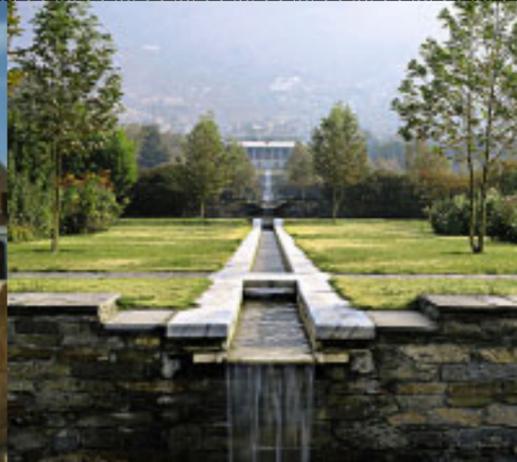
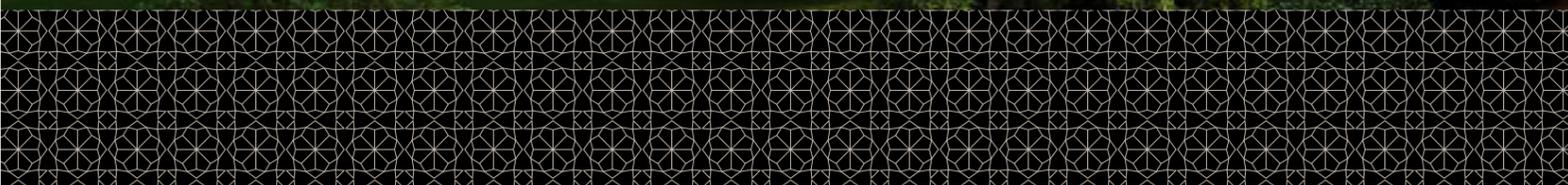


The Aga Khan Historic Cities Programme

STRATEGIES FOR
URBAN REGENERATION



KHOROG
TAJIKISTAN



Khorog City Master Plan

KHOROG, TAJIKISTAN

The city of Khorog is the administrative centre of the Gorno-Badakhshan autonomous region and the second largest city in Tajikistan. The city suffers from the lack of a land-use plan and is in need of a clearly defined city development plan. In 2007 AKTC prepared a 'Development Control Report' that outlined the development history of Khorog and characterized the hazardous and isolated mountain environment that severely restricts safe land supply and makes servicing a challenge. The report recognized a general lack of local planning methodology and human resource capacity to guide Khorog in the many needed areas of urban services reform, and recommended more orderly controlled growth as a goal with a minimum of disruption to cultural and community norms.

In mid 2009 a planning team was engaged to develop a Master Plan in coordination with the local and national government authorities and with AKDN agencies operating in the city. The planning team proposed a phased pattern of modest growth synchronized with services, sensitive to impacts on individuals while recognizing the need for affordability. Khorog is located in a seismically hazardous corridor, thus there is a need to review future design while allowing time for the construction industry to mature. Approval processes that raise safety standards in this context become all the more paramount.

The Master Plan proposes a set of guidelines and recommendations to address the future growth of the city by defining development patterns that allow the city to expand in a controlled manner while meeting the needs of its citizens. The AKTC commissioned planning team is currently completing a development model that focuses on defining guidelines on city planning and building codes; understanding and guiding the spatial city patterns over the next twenty years; and identifying key areas of intervention, infrastructure requirements and opportunistic areas of economic improvement.

The Master Plan goes into further detail, identifying city-wide impact recommendations that include improving city infrastructure; updating building codes; emphasizing energy efficiency and earthquake-proof building design; developing a life-safety strategy in the event of a natural disaster; increasing the city's self-sufficiency in food needs through community green spaces; and creating an institutional city building and planning unit and properly trained staff.



The town of Khorog is situated on the Gunt River, 2100 metres above sea level in the heart of the Pamir Mountains near the border with Afghanistan.

Opposite page:

Above, the axonometric view is a detail from the Khorog Master Plan.

Below, a view of the Park's contiguity with the river.

Preceding pages:

Children enjoying the Park equipment amongst the poplar trees that are changing colour with the autumn.



