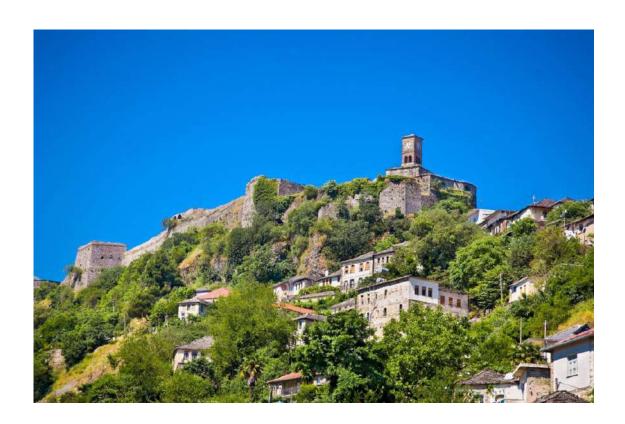
# DESIGN AND SUPERVISION GJIROKASTRA SYSTEM OF MUSEUMS - MUNICIPALITY OF GJIROKASTRA

Project ID Number: P15562 / REF No: AL-ADF-15556-CS-CQS

TASK 4: System of Museums (SoM) Detailed Project Design | APRIL 2020

## **ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT**



casanova+hernandez architects | Cultural Heritage without Borders

## SYSTEM OF MUSEUMS (SoM)

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#### **INTRODUCTION**

The proposed project consists of the restoration and management of the museum system in Gjirokastra. The purpose of this project is to identify the existing depreciated situation, the problems and unauthorized interventions, and to present the best possible solution for improving conditions and infrastructure. These changes are expected to significantly improve the conditions in which the facilities are and positively impact the increase of the visitors number.

Existing museums in Gjirokastra are identified by a code that will enable them to be better identified throughout the modeling process. The main museums mentioned in the ToR as part of the projection task are:

- M1. The castle of Gjirokastra
- M2. Museum of Gjirokastra
- M3. National Museum of Weapons
- M4. Museum of Prison
- M5. Ethnographic Museum
- M6. Ismail Kadare's house
- M7. Cold War Tunnel

There are other historic homes open to the public that should be part of the analysis and may eventually be part of the assignment:

- H1. Skenduli house
- H2. Zakate house
- H3. Fico house
- H4. Jaho house Babaramo
- H5.Angonate house
- H6. Babameto House
- H7. Cabej House
- H8. Kokalari House
- H9.Topulli House

## **Technical Analysis of Museums**

Most of the existing Gjirokastra museums have a small size ranging between 400 and 1350 square meters, with the exception of the castle which has a larger outdoor space of more than 24,000 square meters.

The technical analysis of the buildings reveals many structural and constructural differences associated with the construction period and that differs from the use of stone walls and arches in the fortress, with the use of reinforced concrete in the Cold War tunnel. No museum in Gjirokastra has universal access and no museum has an integrated HVAC system.

Only the Museum of Gjirokastra and the castle have a security system, but no museum has a fire protection system.

Museums present levels of technical problems, most of which relate to humidity, but also to engineering installations, damaged windows or facades.

Proposed interventions will consist of the following facilities:

- 1. THE MUSEUM OF KADARESE
- 2. ETHNOGICAL MUSEUM

- 3. ITINERARY OF THE "CHRONICLE IN STONE"
- 4. EDWAR LEAR'S AND TRAVELERS ITINERARY

In Kadare Museum House, improvement works will be carried out in terms of its functional side management, no reconstruction works of the structure are foreseen.

At the Ethnographic Museum, light restoration works are provided which are described in the following paragraphs.

Regarding the "Chronicle in Stone", "Edwar Lear" and "Travelers" itineraries, light and partial restoration work will be carried out and mainly orientation and information signage installation as well as improvement of the lighting system.

## **Existing condition**

A detailed study of the current state of "Alleyu i të marrëve" has been undertaken, assessing all the different sections and elements that need conservation intervention. The most voluminous and urgent needs are those in the consolidation of stone walls on both sides of the alley and damage to some cobblestone segments.

As in many parts of the historic city, there are many interventions made at different times by the residents themselves. These types of interventions have modified the historical character but have also damaged historic structures such as walls and sidewalks.

These interventions are:

- Metal elements such as iron fences mounted on walls
- Metal pipes installed off the walls, used as structures to support plants like vines
- Concrete layer outside the gates that have covered or removed the cobblestone paving
- Historic gate roofs have been replaced with reinforced concrete covers. Only a gate and a roof at the moment are historic though in a degraded state.

Also, interventions carried out by different institutions in different periods did not help the historical character of this alley:

- Street lighting was done before 1990, during the communist period, through reinforced concrete pillars, with highly degraded lamps where only the lamp could be replaced.
- Water distribution units have been recently installed. They are made of plastic, in contrast to traditional ones.

All of these layers and typologies of interferences cause the general state of the alley to have different conservation problems, which are fragmented and scattered across different segments along the entire length.

Conservation and restoration interventions in the Ethnographic Museum building are necessary, not only to prevent further damage to its elements but also to serve its function as an Ethnographic Museum. The building has been declared a monument of the first category and as such the interventions will respect the elements and try to preserve the maximum of the values that the building carries.

#### **Ethnographic Museum**

Concept of restoration proposal

Authentic elements will be preserved and only if considered necessary will be replaced with new material using the same technique and material. The museum proposal will respect the structure and elements of the building as well.

The project consists of intervening throughout the problematic environment.

#### In more detail:

- 1. Drainage at the back of the building to avoid moisture on the ground floor.
- 2. Surveys to check the wood structure for their condition. Roof restoration if necessary.
- 3. Roof waterproofing to protect the roof structure from water penetration and to reduce the maintenance costs of the building.
- 4. Minor roof restorations (will be installed after monitoring the roof during the rainy season and after removing stone slabs to place the waterproofing layer)
- 5. Restoration of the roof shelter while preserving as much as possible the original elements by replacing only the most necessary and damaged elements.
- 6. Restoration of the wood ceilings of the building. All elements will be cleaned and their condition carefully checked. Only elements that are completely damaged will be replaced with new elements using the same type of material and dimensions. The condition of the elements hidden in the damaged parts shall be checked and acted upon accordingly. Attempts will be made to raise the ceiling but this will only be considered if the materials in good condition will not be damaged.
- 7. Restoration of the wood floor of the building. Each element will be carefully checked and only the damaged ones will be replaced with new ones. Considering the public spaces of the building, the sustainability of their structure must be assured. Surveys should be carried out to assess the condition of the main structure on the floor below the boards. Damaged wood floor boards will be replaced with original elements.
- 8. Wood scale restoration. Wooden railings will be stabilized for the safety of visitors.
- 9. Restoration of windows. Only parts that are damaged will be replaced.
- 10. Door restoration. Only parts that are damaged will be replaced.
- 11. Plaster restoration. After placing the scaffolding the entire plaster will be carefully checked. The damaged parts will be consolidated and only the detached parts that cannot be saved will be plastered again using the same type of plaster. A survey on the plaster composition will be made first.
- 12. Restoration of stone wall damage. Filling the missing joint. Survey on plaster composition as a start.
- 13. Cleaning the walls from vegetation.
- 14. Treatment of ceilings, windows, doors and all other elements of oily wood.
- 15. Water-based spraying of wood floors.
- 16. Restoration of the outer stone floor.
- 17. Restoration of stone stairs.
- 18. Lime coating for the entire surface of the plaster.
- 19. Electrical wiring.
- 20. Mechanical Installations.

## **Cobblestone Interventions**

The cobblestone lanes are one of the identifying elements of the historic city, so their conditions largely influence the overall urban historical landscape.

Proposed curbside interventions will take into account the characteristics of each alley. The specific conditions of each of them are described in the respective project.

Regardless of the particulars of each case, the interventions will follow a similar structure:

- clearing the surface of the trail from debris
- clearing the surface of the trail from greenery and plants
- removal of concrete pavement and its replacement with cobblestone

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- removing inappropriate seating and replacing it with cobblestones
- -filling of missing cobblestone parts
- -Consolidation of side walls where necessary

At the same time, infrastructure interventions will include:

- -organization of rainwater drainage
- urban furniture and lighting only in the public spaces identified in the analysis.

The intervention will be minimal so that the historical character is not lost.

Interventions will only be planned in areas where the sidewalk has been moved significantly

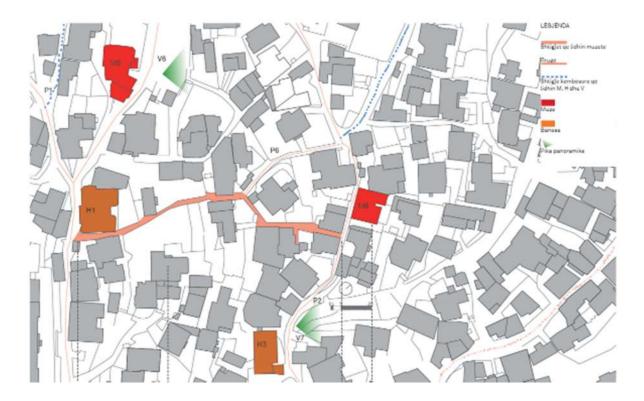
#### Location

The project, in all its works, lies within the city of Gjirokastra, the administrative territory of Gjirokastra Municipality.

Object placement plan:

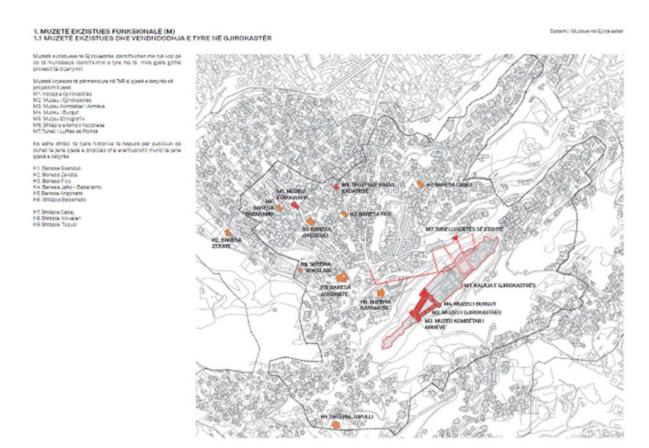
"Sokaku I të marëve" (restoration work will be carried out on this road)

listemi i Muzeve në Gjirokastër

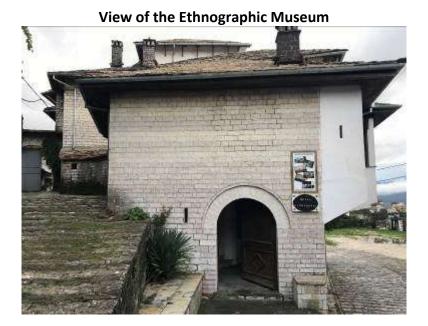


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## Photo of the site where restoration work is proposed



View of different passages from the street "Sokaku I të Marëve".







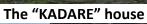














## Restoration proposal.

The conservation and restoration interventions in the building of the Ethnographic museum are necessary not only to prevent the further deterioration of its element but also to better serve its function as an Ethnographic museum.

The building is declared as a first category monument and as such the intervention will totally respect of the elements and try to preserve in maximum the values the building is caring.

The authentic elements will be preserved and only if it is considered very necessary will be replaced by new elements using the same material and techniques.

The museological proposal also will respect the structure and elements of the building.

The project consists of interventions in all the spaces that present problems. More in particular:

## 0. Packing and transport of museum object in a safe space

Gjirokastra Municipality and the Museum responsible staff will be responsible to remove all the exhibited artefacts inside the museum before the starting of the works. These artefacts shall be archived in a clean and dry space. When the implementation works starts, the contractor will not be responsible for any of the artefacts not removed from the working site.

## 1. Drainage in the back part of the building as to avoid the humidity in the ground floor and first floor on the south west walls.

These works are necessary for resolving the issues of humidity along the south east side of the building, especially in the ground floor. Works include removing the elements attached to the south east façade wall: the concrete vase and metallic elements and the plants need to be removed. The cobbled stones along the wall need to be removed and put aside.

Detailed description to be developed by the mechanical engineer

## 2. Test-pits to check the wooden wall structures of the building for their condition. Restoration of "çatma" walls if necessary.

The walls built with "çatma" are generally in good condition. However there are different situations when interventions will be necessary in these walls.

- One is the situation when damages might come during the works on the restoration of the window. This will require the removal of different parts of timber windows and window structures, which are connected to the "çatma" structure. In these cases "catma" plaster will be partially damaged and also small parts of the structure might also. The plaster or parts of the structure will need to be restored with the same technique and material. (Spaces affected: 15, 16, 17, 28, 30, 35.)
- The other situation is related to the upper room under the roof, where the floor structure is deformed. This space is built with "catma" wall in all 4 sides. In this space it will be necessary to do changes to the structural elements of the floor and roof. This will mean dismantling the floor, ceiling and beams. This work will bring deformation to the "catma" walls also: cracking and falling plaster or structure damages. This will require restoration of these damaged parts, using the same materials and techniques as the existing ones. The solution needs to be seen in place during the works with the supervisor supervisor. (Spaces affected: 38.)

