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OBJECTS OF THE ARCHITECTURAL ENVIRONMENT OF THE ARAL SEA REGION ECO-TOURIST ROUTES

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Annotatsiya Мақолада Оролбўйи минтақасининг экотуризм соҳасини жадал ривожлантиришда ободонлаштириш-кўкаламзорлаштиришда ландшафт дизайни лойиҳаларида оммабоп ҳисобланган кичик архитектура қурилмалари лойиҳаларини Қорақалпоқ миллий орнаментлар асосида яратишга қаратилган.

Kalit so'zlar: шийпон, беседка, павильон, сайёҳлик, Оролбўйи минтақаси, “Канада қудуғи”, миллий орнамент, дизайн, Мўйноқ, автомобил йўли, туристтик маршрут.

Аннотация: Статья посвящена созданию малых архитектурных строений на основе каракалпакских национальных орнаментов, популярных в проектах ландшафтного дизайна в благоустройстве и озеленении в условиях бурного развития экотуризма в регионе Приаралья.

Ключевые слова: павильон, беседка, туризм, Приаралья, «Канадская скважина», национальный орнамент, дизайн, Муйнак, шоссе, туристический маршрут.

Annotation: The article is devoted to the creation of small architectural projects based on the Karakalpak national ornaments, popular in landscape design projects in landscaping and gardening in the context of the rapid development of ecotourism in the Aral Sea region.

Keywords: pavilion, gazebo, tourism, Aralsea region, «Canadian well», national ornament, design, Muynak, highway, tourist route.

Introduction. At present, measures to improve the environment, plant greenery and restore cities and settlements are becoming increasingly important. The importance of modern landscape design solutions and their enrichment with small architectural forms in the beautification of tourist routes, in shaping its image is growing.

The adoption of the Resolution of the President of the Republic of Uzbekistan "On priority measures for the development of tourism in 2018-2019" is a logical continuation of the policy pursued by the state in the field of tourism, it is focused on the introduction of the most effective regime, expansion of the economic potential and income base of the regions, creation of new jobs, increase in the flow of tourists to our country, as well as active and comprehensive promotion of national tourism products in the world marke by creating a favorable economic, administrative and legal environment for rapid development of tourism.

Literature review. Currently, E.K. Bulatova O.A. Ulchitsky's "Tourist Complexes and Tourism Architecture", V.I. Nazarov's "Modern mansard, porch, terrace, gazebo and winter gardens", E. Karnakova's "Fireplace Arbor and Pergolas," A.S. Uralov, L.A. Adilova's "Landscape Architecture", I.S Tukhliev, G.H Kudryatov, M.K Pardaev's "Tourism Planning" and E. P. Golubeva's "Principles of shaping the architecture of recreational and recreational complexes" can be considered as the main sources. In connection with the growing relevance of this topic, we can also list the works published in many scientific journals recently: Astanin D.M. "Traditional habitat of Siberian ethnic groups and the possibility of using it for the organization of ecotourism"; Kolotova E.V. "Features of the organization and promotion of ecological and ethnographic tourism in the Kamchatka Territory"; Uchaeva K. O. "Modern trends in the design of suburban recreation complexes"; Adilov Z.H., Mirjalolov D.T., Komiljonov M.S., Tadjibaev J.H. "Effective organization of landscaping in the republic of Karakalpakstan"; Adilov Z., Matniyozov Z., Tojiboev J., Daminova U., Saidkhonova U. "Improvement of the environmental situation of the Aral region through landscape design". [1-11]

Research Methodology. Landscaping of the Muynak highway is an important issue, and a number of studies are being conducted in this regard. Properly selected landscape devices play an important role in the beautification of the highway area, they should reflect the local ethnic culture and be suitable for the environment and climate. Shelter devices, which are considered popular in landscape design projects, are offered as an integral part of recreation [9-10]. The history of the creation of pavilions dates back to ancient Egypt 5,000 years ago. [4]. The Egyptians likened the gardens to paradise, and the sheds in it were considered an integral part of the garden. Roman aristocrats not only rested in sheds, but even settled important state issues. The Russian people decorated the courtyards of the palace with wooden sheds. Small garden houses with sheer and tent-like, lightweight and sliding doors have been built in China and Japan for centuries. Shelters without square or octagonal walls have been built in England and the Netherlands for centuries. Sheds are often located near water, on hills, or in quiet corners. Typically, these small architectural devices are distinguished by impeccable design, ideal proportions and accuracy of details. When sheds are designed in harmony with nature, they become an integral part of the landscape and create a real harmony [1].