- 1 Hospital Entry Square Improvements
- 2 Main Building of Existing Hospital
- 3 Future Mixed-Use Building
- 4 Path Improvements
- 5 Proposed Sculpture Garden
- 6 Public Square Improvements
- 7 Facade Improvements to Existing Pump Building
- 8 Proposed Park and Children's Play Area
- 9 Pedestrian Bridge Improvements

Project Scope/Objectives

To stem the tide of unregulated, inefficient urban sprawl in Khorog, AKTC is developing a Strategic Master Plan with the aim of sharing best practices on city planning ideas and methodologies with the Government of Tajikistan. The programme seeks to establish a set of design and planning principles that will serve as the foundation for collaborative efforts, and to provide technical services for planning. Work on building and land-control design and management, which recognize the vulnerable nature of the region and the limits of sustainable growth, is also underway.

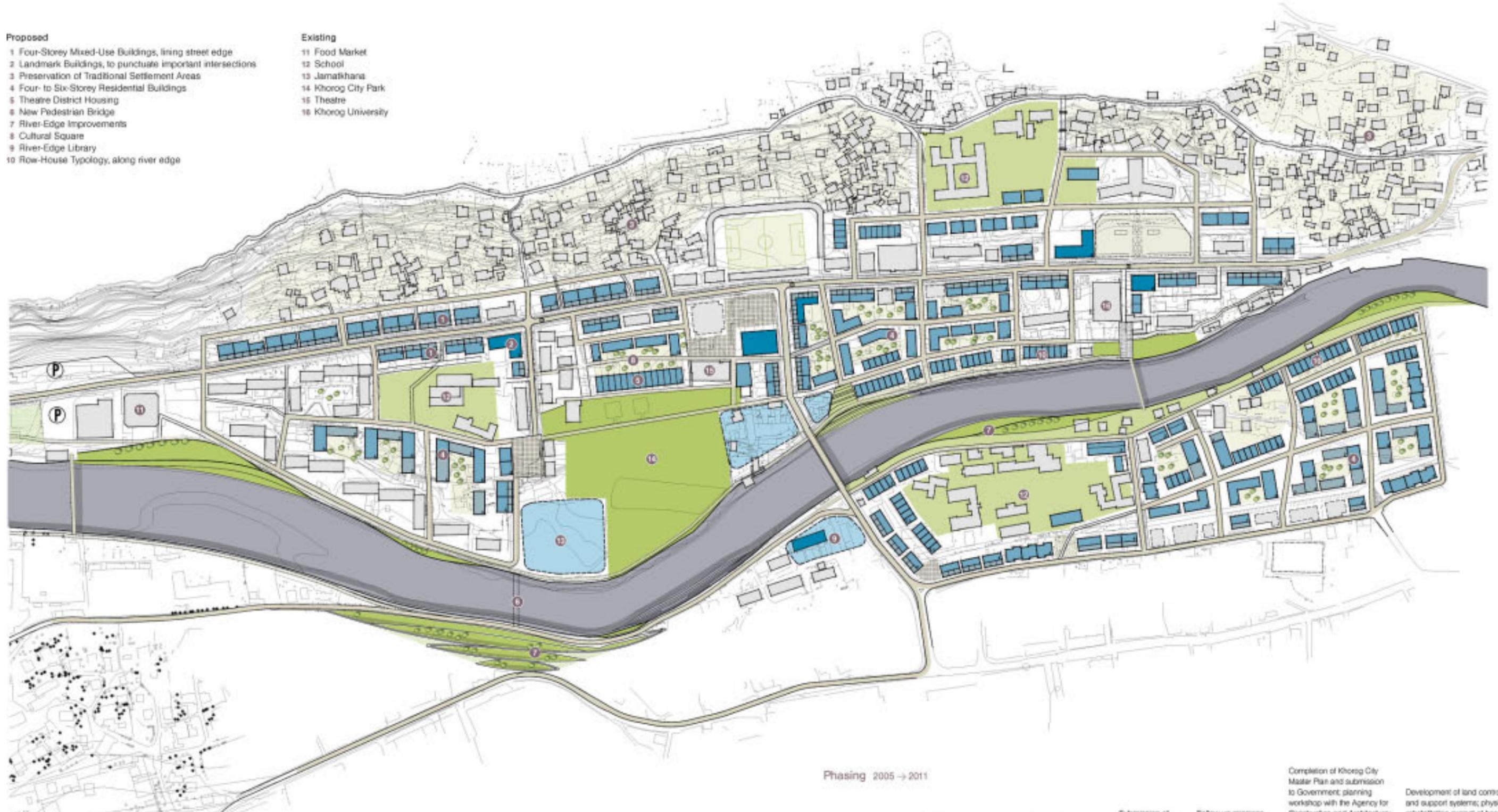


Proposed

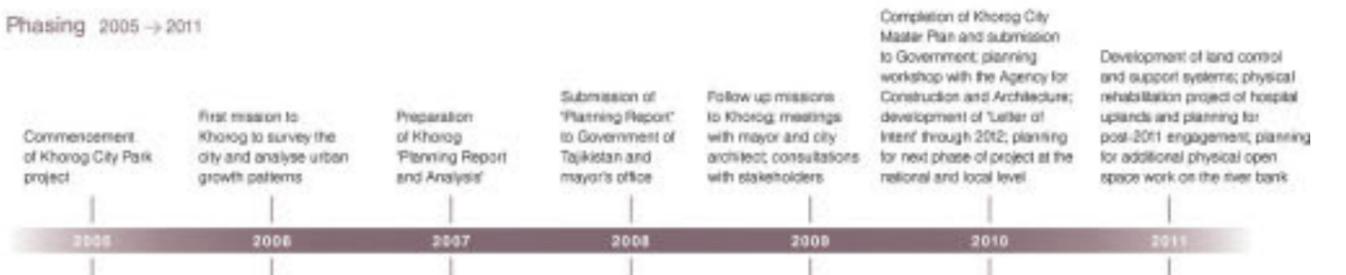
- 1 Four-Storey Mixed-Use Buildings, lining street edge
- 2 Landmark Buildings, to punctuate important intersections
- 3 Preservation of Traditional Settlement Areas
- 4 Four- to Six-Storey Residential Buildings
- 5 Theatre District Housing
- 6 New Pedestrian Bridge
- 7 River-Edge Improvements
- 8 Cultural Square
- 9 River-Edge Library
- 10 Row-House Typology, along river edge

Existing

- 11 Food Market
- 12 School
- 13 Jamatkhana
- 14 Khorog City Park
- 15 Theatre
- 16 Khorog University



Phasing 2005 → 2011



Khorog City Park

KHOROG, TAJIKISTAN

The town of Khorog is the capital of the Gorno-Badakhshan autonomous region in Tajikistan and it is situated in the heart of the Pamir Mountains near the border with Afghanistan. Khorog is a remote settlement and out of necessity must cultivate self-sufficiency. Its dedicated recreational areas are few but vital to the lives of the inhabitants as spaces to socialize and places to play.

The Park site, comprising a run-down open space on the riverfront, is roughly in the city centre of Khorog and is nestled on an alluvial plain only a few hundred metres wide, caught between the steep and barren mountain range of the Pamirs and a bend in the Gunt River. The site was gifted to His Highness the Aga Khan on the occasion of the fortieth anniversary of his Imam, and since 2005 has been the focus of a rehabilitation project designed to offer visitors a high-standard public park with amenities.

Between June and August 2004 the Aga Khan Trust for Culture (AKTC) initiated an exercise of extensive consultation with the population of Khorog, with the aim of assessing what would be core functions and essential features of an upgraded park. The resulting six-hectare Khorog Park is a place to reflect, relax and enjoy nature in the company of friends and family. At its commencement, the project presented an opportunity to provide an enhanced park facility for the entire city; a lively green place and civic space for all of its citizens; recreational facilities for families and children; and the means to integrate the urban green space into the city network.

