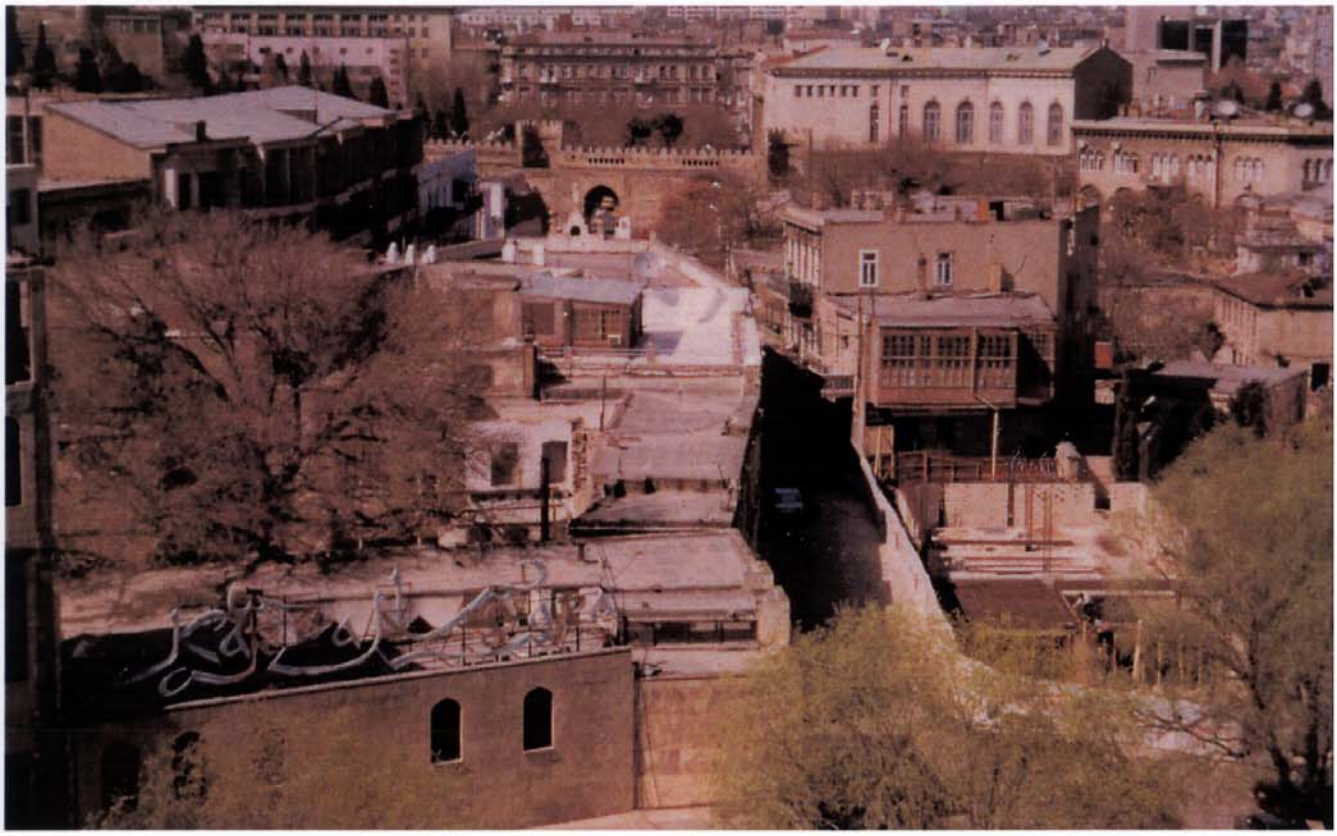
by Ildar Sabitov

Rehabilitation of Baku Old City

Baku, Azerbaijan



Architect
Committee for Protection & Restoration of Historical Monuments

Client
Government of Azerbaijan

Design
1992 and ongoing

Completed
1992 and ongoing

Conservation of Baku Old City, Baku, Azerbaijan

I. Introduction

Magnificent monuments of Azerbaijan architecture which survived on the territory of the old medieval part of Baku in Icheri Sheher became widely known to the world public many centuries ago, and have been holding their own unique, prominent position on the pages of serious studies on the history of architecture. *Kyz Galasy* (Maiden's Bastion), which became the symbol of the medieval Baku, Juma Mosque, the magnificent ensemble of Shirvan Shahs Palace, and many others have long been called the "Baku Acropolis".
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II. Contextual Information