- The third type of interventions to the "catma" walls is related to the installation of the exhibition boxes that will be added as part of the new design of the museum. In these cases, when an exhibition box furniture is to be positioned on a "catma" wall, there will be a reinforcement element inserted in the structure of "catma". (see drawing below) The plaster of the "catma" needs to be removed a stripe at the height of the upper part of the exhibition box, on both sides, for the timber reinforcement to be inserted. After the reinforcement element is inserted the "catma" layers need to be restored.

#### 3. Restoration works in the roof

The roof will have different types of interventions.

- All the stone slates will be removed to allow for the hydro isolation membrane to be installed.
- The upper part of the roof needs to be dismantled in order for the roof to be cleaned and all the structural problems to be checked and fixed. Removing stone slates and the necessary sections of the battens. Removing all the inert materials and cleaning the roof thoroughly. Removing the water deposit and pipes.
- Where there are structural problems: rotten, damaged, missing or wrongly positioned elements the roof needs to be dismantled carefully and elements need to be restored and correctly positioned.
- New elements, like beams, rafters and props will be installed where is needed. Beams will be installed in parallel to the damaged or missing ones.
- Joints of different elements need to be checked and elements reconnected properly.
- The wall plates need to be checked and replaced. New ones need to be installed after the top of the walls have been restored.

The timber for the new elements needs to have these characteristics:

- Specific weight 410 540 kg/m3
- Humidity lower than 12 %
  - Limit in traction 130 MPA

#### 4. Hydro-isolation of the roof

It will serve to protect the roof structure from water penetration and to lower down the maintenance costs of the building. After the roof structure and elements are restored and battens are installed the roof will be covered with a hydro isolation membrane: a polyolefin film that allows evaporation but is fully isolating from heavy rains. (Reference Bramac Eco product). After the membrane is installed, the roof will be covered with the traditional stone slates.

## 5. Restoration of the eaves' ceiling.

The damaged and rotten parts of the timber eaves ceilings above the entrance and the 2 sides of the façade need to be removed carefully by preserving as much as possible the original elements and replace only the very necessary and much damaged elements. (picture below) The necessary area to allow for the intervention needs to be dismantled also carefully. The damaged parts need to be restored and connected to the existing ones in good condition. The structure of the eaves need to be checked when the part of the structure is dismantled and if there are damages need to be consulted with the supervisor and interventions taken.

The same operation needs to be taken for the decorative elements in triangular shape on the upper parts of the eaves, on the north east and north west facades. (picture below)

## 6. Restoration of the wooden ceilings of the building.

All the elements will be cleaned and their condition will be checked carefully. Only the elements that are completely damaged will be replaced with new ones using the same type of material and dimensions. The condition of the hidden elements in the damaged parts will be checked and act accordingly. Efforts will be made to level the ceilings but this will be done only if it is considered possible without damaging the materials that are in good condition. The material used for the restoration of the elements needs to be of the same specifications of the existing ones: type, density, humidity, strength need to be analysed and data used for the new elements.

## 7. Restoration of the wooden floors of the building.

Every element will be checked carefully and only the damaged one will be replaced with new ones. Taking into consideration the public usage of the building, the stability of their structure should be secured. Test pits should be done to evaluate the condition of the main structure of the floor underneath the wooden boards. The same principle will be used here too. The damaged wooden boards of the floor will be replaced with new ones using the same type of material with the same dimensions as the original element. The material used for the restoration of the elements needs to be of the same specifications of the existing ones: type, density, humidity, strength need to be analysed and data used for the new elements.

#### 8. Restoration of the wooden staircases.

The wooden railings and stairs elements presenting instability will be stabilised as to secure the visitors. They will need to be checked, the parts dismantled carefully. The parts that are damaged need to be replaced or restored and assembled back. The material used for the restoration of the elements needs to be of the same specifications of the existing ones: type, density, humidity, strength need to be analysed and data used for the new elements.

#### 9. Restoration of the windows.

There are 9 different types of windows in the building. The types are specified in the detailed drawings. The interventions will require dismantling of the windows in order to allow for the damaged parts to be removed and restored or replaced. After the different parts need to be reassembled and the windows be replaced. Windows material is pine, while the structural frame is oak. The material used for the restoration of the elements needs to be of the same specifications of the existing ones: type, density, humidity, strength need to be analysed and data used for the new elements.

#### 10. Restoration of the doors.

Entrance door is oak timber. It needs to be dismantled carefully, the damaged parts removed and restored. The frame structured repositioned correctly. The parts reassembled and the door installed. The metallic elements of the door like the lock also be checked and replaced if necessary or cleaned and painted with anti-rust paint.

The other 5 external doors of the ground floor also need to be dismantled carefully, the damaged parts removed and restored. The frame structured repositioned correctly. The parts reassembled and the door installed. The metallic elements of the door like the lock also be checked and replaced if necessary.

All the other internal doors of the building need to be checked and if necessary dismantled and parts damaged to be restored.

The material used for the restoration of the elements needs to be of the same specifications of the existing ones: type, density, humidity, strength need to be analysed and data used for the new elements.

## 11. Restoration of the plasters.

After placing the scaffolding all the plaster surfaces will be checked carefully. The damaged parts will be consolidated and only the loose parts that cannot be saved will be plastered again using the same type of plaster. Test pits for the composition of the plaster will be done initially. The new plaster will have the same composition as the existing one verified from the tests.

## 12. Restoration of the damaged stone walls.

Repointing of the loose joints. The joints will be checked in the lower part of the walls where humidity has affected and in the North West and south west facades. Test pits for the composition of the joints plaster will be done initially. The new plaster will have the same composition as the existing one verified from the tests.

Internal stone walls, where the hanging exhibition boxes are positioned will have minimal interventions. At the upper level of the exhibition boxes there will be installed metallic elements in the joints of the stone walls for hanging. Small openings of plaster on the stone walls to see where are the joints will be done, so that anchors can be installed. (see detail below) The mortar will be than restored with new one having the same composition as the existing one.

The joints will be first cleaned thoroughly with pressured water and after refilled with the new mortar. Additional non correct repointing with cement mortar will be mechanically removed carefully not to damage the stones, the joints cleaned and restored in the same process as mentioned above.

## 13. Cleaning the walls from the vegetation

Ivory plants will be removed from the walls and they will be removed from the roots on the ground. Also vegetation ground close to the walls will be removed to avoid humidity accumulation on lower parts. Vegetation growing on the joints will also be removed and cleaned. The joints will be restored.

#### 14. Graffiti cleaning walls

Cleaning the external stone wall façade facing the road from graffiti and paint using warm water with pressure and paint stripper solution.

## 15. Treatment of ceilings, windows, doors and all other wooden elements with linseed oil

All the Ceilings will be cleaned with a soft piece or plastic brush. In cases of superficial damages of the timber sand paper can be used to remove the stains. After 2 layers of linseed oil will be applied. The first with a 50:50 ratio of linseed oil and diluent and the second layer will be with 70:30 ratio.

The same process will be followed to the doors and windows. After they will be dismantled and the damaged parts restored the 2 layers of linseed oil will be applied.

## 16. Treatment of the wooden floors with water based lacquer.

All the floors will be buffed and 2 layers of water based lacquer will be applied.

#### 17. Restoration of the outside stone floors

Black stones at the entrance space and at the small courtyard. These need to be checked. The damaged ones will be removed and replaced by the same type of stone and size. The mortar joints will be checked and if damaged will be cleaned and restored with the same mortar. The vegetation will be removed from the joints, joints cleaned and refilled. Superficial vegetation will be brushed mechanically.

White stones at the courtyard space. These need to be checked. The plants and vegetation need to be carefully removed from the roots. The damaged ones will be removed and replaced by the same type of stone and size. The mortar joints will be checked and if damaged will be cleaned and restored with the same mortar. The vegetation will be removed from the joints, joints cleaned and refilled. Superficial vegetation will be brushed mechanically.

The balcony stone pavement and all the layers underneath need to be checked and restored. The original stone tiles in good condition need to be and reused. The process of the work will be: documenting and numbering the stone tiles; removing the stone tiles and put apart safety; Removing the mortar and damaged hydro insulation layer; controlling the condition of the concrete slab under; applying the layers removed with the same material composition; installing new membrane; applying the mortar; replacing the tiles by changing the damaged ones. The damaged tiles are the ones that are broken or presenting degraded layers at the level that the water is trapped.

## 18. Restoration of the stone staircase

The white stone stairs in the garden space need to be cleaned. The plants and vegetation need to be carefully removed from the roots. The damaged stones will be removed and replaced by the same type of stone and size. The position of the remaining stones shall be documented and stones should be positioned at the same place. The stairs will be restored with the same mortar as the existing one, verified from laboratory analysis.

#### 19. Limewashing for all the plastered surfaced

The plastered and rendered surfaces of the walls, internal and external will be painted with two layers of limewash paint. Surfaces need to be checked before for damages from the older layer paints. Lime paint needs to be mixed with water that has been mixed with ash from the day before. These helps the paint be more resistant.

## Adaptation interventions at Kadare museum

#### • Interventions in the roof

From the evaluation of the current conditions, humidity has been noticed in the eastern side, close to the area of the chimney. Thus, it because necessary for the roof in that area to be uncovered by stone slates in order to evaluate the situation of the wooden construction. Once the necessary interventions on the construction will be completed, the stone tiles that have been carefully stored will be placed again to cover the roof.

## Interventions in the gutters



## Repairing damaged parts

Part of the elements of the gutters are detached or damaged. These elements will be replaced or repaired using elements similar to the existing ones.

## Placing the gutter in the back facade

Currently, the back side of the building does not have gutters. The gutter is necessary on this side to protect the facade, but also to allow for a better functioning of the road and the main entrance. This problem has been pointed out by the staff of the museum as well.

The new gutter will be the same as the existing ones and will be added to the existing system.

## • Intervention in the floor of the ground floor



The black stone tiles of the ground floor will change entirely. The existing stone tiles will be removed carefully. Once they are removed the necessary interventions for the placement of the heating system will be done. Finally, new stone tiles will be used for the paving. Traditional materials and techniques will be used to place the new paving.

The changing of the paving will cause the change of level of the ground floor. The precise difference will be evaluated once the works will be finished as it is not possible to do so now. As the underground layers are unknown, it is unclear how much it will be needed to dig

for the heating system.

This difference will cause a necessary intervention in the steps connecting this floor to the other ones. Another element that will be affected is the well. Once the new floor will be in place the well be lifted in order to keep its relative height to the floor.

#### • Electrical installations

New electrical installations will be made to answer to the new musealisation concept. Interventions will be kept at a minimum.

#### Plaster

Most of the installations will be on the walls, covered by the plaster. Opening up the channels will be done carefully, in order not to damage the stone construction. The installations will be covered with new plaster, similar to the existing one.

#### First floor

The new installations will require a small intervention in the wooden floor of the first floor. Some of the wooden boards will be removed carefully and placed in the original position once the installations will be placed.

#### Stairs railing

In order to connect the ground floor to the second one the wooden railing of the stairs will be replaced with a new wooden one where all the installations will be hidden.

#### Interventions in the walls

Interventions on the walls will be kept to a minimum.

## Dismantling the brick wall

In the entrance lobby there is a brick wall that divides the area into two parts which will be dismantled. This will be done in order to use the whole space in the new musealisation concept.

## Cleaning of the stone wall

The lack of the gutter in the back of the building has crated favourable conditions for vegetation to grow in the facade. This part of the stone wall will be cleaned. The placement of the gutter is expected to lower or remove this problem.

#### Interventions in the toilets

Existing toilet will be part of the intervention as the tiles and the fixtures will be changed. This interventions will be done carefully, not damaging the structure of the building.

#### • Interventions in the wooden elements

#### Doors and windows

Doors and windows are important elements for the well-functioning of the museum. Necessary cleaning and mechanical interventions will be done to secure their appropriate functioning. Afterwards, the wooden elements will be treated.

## Completing the frame

Room number 10 has a few cases where the electrical fixtures have interrupted the wooden decorative frame. These fixtures will be moved elsewhere and the frame will be completed using the same kind of wood and continuing the decorative pattern.

#### Treating the wooden elements

Wooden furniture and wooden ceilings will be treated with linseed oil.

The wooden floors will be buffed and treated with lacquer.

## Painting the facade

The last process will be the whitewashing of the facade.

## Proposed interventions "Chronical in Stone"

Interventions in the Fool's Alley will include all necessary restorative interventions on walls, cobblestones, lighting and the installation of proposed panels and corners that will turn the alley into a visitable space that provides interesting information about the alley, the nature of Gjirokastra and its inhabitants and related to the stories from the novel "Chronicle in Stone".

#### The list of interventions in more detail:

## 1. Waste removal

Collection and removal of debris, elements that will be removed from the walls, such as bars and wire mesh, vegetation and inerts that impede work in the areas where the interventions will happen. The inerts will be transported by hand barrow to the nearest main road to the alley from where it can be shipped by car.

#### 2. Cobblestone restoration.

The restoration will be carried out with the aim of making the most of the existing stone material, while fully preserving the various configurations found along the alley. The degree of intervention in each section is different, depending on the condition of each segment. In each case, the interventions will be done section by section, matriculating the stones, stored near the site, and then placing them in the right place to remember the initial configuration.

The amount of new stones that will be required for use will have to be the same as that found in each case, black or white stone, with dimensions appropriate to the configuration of each section. Generally, the black stones used are 20-25cm deep and 8-15cm wide.

#### 3. Concrete layer removal

All cases of use of concrete, cement mortar, or other inappropriate materials for characteristic alleys will be removed. Surfaces paved with concrete, cement, or irregular stone slabs will be replaced with cobblestones, or black stone slabs, as appropriate. Removal of materials will be done carefully so as not to damage the original layers underneath.