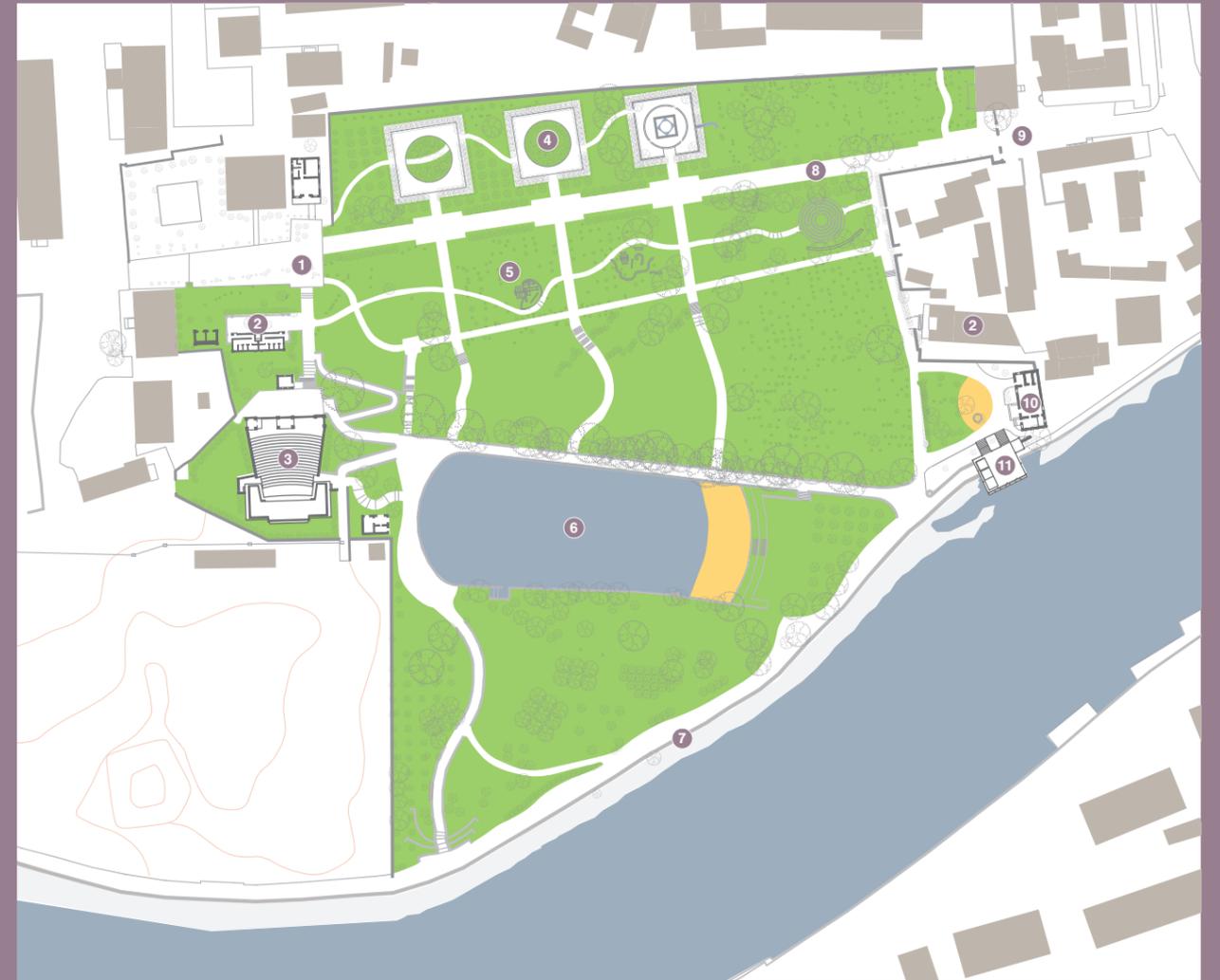
Construction of the Park commenced in spring 2005. Work on the Park by AKTC included the enhancement of the already well-wooded area; a programme of levelling works, topsoil enhancement, fertilizing and irrigation; the sowing of lawns; planting of appropriate plants and flowers, which were raised in an on-site nursery; and the restoration of stone channels used for irrigation in the summer. The first phase of Park construction was completed in 2007 and involved approximately ninety local workers. Work on the Park's main features – the pond, the restaurant, tea-house and open-air theatre – was completed in 2009.

