National Park of Mali

BAMAKO, MALI

Bamako, the capital of the Republic of Mali, is located in the Niger River Valley. The city covers approximately forty square kilometres and it is estimated that its population has exceeded one million inhabitants. Since colonial times, Bamako has experienced significant population growth and this, in turn, has stimulated a constant growth of the urban area and demand for residential and public facilities.

The site defined and proposed for Bamako Urban Park lies within a larger protected forest reserve of 2100 hectares, a green belt of some magnitude and significance in this large but mainly and country. The project site itself covers a total of 103 hectares comprising an inner active, cultural core zone of forty-nine hectares and an outer, more passive ecological buffer zone of fifty-four hectares. It is a large, semicircular canyon area that lies beneath the terraced outcrops of the Koulooba plateau between the National Museum and the Presidential Palace complex in a protected forest that remains in a relatively natural state. The central portion comprises the existing botanical garden, arboretum and zoo. The remainder is composed of the terraces and slopes beneath the 415-metre contour containing geological features such as caves, prehistoric habitats and an important range of flora and fauna.

The existing botanical garden, initiated in the 1930s, used to serve as a conservatory of local botanical species and a nursery for imported ones. A series of dams were constructed along the small riverbed to protect the area from devastating floods during the rainy season. The zoo, developed in a later stage, houses a number of African animals in cages. Small buildings were constructed throughout the period in the arboretum and zoo to accommodate maintenance staff and technical installations. What remains today of this earlier landscape are an arboretum affected by lack of irrigation with alignments of trees covered by alien vegetation, a dilapidated zoo and several small semi-neglected buildings.

Given its natural attractions, its large size and its location next to the museum complex, it was envisioned that the Park could become a large open space for leisure and educational activities, focused on the general public, school groups and tourists. The project brief called for the unification of the sites of the National Museum, the existing Botanical Garden and the Zoo into a single cultural/ecological park of significant value, with natural and cultural attractions.

Project Scope / Objectives

The Bamako Park project encompassed the creation of a high-quality, self-sustaining open space of 90 hectares allowing for cultural, sports, educational and family recreation activities. The project scope included a major site survey, hydrology study, detailed design of civil and electrical infrastructure, reservoirs, a lake, pump stations, an effluent treatment plant for recycled water, the construction of perimeter fencing, and a range of new buildings were all created. New botanical elements include a medicinal garden, tree collections and extensive planting of indigenous plant species.
In 2008 the Aga Khan Trust for Culture (AKTC) developed detailed planning and a schematic design for Phase 1 of the project, while technical and economic feasibility studies were advanced for the totality of the proposed project. Phase 1 is seventeen hectares in area and contains a number of new building facilities, as well as rehabilitated open spaces and gardens.

There is a comprehensive pedestrian circulation network and formal promenades throughout the Park. The Park contains fitness, jogging, cycling and mountaineering tracks of varying difficulty and diverse interpretive awareness trails for botany, birds and nature. This pedestrian network provides easy access to the full extent of the 103 hectares of parkland and connects existing successful nodes, such as the National Museum, with other attractions, such as the amphitheatre dedicated to education or the performing arts.

An important part of Phase I planning includes the redevelopment and integration of approximately eight existing buildings, to be used for internal park operations, food and beverage points and storage. Built facilities, designed by Diébédo Francis Kéré, an Aga Khan Award for Architecture recipient in 2001, will include entry structures (a primary and secondary gate and entry building), a youth and sports centre cluster, a restaurant, public toilets and kiosks.

The garden spaces offer varied types of indigenous flora in different settings, from open lawn areas to flower gardens, wooded areas and a medicinal garden with explanatory signage. The installation of a range of interpretive educational material, in signage or display, and the potential for the development of trained guides could reveal a new depth of educational experiences to all visitors. By combining an environmental undertaking of a high standard with leisure and cultural facilities, all possibly under a public-private partnership approach, an important development model can be put in place in a favourable political context.
Background

BRIEF HISTORY OF PROJECT SITE
The Park site is situated in a valley that during Mali’s colonial era was designated as part of a ‘storm water mitigation’ system. The site eventually became a formal Park, and subsequently a scientific estate with a zoological garden and the National Museum. A small road bisected the area separating the Park and Museum components. The seasonal watercourses crossing the site were dammed at intervals and stone footpaths constructed to link various park features. Many indigenous trees were conserved, largely along the main stream, and formal, open lawns were set out between axial footpaths. Over time, poor maintenance and invasive trees and shrub species transformed the Park into overgrown thicket with insufficiently drained paths that became muddy in the rainy season. Since sports and family recreation are culturally important and the Bamako population lives in dense, often informal settlements, the Park nonetheless remained popular as a quiet shady refuge.

