakoram Highway (KKH) linking western China with Islamabad was opened to the public in 1972. In 1974, the state of Hunza was dissolved by the Government of Pakistan. With the opening of the KKH to foreign tourists in 1979, the influx of foreign money began to change local occupation and employment patterns in radical ways, and agriculture-related earnings began to give way to income generated from the increasing tourist trade. Further impetus was added by the commencement of the activities of the Aga Khan Rural Support Programme (AKRSP) in 1979, and the creation of the Village Organisations to foster collective savings and launch income-generating economic activities. As a result, conditions have changed from subsistence agriculture to a vibrant cash economy which, though still predominantly agricultural, owed its dynamism to international tourism.





The new trades and occupations now supported by tourism include retail commerce, hotels and restaurants, tour guides and tour agents, and transportation of tourists in all-terrain vehicles and mini-buses. A significant number of people are also employed in administrative government work and other tertiary sector activities. As agricultural income has decreased in relation to other forms of earnings, fewer people in agricultural occupations would like to continue with them, and the use of land for agriculture has become an increasingly lower priority. Since all the new activities require new buildings and infrastructure, agricultural land becomes vulnerable to building construction. Without adequate institutional resources and technical skills, these building projects tend to be badly located, designed and built, resulting in a threat to the scenic environment. This already may have had serious repercussions on the sustainability of the new prosperity brought to the population by tourism.

The bowl of Karimabad, with the Fort and the village in the background, and the terraced fields in the foreground.



Partially collapsed traditional housing structures were typical of early conditions found in Karimabad.

ENABLING THE COMMUNITY TO MANAGE ITS PHYSICAL ENVIRONMENT

Karimabad's change from a secluded rural system into a semi-urban agglomeration is typical of the development process which, in various degrees, is affecting most traditional villages in the Northern Areas. It involves problems of infrastructure, traffic, commercial activities and new construction modes, all of which can have a considerable impact on the physical environment.

With the aim of encouraging development that would steer Karimabad away from the potentially negative aspects of such transformations, an analysis of the current situation was initiated by the Historic Cities Support Programme and its consultants in 1992. Implemented with the help of a local technical cell of AKCS-P, it involved thorough discussions with the community about the consequences of present trends and desirable corrections. Eventually, a Conceptual Development Plan was worked out to provide a strategic framework for the orderly physical growth and development of Karimabad, and for the maintenance of its environmental and cultural assets.

The multi-faceted planning process had a number of corollary objectives: first, the establishment of a local institutional base, representative of the community and sufficiently independent to develop its own practices and priorities in response to local problems; second, the conservation of the traditional settlements and their architectural heritage, together with the protection of the scenic environment; third, a more conscious management of land-use, based on creating a balance between tourism-related economic activities and traditional occupational patterns and on enabling the benefits gained from tourism to support less profitable activities; fourth, slowing down adverse trends in home construction arising from the changing social and economic conditions by means of re-valourising traditional settlements and planning for the growth of new settlements either adjacent to existing villages or on new sites agreed within the planned land-use framework; and, finally, establishing an adequate road and service infrastructure base to provide the necessary incentives for appropriate land-use patterns to support a well-functioning civic economy and a healthy community.

Although the plan for Karimabad, as first conceived in 1995, is still not enforceable by law, it has increased the awareness of people about the issues at stake and helped forge a consensus on fundamental choices for ongoing and future development. Through the activity of discussing and modifying land-use details by the directly concerned territorial

and social units (the tribal councils and the Village Organisations), the development of the plan has given birth to a participatory development process. The grass-roots approach was instrumental in mobilising people's commitment to Karimabad's cultural and scenic resources and ensuring that conflicts arising from strategic long-term development options could be discussed and resolved internally, within the concerned social units themselves. Through these discussions, it became clear that it was necessary to sustain continued access of all segments of the population to shared natural resources and their economic potential, with a particular eye to the equitable distribution of economic benefits gained from the tourism industry. A community-based institution was required, which would represent the nascent urban identity of Karimabad, provide an overarching platform for consensus-building, as well as monitor collective development projects.

For this purpose, a Town Management Society (TMS) was formed in the early stage of the project and registered under the Social Welfare Societies' Law. The TMS equivalent to a non-governmental municipality, as it were, and has evolved from a group of nominees representing the pre-existing institutional "building blocks" of Karimabad: leaders of the Shi'a Imami Ismaili religious institutions, the chairperson of the Union Council (the rural local government entity), the representative of Hunza in the Northern Area Council, delegates of the Village Organisations and local notables such as the former Mir of Hunza. With the inclusion of the "numbardars", the leaders of the five tribal constituencies of Karimabad, the Town Management Society is now highly representative of the local community, once led by the Mir of Hunza.

For the time being, AKCS-P still provides technical assistance to the TMS through its team of architects, engineers and social organisers, ranging in professional backgrounds from rural community development to experience gained at the restoration project of the Baltit Fort. Backed by Pakistani and expatriate consultants, AKCS-P is also engaged in cooperation with residents of the community (including occasional design assistance to individual house owners) and has acted as a facilitator, implementing rehabilitation projects financed by the Aga Khan Trust for Culture and by other donors. Its main task is to promote and sustain the strategic policies contained in the Conceptual Development Plan, through patient day-to-day monitoring and through concrete projects, always in conjunction with the governance role performed by the Town Management Society. The technical support role of AKCS-P is likely to continue in the short-to-medium term, and will enable the establishment of a local technical support cell dedicated to the local municipality or the TMS.



A traditional alleyway with ladders providing access to houses in old Karimabad.



Traditional rural landscape on the periphery of Karimabad, with irrigation channel and narrow, steep pathways meandering between stone wall enclosures. To the right a shaded resting place (“baldi”).

The Town Management Society is now developing its procedures for building applications, in co-ordination with the local government institutions. The Northern Areas administration has encouraged the activities of the TMS and promised institutional support for the land-use principles embodied in the Conceptual Development Plan. Important steps have also been undertaken to generate income to the TMS with the help of supportive donors (particularly NORAD), who helped acquire strategic land plots in the bazaar area on behalf of TMS. Furthermore, a “stone and gravel bank” and a wood workshop were set up in order to produce more affordable traditional building material for local house owners. The income from these initiatives, as well as the service charge for donor-financed infrastructure provision (see below) now enables the TMS to have its own “municipal” budget and to employ its own staff.

The establishment of the TMS happened in a local government context which was lacking the ability to respond to the urbanisation trends discussed above. Under the Northern Areas Local Government Act, municipal councils have been created in only a few large towns, such as Gilgit, Skardu, Khapulo and Chilas, which are ruled by a District Commissioner. Areas like Karimabad have not been considered as meeting a population size criterion that would classify them as urban communities. The village councils or union councils established under the local government law did not have any power to carry out land-use planning or prepare development projects. Still, the TMS has continued to strive for government recognition of the Conceptual Development Plan and to have enforcing powers legislated. As this effort has begun to bear fruit more recently, the TMS is likely to move away from its quasi-municipal functions to an oversight and monitoring role as a civil society agency. This has come about with the increasing likelihood that the government will finally agree to create a municipal council, a Town Committee, in Karimabad. The Town Committee, created under the Local Government laws, would then be able to enforce the land-use components of the Conceptual Development Plan.

The TMS and AKCS-P are expected to participate intensively in the modalities of the conversion of the development plan into a “master plan” as ordained in the Local Government Act. However, a number of areas of TMS concern which are not mandated under the local government laws would continue to engage its attention. Among these are its functions as a social welfare organisation, which would continue to play a strategy-building role in relation to the conservation of the cultural landscape and the built heritage, and in relation to the difficult balance between traditional economic activities and those occasioned by external factors such as tourism.

PROTECTION OF CULTURAL AND SCENIC ASSETS

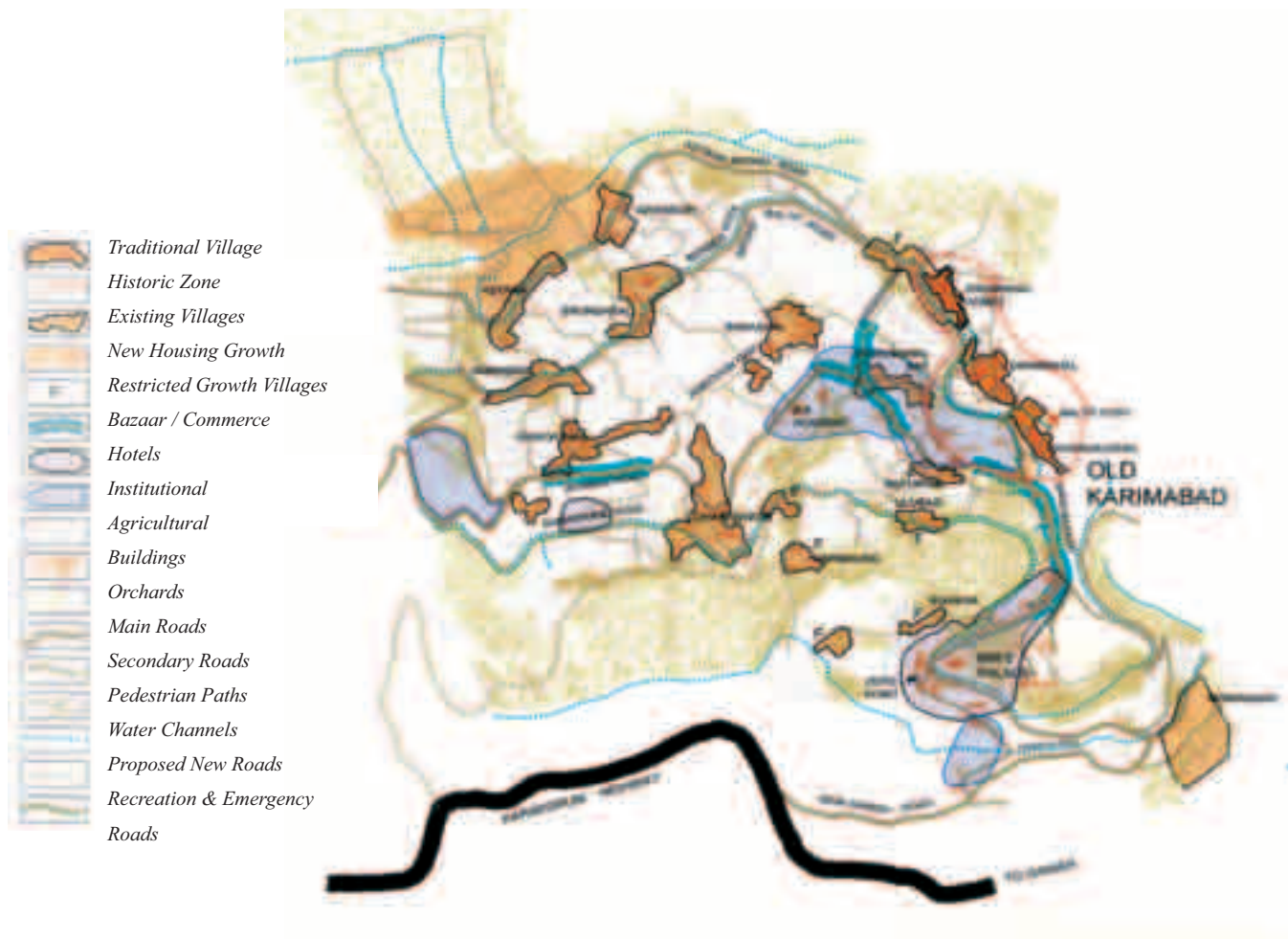
One of the first actions taken as part of the planning process was the identification of those elements of Karimabad that are of special scenic and cultural value. A conservation area was delimited, to include the historic villages of Khurukshal and Diramishal, an extension of Diramishal called Domet, the old orchards in the immediate vicinity of the historic villages and the Polo Ground. Outside this zone, individual spots were earmarked as places of special environmental, social or cultural significance. The most important scenic viewpoints were also identified, as well as a list of architecturally or historically important buildings and open spaces within and outside the contiguous conservation area.