## 4. Cobblestone implementation

At points where the cobblestone is missing, for whatever reason this has come to happen, its implementation will be done respecting the original configuration. In this case, the material will be completely new, but will fit the same conditions as above, in each case.

The new cobblestones will be built using traditional techniques. In addition to stone, it will also be important to properly lay the layers under the cob, according to the terrain of each case.

## 5. Removal of concrete layers at the stepping elements (sofat) and capping with stone slates.

All use of concrete, cement mortar, or other foreign materials for characteristic alleys will be removed. Surfaces paved with concrete, cement, or irregular stone slabs will be replaced with black stone slabs with lime mortar. Removal of materials will be done carefully so as not to damage the original layers underneath.

#### 6. Vegetation removal

As mentioned above, the presence of vegetation is a widespread problem. Vegetation cleaning will be done manually without damaging the cobblestones or walls. Particularly in the case of walls, care must be shown in the way branches are removed so as not to damage the structure. Also in the case of walls covered by Hedera Helix it will be necessary to cut the top of the plant for the restoration of masonry and cover with stone tiles.

## 7. New constructions in the frameqrok of the itinerary "Chronicle in Stone"

Four new corners will be created along the alley as part of the Museum System project, The Chronicle in Stone Itinerary. These corners will contain information panels for Gjirokastra visitors. Also the lighting of the alley will be changed with new elements specially designed for this itinerary.

Works to be completed for the creation of the Itinerary:

## - Panels with light bearing the alley's name. 2 pieces.

These panels will cling to the existing electric poles and will be mounted on the 2 extremites of the alley. One from Fato Berberi street and one from I. Kadare street. These panels are made up of a 4cm stone slab mounted on a stainless steel frame and this steel structure is seized with rings and tightened steel screws with the electric pole. Stainless steel letters on both sides of the plate, 2mm thick, will be affixed to the stone slab. Fixing them to the stone slab will be done with 3mm diameter stainless steel pins, which do not look visible after mounting. These panels will be illuminated with longitudinal steel LED lamps on both sides, mounted on the panel, welded over its structure. All steel elements are coated with black powder paint.

## Materials for 1 panels:

- 1 White stone slab. The same white stone used for the construction of historic walls in Gjirokastra. Thickness 4 cm, width 55 cm, height 58 cm.- Kornizë çeliku inoks 2 mm trashësi. 56 cm gjerësi, 61 cm lartësi.
- 2 Stainless steel wings 2 mm. 81 cm long, 5 cm high profile and 4 cm wide.
- 2 Stainless steel rings that fasten with screws behind the column and grip the panel structure. 2 mm thick and 40 cm maximum diameter (column diameter moving).
- 16 letters with stainless steel pins for both panels on both sides. Text height 10 cm. Thickness 2 mm.
- LED illuminator on both sides. Profile: Stainless steel total length A = 2x 520 mm tandem angle of light beam B = 7° asymmetric left and right version sloping toward the table the length of the light outlet C = continuous. Welded over panel structure. Protective cover: Transparent PC Polycarbonate, IP54. Illuminated: Equipped with single-row LED, 24V, 1492/ ...- 354 12.5W/ m, 1200lm/ m, CCT 5000K, IP67, Electrical safety class LED 3,
- Black RAL powder coating for all stainless steel elements.

## - Panels with light. 4 pieces.

These panels are similar to the ones above but smaller in size and have no metallic lettering on the board. They will be caught behind the existing electric poles and placed on the 4 poles

along the socket of the fool. These panels are made up of a 4cm stone slab mounted on a stainless steel frame and this steel structure is seized with rings and tightened steel screws with the electric pole. All steel elements are coated with black powder paint.

## Materials for 1 panel:

- 1 White stone slab. The same white stone used for the construction of historic walls in Gjirokastra. Thickness 4 cm, width 25 cm, height 58 cm.
- Stainless steel frame 2 mm thick. 56 cm wide, 61 cm high.
- 2 2 mm stainless steel wings. 44 cm long, profile 5 cm high and 4 cm wide.
- 2 Stainless steel rings that fasten with screws behind the column and grip the panel structure. 2 mm thick and 40 cm maximum diameter (column diameter moving).
- LED lights with 2-way illumination. Profile: Stainless steel total length A = 4 x 250 mm tandem angle of light beam B = 7 ° asymmetric left and right version sloping toward the table the length of the light outlet C = continuous. Welded over panel structure. Protective cover: PC Polycarbonate transparent, IP54. Illuminated: Equipped with single-row LED, 24V, 1492 / ...- 354 12.5W / m, 1200lm / m, CCT 5000K, IP67, Electrical safety class LED 3,
- Black RAL powder coating for all stainless steel elements.

## - Corner panels "Sokaku is special"

This angle consists of 2 panels, 1 longitudinal LED lamp that is fastened to a stone wall with steel pins and an open box above, steel that is placed under several stones and fixed with a concrete block underneath. The box will place some stones from the sokak that can be removed by the visitors but not taken away or thrown away. Therefore the stones will be attached to a 2mm steel cable with the box.

#### Materials for the corner:

- 1 panel with 80 x 60 cm aluminum composite, 4mm . Anti scratch. Aluminum frame, 2 x 5 mm profile. Stainless steel fastening elements and screws.
- 1 stainless steel panel, 30 x 50 cm, 2 mm spessor, no frame. Fixed on a stone wall with stainless steel studs hidden.
- 1 stainless steel box, 50 x 50 x 30 height, 2mm thick, open top.
- Stainless steel fasteners and screws attached to stone on one side and box on the other. 16 pieces.
- 2 mm stainless steel wire attached to stone caps and box. Length 1 m. 8 pcs.
- The concrete foundation where the steel box will be caught under the sokak stones. 60 x 60 cm, with a depth of 20 cm.- Wall mounted LED lamps with hidden stainless screws, with 2 steel side profiles, 2 x 5 cm, length 20 cm. Profile: Stainless steel total length  $A = 1 \times 1250 \text{ mm}$  tandem angle of light beam B = 7° asymmetric left and right version
- sloping towards the boards, length of light outlet C = continuous. Protective cover: PC Polycarbonate transparent, IP54. Lighting: equipped with single-row LED, 24V, 1492 / ...- 354 12.5W / m, 1200lm / m, CCT 5000K, IP67, Class 3 LED electrical safety.

## - "Games" corner panels

This corner will have 7 cm thick black stone slabs, framed and mounted on the existing concrete mortar layer. The maximum tile dimensions will be 50 x 70 cm, but they should follow

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the shapes specified in the project drawings. A black stone wall without mortar will be erected by traditional technique, where the panel will be mounted. The stones should be framed with a maximum height of 15 cm. A single row of stones should not be transverse to the entire width of the wall, 40 cm. Only the top row of stones will have a height of 25 cm and a profile of 30 degrees, on the side where the panel will be placed. View the drawings for the correct dimensions. Only this line will be fixed with lime mortar, not visible, with a ratio of 1 lime: 2.5 sand. The panel will be fastened to the upper stones with stainless steel pins.

#### Materials for corner:

- 1 panel with aluminum composite 140 x 35 cm, 4mm spacer. Anti scratch. Aluminum frame, 2 x 5 mm profile. Stainless steel fastening elements and screws.
- Black stone tiles. Thickness 7 cm. The same black stone used for cobblestone construction in Gjirokastra. 14 m2 of space.
- Black stones framed for wall construction. The same black stone used for the construction of historic cobblestones in Gjirokastra. 1 m3 volume. **Corner panels "Character of Gjirokastra"**

This corner will be paved with 7 cm thick white stone slabs, framed and etched on white stone walls / foundations built without mortar. The tiles will be laid with lime mortar for leveling and fixing. The maximum tile dimensions will be  $70 \times 70 \text{ cm}$ , but they must follow the shapes specified in the project drawings.

A drywall white stone structure, by traditional technique, will be set up where panels will be placed and where visitors will sit for reading and resting. The stones should be framed with a maximum height of 15 cm. The width can vary. Look at the drawings for the correct dimensions. The wall will be covered with white stone lid, 5 cm thick. Only this line will be fixed with lime mortar, not visible, with a ratio of 1 lime: 2.5 sand. This wall will be partially overlapped over the existing wall, increasing height and covering the site side of the road. In total there will be 4 stainless steel panels, 2 mm, with different dimensions. The panels will cling to the wall stones with hidden stainless steel pins, no distance from the stone. 3 of the panels will be caught in stones that extend like volumes from the masonry and cut with an angle. These stones are well positioned and dimensioned in the drawings. One of the panels, however, is set in an angularly cut stone inside the wall, inspired by traditional house turrets. This stone also has dimensions and position defined in the project drawings.

A volume of stone with the same technique as the wall and covered with a 5 cm stone lid will serve to sit in the form of traditional sofas.

This angle will be illuminated by 2 longitudinal LED lamps that cling to the stone wall with steel pins.

#### Materials for corner:

- White stone slabs, like paving and landing lids. Thickness 7 cm. The same white stone used for the construction of cobblestones in Gjirokastra. 7 m2 of space.
- White stone tile for wall cover. 5 cm thick. 2.5 m2.
- White stones framed for wall construction and tile support. The same white stone used for the construction of historic walls in Gjirokastra. 6.5 m3 volume.
- 4 stainless steel panels, 2 mm, dimensions: 25x20 cm, 25x30 cm, 25x10 cm, 25x20 cm, spessor 2 mm, without frame. Fixed on stone wall with stainless steel studs hidden.

- 2 pieces of LED wall-mounted illuminated LEDs with hidden stainless steel screws, with 2 steel side profiles, 2 x 5 cm, length 20 cm. Profile: Stainless steel length A = 1 x 1250 mm length of light outlet C = continuous. Protective cover: PC Polycarbonate transparent, IP54. Lighting: equipped with single-row LED, 24V, 1492 / ...- 354 12.5W / m, 1200lm / m, CCT 5000K, IP67, Class 3 LED electrical safety.

## - Construction of metal structure for the slope.

Removal of metal elements placed by residents, at the bottom of the sokaku, near the corner of the panels "Sokaku is special" and replacement with iron elements, circular profile, diameter 8 cm, thickness 2 mm, with a semi-circle shape at the top.

Existing elements will be carefully removed so as not to damage the masonry where they are caught. The slope will be carefully detached from the bars and made sure that it is not damaged by the movement of the elements and the work.

There will be 6 new elements to be deployed. They will be fixed to the existing vases created on the 2 sides of the road with concrete legs / foundations, continuous joining the element to the base. Other small iron rod joints, 1 cm in diameter, will be mounted on welded elements to attach and reinforce the structure, and to better support the slope.

The concrete legs should be dipped at least 30 cm below and in order to allow flowering. Care should also be taken not to damage the steep grape roots. If necessary to protect the roots the elements may be less than 6.

The elements have different dimensions as the road has different sections. The maximum dimensions of the elements shall be: 415 cm distance at base, 360 cm height. Look at the drawings. Sheet DD-R4-16.

## "EDWARD LEAR" AND TRAVELLERS RESTORATION INTERVENTIONS Cleaning from vegetation

As mentioned above, the presence of vegetation is a widespread problem in the path examined. Vegetation cleaning will be done manually, taking care not to damage cobblestones or walls or mortar, where used, as stairs. Particularly in the case of walls, care must be takenin the way of branch sealing so as not to damage the structure. Also, when cleaning the stairs from vegetation, care should be taken with the tile breaks as a result of the degradation of the mortar.

## Removal of inappropriate materials

All cases of the use of concrete, cement mortar, or other foreign materials for characterispaths will be removed. Surfaces paved with concrete, cement, or crushed stone slabs will be replaced by cobblestones, or black stone slabs, as appropriate. Removal of materials will be done carefully so as not to damage the original layers underneath.

#### **Cobblestone restoration**

Cobblestone restoration is one of the main processes that will take place along the path. The restoration will be carried out with the aim of making the most of the existing stone material, while fully preserving the different configurations found along the path.

## **Restoration of masonry**

Retaining or fencing walls alongside PS1, PS3 and PS6 public spaces will be restored. Where appropriate, the intervention will include placing the stone lids on the head of the masonry,

or complete restoration of the masonry, to the height required in each case. The first step will be the removal of inappropriate materials, while the intervention will be carried out with stones having the same characteristics as the existing ones.

The final outlook of the interventions

## Methodology and design strategy

A number of elements have been taken into consideration to achieve the final outlook:

- The location of the areas inside the historic centre of Gjirokastra
- The current condition of these areas
- The existing traditional building materials
- The current lightning conditions
- Data from public hearings held in the city

As all the areas are inside the protected area of the city, all interventions will be done using traditional materials. Also, the bulging techniques used will be the traditional ones.

Currently, street lights in all areas are in very poor conditions, or are missing entirely. Our aim is to make this areas safe and appropriate for use, buy placing proper street lights.

The lights proposed will have a temperature of 3000K, a warm light that help highlight the architectural features of the public spaces. The concept used for the lights is for light to be visible, but not the fixtures.

As the areas are part of one itinerary, there will be elements of unifications, in order for all the interventions to be clearly seen as one intervention spread out in many parts of the city. Urban furniture elements such as benches, bins, bicycle racks and fountains will be the same in all public spaces. This does not only unify the interventions, but also helps the process of maintenance. A number of urban furniture elements have been inspired by the local materials and crafts in their designs, such as round black stone benches.