The design inspiration for the Park came as a direct response to the dramatic climate and landscape of the region and the common need for a public garden



People stroll along the main paved spine looking towards the north-western entrance to the Park. The Pamir Mountains can be seen in the background.

Opposite page:
Workmen are laying out stone paving in a special zig-zag pattern. Where possible, all of the designs, as well as the materials, are local.

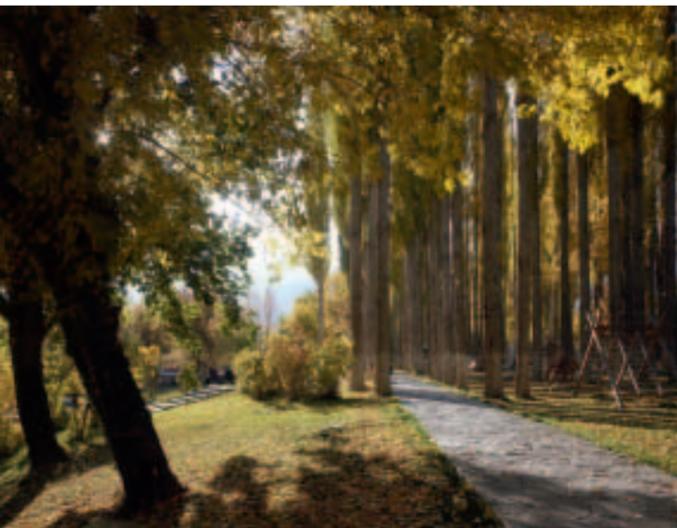


- | | | | |
|-----------------------|--------------------------------------|-----------------------|-------------------------------|
| 1 North-West Entrance | 4 Formal Gardens | 7 River Promenade | 10 Restaurant / Internet Café |
| 2 Toilets | 5 Children's Play Area | 8 Main Axial Path | 11 Chai Khana (tea-house) |
| 3 Open-Air Theatre | 6 Swimming Pool and Ice-Skating Rink | 9 North-East Entrance | |

Project Scope / Objectives

The development of Khorog City Park contributes a significant public green space to the city. It was gifted to His Highness the Aga Khan on the occasion of the 40th anniversary of his Imam, and, since 2003, it has been the focus of a rehabilitation project designed to offer visitors the possibility to reflect, relax and enjoy nature. Income generated by a newly built tea-house, café and open-air theatre aim to support the ongoing Park operations.





Left, steps lead down from a main pathway. Adjacent to the path is a play area.



Right, children swim and sun themselves at the swimming pool ('The Pond'), which functions as an ice-skating rink in winter.

Opposite page:
A view of the waterfront walk along the Gunt River in Khorog City Park with the Pamir Mountains behind.

for both refuge and recreation. The design intent was to preserve the best of what existed and then work creatively with the ordinary – stone, water, flowers and shade trees – in an extraordinary way.

The Park, containing facilities such as a restaurant and tea-house and an open-air theatre, along with such other attractions as a children's playground and stone labyrinth, encourages visitors to explore further. It is central to Khorog's riverine urban form and incorporates an old meander as a water feature: in summer a pool for swimming and reflections, in winter an ice rink. It has been designed with the convenience of users in mind, with extensive lighting and benches, and a public toilet block.

Magnificent mature avenues and groves of Pamir poplar, natural rock outcrops and even historic gravity irrigation canals were integrated into the design and protected during construction. The long, harsh winters make spring and its accompanying blossom of flowering trees, crab apples and cherries an emotional event. Although short, the summer growing season is special to the inhabitants, who nurture and love flowers. The Park has three formal flower gardens designed as discreet and peaceful chambers with generous seating. They, in turn, link with formal and informal paths for strolling through the woods and glades of the Park.

The stone-paved riverside promenade, an important pedestrian corridor, is enhanced by a revetment of the river embankment and, with the addition of stairs and river wall, presents a platform from where the stunning natural landscape of the area can be appreciated. The use of stone is a major feature of the Park, particularly in the extensive rehabilitation and extension of pathways, often paved in striking herringbone patterns. The path of the main spine, panoramic pathway, riverside promenade, the wall of the ponds, fountains, stairways and features in the garden chambers are also built using stone, often involving exquisite detailing.