a. *Historical background*

Baku, capital of the Azerbaijan Republic, is a large industrial, scientific, and cultural centre. Today the boundaries of Baku encompass a considerable part of the Apsheron (*Absharan*) peninsular. The territory of Baku is about 2'200 km^2, it's population is about 2.5 million people. Historians give different explanations to the origin of the name Baku. Some suggest that the word comes from the Persian *bad kooh* (wind mountain) or *badkube* (wind-beaten). There also exists an idea that Baku received its name from the name of tribe Bakan, or Bagi which lived on the Apsheron peninsula between the 12th and 15th centuries B.C.

Baku was indicated as an important centre on the map of Ptolemei in the second century A.D. There are unique archaeological treasures around the city, dating back approximately twelve thousand years. During excavations, a cultural layer dating back to the middle of the first millennium B.C. was found on the territory of Baku. The town was built up intensively under the Sasanids. But the Caspian Sea changed its level every 700 years, and the coastal part of the town was flooded many times. In the 11th and 12th centuries, Baku became a commercial centre of the Shirvan Shah's State. At that time the City Walls, the Mohammed's Mosque (1079) and some other monuments were built.

In the 12th to 15th centuries, with the development of Sufism, and especially, Hurufism, Baku became the cultural capital of the country. After an earthquake the capital of Shirvan Shahs was moved from Shemakha to Baku. It was then that the Shirvan Shahs Palace, the masterpiece of Azerbaijan architecture, numerous mosques, madrasas, caravanserais, hammams and many other monuments were built.

In the second half of the 19th century when Baku began capitalist development, the territory of Icheri Sheher became a place of intensive construction of apartment houses. Ancient buildings were destroyed and new houses with all modern utilities were built.

b. *Local architectural character*

The scale and tectonic character the Icheri Sheher is a specific example of the Shirvan architectural school, and differs sharply from the architecture of the neighbouring countries and regions. Due to its proximity to the sea, the unique relief, and peculiarities of climate, its streets are labyrinthine. Almost all buildings are made of the local stone: limestone. Building façades are richly decorated with carvings and architectural details. The flat streets and roofs of houses are paved with asphalt.

c. *Climatic conditions*

Baku is situated in the steeple zone of Azerbaijan. In the summer, temperatures reach 38°C, and in winter, -4°C. Wind velocity reaches 28 metres per second. The nearest river is 40 to 45 km from the

city.

In the Middle Ages water was supplied via a system of wells and *ovdan*s (places of access to the underground water supply system). In 1911 the oil magnate Haji Zeinalabdin Taghiyev had a water supply system built (its length is 220 km) from the Caucasian Mountains; this system is still functioning.

d. Site context

The Icheri Sheher is located in the very centre of Baku, one side of it borders a magnificent coastal zone of the city, a favourite place of rest for Baku inhabitants. On the other three sides it is surrounded by 4 or 5 storey public buildings and apartment houses constructed during the oil boom at the end of the 19th and beginning of the 20th centuries. The styles of construction are Baroque, Venetian Gothic, and Classicism. When viewed from the sea side it seems as if these buildings have been constructed on the territory of the Icheri Sheher. The old town has five gates which connect it with the rest of city.

e. Site topography

Baku is located in the east of Azerbaijan on the coast of the Caspian Sea. The country is hilly; the climate, sub-continental. The city has been built as an amphitheatre along the length of the Baku Bay. The Old Town, Icheri Sheher, is located in the centre of Baku, on the southern slope of the hill. The Icheri Sheher occupies 21.5 ha, and has a population of 14'000. Elevation from the Caspian Sea level to the highest point, where the Shirvan Shahs Palace is located, is 40 m.