One of the most important unifying elements are the quotes carved on the stone tiles that will be used for the paving. These are quotes from different travellers that have visited Gjirokastra in its history.

In three of the public spaces panoramic panels will be places.

In two of the public spaces water fountains will be places, inspired by the request of the local inhabitants made during the public hearings.

## • PS1 - Next to the "Obelisk"

#### Concept of the intervention

The concept of this public space has been developed around the panorama that it offers and the panel, while having the principle of making the minimal intervention.

The area will be paved with traditional white stone, in rows parallel to each-other, slightly moved, in order to not be monotonous. In some of these stone tiles a quote will be carved, a unifying element of all the public spaces. The tiles will be anchored on the soil.

Three benches will be places, facing the panorama of the city and the castle.

The panoramic panel is placed in the same place where the artist stood almost 2 centuries ago.

A bin will also be placed, with the same materials as the benches, a combination of wood and metal.

The metal elements that will be used in all the public areas will have a colour of AL7016.

The wood will have natural colour, as it will be treated only with protective layers.

## • Lightning

When designing the lightning for the space, the aim was to have a well-lit space that still offers a feeling of intimacy.

The lights have been placed close to the wall. Three additional light will be placed in the vaulted space of the stairs. These will be cylindrical lights, aiming down, in order not to obstruct with too much light.

## Greenery

The vegetation will not change much from the existing one. The grass will be treated in order to make sure its longevity and the anchoring of the stone tiles.

## **PS2- Public Square in front of Fico House**

## Concept of the intervention

The area in front of Fico House will be turned into a pedestrian area, blocking cars from using it as a parking.

A green area will be added to the square, having the same shape as the square, triangular. The square will be paved with the existing stone tiles which will be removed and replaced. Traditional black stones will be added to the white ones. The mixture of the white and black stones will create an interesting contrast to the green area that keeps the physiognomy of the square.

Cobblestone will be used to pave the square. The black tiles will be placed above the stones of the cobblestone, which will be placed in a lower level in the places under the tiles.

In the area covered with grass there will be some black stone tiles, some of which will have quotes covered on them, from travellers visiting the city in the past centuries.

In the green area there will be some big vases built in stone wall and covered in black stone tiles, using the traditional technique.

Another element to be added to the square is the water fountain, requested by the local inhabitants during the public hearings. It will be 20\*10\*90cm, Ral7016 colour metal element Three bicycle racks will be placed in this square.

The surrounding fencing of the square will be slightly modified. The wooden elements will be removed, as they are damaged. They will be replaced with metallic elements, 3\*3 cm, connected to the outer side of the wall in order to increase the sitting surface, as currently it does not comply with sitting standards.

## Lightning

Lights in this intervention have been organized around the surrounding wall, where the sitting places are. Lights will be incorporated in the wall, so not to be an obstacle of any kind for the visitors. The round stone vases will be lit with LED lights around their perimeter. Other lights will be placed inside the vases to give light to the roses planted in them. Lights in the area will have a temperature of 3000K, aiming for a uniformity of the colour of the light.

## Greenery

Wild roses (Rosa Canina) will be planted in the vases. This plant has been chosen as it is widely spread in the city and its height does not exceed 80cm, which allows for Fico house to be seen from the square. This plant does not need specific maintenance.

## PS3 - Public Space in Haxhi Dalipi street

The public are by Haxhi Dalipi street will be turned into a resting area by following minimal interventions, in order not to disturb the existing cosy atmosphere that this area has.

Only a few stone tiles will be placed in the grass, having a traveller quote carve di them.

The area can be accessed in two ways, so stones will be placed in both these locations. Two benches will be placed in the upper part. Benches will be same to those used in PS1.

## Lightning

Lightning in this square will unified and uniform, avoiding sources of light to be seen. The colour of the light will be 3000K. Lights will be placed in the surrounding stone walls and the trees present in the area. It is also important to point out that the lamps of the street lights will be replaced with new ones of 3000K. Lights will not change the existing atmosphere, but will highlight the existing traditional features of the area.

## Greenery

The existing vegetation of the square will not be touched. Only the areas covered in grass will be treated to have healthier grass. The lower part will be treated with new soil and grass as well. Part of the surrounding walls will be restored. On those wall there are plants that will be lit during the summer months, as the lights will be placed a bit further away from the wall to be able to achieve that.

#### PS4 - Viewpoint on the way to the castle

## Concept of the intervention

The new public area will serve as a viewpoint for the city, due to its position offering such function. All elements that will be used will be similar to the ones used in PS2. The aim is to use here some of the stoned removed from the paving of PS2. The paving will be similar, in materials, pattern and technique, to that of PS2: white cobblestone and black stone tiles where the quote will be carved.

Moreover, to round elements will be placed in this square, similar to PS2, but this time they will be used as sitting elements.

A 1.2m tall stone will will be built to divide the area of the public square from the road nearby. The wall will be built using traditional materials and techniques. Alongside the wall a bench will be placed, offering more sitting spaces with a view to the city.

The public area will also be divided by the main road leading to the castle by a 15cm tall edging, which allows pedestrians to access the square but blocks the cars out.

#### • Lightning

Lighting of this new square will be similar to that of PS2. Lights will be placed on the 1.2m tall stone wall and will aim at the square.

Other lights will make sure for all of the wall to be lit.

LED light will be placed around the stone sitting elements. They will be placed in a low level, not blocking sight.

Other lights will be placed inside the sitting elements to illuminate the pomegranate trees planted in the big vases. These plants will offer shade in the summer days.

#### Greenery

The interventions proposed planting two pomegranate trees in the vases/sitting elements. These plants will offer shade in the summer days. This plant has been chosen as it has been historically used in the city and is considered to be a symbol of prosperity. At the same time, the red colour of the pomegranate, present in traditional decorations in the city, is the chosen colour for the Itinerary of Edward Lear and the travellers, part of which is this intervention.

## PS5 - Public Space by Siri Karagjozi street

## • Concept of the intervention

The public square by S Karagjozi Street has quite a panoramic view to itself. A panel will be placed in the same position where Lear was standing when painting that panorama, showing that same painting. Three benches will be placed in this area, of the same model as those in the other public spaces. White stone tiles with the quote carved on them will be used to reach these benches.

A fountain will be placed in this public square, as a request that came from the public hearings. White stone tiles of 20\*40cm will be placed to reach the fountain.

Part of the intervention is the replacement of the existing bridge with a metallic one.

## Lightning

The nearby natural rock has been an important element taken into consideration when designing the lighting for this square. Giving light to the natural terrain will be beneficial to the road for its users and will also make this spot visible from the distance.

The bridge will be lit by LED lights placed under its railing. This will also make its usage easier.

## Greenery

The only intervention done to the vegetation in this area will be that of treating the soil and adding grass, in order to achieve a uniformed view.

## **PS6** - Stairs by Topulli house

#### Concept of the intervention

The interventions to the stairs by Topulli house have been focused on the restoration intervention to the stairs and the addition of lights, the quote on a metal sheet on the restored adjacent stone wall, the house panel on the lowest part of the stairs and the panoramic one on the upper part.

The quote will be carved on metal sheets which will be anchored to the restored stone wall.

#### Lightning

Different lights will be used for this space. This will be done to secure its safe usage and to make the area visible from the city and from the castle.

Lights will be placed every other step, to re-bring the pattern of the cobblestone in the bazaar. The wall at the top of the stairs will be lit as well.

The quote will be lit with LED light placed behind the metal sheet, to make the quote visible at night.

#### Greenery

Both sides of the stairs have natural terrain where pomegranate trees will be planted. These plants will offer shade in the summer days and will be lit during the night.

## Interventions

## Cleaning from vegetation

As mentioned above, the presence of vegetation is a widespread problem in the path examined. Vegetation cleaning will be done manually, taking care not to damage cobblestones or walls or mortar, where used, as stairs. Particularly in the case of walls, care must be takenin the way of branch sealing so as not to damage the structure. Also, when cleaning the stairs from vegetation, care should be taken with the tile breaks as a result of the degradation of the mortar.

## Removal of inappropriate materials

All cases of the use of concrete, cement mortar, or other foreign materials for characterispaths will be removed. Surfaces paved with concrete, cement, or crushed stone slabs will be replaced by cobblestones, or black stone slabs, as appropriate. Removal of materials will be done carefully so as not to damage the original layers underneath.

## • Cobblestone restoration

Cobblestone restoration is one of the main processes that will take place along the path. The restoration will be carried out with the aim of making the most of the existing stone material, while fully preserving the different configurations found along the path.

The degree of intervention in each block is different, depending on the state of each segment of the road. In either case, interventions will be done section by section, matriculating the stones, stored near the site, and then placing them in the right place to remember the cobble configuration.

The amount of new stones that will need to be used will have to be the same as that found in each case, either black or white stone, with dimensions appropriate to the configuration of each section. Generally, the stones used are 20-25cm deep and 8-15cm wide.

#### Cobblestone construction

At points where the cobblestone is missing, for whatever reason this has come to pass, its construction will be done respecting the original configuration. In this case, the material will be all new, but will fit the same conditions as above, in each case.

The new cobblestones will be built using traditional techniques. In addition to the stone, it will also be important to properly lay the layers under the cobblestone, according to the terrain of each of them.

## Restoration of masonry

The bricks that accompany the soak during their extension will undergo restoration to enable the longevity of the cobblestones and the safety of those who use these cobblestones.

Where appropriate, the intervention will include the dismanteling and rebuilding of the wall, as in the case of Astrit Karagjozi Road, stone filling, vertical restoration, head consolidation and stone lid placement. These processes will always be accompanied by joint cleaning and in some cases, removal of the concrete layer on the wall.

In some cases, new walls will be built, mostly to secure the terrain from fallin on the cobblestone. The technique used to build these walls will be the traditional one.

#### Restoration of drainages and borders

Drainages are another element that will be subject to interference. In the case of existing stone drainages, they will be cleaned and fully restored, replacing the missing stones or replacing the missing ones.

In cases where the drainages are made of concrete, they will be replaced with stone drainages in order to respect the construction tradition of the city. Only in the lower section of the Astrit Karagjozi road will concrete cover with metallic carrier be provided, as concrete interference is part of a larger network in the city and the carrier is needed to ensure pedestrian safety.

#### Stairs restoration

As in other cases, the restoration of stairs will be done with respect to existing materials and techniques. The stones to be replaced are those that have been damaged at such points that may impede the safe use of the stairs.

The intervention will be made of massive stones or tiles, according to the way of construction of each scale. Where there are concrete elements, they will be removed and replaced with stone

## Arrangement of the terrain

The arrangement of green spaces with natural terrain along the roads will be done to secure the cobblestones so that there is no landslide on the cobblestones and to enable green rest spaces for walkers. The intervention will in some cases be accompanied by the construction of retaining walls to avoid future slipping. The retaining walls will be built with traditional materials and techniques for the city.

## Manhole system

Above was shown a positive case of the manhole cover, which has a metal construction and cobblestone coating, just like the road on which it was placed. A similar model is proposed to be used in all cases where there are manholes.

The metal construction will have a diameter of 0.4cm and a depth of 5.6cm. At this depth will be laid the stones for the realization of the continuity of the surface coating layer including the manhole.

The manhole rests on all four sides at 5cm above the outside of the manhole, which is mounted on a concrete strip. The outer frame and concrete also help to tighten the cobblestone, since it is interrupted by the manhole.

Replacement of manhole covers shall be in coordination with the relevant institutions for each underground network.

## • Completion of lighting

As mentioned in analyzing the situation for each route, lighting is a problem for some parts of the paths. The project takes into consideration only the lighting of the public spaces and lighting of Fools alley.

Full lighting of the paths will be carried out under the coordination of the ADF from their other projects, responsible for lighting in the historical center.

## Raw materials (for Construction)

The raw materials that will be used during the restoration works of museums and lanes are mainly concrete, sand and lime for plastering the walls with the same quality and properties as the existing ones used, wood of the same type used in museum houses. , limestone for painting fronts, white and black stones, stone tiles, anti-rust paints, linseed oil, paint thinners, engineering installations of indoor environments, as well as installations of fire protection

system. The project aim is to use as much as possible the material that is in good consdition and to replace only the damaged parts.

## Summary of the environmental and institutional legal framework related to the project

Environmental legislation is designed to protect and prevent the contamination and damage of particular and important components of the environment by various factors, human and natural. Among the main laws related to this project, we mention:

- Law No. 10431 dated 09.06. 2011 "On Environmental Protection".
- Law No. 10440 dated 07.07. 2011 "On Environmental Impact Assessment".
- Law no. 12/2015 "On some amendments to the law no. 10 440, dated 7.7.2011, "On Environmental Impact Assessment"
- Law no. 10448, dated 14.07.2011 "On Environmental Permits", as amended by Law 60/2014.
- Law no. 10463 dated 22.09.2011 "On integrated waste management", as amended.
- Law No. 8897 dated 16.05.2002, "On protection of air from pollution", as amended.
- Decision of the Council of Ministers No. 189, dated 18.11.2009 "On the rules and procedures for the design and implementation of the national environmental monitoring program".
- Decision of the Council of Ministers no. 123, dated 17.2.2011 "On noise management".
- Decision no. 313, dt. 09.05.2012 "On the regulation of the protection of the public against environmental discharges".
- Decision of the Council of Ministers no. 247, dated 30.4.2014 "On the establishment of rules, requirements and procedures for informing and involving the public in environmental decision-making".
- Decision of the Council of Ministers no. 686, dated 29.07.2015 On the conduct of the EIA procedure.
- Decision of the Council of Ministers no. 575, dated 24.06.2015 "On the approval of the requirements for the management of solid waste"
- Decision of the Council of Ministers no. 435, dated 12.9.2002 "On the approval of air emission norms in the Republic of Albania"
- Decision of the Council of Ministers no. 99, dated 18.2.2005 "On the approval of the Albanian catalog of waste classification"
- Decision of the Council of Ministers no. 676, dated 20.12.2002 "On the the protected area of Albanian nature monuments"

#### **International Legal Framework**

Albania is a country that is already a signatory to many environmental conventions and agreements and this has helped to promote the drafting of national environmental laws in line with international practices. This report should be adapted to local and national laws and regulations, and the main stages of the development of European policy in the field of environment are summarized below.