Acknowledging the limited value and viability of legal constraints, a range of strategies and mechanisms has been adopted to preserve the



Above: Traditional contrast between dense settlement clusters and agricultural landscape or orchards.

Below: Conceptual Development Plan for Karimabad.





Improvements of public open spaces in Karimabad. Above: A stepped pathway and small square in the residential area.

Below: The former “himaltar” (gateway) to the fortified village, after stone paving of the streets.

traditional character of the landscape and the environment of Karimabad. These are tied to certain collectively agreed-upon land-use principles defining the future development of housing and infrastructure, and will be sustained by medium- to long-term fiscal and economic policies that make agricultural activities more competitive with respect to tourism. Apart from the current practice of dialogue and conflict resolution with the village organisation, recourse is taken to regulatory tools (such as specific planning and design guidelines), supported by appropriate incentives. At the level of the historic zone, incentives for the conservation of individual houses have been issued in the form of soft loans and small grants, combined with technical guidelines to be followed. The provision of sanitation infrastructure, the rehabilitation of streets and public open spaces, and the conservation of individual places, buildings, and building elements of special architectural and cultural value have provided further impetus for the rehabilitation of the historic area as a whole, and spurred collateral private efforts.

Special consideration is being given to the conservation of public open spaces, as they are not only characteristic the environmental qualities



of Karimabad, but also valuable in terms of places of social interaction and collective identity. Projects have included the improvement of the Polo Ground, the stone paving of the access way to the Fort as the main pedestrian spine of Karimabad, as well as the enhancement of special nodes and places of gathering, such as the central jamatkhana and the *himaltar*, the site of the former main entrance gate to Baltit. A similar treatment is to be accorded to zones of special sensory and aesthetic character in the built environment outside the historic zone, such as other villages which are now over a hundred years old, the walk along the Samarkand water channel, and points which offer spectacular views of distant natural landscapes. These points and areas are to be upgraded through modest but sensitively designed interventions.

LAND-USE, INFRASTRUCTURE AND ROAD PLANNING

Establishing a consistent land-use concept in cooperation with individual and collective land-holders is critical to the achievement of harmonious long-term development in rapidly urbanising rural areas. The land-use plan for Karimabad has evolved in a series of cycles, moving from more aggregate ways of strategising at the level of the Town Management Society to consensus-building among the directly concerned tribes, villages and land owners. Discussions on land-use issues have raised community awareness with regard to suitable and conscious development strategies, as well as the protection of natural, cultural and architectural assets. They also helped articulate the conflicts resulting from economic inequities related to the two main alternatives of land exploitation, i.e., using land for agricultural activities, or using it as a commodity for tourism-related facilities. The resolution of such conflicts is seen as an internal community matter, and while AKCS-P can offer technical advice, it has not interfered in the decision-making.

Through the community-based negotiation process, several objectives have been achieved: firstly, certain decision-making competencies have moved from the Town Management Society to the subsidiary level of the Village Organisations, especially concerning the identification of buildable land and the future management of collective territories; secondly, issues relating to contained residential development have been articulated and first schemes for new clustered compounds have been developed through an intense planning and design dialogue; and, thirdly, owners of agricultural land who contribute to the scenic landscapes in important ways now see themselves in a more positive engagement with land-use issues, as new compensation mechanisms



Street paving with integrated sewerage systems has enhanced the living conditions of Karimabad. In the background, a restored watchtower.



A rehabilitated village section in upper Karimabad, with a view of Baltit Fort in the background.

for better distribution of the surpluses created in the tourist industry are discussed within the Village Organisations and the tribal councils. In regard to the land-use plan for Karimabad, this latest round of grass-roots discussions has also witnessed a few instances of individual violations, and there is a growing need for the Plan's validation as a planning instrument under the local government law. With the latter undergoing radical reformulation throughout Pakistan, the Land Use Plan of Karimabad has acquired a pivotal importance as an exemplar of consensual planning in rapidly transforming rural communities.

Anchoring the plan in the social and territorial realities and seeking endorsement from the concerned communities are essential to ensure its successful implementation. Further momentum towards the materialisation of the plan principles is expected from a co-ordinated set of incentives, such as exclusive provision of feeder roads and infrastructure connections to the areas demarcated in the plan. Controlled road construction and infrastructure investments are, thus, essential tools to help implement the plan. Institutional back-up under the local government legislation, in the form of new procedures and building applications never before used in the Northern Areas, should provide additional support in due time.

Vehicular access is critical to the viability of historic districts, but can also be detrimental to their environmental quality if not sufficiently controlled. Karimabad is no exception to this rule. At the beginning of the planning process, a major issue faced by the community was the impending construction of a new road through one of the historic settlements near the Fort, linking the newer villages on the western side of the valley directly with the bazaar road. This project would have destroyed nearly half of the Khurukshal village, and would have encouraged the bazaar to grow into the heart of the historic area, compromising its qualities as a quiet residential neighbourhood.

By proposing an alternate road alignment around the historic core, the planning team eventually succeeded in averting this threat. Further advantages were obtained by making the new road part of a larger planning framework, which will eventually provide a second access from the Karakoram Highway at the bottom of the valley. The new road will also serve as a market-access road for the farms and orchards in a part of the valley not yet accessible to vehicles. Through the link with the KKH, it will constitute an alternate access point to the village from the other side of Karimabad and thus help alleviate development pressures in the present bazaar district, where all the tourist hotels and most commercial facilities are currently located.

The new bypass around the historic core, completed in 1996 with the assistance of the Northern Areas Public Works Department, was the fruit of a participatory planning process and represents the first step of a comprehensive network of major roads that will condition the future physical structure of Karimabad. Small feeder access roads from the main road network will provide vehicle and infrastructure access to residential neighbourhoods, and access of agricultural machinery to the farming terraces. Provision of vehicular accessibility is closely tied to the land-use strategy for the valley, which encourages certain functions to be developed in specific locations, and defines areas where no construction activity should take place in the foreseeable future.

After being exposed to modern ways of life, the need for sanitary sewerage and proper street pavement has been keenly felt by the community. Initially, as local people saw water-borne disposal systems set up by the local hotels in operation, they tended to emulate them by setting up crude cesspits for individual homes – an impractical and inefficient way of solving the problem on a collective scale. A comprehensive sanitation project for Karimabad, based on water-borne disposal and anaerobic treatment, was therefore proposed in 1994. The first and second phases of this project, supported by NORAD, were completed in 1996, with priority given to the conservation zone, including the historical settlements and the Baltit Fort area, several other villages, and the bazaar and hotel area. In 2003, the third phase of Karimabad's sanitary sewerage project was completed by the Town Management Society, with financial assistance from the Government of Japan, and technical assistance by AKCS-P. It provides sanitation to the remainder of the town and helps direct future, more compact urbanisation. In these projects, large even by the standards of government-run projects, voluntary labour and management inputs were provided by the community. TMS also negotiated a development/connection charge to be levied on each household, and a room charge levied on hotels.

REHABILITATION OF THE HISTORIC NUCLEUS OF KARIMABAD

As work began on the conservation of Baltit Fort, the traditional settlements at the foot of the Fort were being abandoned by the citizens, mostly because of the prevailing unsanitary living conditions and the inadequacy of the houses to support modern life. The consequence of this process was the building of new houses in open farm land, where a family could create separate stables for its animals and supply itself with rudimentary sanitary waste disposal by digging cesspits. This often resulted in contaminated water percolating through the hillsides and



*Community participation:
Digging channels into the steep,
rocky slopes of Karimabad for the
underground sanitation system
and preparing stones for house
rehabilitation projects.*



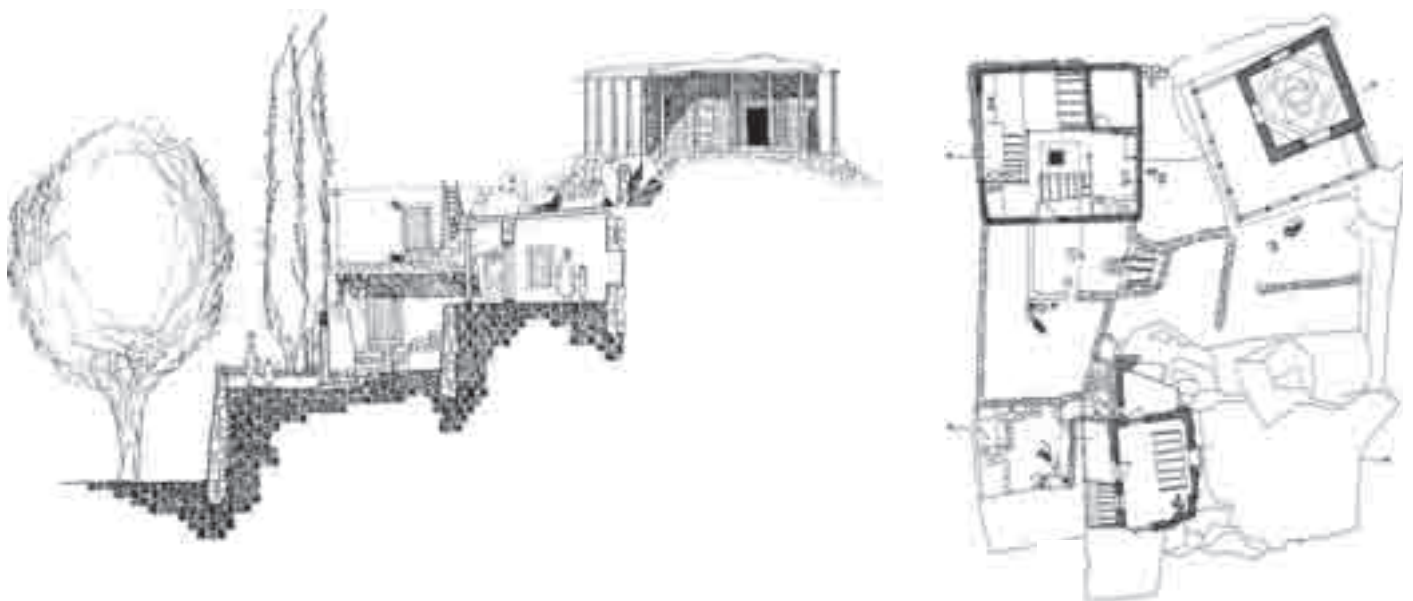
affecting open fields and other houses. Moreover, the hillside surrounding the “bowl” of Karimabad was being dotted with new construction, at the cost of the verdant farming terraces and centuries-old orchards.

One of the first planning interventions was, therefore, to enhance the value of the historic settlements and to demonstrate that they can sustain life at contemporary standards. The rehabilitation and remodelling of a first house in one of the two ancestral villages was acclaimed by the villagers and quickly grew into the Pilot Rehabilitation and Sanitation Project covering a portion of the Khurukshal village. Active community participation was provided by residents in terms of unskilled labour and local materials.



The stepped alleyways of Karimabad after completion of the integrated sanitation, stone pavement and housing rehabilitation project.

Originally designed for 20 houses, the Khurukshal pilot project eventually catered to a total of 31 houses, of which 11 houses have undergone major additions, alterations or reconstruction as a result of the new outlook generated by the project. Parallel house repairs by the people have been closely monitored by AKCS-P with respect to the use of appropriate materials and building techniques, and earthquake-resistant construction techniques have been promoted. The project foresaw the provision of sanitary sewerage in a difficult mountain terrain. Flushing toilets were connected to an anaerobic treatment tank and a soakage pit, pending the connection with the main server line. In addition, the project included the improvement of house exteriors, the stone paving of village lanes and culs-de-sac, and the creation of public open spaces in the village.