III. Programme

a. Objectives

The objective of the team during development of the project for the Icheri Sheher rehabilitation was to organise the medium for a vivid, integral model of a medieval town in the context of a large modern city. In order to reach the objective, the Committee for Protection and Restoration of the Monuments of History and Culture has designated the objects which require restoration or reconstruction, and the extent of restoration works. The committee has also determined the preservation of old functions or new functional roles of the historical monuments and buildings in the context of the whole complex. Analysis of the existing apartment houses has been made in order to determine the necessity of restoring or upgrading of buildings which present interest from historical or architectural points of view and to determine where new houses can be built in cases where an old house does not have any aesthetic function. In the latter case, limitations regarding the configuration of plan, the number of stores, and the building exterior are outlined.

b. Functional requirements

In the course of many centuries most of the buildings have lost their original functional roles due to technological development, changes in the social structure of society, vital requirements, etc. Each restored building, if it cannot function in its original role, is given a new function. If required, the rooms have been rearranged, new rooms have been added, and modern utilities have been installed. The number of restaurants, hotels, workshops and small shops has increased. New typologies like museums, institutes, offices, and representative offices of different companies have been introduced.

IV. Description

a. *Project data*

The entire territory of Icheri Sheher which has been preserved within existing boundaries, occupies an area of 21.5 ha. There are more than 60 blocks of houses of different areas and shapes which form the building structure of the area preserved in the Old Town. Unique architectural monuments occupy key points of the surrounding area (the 15th century ensemble of Shirvan Shahs Palace, for example), in the planning of the commercial centre, and in the context of a shopping street (the 7th century Maiden's Tower, Juma Mosque, 14th to 15th centuries). Within Icheri Sheher there are 518 historical monuments, including 17 mosques and 1 church, the ruins of the town walls including 3 towers, 2 mausoleums, 6 caravanserais, 6 medieval bath houses, 3 cells, the remnants of the medieval drainage and sewage systems, 470 houses, and 10 other monuments, separately preserved elements of monuments and archaeological sites.

Mosques, caravanserais, trading domes, and palaces have exerted a decisive influence on the architecture of 470 houses in the planning structure of the Old Town. Holding a prominent position in the structure of the Old Town, in its artistic colouring, these houses have imparted individual peculiarities to the historical topography of the site. The houses were mainly built in the 19th century (55%) and the early 20th century (40%), but some houses built in the 18th that were erected on even more ancient foundations, have survived. There are also some fragments of private houses dating back to the 14th and 15th centuries.

Each architectural monument has a passport or document file which contains plans, elevations, façades, cross sections, drawings of architectural details, old photos, a description of its physical state, its restoration history, and any other pertinent information. Files on private houses in the Icheri Sheher territory contain descriptions of their physical state, but not all of them have sufficient architectural documentation. The materials are stored in the archives of the Committee for Protection and Restoration of the Monuments of History and Culture, in the Department of the Icheri Sheher Reserve, and in the Institute of Architecture and Arts of the Academy of Sciences of the Azerbaijan Republic.

b. *Evolution of design concepts*

The design concept for the Icheri Sheher rehabilitation, unlike many similar projects, is focused on the preservation of the unique atmosphere of the medieval town. The removal of buildings fallen into disrepair over the centuries did not usually disturb the established planning. The new buildings and houses that have been built in place of the removed ones, often incorporate fragments of the old buildings. While the monuments and buildings date from various historical epochs, its planning structure has come down to us as it was formed in the 15th century, a period when significant construction was under way as Baku city was transformed into the residence of Shirvan Shahs. At that time Baku city was walled, and the boundaries which still exist today appeared. Currently, the restoration of the old blocks of private houses and of the unique labyrinth of the Icheri Sheher streets is under way. No wind blows through the twisting streets, their width no more than 2.5 metres. The town-building solution provides for optimum aerodynamics which provides warmth in winter and coolness in summer.