## • International Convention and Protocol:

- Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters Åarhus, Denmark, 25 June 1998.
- The Bern Convention on the Conservation of European Wildlife and Natural HabitatsBernë, 19.09.1979.

- Convention on International Trade in Endangered Species of Wild Fauna and Flora signed in Washington, D.C., March 3, 1973, Amended Bonn, June 22, 1979.
- Convention on the Protection and Use of Transboundary Watercourses and International Lakes in Helsinki in 17 March 1992.
- Convention on the Transboundary Effects of Industrial Accidents
- Convention on Wetlands of International Importance especially as Waterfowl Habitat, Ramsar, Iran, 2.2.1971 as amended by the Protocol of 3.12.1982 and the Amendments of 28.5.1987
- The Vienna Convention for the Protection of the Ozone Layer was adopted in 1985 and entered into force on 22 Sep 1988. The Vienna Convention became the first Convention of any kind to achieve universal ratification.
- The Convention on Environmental Impact Assessment in a Transboundary Context (informally called the Espoo Convention) is a United Nations Economic Commission for Europe (UNECE) convention signed in Espoo, Finland, in 1991 that entered into force in 1997.
- The United Nations Convention to Combat Desertification in Countries that have experienced severe drought and / or desertification, particularly in Africa, signed in Paris on 17 June 1994.
- The Basel Convention on the Control of Transboundary Movements of Hazardous Waste and their Elimination adapted from the Plenipotentiary Conference on 22 March 1989, entered into force on 5 May 1992.
- Convention for the Protection of the Mediterranean Sea from Pollution (1976) and Protocols (1980, 1982) entered into force on 12 February 1978.
- Kyoto protocol to the United Uations framework convention on climate change The Kyoto Protocol was kept in Kyoto, Japan, on 11 December 1997 and entered into force on 16 February 2005.
- 1. Montreal Protocol on Substances that Deplete the Ozone Layer is the most successful global environmental agreement in history. Along with the Vienna Convention for the Protection of the Ozone Layer.

#### **Environmental Impact Assessment (EIA) Directive**

Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment amended by Council Directive 97/11 / EC of 3 March 1997, Directive 2011/92 / CE on the effects of the public and private environmental projects were published in the Official Gazette, and Directive 2014/52 / EU of the European Parliament and of 16 April 2014 amending Directive 2011/92 / CE on the Environmental Impact Assessment of Some Public and Private Projects. Directive 2009/31 / EC amending Annexes I and II of the EIA Directive, adding projects related to the transport, capture and storage of carbon dioxide (CO2). Directive 2003/35 / CE which aims to approximate the provisions of the EIA Directive with the Aarhus Convention on public participation in decision-making and access to justice in environmental matters;

## 2. DESCRIPTION OF THE GREENSPACES NEAR THE PROPOSED PROJECT.

The proposed project is located inside the city of Gjirokastra. The object of this project are two objects of buildings and land type, as well as a cobblestone alley and two itineraries consisting of several stone alleys. Under these conditions, the project is not located in the vegetation area and does not harm the latter. The restoration of alleys and buildings does not foresee cuttings of vegetation. Along the "Sokaku I të marëve" street, it was noticed that in some of the stone walls, there was a kind of clambering plant that was wearing the wall but on the other hand it covers the monumental and historical values of these walls. This type of plant is the only one affected by the restoration of this road. Objects that will undergo light restoration work are shown above in the photo as well. Meanwhile, inside the courtyards of the houses, mainly woody vegetation was identified, dominated by figs and walnuts these trees were not affected by the evaluated project.

Regarding the region, the province of Gjirokastra is not known for high and dense vegetation, being a mostly steep terrain and with poor pedological conditions (rocky soil structure), but also having a humid and cold climate during winter, does not favor the development of vegetation. On certain parts of the mountain slope, there are clusters of soft pine trees mostly planted 4-5 decades ago.



Google Earth Satellite view of the Gjirokastra town greenspaces.

## **PROTECTED AREAS OF THE REGION**

Description of protected areas near the site where the project is proposed to be implemented including natural monuments protected by law.

The area where the project in evaluation will be implemented does not belong to the environmental protected area, at least from the preliminary verifications of the work group and information available in this regard. More detailed and accurate verifications can only be

#### **ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT REPORT**

#### DESIGN AND SUPERVISION OF THE MUSEUM SYSTEM IN GJIROKASTER

carried out by the National Agency of Protected Areas which has accurate data on protected areas. Based on DCM 676 on the approval of the list of protected areas Natural Monument, for the Gjirokastra region they are listed as follows:

## Natural monuments of Gjirokastra district (Acording to VKM 676)

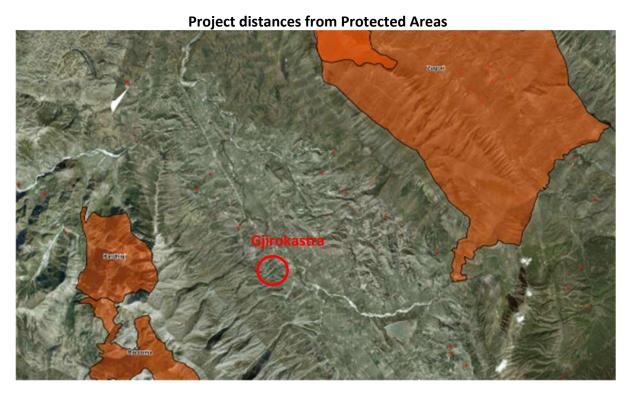
- 1. Viroi (mëma e ujit) i Gjirokastrës
- 2. Pylli i Gurte Nderan
- 3. Shpella e Vanistres (Skotinia)
- 4. Kanioni i Piksit
- 5. Tarraca e Nderanit
- 6. Shembja e Zhulatit
- 7. Gurra e Nivanit
- 8. Reshqitja e Kllezit
- 9. Reshqitja ne malin e Karparielit
- 10. Burimi i Libohoves
- 11. Burimi mineral i Glines
- 12. Burimi i Nepravishtes
- 13. Qafa e Çajupit
- 14. Shkembi i Zheit
- 15. Zhveshja e Muzines
- 16. Dalja e magmatikeve ne gelgeroret afer Picarit
- 17. Liqeni i Kacojthit
- 18. Venjat e Konckes
- 19. Vithimat e Buretos
- 20. Vrimat e Konckes
- 21. Rrapi i Zhulatit
- 22. Rrapi i Fushebardhes
- 23. Rrapi i Mashkullores
- 24. Rrapishte e Mashkullores
- 25. Rrapi i Çerçizit -Gjirokaster
- 26. Rrapi i Libohoves
- 27. Geshtenja e Nepravishtes
- 28. Rrepet e Kellezit
- 29. Rrapi i Dhoksatit
- 30. Rrapi i Manastirit Stegopul
- 31. Rrapi i Tranoshishtes
- 32. Rrepet e Selos
- 33. Rrepet e Mullirit ne Selo
- 34. Perralli i Bodrishtes
- 35. Pishat e Kërres
- 36. Rrepet e Koshovices
- 37. Selvite e Kishes Hllomo
- 38. Rrepet e Catistes
- 39. Lisat e Poliçanit
- 40. Selvite e Hllomose
- 41. Rrapi i Poliçanit

## ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT REPORT

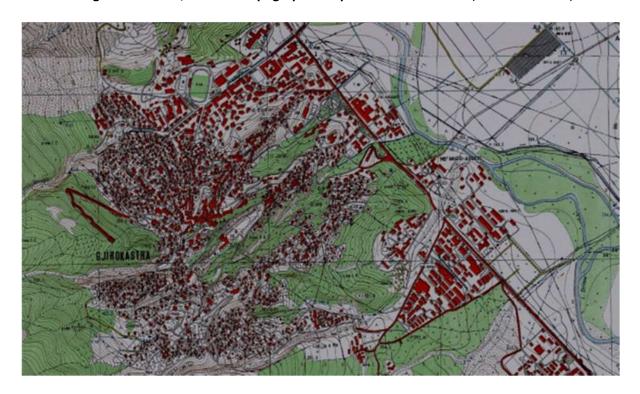
## DESIGN AND SUPERVISION OF THE MUSEUM SYSTEM IN GJIROKASTER

- 42. Rrapi i Nderanit
- 43. Lisat e Skorese
- 44. Lisat e Çorrokut Sheper
- 45. Rrepet e shkolles Sheperit
- 46. Lisat e Manastirit Nivan
- 47. Rrepet e Nivanit

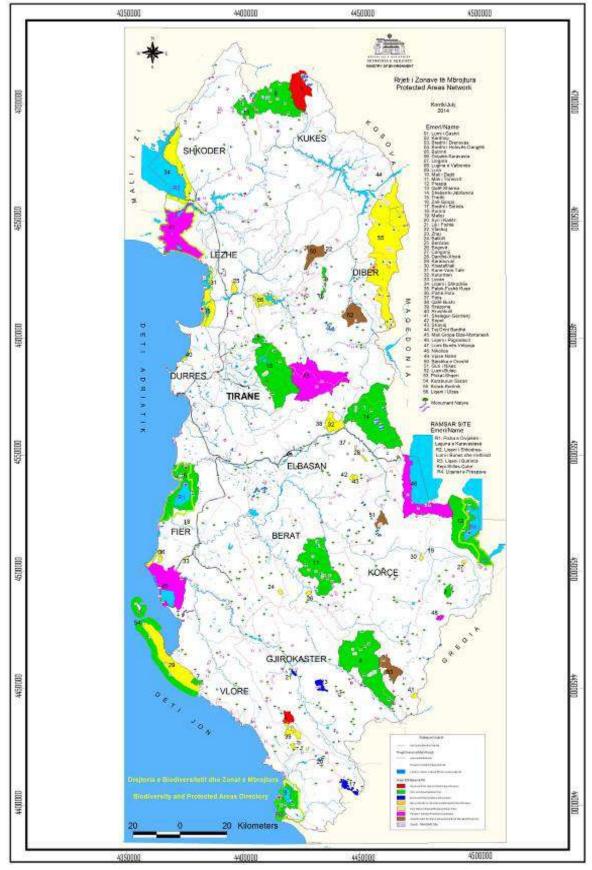
In the area under assessment, no natural monuments have been identified. The closest object has been identified is the "Rrapi I Çerçizit", which is about 700 aerial meters away.



Fragment of 1: 10,000 scale topographic map with nomenclature (K-34-137-C-d-1)



## Protected areas in the Republic of Albania (According to the official website of the Ministry of Tourism and the Environment)