The Khurukshal pilot initiative succeeded in turning the attitudes of the people of Karimabad around, and the old settlements which were on the verge of being totally abandoned began to attract people back. This relatively small intervention in a part of one of the historic villages resulted in multiplier effects involving the entire population and spreading beyond the limits of Karimabad. It created a new attitude towards the local environment, and has thereby nearly stopped the demolition of old houses and the random construction of new houses in the scenic farming terraces further down in the valley. Together with establishing new standards of health and hygiene, it has revived sound traditional building techniques as experimented in the Fort restoration.

Above: Design for compact new residential clusters using traditional design elements.

Below: Pilot project in Shinokshal for new house construction in traditional stone masonry.

Left page: Plan and section of a traditional housing cluster in Karimabad, including a small historic mosque.

COMPACT RESIDENTIAL DEVELOPMENT OUTSIDE THE HISTORIC AREA OF BALTIT

The revalorisation of traditional settlement patterns helped neutralise the dangerous trend of building isolated houses on farming terraces, and has aided the community to understand the need for clearly defined, self-contained built-up areas, protecting the orchards and agricultural terraces from haphazard urban sprawl. The rationale for such development policies draws on three inter-related arguments: firstly, only a well-planned and concise new development will allow for cost-efficient provision of infrastructure, such as roads, water supply, a sanitation system and electricity; secondly, securing the landscape and the environmental quality of Karimabad will help protect the population's major economic assets; and thirdly, conceiving the growth of Karimabad in the form of a number of villages will allow precious traditions to be continued hand-in-hand with the introduction of modern amenities.

The physical development of new housing projects will follow a two-pronged approach, involving, on one hand, the growth of existing





villages, and, on the other hand, the planning and construction of new housing clusters. In the case of existing settlements, possible extensions have been identified with a ten-year perspective in mind. Where this process has been initiated, the limits of growth of each such village are being demarcated through negotiation with the affected land owners, and the demarcated areas are subjected to a physical development plan conforming to standards of density, building types, and architectural guidelines. The pilot project in Shinokshal was the first demonstration of this approach. It draws strongly upon a design manual for new houses prepared by AKCS-P in cooperation with faculty and students from the Aga Khan Program for Islamic Architecture at the Massachusetts Institute for Technology. Apart from social and cultural factors, this research also considered earthquake resistance and simple ways to improve thermic isolation.

In the case of new, separate housing clusters, suitable new development areas were selected through a dialogue between the Town Management Society, AKCS-P and those Village Organisations which wanted to create new opportunities for their members or preferred not to extend their existing village clusters. Assistance for preparing appropriate plans for layout, plot sub-divisions, alignment of access roads and allocation of public facilities, collective open spaces, and shops and guest houses has been provided by AKCS-P.



PROJECT REPLICATION IN THE VILLAGES OF ALTIT AND GANISH

HCSP's community-based village planning and rehabilitation efforts in Karimabad, as described above, have had an effect far beyond their immediate area of application. Other villages in the area, such as Altit and Ganish, realised the positive change achieved and requested similar type of assistance from AKCS-P and its donors, in particular NORAD and the Japanese Embassy. This concept replication was facilitated by a number of factors: first, the Karimabad projects were instrumental in determining and detailing the procedures of interaction between AKCS-P and the local community; second, the new demand, based on the convincing visual demonstration effect, created a "competitive" situation, in which each village was bound to increase its own stake and participation; and third, the training effect achieved in Karimabad, both with respect to the local AKCS-P staff and to local labour, made new projects more efficient and less cost-intensive.

Above: View of the historic village of Altit, seen from the fort above it.

Below: Interior of a typical Hunza house.

In the village of Altit, the nearby twin community of Baltit/Karimabad located at the foot of the 900-year-old Altit Fort, AKCS-P was in a

position to pro-actively pre-empt the socio-economic consequences to be expected from a tourism boom related to the conservation of the Fort. In an inversion of the sequence, village rehabilitation has preceded the intervention on the Fort, to ensure that the right community planning procedures were in place early on. Fostering collective decision-making through arbitrating mechanisms such as the TMS was thus given priority over the conservation of the principal monument. This meant a longer preparatory period for rehabilitation, and time to set in place community awareness that would generate better adjustments to negative external pressures, while giving new heritage related values the chance to take root more firmly.

As a result, all the interventions in the Altit village planning have taken place under a citizen-managed land-use programme, prior to the monument conservation project, which is to gather pace in 2005 and the following years. A very interesting aspect of this work is the topographic surveys carried out by young women of Altit and its surrounding villages who were trained by the AKCS-P in plane-table surveying and



Above: Informal meeting of the Altit TMS on the rock of Altit Fort.

Below: View of Altit Fort on the vertical cliff above the Hunza river, with the village settlement on the other side.



**Altit Village
Historic Area
Existing Land Use**

- Historic
- Residential
- Commercial
- Industrial
- Public
- Open Space
- Water
- Forest
- Wetland
- Highway
- Utility
- Other
- Unimproved Area 1
- Unimproved Area 2
- Other Use



Plan of the historic village of Altit and its surroundings. Much of the former Polo Ground space has been used for construction of new public buildings.

computer digitisation. The physical interventions implemented so far under this programme include the rehabilitation of historic Altit and its water pond, with sanitary sewerage and waste disposal, street paving, and building renewal and replacement. The land-use regulation process is still ongoing with several important decisions as to the location of the principal tourist-related commercial precinct still to be resolved. The conservation project for Altit Fort and the village will be the last step in this series of interventions.

GANISH HISTORIC VILLAGE REHABILITATION

According to oral tradition, the settlement of Ganish already existed in the mid-fifteenth century when the Burushaski-speaking sub-regions of Hunza and Nagar were under the kingdom of Gilgit. Ganish was recognised for its strategic location on the branch of the Silk Route leading out of the Karakoram into Uighur China (*Xinjiang*), but has now suffered from its location on the Karakoram Highway.

What is left of the old village of Ganish today comprises about 32 houses all built in the traditional Hunza manner. The houses are clustered tightly within their perimeter walls, forming a solid enclosure. The ancient entrance gate (*himaltar*) of the village looks on to the ancestral village water pond/reservoir (*pharee*), shaded by a giant old chinar and willow trees. Watchtowers (*shikaris*) punctuate the perimeter of the village. But of a total of eleven shikaris that are said to have surrounded the village, only three remain.

The place for religious congregation (*imambargah/matamsara*), which was built in 1922 (and rehabilitated and enlarged in 2002), is located on one side of the pond, at the end of the old Polo Ground (*shabaran*). Before the KKH was built, the Polo Ground stretched 120 metres north from the pond. Today it is cut into two by the KKH. The boys' school was built at one end of it, across the highway, while on the other end, close to the village, is the elementary girls' school associated with the *imambargah*. The space of the old Polo Ground is now also the principal means of access from the road into the village. The formal entrance gate at the end of the community pond leads to an inner system of tiny lanes, which in turn lead to the individual houses. The principal lane provides access to the common public and ceremonial space of the village (*jataq*).

Of the seven wooden mosques of considerable age in Ganish, four are located around the *jataq*. They are excellent examples of the family mosques that are typical for the region, representing traditional



The rehabilitated main spine of Altit village leading up to the Fort, after introducing new sanitation lines and stone pavements.



The ceremonial space (“jataq”) of Ganish during a public meeting after the restoration of the adjacent small family mosques.

wooden architecture and architectural decoration and ornament at its best. Together, they form an ensemble of great distinction. The village elders were conscious of the assets of their village. They knew of its ancient past, and had a notion of the value of its heritage. This was an authentic traditional village untouched by bad repair or alterations and endowed with a rich admixture of traditional urban spaces, defensive structures, and religious and residential architecture of considerable artistic value. With magnificent views of surrounding mountains, the village was, potentially, a major attraction for visitors.

Public celebration at the gateway (“himaltar”) of Altit after completion of the village rehabilitation project.



The Ganish rehabilitation project was driven by community demand and the community contributed about twenty per cent of the cost of the project in the form of unskilled volunteer labour and substantive management inputs. The most urgent request was a sanitary sewerage system. Although government departments had already provided a modicum of clean-water supply, there was no proper drainage of the waste water. As a result, a trend towards building new houses with private bathrooms and toilets in farmland outside the village had started, and the old village had been increasingly abandoned, leaving behind the poorest of its inhabitants. The village was no longer a clean and happy place to be.

Apart from seeking sanitary sewerage for the village, the elders were also interested in the rehabilitation of the ancestral water pond (*pharee*), which had been used for generations for the supply of water for washing

and bathing. Even though tap water was now available, the settlement lacked bathrooms and toilets. The villagers were still partly using the ancient open pond for purposes of personal hygiene and ritual cleanliness. With the anticipated sewerage system, the *pharee* began to be seen in a new light.

The clean-up, desilting, and rehabilitation of the historic water pond, was an activity that demanded large labour inputs and a high degree of community mobilisation. The work involved removal of excess deposits of silt and sand, cleaning up, re-designing and rehabilitation of the water ingress and escape mechanisms and consolidating the containing structure where it was showing signs of becoming weak and endangering the buildings nearby. During the process of the rehabilitation, the old public bathing place was also re-designed and reconstructed. Previously, bathing was done in the open, by ladling the water from the pond, and people were sheltered only by a low stone wall. The redesigned bathhouse is located at the same site, but is now covered and houses shower stalls, a place for ritual ablution, and provision for piped hot water. On one side of the pond, there was the village guesthouse (*sawab-ha*), literally “the house of benediction”. The restoration of this small two-storied structure involved considerable reconstruction of missing elements.

The sanitation project began in 1996, in combination with a storm-water drainage system, a new underground electricity distribution network (to eliminate disturbing electricity poles in the historic areas) and a new piped-water network. Paving for the entire street network of the old village was integrated in the project, including the space surrounding the *pharee*, and the part of the old Polo Ground that is being used by the children’s school. Special details had to be worked out to deal with the undulating levels of the small lanes, and where the streets were covered over by houses and vertical clearances were limited. Pre-existing water supply pipes had to be upgraded and the electricity cables were laid carefully in very stringent space confines. Stone paving included designing special details for steps and stairs, as well as the edge of the water pond, and special stones had to be used for these purposes.

CONSERVATION PROJECTS IN GANISH

The conservation effort in Ganish was concentrated on those physical elements which are in common ownership or use. However, this investment in the public domain has spurred private owners to invest in the repair and improvement of houses – a process which was supported by AKCS-P through free technical assistance and occasional small grants for building material.



The “jataq” in Ganish before and after completion of the restoration works. In the background, one of the restored old watchtowers.





Above: Dredging the community pond (“pharee”) in Ganish.

Below: The restored community pond and its surroundings. At its left, the restored village guesthouse; right, a watchtower and the gateway.

The most important historic space inside the village was the *jataq* (see above). Traditionally, it was used for formal public meetings, ceremonies, informal gathering of women, festivals with singing and dancing or other ritual congregations. It is thus at the very heart of the traditional life of the village. The guest of honour in the public gatherings would very often have been the Mir himself, or other members of local royalty. This traditional use of the *jataq* in Ganish had long been abandoned, presumably after the collapse of the old social order of the State of Hunza. Long in disuse following the construction of the congregational mosque and *imambargah* outside the village entrance, the four exquisite wooden mosques were in a state of near collapse. Restoration of these four mosques followed the methods established at Baltit Fort and involved a considerable amount of new woodcarving matching the surviving elements.