The Icheri Sheher rehabilitation project proposes the incorporation of a variety of architectural monuments into the spatial structure of the Old Town as opposed to the Bukhara project where "large open areas are created within the old town that allow for good viewing of the architectural delights." This works toward the restoration of the original atmosphere to revive the spirit and aroma of the Middle Ages. Harmony and the peculiar colouring of the Icheri Sheher attract Baku city inhabitants and lots of tourists who, enchanted by the opportunity to make "a travel-in-time", come back here

again and again.

c. *Structure, Materials, Technology*

The basic building material used for the Icheri Sheher construction is the local material: limestone. The limestone is quarried from natural deposits 5 to 6 km from Baku. The average size of the processed limestone is 60 x 80 x 40 cm, one block weighing no more than 30 kg. The size is convenient to use. The most suitable stone for carving is fine-grained Apsheron limestone whose colours range from light ochre to almost white to greenish-blue. Lime mortar mixed with milk, eggs, and crushed charcoal is used for restoration of medieval monuments. The mortar is put into special vessels which are buried and kept in earth for several years before use.

The domes, arches, vaults, and other ceiling and roof elements of historical buildings were made out of the same material. The geometric accuracy of joining stone blocks into domes, each of which has a different curvature, practically on all sides, excites sincere admiration of the skill of local stonemasons. Buildings constructed at the end of the 19th century and modern houses have flat roofs made of monolithic reinforced concrete with filler.

Especially important for the architecture of Icheri Sheher are floral and geometric designs carved in stone, constructive stony stalactites, and profiles and cornices made by highly skilled craftsmen. It should be noted that within the Old Town there is not a single building where stone was used for decorative lining purposes, there are no false domes, vaults, or stalactites. All architectural elements made of stone have their design substantiation. At the same time, the variety of elements and detail of carvings are the main factors of aesthetic influence on an observer. *Shebeke*, decorative stone lattices installed in apertures, are widely used. Wooden building elements have been made from oak, beech, chestnut, and other trees brought from the forests of the Caucasian mountains and from local trees. The interiors of some buildings are decorated with paintings and gypsum stucco.

d. *Origin of technology, materials, labour force, professionals*

The technology used for restoration of the Icheri Sheher monuments is traditional: processed stones are laid manually and are bonded with mortar. Modern technologies are used for construction of new buildings, but the exterior walls of all new buildings are made of the traditional stone blocks as required by the Committee. Wall surfaces are unplastered. The stones acts as the decorative medium when carved, laid in patterns, and decorated with floral and geometric designs or alternating bands of inscriptions, Arabic phrases from the Koran.

Labour force

The labour force is local. The specialised craftsmen – stonemasons, engravers, coppersmiths, joiners and stonelayers – usually belong to a family with a long history in that craft. The craftsmen do their work in close contact and under the supervision of qualified architects-restorers.

Professionals

For many years a number of architects, scientists, and archaeologists have worked independently on the Icheri Sheher restoration. Since 1992, when the Committee for Protection and Restoration of the Monuments of History and Culture was organised by the Cabinet of Ministers of the Azerbaijan Republic, all restoration activities have been performed by architects and specialists of the Scientific Research Institute Azerrestavratsia. Consultants from the Academy of Sciences of the Azerbaijan Republic are invited to participate.

Contractors, engineers, and builders are supplied by 17 scientific restoration production departments

of the committee. Another department of the committee, the Directorate of the Icheri Sheher Conservation is responsible for infrastructure, roads, utilities, and gardens The directorate has its own staff of 36 employees and has a budget provided by the Cabinet of Ministers and Municipality of Baku.