Sheds are mainly designed for short-term recreation, the main purpose of which is to protect against harmful environmental factors - heat, heavy rain or strong winds. Based on this, the design and construction of the shed will be developed. Today, sheds come in a variety of shapes and designs. In the past, sheds were mainly made of wood and metal, but now the diversity of raw materials and innovations in production technologies allow the use of other types of materials.

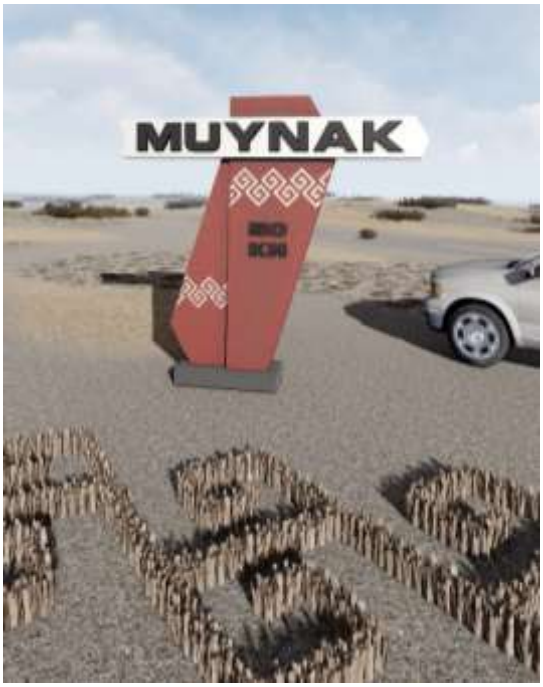

Figure 1. Pointer design

The aesthetic appearance of the shed and its construction in harmony with the environment is an important process in landscaping. The suitability of its design to the selected area requires the designer to study the area, the culture and needs of the population. Landscaping solutions for highways also include the design of sheds. It is known that the Moynak highway is located in the territory of the Republic of Karakalpakstan and crosses mainly sandy and eroded areas. The climate of this region is sharply continental, summers are dry and winters are relatively cold, with little snowfall. The average temperature in January is 7.4 °, and in July + 26.3 °. The design of the shed for the Kungirat-Moynak highway will be of a closed type, which will help to protect the area from the hot sun and sandy winds. The main purpose of installing such sheds on the roadside is not only to improve the aesthetic appearance of the roads, but also to include a number of other useful features.

If it is considered Muynak to be a tourist city in the near future, the flow of tourists visiting here will also depend on the opportunities created, convenience and security services. The Muynak highway is the main road used by tourists to see the Aral Sea and its relief.

Analysis and results. Designed for the Moynak tourist routes, the sheds serve the needs of tourists for tired, light meals on the way or just looking around and taking pictures and other purposes. If it is taken into account the emergencies on the roads, such shelters make it possible to provide first aid, repair a broken car or call an ambulance through a communication device installed in it.

Considering the frequent occurrence of dusty and sandy winds in the area, the idea of the design of closed-type sheds in the form of grass was put forward. But in the

Figure 2. Pavilion design

solution of such a design project the problem of maintaining a moderate air temperature arises. As a solution to this problem, two different structures of air circulation were studied.

The first type of “badgir” (Persian winds) is a traditional Persian and Iranian architectural element that serves to ventilate buildings and maintain their temperature balance. It has also been preserved and is still used in some countries, including Bahrain, the UAE, Pakistan, Afghanistan, and Saudi Arabia.

The second type “the Canadian Well” is a system that uses groundwater for heating in winter and cooling in summer. The principle of its operation is very simple - the pipes near the house are laid at a depth of 1.5–2.5 m. The pipes run to the house on one side and to the open air on the other. In winter, even in severe cold, the soil at such depths does not freeze, the temperature remains relatively warm from +5 to +8 degrees. The air sucked in by the ventilation pump, before entering the house, passes through the pipes of the heat exchanger and heats up to several degrees. The air sucked in by the ventilation pump, before entering the house, passes through the heat exchanger pipes and heats up to several degrees. In the summer, a similar system works to cool the house. The temperature of the underground pipes does not exceed 10-14 degrees even in the heat, so the "Canadian well" works like an air conditioner [11].