Since Ganish was once a tightly knit and fortified space, restoration also involved the remaining towers and gates. Although no vestiges of a town wall exist, the houses do not open to the outside and together

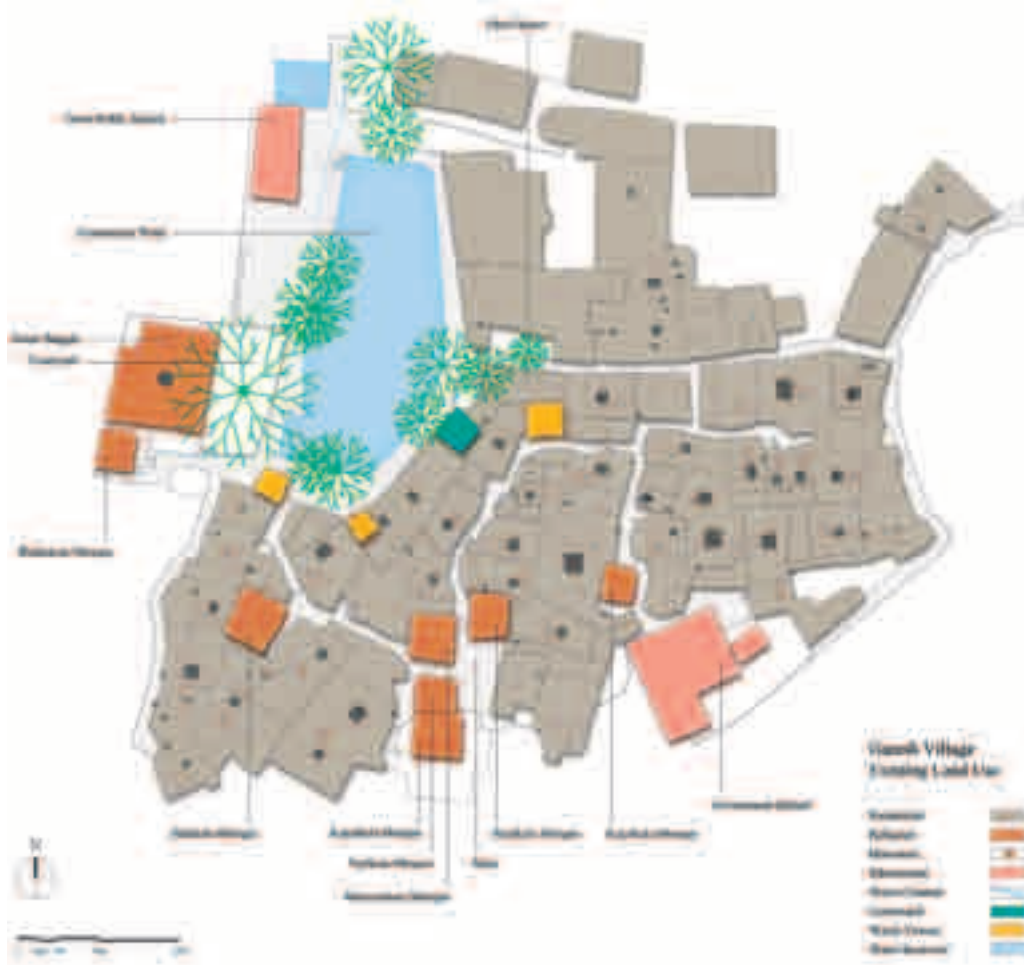


present themselves as the outside wall of a settlement. Only a fragment of what was once such a fortification “in the round” now exists. This is the part of the village that skirts the communal pond, and contains the main entrance gate to the village, the *himaltar*. All three remaining *shikaris* and the *himaltar* are part of the conservation project.

Remarkably, the collective physical rehabilitation effort launched in Ganish has helped overcome internal village controversies and has promoted grass-roots institution building. In the spring of 2001, the thirty-odd households of Ganish met in the Ganish *jataq* and resolved to establish the Ganish Khun Heritage Care and Social Welfare Society, registered under the Societies Act. For its aims, the Society has the management of the conservation, rehabilitation and maintenance of the village as a continuous process, in addition to a wide range of social goals. Visits to the village are henceforth regulated, and the sale of entrance tickets generates income for the collective use of the community. The Society has already shown impressive progress in the organisation and management of the village as a source of revenue.



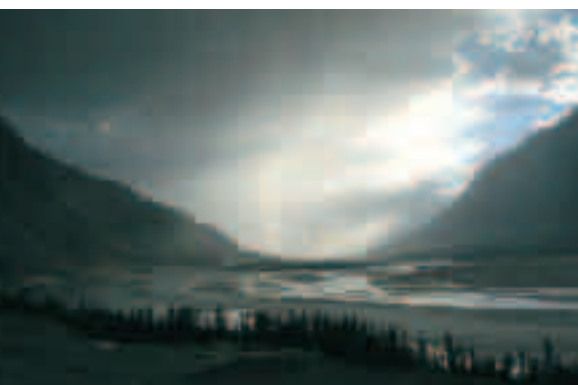
Above: Public exhibition of restoration plans, in Ganish.
Below: Plan of the historic nucleus of Ganish around the community pond.





CULTURAL DEVELOPMENT PROJECTS IN BALTISTAN

Izhar Hunzai and Salman Beg, CEO, Aga Khan Cultural Services-Pakistan



View of the upper Indus Valley in Baltistan, near Skardu.

The region of Baltistan in the upper Indus Valley shares many characteristics with the Hunza Valley, although it is separated from it by the Haramosh range of mountains. In Baltistan, too, one will find a lifestyle based on tough agriculture, staple apricot fruit, and glacier and snow melt for water. But there are also differences. Until late in the nineteenth century, Hunza had been remote and fiercely independent. Baltistan, more accessible from the main valleys of Kashmir and from Ladakh and Tibet, had been much more subservient to outside powers, and its local rulers had been historically affected by the power play of distant forces. After the partition between India and Pakistan (1947), the situation changed, inasmuch as Baltistan lost its earlier connections with Kashmir and became relatively isolated.

Geographically, Baltistan is larger and more diverse than Hunza. Rugged mountain gorges are interspersed with relatively vast valleys that had been lake-beds in the geological past; crystal-clear lakes perched on upland shelves, and in the Deosai plain, the highest tundra pasture land in the world, averaging 4100 metres above mean sea level. The magnificent K-2, the world's second highest peak, and Baltoro, the longest glacier outside the polar system, are in this region. These features explain why Baltistan is highly attractive for adventure tourism.

The entire population of Baltistan is Muslim, the largest community being the Shi'a *Ithna'ashari* (Twelvers), followed by adherents to the Sunni branch of Islam. In contrast to Hunza, no Ismaili Shi'a group lives in Baltistan. In the Indus and Shyok river valleys, subsistence agriculture and tourism are the primary livelihood sources. While the tourism industry is still far behind Hunza, it is nevertheless the largest source of cash income. Despite its historical and geographical isolation, the pace of social and cultural change has been accelerating; since the opening of the Karakoram Highway, connected to Baltistan by the Skardu Road, traditional life-patterns have changed. The effects of education, migration, trade and tourism have slowly led to discernible differences in income, social attitudes and consumption patterns. Distinctions of age, gender, education and emerging sub-cultures are having a profound impact on all aspects of collective life.

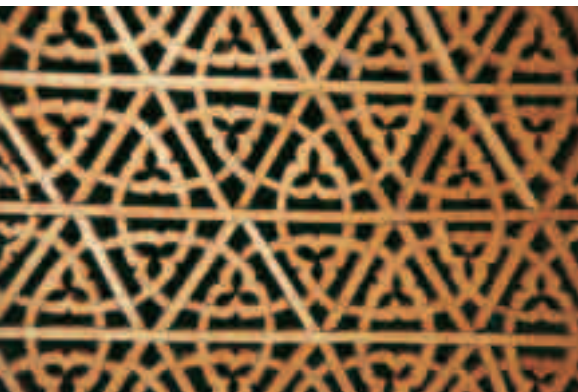
Left page: View from the cliff behind the restored 17th-century Shigar Fort/Palace (see final chapter). The village appears like an oasis out of the desert environment of the Shigar valley, in Baltistan.

In September 1996, His Highness the Aga Khan paid a short visit to Baltistan, immediately after the inauguration ceremony of the restored Baltit Fort. In his address to a large gathering, he stressed the relevance



The tomb and shrine of Mir Aref in Tagas (Baltistan), typical of the refined Balti timber architecture.

Detail of typical decorative timber work, locally called “jali”.



of culture to human development and the need to include the protection of the environment in the development agenda. He underlined that these issues should be given high priority, especially in the context of wider local development, as supported by the various Aga Khan institutions and other international donor agencies. In the following weeks and months, a debate ensued among the communities, the literati and political leadership on how best to address the cultural and environmental dimension of local development. A number of prominent citizens from Baltistan came to the office of AKCS-P in Gilgit with resolutions from individual villages, requesting AKCS-P to extend its activities to Baltistan.

Culturally speaking, Baltistan has a wealth of architectural heritage no other region in Pakistan can equal. This heritage comprises ancient rural settlements, centuries-old mosques, *khanqahs* and *imambargahs* (religious meeting places), as well as palace fortresses, all built of stone, earth and timber. Their architectural features are highly complex in their cultural origins, being informed by the diverse cultures of Tibet, Ladakh and Kashmir. Moghul influences are evident in the provincial court style, particularly in the elaborate decorative timberwork making use of local walnut, mulberry, juniper, cedar, apricot and poplar wood. Arguably, the whole of Baltistan could qualify to become a World Heritage Site.

The hereditary leadership, dominated by the local Rajas, Wazirs and Numberdars, though still respected and active in local politics, is giving way to a more meritocratic and plural leadership in both the religious and the secular domains. Today, in both rural and urban areas, religious leaders are taking on an even more important role than before, in issues such as female education, family planning, institutional development, as well as the course of personal and public affairs.

The government of Pakistan continues to be the largest agency of development for Baltistan. Alleviating poverty through food subsidies, overcoming the region’s inaccessibility and improving economic and social infrastructures have taken precedence over other priorities, including cultural heritage preservation. Meanwhile, the Aga Khan Rural Support Programme (AKRSP) has been able to mobilise local communities around various group interests and to establish Village Organisations (VO) and Women’s Organisations (WO) as grass-roots cells of social and economic progress. These existing structures have been essential to the historic village improvement programmes of AKCS-P. Other local AKDN institutions, such as the Water and Sanitation Extension Programme (WASEP), have also been willing to cooperate and to produce synergies and multiplier effects.

ROOTING NEW INITIATIVES

In 1997, building on its previous experiences in Karimabad, AKCS-P sent its first exploratory mission to Baltistan. After having visited more than 80 sites, the team presented its first preliminary report, proposing a number of initial actions. Based on its interest in integrated heritage preservation, NORAD agreed to become a lead partner in the proposed one-year feasibility study (1998), which included more comprehensive field surveys, as well as selective implementation through a number of pilot projects.

The surveys established in 1998 were later followed by a more systematic inventory of architectural heritage and important natural sites, established in cooperation with the International Union for the Conservation of Nature (IUCN). Initiated in Baltistan, this inventory is now being extended to the whole of the Northern Areas of Pakistan. It not only categorises individual monuments and existing historic settlements, but also establishes priorities for intervention and determines types of necessary (or desirable) action. Precious landscapes and environmental settings to be protected are also identified, in order to determine the potential for community-based planning strategies and procedures – especially in those areas threatened by ongoing or imminent urbanisation, or those offering a definite potential for tourism.

The extensive field work implied in the Feasibility Study (and later in the inventories) gave an excellent opportunity to raise public awareness in the local Village and Women’s Organisations, and to receive feedback and active support from them. The dialogue on heritage and environmental issues was facilitated by AKRSP, which initially had greater access to the local communities in Baltistan. Government institutions, such as the two municipal bodies in Baltistan, and the Northern Areas Public Works Department were also highly supportive of the proposed programme direction. These discussions resulted in a broad-based consensus that cultural heritage, environment, and sustainable development are interconnected themes, and that a partnership was needed between the community institutions, the public and private sectors, and donors and development intermediaries to respond to the continuing deterioration of conditions in human settlements, built heritage and livelihood systems.