V. Construction Schedule and Costs

a. *History of project*

The oil boom in Baku started the transformation of a medieval town into a modern city, where new ensembles of squares and blocks of apartment houses meeting modern requirements were built. This activity did not touch the Old Town despite its location at the centre of construction activity.

Research into the history of the Icheri Sheher development has been in progress since the 1920s. In the 1950s the first elements of democracy appeared in the Soviet Union and the development of national consciousness in the republics increased. Preservation and restoration of architectural monuments were considered a tribute of respect to the historic heritage of the nation. The systematic restoration of the Icheri Sheher monuments began in 1952 when a Special Scientific Restoration Production Workshop was organised at the Ministry of Culture of the Azerbaijan Soviet Socialist Republic. In 1981, a department for rehabilitation and restoration formed and the Icheri Sheher Historical Architectural Conservation was organised at the Municipality of Baku.

Since 1992 all restoration and rehabilitation activities were transferred to an independent structure: the Committee for Protection and Restoration of the Monuments of History and Culture at the Cabinet of Ministers of the Azerbaijan Republic. The chair of the committee is Fakhraddin Miralayev. The committee is carrying out restoration of historical monuments and controls planning and construction of apartment houses and offices in the residential blocks of the medieval town.

b. *Total costs and main sources of financing*

The data on the amount of funding allocated by the Ministry of Culture and the Municipality of Baku for the Restoration of Icheri Sheher from 1952 to 1992 are not available. There is evidence that under the USSR the annual restoration budget was approximately USD 1 million. At present, the Cabinet of Ministers of the Azerbaijan Republic and the Municipality of Baku provides no more than USD 200'000 per year for the restoration of architectural monuments. In addition to government monies, some donations for restoration and rehabilitation are provided by private persons and companies (both local and foreign) which are renting houses or are building in the Icheri Sheher territory. Those include Khazarpetroleum, British Petroleum, LUKoil, Remko, Statoil, Djabbari International, and others. Their contributions, in addition to the restoration and construction of new buildings in the zones which belong to them (plus regular rental payments), go to the rehabilitation of modern utilities and the organisation of public services and amenities in these zones.

According to estimates made by the Committee for Protection and Restoration of the Monuments of History and Culture, 17 billion manat (the sum equal approximately to USD 4.3 million is required for completion of the completion of restoration work on existing historical monuments in Icheri Sheher. At present, costs for the restoration of Icheri Sheher amount to USD 4 to 5 million per year. 90 to 95% of this sum is provided by private companies and investors and goes toward the construction of new private buildings. Hopes rest on the investment programmes of the World Bank and European Community. Efforts to fund the Shirvan Shahs Palace restoration are now in progress. The World Bank is supposed to be the funding party. The amount of funding is USD 4 million.

c. *Comparative costs*

Costs for the restoration of each individual object are determined in accordance with a list of defects and estimates of the performance of restoration works. Each object has its own cost which depends on the defect percentage and which ranges from USD 270 to 1'000 per square metre.

d. *Maintenance costs*

Because the territory of the Old Town is densely covered by buildings, the use of natural gas for heating is not allowed. Electric power is used for heating and air conditioning. It is impossible to determine costs for the maintenance of Icheri Sheher, as the funding for this purpose is provided by city and government budgets, as well as by various companies and private individuals.

VI. Technical Assessment

a. *Functional assessment*

Though the life of Icheri Sheher is specific, it is at the same time bright and full of value. Restored mosques and a historical-architectural museum are functioning, and offices, institutes, and shops are working. Along with small shops selling the traditional goods of the local craftsmen and antiquarian items, one can also find tiny workshops where these goods and items are made and/or restored. Restaurants offering Azerbaijani and European food have been opened in old caravanserais. There are always many tourists and people who live in the immediate vicinity. People walk around, shop, and sit quietly under the shade trees and in restaurants, in the open air. Baku inhabitants consider Icheri Sheher a prestigious place to live, and local and foreign businessmen and companies prefer to have their offices there.