## **Cultural Monuments of Gjirokastra District**

NR.	EMRI I MONUMENTIT	FSHATI	KOMUNA	BASHKIA	RRETHI	KATEG	INSTITUCIONI I SHPALLJES	Nr. VENDIMI	DATA E SHPALLJES
1	KALAJA E GJIROKASTRËS ne mes te qytetit, e gjithe kalaja me nje distance prej rreth 10 m rreth e perqark mureve			Gjirokastër	Gjirokastër	ı	AprovLigj. Nr. 609,dt,24.05.1948	586, 4874	17.03.1948 23.09.1971
2	KALAJA E MELANIT ne fshatin Nepravishte	Nepravishtë			Gjirokastër	1	Rektorati i Universitetit Shtetëror	6	15.01.1963
3	KALAJA E LABOVËS SË KRYQIT ne fshatin Labove e Kryqit	Labovë e Kryqit			Gjirokastër	ı	Rektorati i Universitetit Shtetëror	6	15.01.1963
4	KALAJA SELOS ne fshatin Selos	Selos			Gjirokastër	- 1	Rektorati i Universitetit Shtetëror	6	15.01.1963
5	KALAJA E SHTËPEZËS ne fshatin Stepeze	Shtëpezë			Gjirokastër	1	Rektorati i Universitetit Shtetëror	6	15.01.1963
6	KALAJA E JERMËS Saraqinisht ne fshatin Saraqinisht	Saraqinisht			Gjirokastër	1	Rektorati i Universitetit Shtetëror	6	15.01.1963
7	KALAJA E KARDHIQIT ne fshatin Kardhiq	Kardhiq			Gjirokastër	ı	Rektorati i Universitetit Shtetëror	6	15.01.1963
8	KALAJA E LIBOHOVËS ne fshatin Libohove	Libohovë			Gjirokastër	1	Rektorati i Universitetit Shtetëror	6	15.01.1963
9	KALAJA E SHËN TRIADHËS ne fushen e ∀alarese ne qytetin e Gjirokastres	Valare			Gjirokastër	ı	Rektorati i Universitetit Shtetëror	6	15.01.1963
10	KALAJA NË FSHATIN PALEOKASTËR	Paleokastër			Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973.
11	KALAJA E PEPELIT	Pepel			Gjirokastër	- 1	Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	266/1	16.02.1979
12	RRENOJA E F\$HATIT TE VJETER TE KARDHIQIT	KARDHIQ			Gjirokastër	1	Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	266/1	16.02.1979 22.05.1980
13	VARREZA ANTIKE NË V.L.TË FSHATIT SOFRATIKË				Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
14	RRËNOJAT E TEATRIT ANTIK, PRANË FSHATIT SOFRATIK				Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
15	TUMAT PRANË FSHATIT JERMË NË FERMEN "ASIM ZENELI"	Jermë			Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
16	URA E ZONJËS ne fshatin Labove	Labovë			Gjirokastër	I	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
17	URA E KOLLORCËS RRETH 4 Km NË J.L.TË GJIROKASTRËS				Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	Urdhëres	08.01.1977
18	URA NË FSHATIN HASKOVË	Haskovë			Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	Urdhëres	08.01.1977
19	URA NË FSH.GRAPSH NË AFËRSI TË RRUGËS NACIONALE	Grapsh			Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	Urdhëres	08.01.1977
20	URA NË SUBASH MBI LUMIN DRINO.	Subash			Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	Urdhëres	08.01.1977
21	URA E UJËSJELLËSIT TË SOPOTIT MBI PËRROIN E BUFANAS LAGJIA "DUNAVAT"				Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	Urdhëres	08.01.1977
22	URA E MADHE E GURIT E KAÇARELLOS, MBI LUMIN KAÇARREL,-ne dalje te fshatit ne rrugen per Sopik, Hllomo-Pogon	HLLOMO- POGON			Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	2509/1	30.06.1983
23	URA E NIVANIT (NDERANIT) MBI LUMIN E ZAGORISË , AFËR MANASTIRIT TË NIVANIT NË Rrugen NIVAN-NDERAN, Nivan-Zagori	NIVAN - ZAGORI			Gjirokastër		Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	2509/1	30.06.1983
24	URA E GURIT E ÇIMINXHIT MBI LUMIN E SOPIKUT, ne rrugen SKORE -HLLOMO, HLLOMO-POGON	HLLOMO- POGON			Gjirokastër		Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	2509/1	30.06.1983
25	URA E GURIT TË HOSHTEVËS MBI LUMIN E ZAGORISË GJATË Rruges HOSHTEVË-ÇAJUP, Hoshteve-Zagori	HOSHTEVË - ZAGORI			Gjirokastër		Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	2509/1	30.06.1983
26	TRI URAT E VOGLA MBI PËRROIN E ZERZEBILIT ne Gjirokaster				Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	Urdhëres	08.01.1977
27	RRENOJAT E URES SE SHEN KOLLAJVE NE FSHATIN Lazarat	LAZARAT			Gjirokastër	-	Ministria e Arsimit dhe e Kulturës	Urdhëres	08.01.1977
28	RRENOJAT E KËMBËVE TË UJSJELLËSIT ,L."DUNAVAT"			Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	Urdhëres	08.01.1977

29	BANJAT E QYTETIT,L."MECITE" te qytetit te Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	Urdhëres	08.01.1977
30	STERA E BABOÇATËVE , RR. ARSHI LENGO"DROHI LENGO" L."MANALAT" ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
31	STERA E UJIT NË FSHATIN VANISTË	Vanistë		Gjirokastër	1	Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	266/1	16.02.1979
32	KROI i LAGJES SË POSHTME NË FSHATIN Dhoksat	Dhoksat- Lunxhëri		Gjirokastër	1	Komiteti i Kulturës dhe Arteve	8	18.12.1987
33	KROI ME BENDIN E ÇETËS SË MESME ne fshatin Dhoksat, Gjirokaster	Dhoksat		Gjirokastër	1	Komiteti i Kulturës dhe Arteve	8	18.12.1987
34	BENDI i RIKËS MBI PËRROIN E GURRËS NË FSHATIN Kellez- Lunxheri, Gjirokaster	Këllëz- Lunxhëri		Gjirokastër	1	Komiteti i Kulturës dhe Arteve	8	18.12.1987
35	BENDI MBI PRROIN E NAKOVËS NË FSHATIN Nakove-Lunxheri, Gjirokaster	Nakovë- Lunxhëri		Gjirokastër	ı	Komiteti i Kulturës dhe Arteve	8	18.12.1987
36	KARAKOLL NË QAFËN E ÇAJUPIT Afër fshatit Zhej-Zagori, Gjirokaster	Zhej- Zagori		Gjirokastër	1	Komiteti i Kulturës dhe Arteve	8	18.12.1987
37	ÇEZMA NË GUVËN SHKËMBORE PRANË MANASTIRIT TË SHËN MËRISË ne fshatin Goranxi, Gjirokaster	Goranci		Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	2854 814	08.08.1980 25 .10.1980
38	PUSI KARAKTERISTIK prapa gjelletores se fshatit Sofratike- BUZË RRUGËS GJIROK JORGUCAT, Sofratike, Dropull	SOFRATIKË- DROPULL.		Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	2509/1	30.06.1983
39	UJËSJELLËSI NË TEQEN E MELANIT ne fshatin Nepravishte	Nepravishtë		Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
40	ÇEZMA ME KUPOLÊ ne fshatin Selcke	Selckë		Gjirokastër	- 1	Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	786/1	05.11.1984
41	ÇEZMA E HLLOMOS ne fshatin Hilomo- Pogon	Hllomo-Pogon		Gjirokastër	1	Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	786/1	05.11.1984
42	MANASTIRI I SHËN QIRJAKUT DHE JUDITËS ne fshatin Dhuvjan	Dhuvjan		Gjirokastër	1	Rektorati i Universitetit Shtetëror	6	15.01.1963
43	MANASTIRII I SHËN MËRISË I Goranxise, mbi fshatin Goranxi	Goranci		Gjirokastër	1	Rektorati i Universitetit Shtetëror	6	15.01.1963
44	MANASTIRI I UNGJELLIZIMIT I Vanishtes mbi fshatin Vanishte	Vanishtë		Gjirokastër	ű	Rektorati i Universitetit Shtetëror	6	15.01.1963
45	KISHA E MANASTIRIT TË SHPËRFYTYRIMIT prane fshatit Mingul	Mingul		Gjirokastër	1	Rektorati i Universitetit Shtetëror	6	15.01.1963
46	KISHA E MANASTIRIT TË SHPËRFYTYRIMIT ne fshatin Catiste te Pogont	Çatistë-Pogon		Gjirokastër	1	Rektorati i Universitetit Shtetëror	6	15.01.1963
47	KISHA E MANASTIRIT TË SHËN TRIADHËS ne fshatin Pepel	Pepel		Gjirokastër	ı	Rektorati i Universitetit Shtetëror	6	15.01.1963
48	KISHA E MANASTIRIT TË PROFET ILIAS mbi fshatin Jorgucat	Jorgucat		Gjirokastër	ı	Rektorati i Universitetit Shtetëror	6	15.01.1963
49	KISHA E MANASTIRIT TË SHËN MËRISË SPILESË, Tranoshisht	Tranoshisht		Gjirokastër	1	Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	68/7	1970
50	KISHA E MANASTIRIT TË SHËN MËRISË ne fshatin Koshovice	Koshovicë		Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	Urdhëres	08.01.1977
51	KISHA E MANASTIRIT TË SHËN MËHILLIT ME GJITHË GODINAT KU KA QENË SKOLLA E ZAGORISË ne fshatin Nivan	Nivan		Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	Urdhëres	08.01.1977
52	KISHA E PROFET ILISË	Stegopull		Gjirokastër	1	Rektorati i Universitetit Shtetëror	6	15.01.1963
53	KISHA E SHËN MËRISË SË DRIANOS MBI FSH. ZERVAT	Zervat		Gjirokastër	ı	Rektorati i Universitetit Shtetëror	6	15.01.1963
54	KISHA FJETJA E SHËN MËRISË ne fshatin Sopik te Pogonit	Sopik -Pogon		Gjirokastër	-	Rektorati i Universitetit Shtetëror	6	15.01.1963
55	KISHA E SHËN MËRISË ne fshatin Zervat	Zervat		Gjirokastër	ı	Rektorati i Universitetit Shtetëror	6	15.01.1963
56	KISHA Fjetja E SHËN MËRISË ne	Labovë e		Gjirokastër	- 1	Rektorati i Universitetit Shtetëror	6	15.01.1963
	fshatin Labove e Kryqit	Kryqit	1	,				

58	KISHA Fjetja E SHËN MËRISË ne fshatin Vllahogranxi	Vrahogoranxi		Gjirokastër	ı	Rektorati i Universitetit Shtetëror	6	15.01.1963
59	KISHA E SHËN MËRISË	Derviçan		Gjirokastër	1	Rektorati i Universitetit Shtetëror	6	15.01.1963
60	KISHA E SHËN MËHILLIT ne fshatin Mingul	Mingul		Gjirokastër	1	Rektorati i Universitetit Shtetëror	6	15.01.1963
61	KISHA E SHËN MËHILLIT ne qytetin e Giirokastres		Gjirokastër	Gjirokastër	1	Rektorati i Universitetit Shtetëror	6	15.01.1963
62	KISHA E SHËN KOLLIT ne fshatin Dhuvjan	Dhuvjan		Gjirokastër	ı	Rektorati i Universitetit Shtetëror	6	15.01.1963
63	KISHA E SHËN KOLLIT ne fshatin Saraqinisht	Saraqinisht		Gjirokastër	ı	Rektorati i Universitetit Shtetëror	6	15.01.1963
64	KISHA E SHËN GJERGJIT ne fshatin Nakove	Nakovë		Gjirokastër	ı	Rektorati i Universitetit Shtetëror	6	15.01.1963
65	KISHA E SHËN THANASIT ne fshatin Poliçan	Poliçan		Gjirokastër	ı	Rektorati i Universitetit Shtetëror	6	15.01.1963
66	KISHA E SHËN THANASIT (VETËM PËR IKONOSTASIN Në vitin1987).	Selo		Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	Urdhëres	08.01.1977
67	KISHA E SHËN E PREMTES ne fshatin Hllomo	Hllomo		Gjirokastër	ı	Rektorati i Universitetit Shtetëror	6	15.01.1963
68	KISHA E SHËN E PREMTES, Selcke	Selckë		Gjirokastër	1	Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	68/7	30.05.1970
69	KISHA E SHEN THANASIT TE MEZHANIT ne fshatin Polican	Poliçan		Gjirokastër	ı	Rektorati i Universitetit Shtetëror	6	15.01.1963
70	KISHA PALEOKRISTIANE E MANASTIRIT ne fshatin Nepravishte	Nepravishtë		Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
71	KISHA E SHPËRFYTYRIMIT ne godinat e Mitopolise ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Rektorati i Universitetit Shtetëror	6	15.01.1963
72	KISHA E SHËN APOSTUJVE ne fshatin Hoshteve	Hoshtevë		Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	Urdhëres	08.01.1977
73	GËRMADHAT E KISHËS SË SHËN ANËS (PANAJOTOPU -LLA)MBI FSHATIN DERVIÇAN.	Derviçan		Gjirokastër	ı	Rektorati i Universitetit Shtetëror	6	15.01.1963
74	RRËNOJAT E BAZILIKËS PALEOKRISTIANE, PRANË FSHATIT GORICË			Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	Urdhëres	08.01.1977
75	XHAMIA E TEQESË LAGJA "PARTIZANI " RR."Q.STAFA" ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
76	MONUMENTI I ÇERÇIZ TOPULLIT ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Rektorati i Universitetit Shtetëror	6	15.01.1963
77	SHTËPIA E ENVER HOXHËS( MUZEU I L.N.ÇLIRIMTARE),		Gjirokastër	Gjirokastër	ı	Rektorati i Universitetit Shtetëror	6	15.01.1963
78	GODINA E MANASTIRIT TË CEPOS PRANË FSHATIT MASHKULLORË.	Mashkullore	Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
79	SHTËPIA E TOPULLARVE, LAGJA DUNAVAT, RR. "AGO TOPULLI", ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
80	BANESA E SKËNDULAJVE , LAGJA "PALORTO" RR. "THEMO VASI".Nr 2, ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
81	BANESA ADEM ZEKOS ,LAGJA PALORTO,RR."RAMADAN GOZHITA"NR.17, ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
82	BANESA E ASTRIT DHRAMIT ,LAGJA PALORTO,RR."PERTEF KOKONA"NR.45,47,49, ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
83	BANESA E MYRTEZA TOROS, LAGJA PALORTO, Rr."ASTRIT TORO"NR.20, ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
84	BANESA E PETRO STAVRIT (SEVO STAVRIT), LAGJA PALORTO, RR."PERTEF KOKONA" NR.22. , ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
85	BANESA E VEIZ XHEZOS ,LAGJA PALORTO, RR."MUHAMET BAKIR!"NR13, ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973