Eventually, the idea of creating a Baltistan Culture Foundation (BCF) was launched and taken up enthusiastically by local circles. While still in its early phase, BCF, with the assistance of AKCS-P, is expected to: firstly, protect, manage and promote cultural heritage as an integral



Above: Project meeting with the local community in the garden of Shigar Fort.

Below: Local craftsmen work on the re-assembled and restored “astana” of Sayyid Mohammad in Khaplu, one of the first “demonstration projects”.



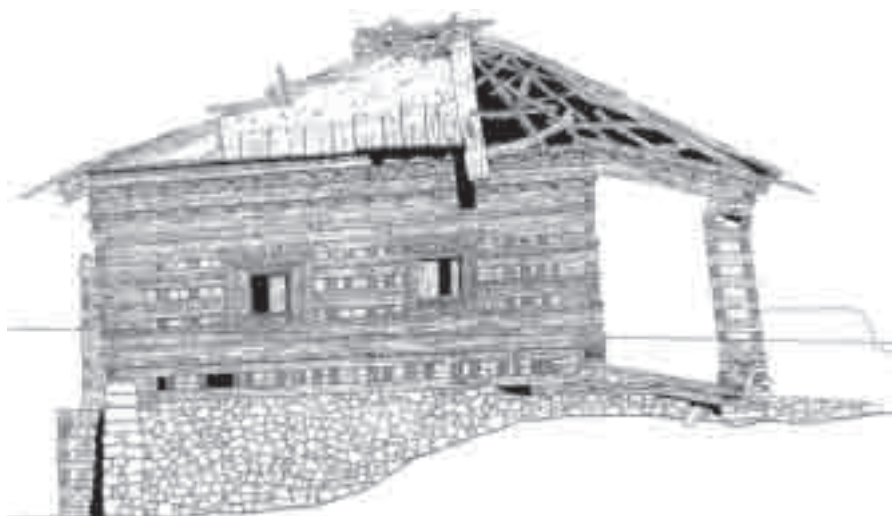


Above: The several-century-old Amburiq Mosque, near Shigar, as found.

Below: Survey drawing of the dilapidated condition of the building, done by the technical team in preparation for partial dismantling and restoration.

part of sustainable overall development, secondly, enable effective and participatory community stewardship of heritage and environmental resources, and thirdly, create new income and enterprise opportunities for local communities based on pro-active cultural heritage management. To explore enterprise opportunities, a survey of various crafts was also carried out with support from the Swiss Development Cooperation (SDC), who had earlier partnered with AKCS-P in Hunza to develop the Karakoram Handicraft Development Programme (KHDP) with a focus on women's participation. After an extensive evaluation, it was agreed that the local production opportunities related to apricot kernel oil, woodcrafts (carving and screens, as well as furniture and construction carpentry) and gemstones, which would form the basis of future product lines. Based on the results of the orientation phase, a four-year regular phase starting from July 2003 has been implemented under the name of Baltistan Enterprise Development and Arts Revival Programme (BEDAR) – an acronym which stands for “awakening” in Urdu.

In order to demonstrate to the local communities the procedures and benefits of culturally relevant rehabilitation, a number of pilot projects (co-funded by NORAD) were implemented by AKCS-P in 1998 with the help of its local staff trained during the various previous projects in Hunza. The pre-selection of these projects was an immediate outcome of the preliminary surveys of monuments and significant human settlements. In consultations with the community, the team was able to narrow down the choice to three pilot demonstration projects – i.e., the restoration of Amburiq Mosque in Shigar, the rehabilitation of the Hunduli settlement in Khaplu and the restoration of the Astana in Khaplu. Execution was entrusted to local AKCS-P staff – with limited assistance from international consultants.



DEMONSTRATION PROJECTS

The old Amburiq Mosque in the Shigar Valley (allegedly dating from the fourteenth century), is a relatively small but unique monument, both in its historic significance and architectural quality. It therefore stood out as the prime candidate for a demonstration project in architectural conservation. A predominantly timber structure with cribbage and delicate carvings, the small single-roomed mosque needed emergency repairs – especially to the roof and foundations, since the structure had tilted almost 70 centimetres to one side due to regular infiltration of water to its foundations from the backyard. The mosque is easily accessible to tourists and trekkers on route to the K-2 base camp, and is highly valued by the local community, because of its historic association with Amir Kabir Syed Ali Hamdani, the first Muslim preacher in Baltistan. The enthusiastic support of the community towards the restoration effort, by providing labour and donating land and timber – was an important element of the entire exercise.



The fully restored Amburiq Mosque has become a strong focal point for the local community.



The technical complexity of the project, including jacking up the entire structure by around 60 centimetres on one corner, provided a good test of AKCS-P's technical expertise, as well as an opportunity to demonstrate appropriate conservation techniques. The project also gave the AKCS-P team experience in undertaking complex technical projects outside Hunza, both in terms of project management and community mobilisation. The restoration was fully completed by the end of 1999 within the allocated budget. The Amburiq Mosque and its annexe (an added washroom) and adjacent open space are now in extensive use by the community.

The selection of Hunduli village for the second demonstration project was made after extensive dialogue with the communities and technical discussions within the team, and after visiting many monuments and villages. Rural Baltistan has highly interesting traditional settlements, which have grown organically over the centuries in response to actual community needs. In addition to being architecturally relevant, traditional settlement patterns offer potential answers to growing population and urbanisation pressures. Today, there is a need for low-cost improvements in individual dwellings and public open spaces, using local labour, appropriate technical assistance and well-focused small investments. The provision of adequate social services can meet the changing needs of families and communities, thus enabling them to upgrade and revalorise their existing settlements, rather than letting the old buildings decay and constructing expensive new houses on agricultural land.

Hunduli is one of the eight old settlements in Khaplu Town which are still inhabited. Originally settled by craftsmen and artisans who came to Baltistan from Kashmir and other parts of South Asia with the early preachers of Islam and who built the early mosques and *khanqahs*, Hunduli is now home to 88 families. The first step in the upgrading strategy was to select a typical house rehabilitation project, which the team did in consultation with the local VO members. The residents unanimously selected a two-roomed house, belonging to the poorest family amongst themselves. The family, by way of expressing its gratitude, decided to donate one third of the plot for a community purpose.

Among the most fascinating structures in Baltistan are tombs and shrines of venerated saints (*astanas*), held in the highest reverence and very frequently visited by the people. In Baltistan, this mausoleum structure has a square plan, surmounted with a conical tower. Often the inner square chamber features a surrounding veranda. Usually, this inner chamber is enclosed with screens of geometric perforations formed by slotted wooden elements – a Kashmiri tradition that is frequently found in Baltistan.



The tomb and shrine ("astana") of Sayyid Mohammad in Khaplu, before and after restoration.





Rear facade (below) of the 19th-century Khaplu Palace and side balcony (above), all in existing condition. This building is another candidate for restoration.

One of the finest of these buildings in Khaplu, the Astana of Sayyid Mohammad, was already in an advanced state of deterioration. AKCS-P carried out the restoration work, which included removing the complete upper part of the building, deftly nudging the remaining structure back into place and replacing missing timber elements. The project was completed in 2000.

RESTORATION OF THE FORTS/PALACES OF BALTISTAN

From the initial surveys, the palaces of Shigar and Khaplu emerged as the two major structures which had outstanding historic and architectural merit, were in urgent need of rehabilitation, and were no longer inhabited. In contrast to the highly defensive structures in Hunza – Baltit and Altit Forts – their counterparts in Shigar and Khaplu are more in the vein of Kashmiri palaces or manor houses. They also include more recent and easily convertible annexes. The analysis of existing conditions,



constraints and opportunities has led AKTC to envisage new re-use concepts, different from those pursued in Baltit Fort and Altit Fort. The options for the Shigar and Khaplu Palaces thus include a number of exhibition rooms in the historically most relevant and best preserved sections of the palaces, combined with very special accommodation for culturally interested visitors in the annexes or – in the case of Shigar Palace – in certain parts of the main building which were extremely damaged and had to be reconstructed.

The Shigar Fort Residence has been the first project to be implemented so far (see details in the following chapter). It was completed in 2004 and inaugurated in May 2005. Works on the Khaplu palace project will be initiated in the near future, with similar principles in mind.

The idea behind this re-use concept is to introduce to Baltistan, in addition to trekking, a particular type of selective, high-quality tourism, based on the visitors' interest to experience a unique and authentic environment in the building itself and in its surroundings. Given the highly sensitive character of this type of tourism (both in terms of visitors' expectations and in terms of social impact on the local populations), AKCS-P is undertaking special training efforts for future staff, exploring particular forms of ecologically compatible leisure activities, and launching special awareness campaigns in the local communities.

The rehabilitation projects for the Palace compounds in Baltistan are based on a clear understanding with the Rajas – the former local rulers – that they are no longer able to live in or to maintain their ancestral buildings which are falling into disrepair or threaten to do so in the near future. The buildings have been donated by the Rajas to AKCS-P, to enable AKTC (with the help of other donors, such as NORAD) to save and restore the buildings in the best interest of local communities. In exchange, AKTC compensated the former owners by the acquisition of sizeable pieces of land around the buildings at market prices. So far, this model has been fully implemented with Shigar Fort, completed in 2005 (see next chapter), while preparations for a similar project in Khaplu are ongoing.

Local communities will benefit in various ways from the restoration of the palace compounds and their conversion into guesthouses: firstly, in terms of direct employment in the tourism sector; secondly, in terms of promotion of local skills and handicrafts used in the Palace restoration, furnishing and sales corner; and, thirdly, in terms of services to be provided to visitors of the areas.



*Front facade of Khaplu Palace
(above) and interior of the
projecting room on the upper floor.*



*Carpenter and woodcarving workshop at the Shigar Fort restoration site.
(See following chapter.)*



VILLAGE UPGRADING IN BALTISTAN

In contrast to Hunza, where urbanisation trends have been rapid and relentless, in Baltistan the effect of the improvement of communications, increase in tourism and the advent of a cash economy has had a relatively smaller impact on the rural economy and even less on the rural landscape. Social mobility is as yet marginal and has not induced people to turn to images of modernity and lifestyle as much as they have elsewhere.

In addressing problems of development at the level of villages in Baltistan, it was necessary to study anew the nature of village micro-economy, to identify the priority needs of the communities and to employ a mode of development intervention that would be in keeping with the scale of these needs. Simple and low cost interventions, such as modernised composting latrines, clean water and communal bath houses for men and women, paid for to a significant extent by the users themselves, have made for village upgrading programmes that are in keeping with the aspirations of the people.

Investment in large-scale restoration projects, such as Shigar Fort, apart from bringing about much needed local employment, have made it possible to deliver amenities like clean drinking water to the adjacent villages of Khiligrong, Shilpa and Halpapa. This assistance was completed by paving village streets with abundantly available local flagstone material. In certain cases, as with Hunduli in Khapulo, piped water already provided by the government agencies makes domestic use of existing open water channels running through the village obsolete, particularly since the use of such water channels as drains for disposal of used water has begun to create issues of public health and hygiene.

The conservation and upgrading plan was developed in interaction with the community and focuses on simple improvements using traditional skills and materials. Lessons learnt in Hunza, such as the pilot demonstration effect of upgrading and modernising a single house in a village, have also been applied in Baltistan. The improvement of a selected house in Hunduli has introduced the notion of upgrading old homes instead of succumbing to the compulsion of “modern” forms and building materials. This has reduced the incidence of needless demolition of traditional houses, for the project showed how old houses can be re-adapted to new requirements and how improvements in the public open spaces around the house could be achieved. Another aspect of the project related to innovations in the use of traditional materials and the extension of such techniques through hands-on training. However,

without the need for the connecting network of piped sewerage, this project in Hunduli has not been as prolific in its “snowball” effect as it was in Karimabad.