In the evening, restrained lighting offers a more urban dimension to the Park experience. The enthusiastic response of the local population and visitors has been very encouraging and should ensure Khorog City Park's future. The development of Khorog City Park and its surrounding urban environment contributes a significant public green space to the city and has become an integral part of the circulation through the city. Its revival represents a substantial step towards the revitalization of Khorog as a whole.

Background

BRIEF HISTORY OF PROJECT SITE

The site was part of the Gunt River flood plain including an elbow of redundant meander, now a pond. It has many mature trees, especially the distinctive Pamir poplar. It survived as an area of open space on the banks of the river within the very centre of the city's urban development. When still part of the former USSR, the area was developed as a civic park, with some formal pathways, flower beds and statuary. The riverbank, subject to erosion, was formalized. It was a conduit for two major cross-town thoroughfares, a pedestrian link below and parallel to the main road, and a riverside walkway on top of failing bank revetments. Overused and under-maintained, the park fell into disrepair and ad hoc animal grazing, erosion and encroachment continued. Moves to restore and upgrade the site began, leading to the opening of the new multipurpose Park.

Challenges

PROJECT RISKS

The river adjacent to the Park has a fearsome summer flow, due to melt water from glaciers upstream, where strong currents can carry large boulders and batter obstacles. Careful survey of the riverbed and banks, flow rate and volumes, were useful to scientifically inform the engineering design specifications for new revetments. Khorog's remoteness made importing materials difficult and so local sourcing was paramount.

SITE CONDITIONS

The extreme mountain and valley topography, combined with the flood plain of the river, severely limited available land for both urban and open spaces. Long winters with deep snow and frozen ground require the seasonal coordination of works. In addition, the area is prone to earthquakes.

ENVIRONMENTAL CONCERNS

Potential riverbank erosion, pollution of the river during construction and the protection of site vegetation were all ongoing environment issues during the roll out of this project.

BUILDING CONDITIONS

Seasonal extremes required tight and rapid programming of works and shift working. Incomplete site works were protected during winter close downs. Local materials, namely stone, were used throughout the Park for pavings, structures and buildings. Specific attention was given to frost proofing of construction details and incorporating structural elements in buildings to offset earthquake damage. Most of the plant material was sourced from either the local State Botanical Garden or neighbouring farms in order to ensure its hardiness, suitability, ease of transport and to support local suppliers.

Significant Issues and Impact

DATA COLLECTION/SURVEYS

The documentation prepared before the interventions included an evaluation of all site features, rocky outcrops, specimen trees, boundary condition, offsite views, adjacent development proposals and river dynamics, including a visual assessment of the riverbank opposite the Park. Prototypes of construction



materials and details were produced early on in the planning process to inform design and define acceptable levels of workmanship.

MASTER PLANNING PROCESS

The master planning process defined the general programme and priorities of intervention and framed the character of a unique Tajik City Park. This led to the preparation of area plans, descriptions of works, operational standards and budgets. The plan was tailored to its context within the heart of the city. In form and function it was designed to interact with adjacent land uses, be they planned *jamatkhana*, residential, commercial or city pedestrian linkages.

INFRASTRUCTURE

New lines for water, sewage and electrical reticulation were installed to service proposed Park facilities. New bore holes and an irrigation ring main were installed to serve the new Park's planting and provide a clean source of water for the central pond. Several existing buildings were rehabilitated or transformed for new

relevant purposes, namely Park administration and maintenance, ablution facilities, open-air theatre, and tea-house and restaurant precinct. Few construction resources were available *in situ*, but creative use of stone and local plants enhanced the project implementation.

COMMUNITY INVOLVEMENT/PROGRAMME

School children participated in Park clean-ups in non-construction areas during the upgrade and even the army contributed to general site clearance works.

VOCATIONAL TRAINING/CAPACITY BUILDING

Stone masonry, general construction, landscape earthworks and horticulture were all fields of capacity development in the execution of this project.

Partners

PUBLIC PARTNERS

City of Khorog, Gorno-Badakhshan Autonomous Oblast.