b. *Climatic performance*

As Icheri Sheher is situated near the sea, there are strong seasonal winds. The walls of all buildings are very thick (sometimes as thick as 120 to 140 cm), which provides for the formation of a comfortable microclimate in houses at all times of year. The most efficient, modern insulation materials are used for construction of new buildings.

c. *Choice of materials, level of technology*

The basic building material used in Icheri Sheher was and is the local material: limestone. The construction technology used for the restoration of monuments is based on the traditional methods of the local craftsmen. Modern construction methods and machines are used in Icheri Sheher only for new construction.

d. *Ageing and maintenance*

During excavations in the 1930s and 1940s, it was established that the existing structures were erected on well preserved, ancient foundations. Now, in the process of construction, specialists often face this kind of problem. Many of the ancient buildings have received a second life. Due to destruction and the rise of underground water levels, the ancient underground water supply system (*kahris*) overflows into the underground structures and basements. Designers, along with installation of new communications and water supply lines, have to make provisions for restoration of the ancient *kahris*. High humidity due to the proximity of the Caspian Sea and strong winds unfavourably affect the limestone, especially the stone carvings. Until recently, the weathered or defective stones and blocks have been replaced by new ones made using the preserved analogues and traces as models. At present,

work on restoring lost sections of stone blocks with chemical solutions mixed with crushed stone is in progress.

VII. Users

a. *Beneficiaries of the programme*

The rehabilitation of Icheri Sheher has a positive effect on its inhabitants. Their living conditions have been significantly improved and many of the Icheri Sheher inhabitants are employed by this programme. Tourist agencies, museums, trade and food businesses, craftsmen, and artisans are also interested in the realisation of the rehabilitation programme as the number of tourists (both local and foreign) will increase. Because Icheri Sheher is considered a prestigious district of Baku city, many local and foreign companies have made considerable monetary investments in the rehabilitation programme in order to live and work there.

The most interested party involved in this venture are the people of Azerbaijan, as Icheri Sheher is the heart of Azerbaijan, its history and favourite place. In the early 1990s meetings were held at the Union of Architects of the Azerbaijan Republic, at the Committee for Protection and Restoration of the Monuments of History and Culture, at the Directorate of the Icheri Sheher Preserve and at the Institute of Architecture and Arts of the Academy of Sciences of the Azerbaijan Republic to discuss the Icheri Sheher rehabilitation, and the project was unanimously approved.

Today, problems with the project realisation have appeared. The difficulties are due to the fact that in the Icheri Sheher area there are 14 thousand inhabitants, who own the houses in which they live. In a certain sense, most of these private houses are monuments (national property), while, in another sense they are private property.

Every person in Baku and Azerbaijan understands the need of for the rehabilitation of Icheri Sheher. Though most of the responses of clients and users to the rehabilitation process are positive, there are also persons who criticise the programme. They are afraid that the programme's approach could result in the loss of the unique masterpiece that is Icheri Sheher. The critics can be divided into two camps. The first one stands for an absolute conservation of Icheri Sheher, which would involve a total ban on new construction and moderate restoration. The second group opposes the volume of new construction, especially the scale, height, and architectural solutions of the newly built houses.

In light of that, on 30th April 1998, the Melli Majlis – the Parliament of the Azerbaijan Republic – decided to form the Temporary Commission on Icheri Sheher. The head of the commission is Anar, the famous Azerbaijani writer, who is also the Chairman of the Deputy's Commission on Culture of the Melli Majlis and Chairman of the Writers' Union. The commission is composed of his 7 deputies and a working group of 10 specialists. They will work till 23rd May 1998, at which point they will announce their conclusions and submit the wording of a draft decree to the Melli Majlis.