Meanwhile, the application of another model transferred from Hunza – the creation of community-based municipal or quasi-municipal institutions – has had a very positive impact in Baltistan, with multiplier effects of a larger reach. In Baltistan, the establishment of local community institutions such as Town Management Societies have taken on a much stronger role in the protection of cultural traditions in the safeguarding of the heritage, and in the development of economic aspects of cultural activities. These institutions are now being developed as part of the hierarchy of institutions forming a Baltistan-wide cultural institution, the Baltistan Cultural Foundation (BCF). In certain cases (Khapulo), a Town Committee already exists under the local government laws. In such cases the Town Management Society has tended to reinforce its cultural and social welfare function, and acts in a role that is complementary to the Municipal Committee.



Above: The restored Khilingrong Mosque in the Shigar Fort complex.

Below: Shigar village and the restored palace to the right. In the centre, the new Raja's residence. To the left, the Khilingrong Mosque.





THE REHABILITATION OF SHIGAR PALACE

Masood Khan and Stefano Bianca



An old photograph of Shigar Fort (around 1900), showing upper floors on the north-eastern corner which have since collapsed.

Built upon a huge boulder, Shigar Palace is locally known as Fong Khar – literally, the Palace on the Rock. The palace is located on the right bank of a mountain stream that flows through the village and discharges into the Shigar river, which then joins the Indus river near Skardu. It stands slightly elevated above the nearest hamlets of Shigar, at the foot of a steep cliff (over a hundred metres high), on which the main stronghold of the Amachas was once built. According to various writers and the present Raja, it was Hassan Khan, the twentieth ruler of the Amacha dynasty, who constructed Fong Khar in the seventeenth century. The Amacha dynasty has its origins in the Hamacha tribe of Ganish, Hunza, and it is likely that the Amacha came to Shigar using the passageway across the Hispar glacier and the Amndo valley. Some writers believe that as the Hamacha tribe was massacred in Hunza, a few members of that tribe managed to flee to Shigar where they gained power and got recognised as the Amacha in the thirteenth or fourteenth century. The present Raja, Mohammad Ali Shah Saba, believes that the Amacha originally belonged to China.

Hassan Khan ascended the throne in 1634, but lost his kingdom to other invaders. He managed to regain the throne with the help of the forces of the Moghul emperor Shah Jahan. With the permission of the Moghuls, Hassan Khan brought various artisans including shawl weavers, carpenters, goldsmiths and stone carvers from Kashmir to Shigar and proceeded to build the fortified palace, which survived until today. The earliest fort built in the area had been Sinigma Khar, built on the steep rock towering above the present palace. This earlier fort is now completely ruined, but for some period of time co-existed alongside Fong Khar. Fong Khar itself was gradually abandoned in the first half of the twentieth century in favour of more recent annexes, built in its immediate vicinity.

THE BUILDING AND ITS ANNEXES

The complex at Shigar now comprises the seventeenth-century Fort-Palace, two ancillary buildings (the “Old House” and the “Garden House”) and a small mosque, near the entrance to the complex. The Old House was built around 1900 as the upper storey of the pre-existing stables

Left page: South-eastern corner of the restored Shigar Fort/Palace “on the rock”, with the re-instated old entrance through the northern tower in the background. To the left, part of the “Old House”.



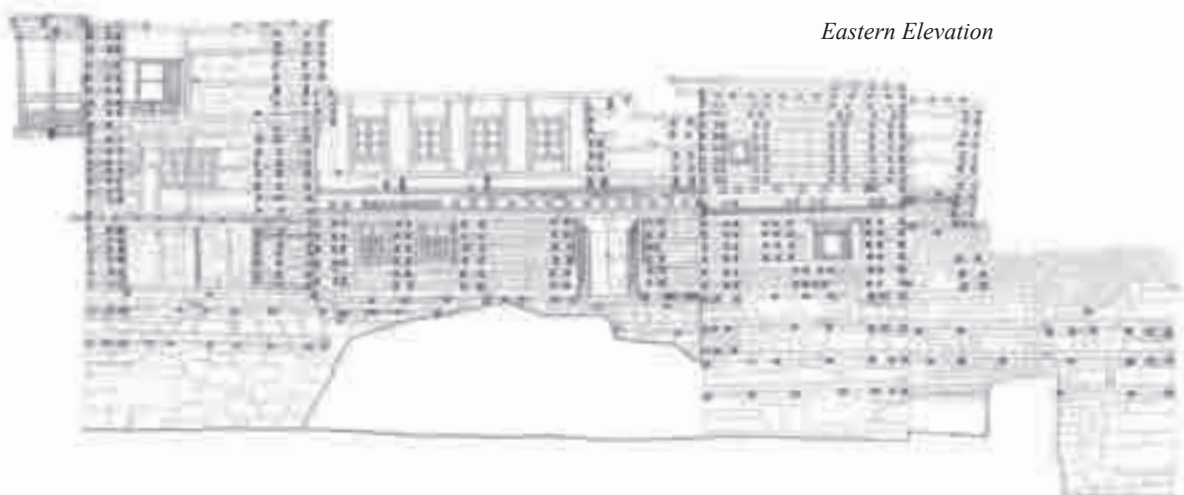
Above: Entrance to the Shigar Fort complex (unrestored) with the “Old House” on the left.

Below: The eastern elevation as seen from the Amacha Garden.

of the Fort. The Garden House was built in the mid-twentieth century and was inhabited by the Raja until 2004, when he moved into a new residence built for him nearby. The three buildings are contained in a plot of slightly less than one hectare, comprising gardens, orchards, and several irrigation channels diverted from the roaring mountain stream onto which the complex looks.

The compound is complemented by three settlements, Khilingrong, Chinpa and Halpapa, that accommodated service personnel, courtiers and warriors immediately related to Fong Khar. By the year 1997, most of the houses of Khilingrong had fallen into ruin; they have now been partly replaced by the new residence of Raja Azam (heir to Raja Mohammad Ali Shah Saba), but Khilingrong still retains its impressive mosque overlooking the river.

Shigar Fort/Palace itself is an aggregate of three structures built on top of a 30-by-19-metre-wide platform constructed of impressive stone masonry. The eastern side of this platform almost entirely consists of the flank of a giant, four-metre-high boulder. The oldest nucleus of the building – the original Fong Khar – sits directly on this rock. The old entry of the Palace, rediscovered during the restoration works, was located within a fortified tower at the foot of the boulder. Through the tower, a vertical connection was established with the main floor above.



Eastern Elevation

The oldest component (Module I) of the Fort includes the remains of a historic reception room with impressive wood carving on timber columns and beams. The second component (Module II) is the three-storeyed residential block to the south of the original Fong Khar. This appears to have arisen at a later time, and it is possible that it served as the ruler's residence (and the residence of his guests) in addition to the now collapsed old fort (Sinigma Khar). Finally, there are ancillary single-storey structures of a more recent and haphazard construction (Module III), which form an L-shaped wing around the enclosed central open space. They appear as the last of a series of periodic additions and demolitions that must have occurred on the rest of the platform, defining its northern and western perimeters. Also included in Module III is a small mosque – accessible from the courtyard of the building – which appears to be of a relatively recent construction.