	V.	AV		00	50	V V	y	
86	BANESA E ANGONATËVE, LAGJA PALORTO, RR. "K. BELLO" Nr1-3- 11., ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
87	BANESA E KOCO PACELIT E POLO ZOICES, LAGJA PALORTO,RR."P.KOKONA" Nr.1, ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
88	BANESA E VLL.XHAXHIAJ, (HAXHIAJ)LAGJA PALORTO,RR. "A.TOTO" NR.24. ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
89	BANESA E MINE HALITE, LAGJA PALORTO,RR."RIZA HOXHA"Nr. 11, ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	Ŷ	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
90	BANESA E FARIE DUROS, LAGJA PALORTO, Rr."K.BELLO" NR.47, ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
91	BANESA E RESUL E FETAH HOXHËS, LAGJA PALORTO, RR"THMO VASI"NR.13,ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
92	BANESA E MUCO E BAJRAM HOXHËS,LAGJA PALORTO, RR."THEMO VASI" NR.8-10, ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
93	BANESA E ABDYL BABARAMOS E ISUF JAHOS,LAGJA PALORTO RR."M.BAKIRI"NR.1, ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
94	BANESA E ISLAM KOKONËS, LAGJA PALORTO,RR."ASIM ZENELI",NR.6-7, ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
95	BANESA E NIAZI FICOS, LAGJA PALORTO, RR."FOTO DUDUMI" NR.13, ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
96	BANESA E MUHAMET FICOS, LAGJA PALORTO,RR."FOTO DUDUMI" NR.15, ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
97	BANESA PRONË SHTETËRORE, LAGJA PALORTO, RR."K.BELLO"NR.27, ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
98	BANESA E IRFAN E HAKI KOKALARIT, LAGJA PALORTO, RR."A. TOTO"NR.6., ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
99	BANESA E HATIF ZEKOS, LAGJA PALORTO, RR."ASIM ZENELI",NR.64. ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
100	BANESA ZAPANAJA E ZEKATĒVE, LAGJA PALORTO		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
101	KAMERJE E ISMET ROQIT, LAGJA PALORTO, RR."PANO XHIXHO" NR.3- 5. ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
102	BANESA E RESAJVE, LAGJA DUNAVAT, RR."MYFIT RESA", NR.12. ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
103	BANESA BEJO BEQIRIT, LAGJA DUNAVAT,RR."MYFIT RESO" NR.7 ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
104	BANESA E RAMADAN QERIBASHIT DHE JANI E JORGO GJINIT, LAGJA DUNAVAT,RR."MYFIT RESO" NR. 12,14-ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	i.	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
105	BANESA E PERTEF E XHEVAT ANGONIT, LAGJA DUNAVAT, RR."MYFIT RESO" NR.17,19. ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
106	BANESA MYZEJEN BRAHJES, LAGJA DUNAVAT, RR."JACE BRAHJA" NR.7 . ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973

107	BANESA E GALIP SINOIMERIT, LAGJA DUNAVAT, RR."BULE NAIPI" NR.8. ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
108	BANESA E GALANXHIJVE, (HASAF) LAGJA: VAROSH, RR."K.BACO" NR.17. ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
109	BANESA E GALANXHIJVE, (ZYHDI e XHAFER), LAGJA: VAROSH, RR."K.BACO" NR.9.ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
110	BANESA E MITRO KOÇOS (SHTETERORE) LAGJA VAROSH, NR.96-97. ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
111	BANESA KIKINAJVE, LAGJA MANALAT,RR."Z.BABOCI" NR.12,14. ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
112	ZAPANAJA E BRAHO BABOCIT, LAGJA MANALAT, RR."STALINGRAD" NR.50,52. ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
113	BANESA E SULO LLAQIT, LAGJA MANALAT, RR."STALINGRAD" NR. 17. ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
114	BANESA E HALIM CANIT, LAGJA MANALAT, RR."JACE BRAHJA" NR. 48. ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
115	BANESA E VLLAZERISE XHENETI, LAGJA PARTIZANI, RR."MYFIT HEBA" NR. 4.ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
116	BANESA E ILJAZ BABAMETOS, LAGJA PARTIZANI, RR."SHERIF ZENELI", NR.17. ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
117	BANESA E FAIK BELAJ E VASIL PAPADHOPULLIT, LAGJA PARTIZANI, RR. "S. MUSAI" 10. ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
118	BANESA E SHERIF CUBERIT, LAGJA PARTIZANI, RR." ABDYL FRASHËRI" NR.20-22.ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
119	BANESA E MEDI ÇIÇOS E AZEM BERBERIT, LAGJA "11 JANARI" RR. "ALQI KONDI" NR. 3-5-7.ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
120	BANESË PRONË SHTETËRORE (POLIKLINIKA) LAGJA "11 JANARI" RR. ALQI KONDI ,NR.3. ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër		Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
121	BANESA NADIRE BABAMETOS, LAGJA "11. JANARI", RR. " ALQI KONDI" NR.4. ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
122	BANESA E BAKO BATHAJ, LAGJA "11 JANARI" RR. "ALQI KONDI" NR.1. ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
123	BANESA E ASLLAN MUHEDINIT, LAGJA "CFAKË', RR." P. XHAMBALLO"NR.1. ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
124	BANESA DONIKA QËNDROS, VASIL CICOS ,LAGJA M. MAME, nr .6 ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
125	BANESA E NAIM ÇENES, LAGJA VAROSH, RR. "K. BAKO",NR.47 ne qytetin e Gjirokastres.		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
126	BANESA E AHMET DUDUMIT DHE ZYLFO BAKIRIT, RR. " M.BAKIRI" NR.4.		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
127	PORTA E BANESËS SË HAXHI KURTIT, LAGJA CFAKË, RR. " ISUF OMARI" NR.2. ne qytetin e Gjirokastres.		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
128	BANESA E MEXHIT KOKALARIT RR. "M.BAKIRI", Nr17 ne qytetin e Gjirokastres.		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	Urdhëres	08.01.1977
129	BANESA E MERSIN LIKËS NË FSHATIN GOLEM	Golem		Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	Urdhëres	08.01.1977

### DESIGN AND SUPERVISION OF THE MUSEUM SYSTEM IN GJIROKASTER

	BANESA E SHEFQET PEÇIT ne fshatin Picar	Picar		Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	Urdhëres	08.01.1977
131	DËNO IAT E BANESËS DHE LËMI I	Picar		Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	Urdhëres	08.01.1977
132	DHOMA E MIRË NË BANESËR PROMË SHTETRORE RR. "ZENEL BABOÇI", Nr.3. (ISH E GORICAJVE) ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	Urdhëres	08.01.1977
133	DHOMA E MIRË NË BANESËN E LOLOMANËVE LAGJA VAROSH,RR. "M. MAME" Nr.3, lagjia "Varosh" ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	Urdhëres	08.01.1977
134	TAVANI DHE PORTA E VJETËR NË BANESËN E KOZMA SHAJKOS, RR. "B.SAKO", Nr4. ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	Urdhëres	08.01.1977
135	KOPSHTI (BAÇEJA ) E CANAJVE SË BASHKU ME STERËN DHE NJË NDËRTESË TË VOGËL BRENDA TIJ, LAGJA DUNAVAT RR."B.MALASI"Nr.88 ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës	Urdhëres	08.01.1977
136	BANESA E VËLLEZËRVE KORE NË LAGJEN "PALORTO" RR. "THEMO VASI" ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	266/1	16.02.1979
137	KAMERIEJA E JONUZ SHEHUT LAGJA"DUNAVAT" RR."AGO TOPULLI"		Gjirokastër	Gjirokastër		Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	2509/1	30.06.1983
	BANESA E ZAHARI STERIES ne fshatin Dervican	Derviçan		Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	266/1	16.02.1979
139	BANESA E SEVO MARËS Dhoksat	Dhoksat		Gjirokastër	'	Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	2509/1	30.06.1983
140	BANESA E KOÇO ÇUÇIT Dhoksat	Dhoksat		Gjirokastër		Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	2509/1	30.06.1983
141	BANESA E MYZAFER KARAGJOZIT ,LAGJA DUNAVAT ,RR. "AGO TOPULLI"Nr.3		Gjirokastër	Gjirokastër		Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	266/1	16.02.1979
142	BANESA E VASO RUMBIT Qestorat	Qestorat		Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	2509/1	30.06.1983
143	BANESA NIKO ZOGRAFIT Qestorat	Qestorat		Gjirokastër		Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	2509/1	30.06.1983
144	BANESA E PANO GËRÇOS Qestorat	Qestorat		Gjirokastër	1	Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	2509/1	30.06.1983
145	BANESA E VASIL DRAZHËS, Hilomo	Hllomo		Gjirokastër		Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	2509/1	30.06.1983
	RRENOJAT E FSHATIT TË VJETËR TË KARDHIQIT			Gjirokastër	1	Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	266/1	16.02.1979
	KULLA E VANGO DULES ne fshatin Goranxi	Goranxi		Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
	KULLA E MIHO NGJELËS ne fshatin Goranxi	Goranci		Gjirokastër	1	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
	KULLA E NIKO NGJELËS ne fshatin Goranxi	Goranci		Gjirokastër	3	Ministria e Arsimit dhe e Kulturës	1886	10.06.1973
150	PORTA E JASHTME E BANESËS SË M.BOZOS, LAGJA PALORTO, RR. "B. BOZO", NR.38, Gjirokaster.		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	2854 814	08.08.1980 25 .10.1980
151	PORTA E JASHTME E BANESES SË RAKIP SARACIT, LAGJA PALORTO, RR. "SAJDE BERBERI" NR.216, Gjirokaster		Gjirokastër	Gjirokastër	1	Ministria e Arsimit dhe e Kulturës (Drejtoria e kulturës)	2854 814	08.08.1980 25 .10.1980
152	BANESA E SKËNDER DARI, FASLLI LULOS E NELO KABILIT LAGJA PARTIZANI, RR. "ABDYL FRASHËRI" NR.6-14 ne qytetin e Gjirokastres.		Gjirokastër	Gjirokastër	ı	Ministria e Arsimit dhe e Kulturës (	1886	10.06.1973
	BANESA E EQEREM ÇABEJ ( <u>Mon.</u> <u>historik</u> ) ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër		Komiteti I Kulturës dhe Arteve (Drejt. E Muzeumeve dhe Monum.)	4	7.05.1991
	BANESA E ISMAIL KADARESË ( <u>Mon. historik</u> ) ne qytetin e Gjirokastres		Gjirokastër	Gjirokastër	ı	Komiteti I Kulturës dhe Arteve (Drejt. E Muzeumeve dhe Monum.)	4	7.05.1991
	VARRI MONUMENTAL DHE UJËMBLEDHESI NE JURGUCAT	Jorgucat				Ministria e Kult.Rinise.dhe Sporteve (Ministri)	414	18.09.2003
156	PËRCAKTIMI I ZONËS SE MBROJTUR TE VARRIT MONUMENTAL DHE UJEMBLEDHËSIT, Jorgucat, Gjirokaster	Jorgucat		Gjirokastër	ı	M.T.K.R.S Drejt.e Pergj.e Turizmit dhe Trasheg.Kulturore	484	10.09.2010
157				I		Ministria e Kultures, Rinise dhe	Urdher	40.0.2002
	SHTEPIA E ANDON ZAKO ÇAJUPIT	Sheper		Gjirokastër	1	Sporteve	nr.412	18.9.2003

Burimi i informacionit: Ministria e Kulturës

### 3. INFORMATION ABOUT WATER RESOURCES NEAR THE PROJECT.

There are no significant water resources identified in the implementation area of this project. Water sources are located away from the facility. The nearest and most important water source of this area is the Drinos River, about 1.3km northeastward and Viroi, which is about 2.8km northeastward, joining the two along and further along the Kardhiq River about 9km away form the tributary of the Vjose River.



### 4. IDENTIFICATION OF POSSIBLE NEGATIVE ENVIRONMENTAL IMPACTS.

### **General considerations**

Environmental Impact Assessment is drafted only for the phase of the restoration works. Upon completion of the works, these activities will have no environmental impact. This preliminary Environmental Impact Assessment report, as required by institutional or legal requirements, may be submitted to the Ministry of Tourism and Environment, and the National Environment Agency to undergo the preliminary procedure of Environmental Impact Assessment. This report is drafted in accordance with the requirements of Law no. 10440, dated 07.07.2011 "On Environmental Impact Assessment", as amended, and in full compliance with the requirements of DCM no. 686, dated 29.07.2015 "On the Development of the Environmental Impact Assessment Procedure". The activities of Annex II of the Law on Environmental Impact Assessment have no obligation to organize a public hearing. For such moderate impact projects, we do not recommend applying a public hearing procedure.

### Impacts on air (Air quality, noises, vibrations)

By performing these works for the restoration of roads and buildings, dust emissions and noise emission in residential environments are assessed. Part of the restoration work is the partial demolition of the walls and foundations of the road where concrete was used or materials other than those of historical and monumental value were used. The use of pneumatic hammers, levers and ordinary hammers, stone carving to adapt to the terrain, conversations of workers, etc. may be a temporary concern for residents of the area who occupy dwellings near these roads or near these facilities like the Ethnographic Museum, etc. There will be no vibrations from these works. Vibrations are mainly produced by work using explosives, or when road and asphalt coatings are performed, when roller compression is used. As a measure to reduce pollution in the environment, the wetland of the site / roads during the dry season can be applied to reduce and avoid dust build-up. Use of modern tools and methods for carrying out the works. Use of quality and efficient tools and materials. Monitoring of air quality during the working phase, measurement of PM10 particles and noise in dBA. Management of temporarily deposited inert materials and waste produced from demolition and restoration. Prohibition of late-night work and respect for public peace.

### Impacts on water (Surface water, groundwater).

This project does not affect the water. Neither groundwater nor surface water will be affected. The very nature of the works to be carried out and the type of construction materials to be used, cause no water pollution. No concrete will be produced in the workplace, no use of polluting materials for the environment. There will be no deep excavations, no use of heavy construction vehicles, except for small wagons to transport materials. Natural materials such as stone and wood will be used.