VIII. Persons involved

Project personnel

From 1952 to 1992, the Ministry of Culture of the Azerbaijan Soviet Socialist Republic was the only client interested in the development and realisation of the restoration of Icheri Sheher. From 1981 to 1992 the project was partially funded by the Municipality of Baku. Since 1992 the protection and restoration of the monuments of history and culture on the territory of Azerbaijan became the responsibility of an independent government structure: The Committee for Protection & Restoration

of the Monuments of History and Culture at the Cabinet of Ministers of the Azerbaijan Republic. The committee incorporates the Institute Azerrestavratsia, the Information Centre, 14 architectural, archaeological, and ethnographical reserves (Icheri Sheher is one of these), 19 scientific restoration workshops, a scientific-industrial complex, and the scientific research centre Restavratsia. The committee and its divisions employ about 2'500 persons. The Committee has become the major client for all works carried out in Icheri Sheher; its specialists work out the rehabilitation project, develop project documentation on the reconstruction and construction of new buildings, carry out management and supervision of the realisation of restoration and construction work. In addition, the committee incorporates restoration-construction divisions which perform the majority of restoration works.

Many Azerbaijani architects and specialists in restoration have been involved in the rehabilitation project. Among them, first of all, should be named the late academicians M. Useinov and A. Salamadze, Professors G. Alizade and L. Bretanitskiy, candidates of architecture K. Mamedbekov and V. Gadjiyev, architects-restorers N. Utsin and U. Revazov, and those still living: Professor D. Akhundov, Assistant Professor A. Aslanov, architects D. Mamedov, T. Shekikhanov, A. Suleimanov, N. Musayev, candidate of history S. Dadasheva, Director of the Icheri Sheher preserve A. Aliyev.

The following specialists have been deeply involved in the development and realisation of this project:

Fakhraddin Miralayev, architect, Chairman of the Committee for Protection & Restoration of Monuments of History and Culture, Associate Member/Corresponding Member of the International Academy of Architecture of the East Countries (MAASV) who has been working on this project for 22 years, general manager of the project and designer of the restoration of Shirvan Shahs Palace and many other projects.

Roustam Mukhtarov, architect, Deputy Chairman of the Committee. For more than 21 years he has been involved in this project. He is the designer of the restoration of bath houses, caravanserais, and a number of houses.

Ugur Miralay, Candidate of Architecture (PhD). Designer of the rehabilitation project, he has written a number of scientific papers on the problems of Icheri Sheher.

Shamil Fatullayev, Doctor of Architecture, President of MAASV, scientific consultant to the programme. He has been working on the project for more than 45 years.

Nijazi Rezayev, construction engineer, senior lecturer in the architectural constructions department of the Azerbaijan Engineering Construction Academy, scientific consultant to the programme. He has been working on the project for more than 45 years and is designer of the project on the restoration of Shirvan Shahs Palace.

Rasim Aliyev, Chief Architect for city of Baku (1977-1987), one of the designers of the Icheri Sheher rehabilitation project.

El'bai Kasymzade, Chief Architect for city of Baku. One of the designers of the Icheri Sheher rehabilitation project.

Jafar Gijasi, Doctor of Architecture, Director of the Institute Azerrestavratsia, head of the projects on monuments restoration.

Jahit Kadyrov, Chief Architect of the Institute Azerrestavratsia, designer of the projects on restoration of the House of Baku khans and a number of other houses.

Bashir Sadykhov, architect, head of the scientific research centre Restavratsia who has been working on the Icheri Sheher for more than 30 years, designer of the projects on restoration of the Multani and Bukhari caravanserais, and some of the mosques and bath houses.

Leila Guseinova, Leading Architect of the Institute Azerrestavratsia, designer of the projects on restoration of the Khanlar Mosque, the small caravanserai, a number of houses, and others.

Vagif Gasanov, Chief Architect for the Historical Architectural Preserve Icheri Sheher, designer of the rehabilitation project.

Farhat Ibragimov, archaeologist, head of the Icheri Sheher archaeological expedition who carried out the major excavations on the territory of the Old Town.

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