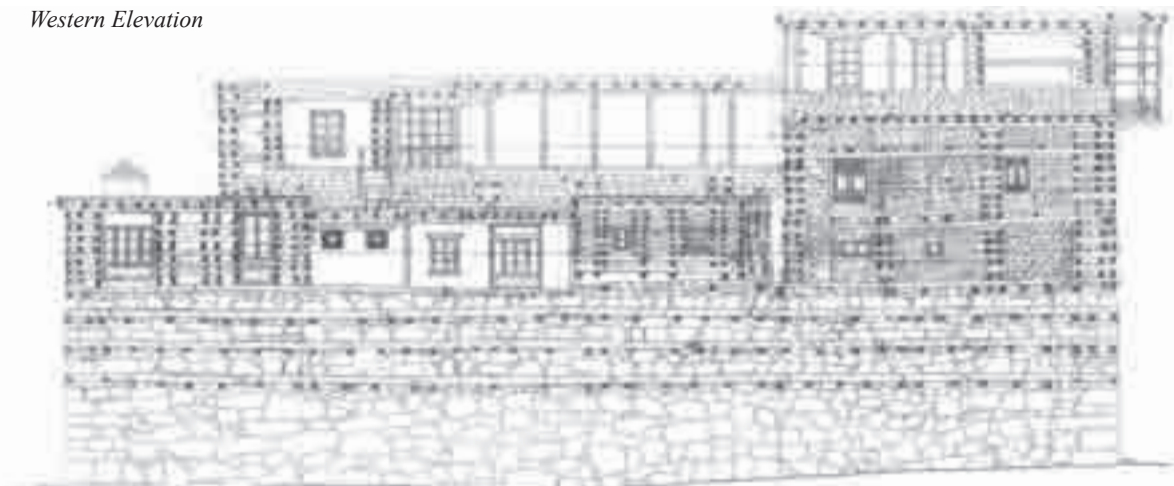


*View of the restored complex,
entry lane and "Old House"
from the south.*

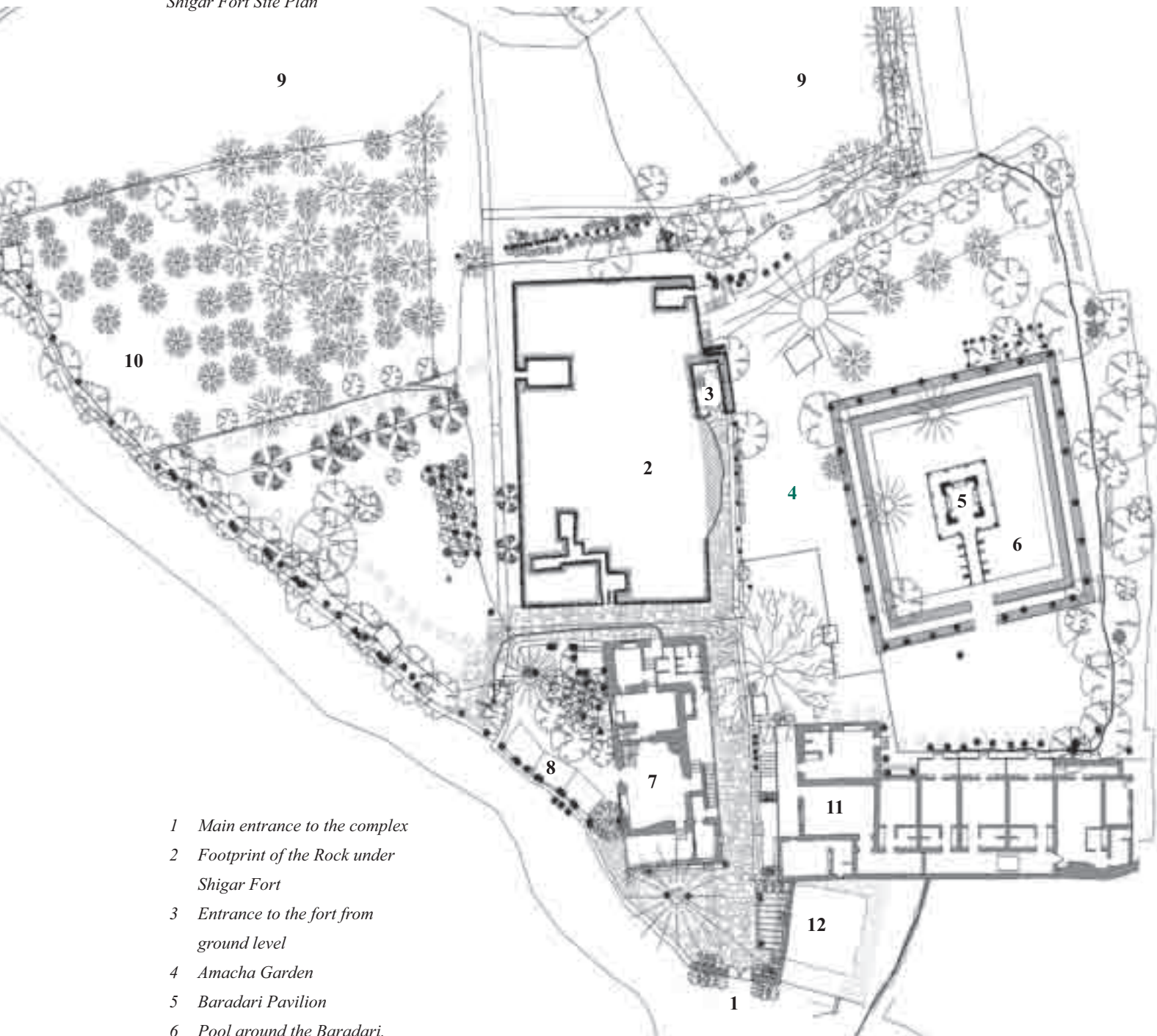
Longitudinal Section



Western Elevation



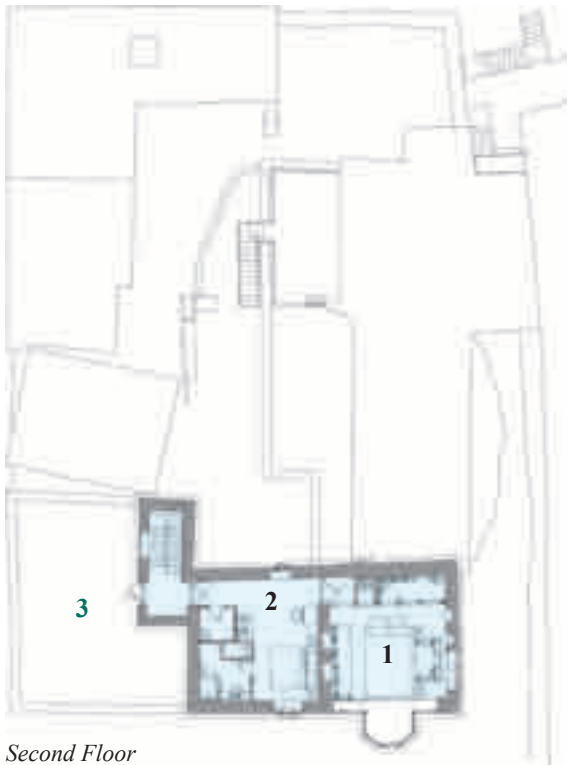
Shigar Fort Site Plan



- 1 Main entrance to the complex
- 2 Footprint of the Rock under Shigar Fort
- 3 Entrance to the fort from ground level
- 4 Amacha Garden
- 5 Baradari Pavilion
- 6 Pool around the Baradari, surrounded by flower beds
- 7 Restaurant in the Old House
- 8 Pergola and outdoor dining
- 9 Burapi garden
- 10 Cherry garden
- 11 Entrance/lobby for garden house rooms
- 12 Raja's Mosque

Site plan of the complete Shigar Fort/Palace complex, with footprint of the "Fort on the Rock", the "Old House", the "Garden House" and the Amacha Garden.

Right page: Floor plans and "Modules" of the Fort, as converted into the "Shigar Fort Residence".



Second Floor



First Floor

Module I

Module II

Module III

Second Floor

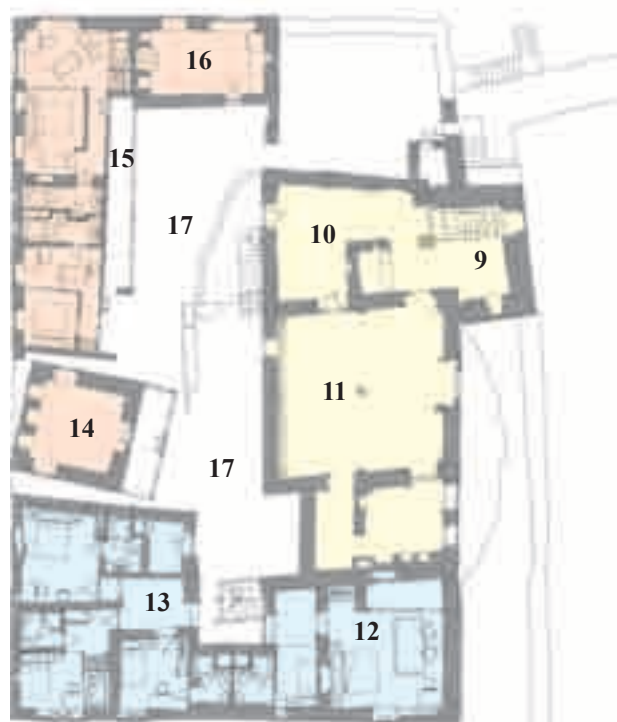
1. Raja's room
2. Bedroom
3. Terrace

First Floor

4. Bedroom facing garden
5. Suite in entrance tower
6. Terrace above main hall
7. Raja's first floor suite
8. Vestibule with three individual guestrooms

Upper Ground Floor

9. Landing of entry staircase
10. Vestibule
11. Audience hall
12. Raja's ground floor suite
13. Vestibule with three individual guestrooms
14. Palace mosque
15. Guestrooms
16. Old kitchen
17. Courtyard/terrace



Upper Ground Floor



Above: The scaffolded Fort/Palace under restoration.

Below: View from outside the gate, with the Raja's Mosque to the right.

THE CONSERVATION AND ADAPTIVE RE-USE CONCEPT

The main subject of AKCS-P's conservation efforts has been the seventeenth-century Fong Khar Palace. During the past two to three centuries, it had undergone many transformations and adaptations, and in 1998, it was found in partially ruined condition. Some of the former rooms in Module II were serving as cow-sheds, and a new ramp access had been constructed, leading directly into the former reception room of Module I. Only half the width had remained of the grand reception room, but the foundation walls in the open courtyard and the position of the walled-in central pillar gave sufficient evidence of its former size to justify a reconstruction of this important interior space. The upper floors of Module II were partly missing, and partly in very bad condition.

Given the dilapidated condition of the building, it soon became clear that conservation would have to include partial restoration and some amount of reconstruction. Hence, a number of basic questions emerged. Which earlier state to take as the reference? How to restore missing pieces and what uses to allocate to the rooms? How to ensure income and proper maintenance for the restored building? These issues called for a consistent re-use concept for the building to be restored. The team therefore debated potential new functions to be introduced, other than a purely museum use, and a partial guesthouse function was found to be the most viable and sustainable option.

This resulted in a somewhat different approach in comparison to the one adopted in the case of Baltit Fort. In fact, due to its constricted layout and narrow rooms, Baltit Fort did not offer the same adaptive re-use potential; its state of conservation was superior, and its financial viability as a museum was higher because of the larger numbers of tourists visiting Hunza. In Shigar, the selected option was to reconstruct the rooms for which adequate evidence was available, with a view to re-establishing the former volumes and to increasing the re-use potential. However, the conservation and restoration techniques were based on those developed during the restoration of Baltit Fort, traditional constructions in Hunza and Baltistan being closely related.

The re-use concept for Shigar Fort/Palace attempts to strike a balance between, on the one hand, a museum site which impresses the visitor with its massive seventeenth-century stone construction and elaborate



timber ornamentation, and, on the other hand, a very special type of resort offering a unique experience through a number of authentic historic rooms and adapted modern facilities. The cultural attraction of the site is predicated on the architectural merit of the fort/palace and on the exquisite wood carvings in the interior and on the exterior of the building. The presence of several historic buildings and old settlements in its vicinity constitutes another asset. Furthermore, the site is enhanced by its exceptional natural environment. Indeed, the steep rocky escarpment forming the background of the palace, the mountain stream to its south and the many irrigation channels meandering through the site and through the neighbouring well-preserved village settlements all account for the unique charm of the site.

Drawing on the existing architectural and environmental potential, this project is the first attempt to achieve a much wider cultural development initiative in the Northern Areas of Pakistan, based on the promotion of a new type of culturally and ecologically sensitive tourism. Such concepts

Above: The restored Fort/Palace as seen from the river.

Below: The garden terrace of the “Old House” restaurant with pergolas, looking onto the river.





Above: Northern tower of Shigar Fort with the reinstated old entrance leading to the stairwell and the upper platform.

Below: Detail of the carved beam along the upper floor of the eastern elevation (above).

have been successfully tested in various European countries, such as France, Italy, and Spain (Maisons d'hôtes, Agroturismo, Fincas, etc.) but are new for Pakistan. While Shigar's location on the route towards some of the highest mountains in the world is remote, it is not inaccessible. The fact that the road between Skardu and Shigar was paved in 2004 (bringing Shigar within sixty-minutes reach of Skardu airport), facilitates the access to the future guesthouse complex. Moreover, the road access to Baltistan from down-country will be considerably improved by the future connection to the KKH via the Kaghan Valley. The planned road connections to Astor (via Deosai plateau) and from Muzaffarabad to Kachura will reduce by several hours the eighteen-hour drive from Islamabad to Skardu.

The resort character of the complex will be articulated by developing a series of walking and driving itineraries and other leisure activities in Shigar and throughout Baltistan. Future guests will have the opportunity to engage in short treks in the vicinity, as well as fishing, climbing the Shigar rock, visiting the hot springs at Chutron (two hours from Shigar), touring monuments in Shigar and Skardu and undertaking day-trips to Khaplu, Kiris and Kharmang, etc.

The combined museum/guesthouse option selected for Shigar Palace obviously conditioned the approach of the project towards restoration, design, and implementation. The re-use objectives helped to carry out a more pro-active policy of consolidation, restitution and reconstruction based on the evidence uncovered during the analytical process. Strict adherence to this evidence resulted in a high degree of authenticity. Moreover, all efforts have been made to preserve the patina of older elements, while newer elements and finishes remain distinguishable but have been incorporated in sympathy with the aged features.

INTERIOR RE-STRUCTURING

The conversion of the old Palace into a guesthouse has been designed in such a way as to remain faithful to the original structure and minimise modern architectural interventions. The main conservation-related decisions were: firstly, to relocate, as far as possible, displaced structural and decorative items in their original position, particularly in the most important historic section of Module I; secondly, to reconstitute the old lower entry through the tower and to bring back the audience hall to its original size, based on existing evidence; and, thirdly, to adapt the extant

structures in Modules II and III to the new guesthouse function while maintaining the basic historic character of the building. The rooms of Module III were low-value ancillary structures subject to several recent changes (as was discovered from early-twentieth century photographs) and therefore allowed for greater liberties in redesign.

The museal aspect of the project applies to the partly reconstructed reception hall of Module I, which will accommodate an exhibition of Baltistan wood carvings, as well as to the adjacent entry hall. Three of the thirteen guestrooms in Module II, located on top of each other at the south-eastern corner of the building (the Raja's bedrooms and his summer living-room/pavilion on the topmost floor of Module II), also have museal character and feature special decorative elements and historic furniture. They will be rented out on special occasions only, and can be visited as part of the museum tour when free of guests.



Above: Upper level hall and staircase in the northern tower.

Below: The restored reception hall in Module I with its central column.





Above: The central column of the former reception hall "buried" in later infill construction.

Below: Module I reception hall after removal of the infill wall and before extending the hall to its original size.