The proposed shed design was designed using the “Canadian Well” (Figure 3) method for cooling. The reason is that the first type of structure requires the elevation of a high tower, the "Canadian well" method is carried out to keep the air moderately through the underground pipe. This ensures that the temperature inside the shed is cool in summer and warm in winter. The horizontal length of the pipe should not be less than 30 meters, the outlet on the side of the shed should be higher than the inlet. In this case, the slope of the pipe is set at a ratio of 2% of its total length. The air inlet part of the pipe should be 1.2 meters above the ground, and the length of the underground part should be at least 2 meters or more into the ground (Figure 4). In the lower part of the pipe is placed a pit measuring 1x1x1 meters, and its mouth is covered with a metal grid. This grille should not impede air movement. In addition, people should be able to walk freely on the fence and be safe. The air inlet is also protected by a grille. The total height of the shed is 6.4 meters, the highest part of which serves as a beacon. This ensures that the shed is visible from a long distance and also helps passengers determine the direction. The lighting inside the shed is done by the light coming from the window panes in the center of its roof. This method of lighting is also derived from the ancient Karakalpak grass, which completely illuminates the interior of the shed.

The inner surface of the shed is located 0.9 meters below ground level and is descended by 6 steps. The view from the top of the staircase is in the shape of a circle, which helps to ensure safety. The indoor environment has seating around the perimeter and can accommodate up to 20 people. The diameter of the shed is 8 meters. In addition, space is left for the installation of an additional furnace in the indoor environment of the shed. This allows passengers and tourists to relax in the bosom of nature and prepare their own meals along the way. Two types of shed design solutions are proposed, although they are structurally similar, but differ depending on the type of raw material used. The first design solution consisted of a reinforced concrete

structure and a brick wall. The design is more modern but almost traditional materials are used in terms of raw materials. The second proposal in the project consists of a modern material sandwich panel and its prefabricated metal elements and is cheaper than the first project in terms of price. Although the design looks simpler, it is more efficient than the first project in terms of construction time and lightness. Both sheds offered bright, eye-catching colors. Colors and ornaments were reflected in two styles. The blue shed shows the imitation of the Karakalpak way of life and grass, while the brick shed is polished in a modern style.

Figure 5. Sand control methods

The most effective and cost-effective method is to plant local shrubs or use them as a protective barrier against roses to protect the sheds from moving sand. To do this, use a cane with a length of 1–1.2 m. Such reeds are 2-3 cm in diameter, its branches are bent in half (0.5 m), placed vertically in the sand to a depth of 25-30 cm and form cells 25 cm high. This method provides protection from portable sands for 2 years. Stabilization of the sandy surface in the following years is achieved by planting seedlings of local psamophyte plants and their subsequent self-renewal [12].

Analysis and results. Based on Karakalpak culture and traditions, Karakalpak ornaments were widely used in the use of the method of protection. At the same time, the fact that the intersecting lines of the ornaments fully fulfill the shape and function of the protective cages does not hinder the implementation of the main task of protection, but rather serves to improve the quality of landscape design, avoiding simplicity and uniformity.

Conclusion/Recommendations. In the theoretical modeling of tourist destinations, the study of historical materials and their application in modern practice, it is expedient to create small recreation areas as an integral part of tourist destinations. Shelter designed for this purpose; to the typology of modern small gardens as a potential object of landscape architecture to improve the ecotourism environment was created according to their compositional and figurative content. In the process of comprehensive consideration of the impact of tourism on the development of small parks and their architectural and landscape solutions in the conditions of modern tourist

routes of urban planning and architectural activities, the possibility of adapting scientific, analytical, cultural and design experience of foreign countries to local conditions, construction of small recreation areas studies were conducted. As a result, new design projects of sheds were developed based on national ethnic elements and modern building materials of the tourist destinations of Karakalpakstan, which has a comfortable, highly aesthetic, stable environment with a unique cultural and historical past, and at the same time developing in line with global trends in architecture and urban planning.

Analytical experience in local practice on the revision of traditional simplified models, an approach to improving the areas of tourist orientation predict the possibility of scientific adaptation in the further development of this research.

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