Challenges

PROJECT RISKS
Peri-urban heat, interspersed with two intense rainy seasons, limit the window of opportunity for both construction and infrastructure. The surrounding steep slopes are subject to hot turning to encourage grass for cattle, and such fires can spread uncontrollably. Informal collection of tree bark for medicine and grass for cattle, and such fires can spread uncontrollably.

SITE CONDITIONS
Virtually no formal facilities remained operational, including the original irrigation system. The planning process identified opportunities to reframe the Park and Museum through master planning and to restore, upgrade and enhance the natural facilities and activities offered by the dynamic valley site.

ENVIRONMENTAL CONCERNS
Water is a precious resource here and potential depletions of groundwater is an issue. Physical flooding indicated that planned boreholes and water consumption were sustainable.

INFRASTRUCTURE
The municipal infrastructure did not have capacity for potable water, sewage treatment or irrigation requirements. Electricity supply was erratic.

BUILDING CONDITIONS
Access to building materials was limited due to the remoteness of the location.

Significant issues and impact

DATA COLLECTION/SURVEYS
The documentation prepared before the interventions included an evaluation of all site features: rock outcrops, specimen trees, boundary condition, various trail opportunities, offsite waste, adjacent development proposals and catchment dynamics. Prototypes of construction materials and details were produced early in the planning process to inform design and define acceptable levels of workmanship. Engineering flood risk calculations were required to establish a no-build zone.

MASTER PLANNING PROCESS
A general programme was detailed, stating interventions included an evaluation of all site features: rock outcrops, specimen trees, boundary condition, various trail opportunities, offsite waste, adjacent development proposals and catchment dynamics. Prototypes of construction materials and details were produced early in the planning process to inform design and define acceptable levels of workmanship. Engineering flood risk calculations were required to establish a no-build zone.

PLANNING ISSUES
Site works were programmed to take advantage of dry weather for building and infrastructure, and natural rains for plantings. Shift work enabled paving manufacture and construction to take best advantage of the seasons. Elements such as roads and street furniture were prefabricated to expedite works and counter seasonal installation constraints. Natural stones was readily available and an on-site factory for cutting stone paving was established. These finishes served as a unifying theme. An autonomous water-related infrastructure was planned with boreholes, water treatment reservoirs, pumps and a package sewage treatment plant. Scour valves were installed in existing dams and new flood detention basins created. Sandbag electricity generators were also included in the infrastructure package. As long as the Park remained unfenced, informal public use continued. Completion of the perimeter fencing was necessary to secure the site and ensure public safety. Grazing is excluded from the park area. Loss of mature trees was a consideration in the planning and the minimum number, largely alien species, were felled to assimilate the design. Many new plantings have been provided as an offset. The vast majority of required plant material was obtained from local sources or grown on site. Emphasis was placed on the precise conservation of existing mature vegetation to preserve the Park’s character. The Park’s natural fabrics—valley gorges, rock outcrops, woodland and riparian forest—is a rich birdlife habitat. It was preserved and will now be protected and enhanced.

HISTORIC BUILDINGS/MONUMENTS CONSERVED
Administration and maintenance functions were disposed at the Park edge. Several buildings were rehabilitated for new use as boutiques, a bird hides, tea-house, cafeteria and environmental education centre. A range of buildings including formal entrance pavilions, a gym and youth club, an environment centre, boutique, administration office, two cable and abutment facilities were either erected or rehabilitated and the National Museum landscape was redesigned.

Partners

PUBLIC PARTNERS
Ministry of Culture, Ministry of Environment and Sanitation, Republic of Mali.

COMMUNITY PARTNERS
Associations of Park Users, Sports Club, Environment Club.

Authoritative Framework