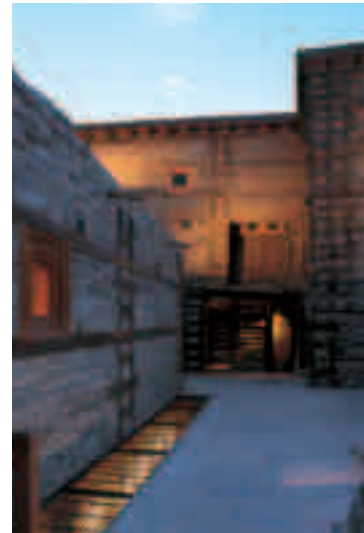
The guesthouse aspect of the project has conditioned the restoration of most of the rooms of Modules II and III. The decisions related to the interior refurbishment were based on the potential offered by a cellular room typology, which lends itself admirably to individual guest units. Conservation principles have not been sacrificed to conventional commercial thinking; it was thought that, on the contrary, maintaining the historic character will enhance the rarity value of the rooms. Some guestrooms have only small windows, but this is considered as part of the authentic experience. Furnishing is restrained and discreet, utilising simple wooden furniture and hand-woven textile elements. Original features such as bed niches, woodcarvings, screens, etc. have been conserved and displayed as an integral component of the decor. Plastered earthen walls are lightened up by a muted lime wash. Clear timber and walnut floors impart warmth and friendliness to the room interiors. Bathrooms have been integrated as much as possible in small former service rooms, or added in ways which do not conflict with original historic features. All modern bathroom interventions were kept clear of



the original structure and have been planned with the idea of reversibility in mind. The underfloor basement spaces, which historically served as collection and composting spaces for the nightsoil, have been used as sub-floor plenums to run plumbing and sanitary sewerage pipes.

The Old House, located at the entrance of the site, has been re-designed and converted to serve as the reception space of the complex, and now contains its food and lounge functions. Upon arrival, the visitor is facing a corner of the building featuring a reception information office, museum ticketing and restaurant access. Inside, the building accommodates a kitchen and ground-floor restaurant with outdoor seating space and an upper-floor lounge with balcony overlooking the stream, a meeting room and administration facilities.

The Garden House across the entrance street from the Old House had no particular architectural value. It was refurbished and extended to offer seven additional guestrooms, more conventional and modern in



The reconstructed outer wall of the reception hall, with the old foundations displayed through a light well.





Above: Individual guestrooms at the new Shigar Fort Residence.

Below: Staircase and lobby in the first floor of Module II.



character, devoid of any historic connotation. However, most of the rooms, on a raised ground floor, overlook the Amacha Garden and therefore benefit from a special attraction.

Offering alternate types of accommodation will enable the complex to cater to different tastes and types of clients. Even within the Fort/Palace, there is a choice between highly decorated to much simpler rooms. The policy will be to let the historic and most exclusive rooms in the Fort at a premium price, which will reduce occupancy and the risks of wear and tear, while still providing the yearly income necessary to ensure self-sustainable operation and maintenance of the building. On special occasions, interested parties can also be offered a whole floor or a whole section of the palace, including special services such as traditional meals served in the fort, musical performances in the courtyard or the reception hall, guided tours in the area, etc.

FURNISHING AND DISPLAYS

The restored palace has been furnished in a such a way as to preserve as much as possible the authentic ambience of a historic building. All the interior finishes and appointments were designed to provide a cultural experience seeped in the past, with sensitively integrated modern additions to ensure appropriate levels of comfort. Interior lighting will be adequate for most actual needs, with special accent lighting dramatically displaying specific features of the rooms, such as old niches, wooden carvings, exposed stone masonry work, ancient ceilings etc. Almost all original built-in furnishings and installations have been retained, and in places presented as usable bedrooms elements. Examples are the





several *shahnashins* (timber-framed sleeping niches enclosed on all three sides) in various rooms. They are made available as extra sleeping spaces, and can also be used as traditional sit-in spaces. Several rooms contain original decorative features, such as carved wooden elements which were enhanced by special lighting. Walls inside bathrooms were finished in simple polished marble tiles, glassed-in shower stalls, and imported ceramic ware and fittings.

The furniture is sparse, restrained and carefully chosen to defer to the historic qualities of the interior spaces. Floor coverings are restricted to the occasional area rug, in particular the local goat and sheep hair sharma rugs, except in the more ceremonial rooms where Kashmir and other Central Asian rugs are used as central floor cover. Taking advantage of the local arts and crafts revival promoted by parallel AKCS-P projects, vernacular handicrafts have also been used in the interior decoration of the rooms, such as blankets, shawls and other woven articles. Reed screens, with hand-printed cotton lining are used on windows in lieu of curtains. (The interior decoration was produced under the direction of Shenaz Ismail.)

In Module I, the original format of the historic audience hall – the core of the Palace Museum – has been reclaimed and presented in some of its original splendour. The uncovered foundation structures and the impressive carved timber elements have allowed for typological comparisons and provided the bases for architectural restitution, facilitating the understanding of the hall’s former function and of its ancillary spaces. The carved timber elements of the interior, which had been totally obscured behind piles of rubble, more recent stone and masonry work

Above: Individual guestrooms in the new Shigar Fort Residence and the balcony of the Raja’s room on the second floor.

Below: One of the small guestrooms.





The restaurant in the converted Old House: veranda overlooking the river (above); first-floor lounge (centre); ground-floor dining room at night (below).

and the dust and soot of the centuries, have now been uncovered. The modern (reconstructed) complements to these carved timber structures replicate only the original geometric profile, as a simple allusion to the hypothetical former condition.

Greater liberties were allowed in the conversion of the Old House into the main service complex. Once the ground floor of the Old House – a large stable – was cleaned out, the building revealed certain impressive architectural and structural features such as crude stone masonry using large stones, raw lumber columns and beams, and a charming covered area facing the stream across the road to the south.

This entire lower floor of the Old House is now used as the formal dining facility with its main kitchen, storage facilities for food and other kitchen-related items, and toilets for visitors. The restaurant function on the ground floor is designed to spill out onto the small garden in the west of the building. In addition, the ground floor will house a visitors' information office, and a ticketing counter.

The upper floor of the Old House, of more recent origin, features a veranda with dramatic views to the south, overlooking the stream. This part of the building has a lighter structure, and accommodates the walk-in restaurant/cafeteria, a small “cold” short-order kitchen, office space for management and a large room for multiple functions, such as a business office for the guests, a convention room or additional rental space as large guest bed room.

In the ground floor main restaurant, rugged timber furniture was used, in sympathy with the rustic ambience of the spaces and their finishes. Handmade textile table-linen and specially produced artisanal crockery add more refined accents. Paraffin lamps provide table lighting, while at night ambient lighting is generated via reflection off the illuminated historic walls. For the first-floor walk-in restaurant/cafeteria, lightweight rattan furniture produced in Karachi has been used, in combination with traditional sitting benches and bolsters running along the wall in one of the room niches. Overall, the intention was to create a relaxed and informal atmosphere, while highlighting (rather than overshadowing) the historic character of the environment.

ACKNOWLEDGEMENTS

MAJOR DONORS

The Government of Norway has consistently supported, since 1994, village rehabilitation projects in Karimabad, Ganish and Baltistan, as well as the Baltit Fort museum and various emergency stabilisation projects. Moreover, since 1999, it has generously co-funded the restoration of Shigar Fort.

The Japanese Embassy in Islamabad, through its Grass-Roots Assistance programme, has supported the Karimabad sanitation project phase II and the Altit village rehabilitation project, as well as similar initiatives in Baltistan.

The Swiss Development Cooperation (SDC) was instrumental in launching the handicraft and enterprise development projects in both Hunza and Baltistan that complement the physical rehabilitation activities on monuments and villages in these areas.

The Getty Grant Program made a generous contribution towards the restoration of Baltit Fort.

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TECHNICAL PROJECT MANAGEMENT

Stefano Bianca, Director, Historic Cities Support Programme, Geneva; Izhar Hunzai (CEO, Aga Khan Cultural Service Pakistan 1996-98) and Salman Beg (CEO, Aga Khan Cultural Service Pakistan 1998 to date).

CONSULTANTS

Richard Hughes, Masood Khan, Shehnaz Ismail, Yasmeen Cheema, Benedict Bull.

SITE TEAMS OF AGA KHAN CULTURAL SERVICE-PAKISTAN

Essa Khan (late), Sohail Khan (late), Abbas Ali Shah, Sher Ghazi, Asadullah Jan, Shukurullah Baig, Iqbal Rasul, Ehsan ul Karim, Ali Yad Khan, Salman Muhammad, Wajahat Ali, Inam ul Haq, Moazzam Ali, Ali Ahmed Shah, Rubina, Abid Hussain, Mubashir Hussain, Javed Iqbal, Waheed Murad, Fazal Karim, Darvesh Karim

Management: Salman Beg, Izhar Hunzai, Ghulam Mohammed, Safiullah Baig, Khalid Nadeem, Syed Sajid Ali Shah.

Support Staff: Nauroz Shah, Karimuddin, Mohammed Ali, Iqbal Karim, Ali Ahmed Jan, Zilha Pari, Kausar Parveen, Rozdarullah, Shahid Ahmed Jan, Kamil Jan, Daulat Shah, Ibrahim, Hidayat Shah, Asadullah Baig, Karimul Hayat, Bulbul Shah, Ali, Yaqoob, Jaffer Ali, Ghulam Rasool, Abdul Karim, Amin Khan.

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The Aga Khan Development Network (AKDN) is a group of private, non-denominational, international development agencies created by His Highness the Aga Khan, the 49th hereditary Imam of the Shia Ismaili Muslims. It is a contemporary endeavour of the Ismaili Imamate to realise the social conscience of Islam through institutional action. The Network is grounded in Islam's ethics of inclusiveness, compassion, sharing, self-reliance, respect for health and life, the cultivation of a sound and enlightened mind, and humanity's collective responsibility for a sustainable physical, social and cultural environment. The agencies address problems experienced by all citizens, irrespective of race, ethnicity, gender or religion. Together they collaborate in working towards a common goal – to build programmes and institutions that improve the welfare and prospects of people in countries of the developing world, particularly in Asia and Africa.

The Aga Khan Trust for Culture (AKTC) is the cultural agency of the Aga Khan Development Network. It was established in 1988 in Geneva as a private philanthropic foundation to integrate and co-ordinate the various initiatives of His Highness the Aga Khan regarding the improvement of cultural life and the built environment – seen as the most complex and tangible expression of cultural development – in societies where Muslims have a significant presence. AKTC encompasses three programmes:

- The Aga Khan Award for Architecture, which was established in 1977 (before the Trust was in existence), is the world's largest prize for architecture, presented every three years to reward exemplary projects in the fields of contemporary design, conservation, landscaping and community development.
- The Education and Culture Programme consists of five major units: the Aga Khan Program for Islamic Architecture at Harvard and the Massachusetts Institute of Technology, established in 1979; ArchNet, a web-based virtual archive (www.archnet.org); the Aga Khan Music Initiative in Central Asia which is concerned with the revitalisation of traditional music; the Aga Khan Humanities Project, which promotes pluralism of ideas, cultures and people by supporting the development and implementation of innovative humanities curricula; and the Museum Projects Unit, which deals with the conceptualisation, design and realisation of museum projects initiated by the Trust.
- The Historic Cities Support Programme was set up in 1991 to implement, on behalf of the Trust, its own conservation and urban revitalisation projects in culturally important sites in the Islamic world.

The Historic Cities Support Programme (HCSP) undertakes conservation, restoration and adaptive re-use of significant monuments in Islamic countries in the context of wider area development projects which aim at integrated and holistic rehabilitation of selected urban districts or developing rural areas. Together with conservation, HCSP projects focus on the operation and maintenance aspects of completed restoration projects, to keep historic buildings alive and ensure their sustainability. Moreover, the Programme engages in the revitalisation of the traditional urban fabric around landmark buildings, including housing, social facilities and public open spaces. Through collateral activities, HCSP contributes to the improvement of socio-economic living conditions in the project area and beyond, mobilises local awareness and participation, and assists in local capacity- and institution-building. So far, the Programme has been – and for the moment continues to be – active in Northern Pakistan (Hunza and Baltistan), Cairo, Zanzibar, Samarkand, Delhi, Mostar, Aleppo and other sites in Syria, as well as in Kabul, Herat and Mopti.



AGA KHAN TRUST FOR CULTURE

1-3 Avenue de la Paix, 1202 Geneva, Switzerland

Telephone: (41.22) 909 72 00 Facsimile: (41.22) 909 72 92

www.akdn.org