### Impacts on soil (Relief, surface, composition of soil structure, subsoil.)

This project will not adversely affect the land. The works will be carried out at the surface level of the road and on existing facilities. These works do not consist of excavation of land, production of soil volumes, neither alteration of relief, nor alteration of soil structure or texture. There will be no underground works.

# Impacts on the socio-economic environment (Socio-cultural and economic environment, land use, water resources use).

The impact on the socio-cultural and economic environment of this project implementation is estimated to be only positive. The project itself aims to enhance the orientation infrastructure, information to local and foreign visitors, as well as the road and technical infrastructure of the buildings, with the aim of enhancing the cultural and museum values of some of the main and very important buildings in the city of Gjirokastra. Implementation of this project is expected to facilitate the orientation and conditions of development of tourist guides in this city, thus creating better opportunities for local operators but not only, indirectly affecting revenue growth through taxes. Among other things, these alleys are mostly used by city dwellers who benefit from improved infrastructure conditions. In addition, the project envisages the improvement of the street lighting system in this area. With the increase in the number of visitors and tourists, also benefit the residents of the area, who can advertise their craft, or manage tourism activities such as Bars, Restaurants, Hotels, Shops, etc.

Such maintenance and improvement works on infrastructure and depreciated buildings in this historic and monumental area, furthermore included in the UNESCO network, are indispensable

There are no expropriation planned in this project implementation. The works will be carried out mainly in state-owned properties. Due to the safety of passers-by in the areas included in the project and the visual improvement of some elements as to adapt them with the traditional elements and materials of the city, interventions are foreseen in some walls or spaces that bordering the alleys and are at the same time the surrounding elements of the private houses. The project envisions improving these assets (drawings DD-R3-41 to DD-R3-70 and DD-R4-08 to DD-R4-14). Understanding agreements will be signed for these cases, a process that will be managed by the ADF. (Annex 2)

### Technical security during the implementation of construction works

Technical security measurements and protection at work

The activity that will take place will be a construction activity, limited to reconstruction works. This kind of activity is considered not a risk to the staff (employees) who will work for the implementation of this facility, nor to the residents of the area.

However, as in any other construction activity, technical safety rules need to be applied to both employees and by cassual residents affected by the project.

Below we will present some conditions and tasks which needs to be taken into consideration from the entity during the work on the construction site:

### Obligations of the employer:

- The employer himself or through the technical director must inform the employees which has employed:

- 1. The overall process of work on the front work
- 2. Equipment and machinery used on site and manner of use.
- 3. Causes of accidents and the measurements to avoid them.
- 4. Rules of technical safety and labor protection in the Republic of Albania, legal acts and instructions in their implementation, issued by the relevant departments.
- 5. Rules of technical insurance related to the work front, machinery and profession performed by the entrepreneur as an individual for the protection of himself and other employees.
- 6. General rules of technical security on the construction site, to be protected from machinery, electricity, atmospheric discharges, etc.
- 7. First AID kit
- 8. Preliminary and periodic instruction / training of employees is documented according to the formality defined in the technical insurance regulation.
- 9. Work fronts in the implementation of the facility, if working at night, should be illuminated with projectors that are supplied by the mains without depending on the individual lighting of motor vehicles. When there is no lighting, work is stopped.
- 10. Ndalohet qendrimi dhe kalimi i punonjesve brenda rrezes se veprimit te mjeteve ngarkuese dhe transportuese, kur ato jane duke punuar. It is forbidden for employees to stay and pass within the radius of action of the loading and transporting vehicles, when they are working.
- 11. It is forbidden to repair breakdowns, greasing and other works when the machines are in motion / working.
- 12. Before starting the work, checking the front work, the technical condition of the machines, etc.
- 13. When working at heights, scaffolding tunnels need to be constructed in order to protect the passer-by from objects that may fall from heights.
- 14. When there are interruptions / openings of pedestrian channels or vehicle channels, temporary crossings or bridges are built.
- 15. Working on a limited schedule, especially not to work late hours, as it can cause inconvenience to residents.
- 16. Informing the residents in advance about the type of works and the expiration date!
- 17. Establishing visible signage for workers and pedestrians, on technical safety and the danger that may arise.

- 18. Keeping a clean environment and not storing flammable or hazardous substances.
- 19. Roads should be fully lit at night, even if there are no work.(in order to prevent accidents to the residents).
- 20. In case that temporary interruption of the engineering network of the area is needed, the residents will be continuously notified through electronic and print media.

### **Obligations of employee**: Main obligations are:

- 1. To know the regulation of technical insurance and protection at work issued by the Technical Security Inspectorate and the Labor Inspectorate and to implement it at work.
- 2. To have a good knowledge on the possible causes of accidents for each work process.
- 3. Secure yourself and other employees during the implementation work process.
- 4. When it detects signs of a possible accident that is the source of the accident, in the first place take measures to eliminate it, while notifying all employees of the danger and notifying the technical director.
- 5. Using individual protective equipment at work such as: hats, clothes work boots, gloves, dust protection masks, gases and earplugs for noise, special uniforms, etc.
- 6. To have sufficient knowledge for first AID.

Security Technician Regulations, by the technical director of the works and the private entity, will be applied in every working process defined in the plan-organization of the performance of the works drafted by the technical director of the works, which must contain:

- Organizational Working plan will be drafted before the start of the works;
- · Organizational work plan is drafted by the technical director of works
- The technical director of the works, or the charged person, will make the technical control and the correct updating of the works;
- The order of fulfill will be determined in detail in the plan of technicalorganizational measures and will be approved by the owner of the firm;
- · In this technical-organizational plan, the measures of the insurance technique will occupy the main place.
- $\cdot$  The technical director of the works will perform regular periodic instructions, where special topics will be treated for all professions and processes that will be performed.

- Kujdes i vecantë do të tregohet në krijimin e kushteve të punës , pastrimin e sheshit te punes, mirembejtjen e makinerive dhe impiantiteve, pastrimit të rrugëve të brendshme e të jashtme te kantierit, si dhe menaxhimin e mbarevajtjen e punes, etj.
- Particularity will be pointing out in creating working conditions, cleaning the workplace, maintaining machinery and plants, cleaning the internal and external roads of the construction site, as well as managing the progress of the work, etc.

As mentioned above, interventions are planned in 2 museums as well as in several alleys and public spaces within the historic center. During the intervention process the museums will be closed. All objects of the Ethnographic Museum will be packaged and moved in a safe environment by the Municipality itself before the start of the project implementation. The facade will be surrounded by scaffolding covered with mesh and the necessary signage. During the works on the cobblestone additions, the company implementing the works will have to organize the works in sections and allow access to the apartments all the time. During the works that will be carried out on the bridge located on the alley Siri Karagjozi, the construction of a temporary wooden bridge is foreseen (see the drawing DD-Eng 3-04)

### Information on Residential Centers in the area

The nearest inhabited centers are Gjirokastra itself and its suburbs.

According to the new law on administrative division, the Municipality of Gjirokastra also includes a number of Administrative Units, totaling to 7, which are: Gjirokastra, Cepo, Lazarat, Picar, Lunxhëri, Odrije and Antigone.

Gjirokastra Administrative Unit includes only the city of Gjirokastra.

### Administrative organization according to the new administrative division

### Njësi të qeverisjes vendore Niësitë Nr. Qendra e Qarku Bashkia administrative Qytetet dhe fshatrat në përbërje të tyre Oarkut Bashkisë përbërëse Gjirokastër Qyteti Gjirokastër Fshatrat: Fushëbardhë, Zhulat, Taroninë, Mashkullorë Cepo Palokastër, Çepun, Kodër, Plesat, Kardhiq, Prongji, Humelice Lazarat Fshatrat; Lazarat, Kordhoce Picar Fshatrat; Picar, Shtëpëz, Kolonjë, Golem, Kaparjel Qyteti Gjirokastër Fshatrat; Qesorat, Dhoksat, Këllëz, Mingul, Nokovë, Erind, Gjirokastër Lunxhëri Gjat, Kakoz, Karjan, Valare Fshatrat; Andon Poçi, Hundëkuq, Tërbuq, Labovë e Madhe, Odrie Labovë e Vogël Fshatrat; Asim Zeneli, Arshi Lengo, Krinë, Tranoshisht, Antigonë Saraqinisht

QARKU GJIROKASTËR

### Impact on the landscape

The negative impact on the landscape will only be temporary for the construction phase. Once the restoration work is completed and the full rehabilitation of the damaged areas is completed, it is estimated that the impact on the landscape will be positive. It is expected that after the works, the landscape of these alleys will be significantly improved, increasing the tourist and landscape values.

### Impacts of climate change (Climate change, emission of ozone-depleting substances, etc.)

The project under evaluation will at no stage include such substances as may affect the increase in the concentration of ozone-depleting substances in the atmosphere.

### Negative impacts on habitats and biodiversity of the area. (Flora and fauna)

This project is not considered to have adverse impacts on the biodiversity of the area. The first reason is because the project will be implemented inside the city, the second reason is because no vegetation will be affected by the fauna of the area, the third reason is because they are light surface works, without the use of polluting materials and will not release harmful gases that may affect the microclimate or the layers of the atmosphere.

### Solid waste produced during the works

From this activity as solid waste are produced only the inert materials which will be generated by demolition of walls and cobblestones, where concrete or inappropriate material is used. Most of these materials will be reused for the rehabilitation work. So original stones and not damaged. In part, these materials will not be reused and as a result will need to be dumped somewhere. Once these materials are disposed of, they receive the status of inert waste. According to the Albanian catalog of waste classification, approved by DCM no. 99, dated 18.2.2005 "On the approval of the Albanian catalog of waste classification" these waste can be classified with the following codes:

17 01 01 Concrete

17 01 02 Bricks

17 01 03 Tiles and ceramics

17 04 05 Iron and steel

17 05 04 Soil and stones.

In total, it is estimated that the amount of waste produced is about 50-100 m3. (so waste are only those that need to be removed from the construction site, not those that will be reused for restoration work). These types of waste, which will need to be removed from the construction sites, will be deposited at the inert waste disposal points (not together with the urban ones) approved or authorized by the Municipality of Gjirokastra.

The subcontracting entity of the implementation of the works will take the necessary measures for their management, respecting the criteria of DCM no. 575, dated 24.06.2015 "On the approval of requests for inert waste management". The subject that will perform the transport of these wastes, in accordance with article 57 of law no. 10463, dated 22.09.2011 "On integrated waste management", as amended, will be equipped with a license of subcategory III.2.B, according to the licensing system in the National Business Center (NBC). Also, the provision of the raw material will be carefully selected and carried out by licensed entities for this purpose. (ref. Permit with codes IV.1.B and III.1.B, according to the NBC register)

### 5. DESCRIPTION OF POSSIBLE ENVIRONMENTAL DISCHARGES.

### Discharges in the air

By performing these works for the restoration of roads and buildings, dust emissions and noise emission in residential environments are assessed. Part of the restoration work is the partial demolition of the walls and foundations of the road where concrete was used or materials other than those of historical and monumental value were used. Use of pneumatic hammers, levers and ordinary hammers, stone carving to fit the terrain, worker conversations, etc. may be a temporary concern for residents of the area, who have residences near these streets or near facilities such as the Ethnographic Museum, etc. There will be no vibrations from these works.

### Discharges in the water

This project will have no water discharges. Neither groundwater nor surface water will be affected. The very nature of the works to be carried out and the type of construction materials to be used, cause no water pollution. No concrete will be produced in the workplace, no use of polluting materials for the environment. There will be no deep excavations, no use of heavy construction vehicles, except for small wagons to transport materials.

### **Land discharges**

This project will have no landfills. The works will be carried out at the surface level of the road and in existing facilities. These works do not consist of excavation of land, production of soil volumes, neither alteration of relief, nor alteration of soil structure or texture. There will be no underground works.

### Impacts that cause climate change

The project under evaluation will not, at any stage of it, have discharges of such substances that may affect the increase in the concentration of ozone-depleting substances in the atmosphere.

### Production of solid waste during construction works

From this activity as solid waste are produced only the inert materials which will be located by the demolition of walls and cobblestones, where the concrete or inappropriate material is used. Most of these materials will be reused for the rehabilitation work. So original stones and not damaged. In part, these materials will not be reused and as a result will need to be dumped somewhere. Once these materials are disposed of, they receive the status of inert waste. According to the Albanian catalog of waste classification, approved by DCM no. 99, dated 18.2.2005 "On the approval of the Albanian catalog of waste classification" these waste can be classified with the following codes:

17 01 01 Concrete 17 01 02 Bricks 17 01 03 Tiles and ceramics 17 04 05 Iron and steel

17 05 04 Soil and stones.

### 6. INFORMATION ON POSSIBLE DURATION OF NEGATIVE IMPACTS.

Negative impacts on the environment will last as long as the construction / restoration works of the facilities last. According to the project implementation plan, the works will last a total of 12 months. From the second month until the 13th month. The whole project, including web site design, is planned to last 13 months. That is the maximum impact of environmental impact.

# Implementation program In plant | Implementation p

# 7. SPATIAL EXPANSION OF NEGATIVE IMPACT ON THE ENVIRONMENT OF THE AREA

The impact on the environment of the area will have its effects only on a short distance, only on the alleys where the repair of the walls and cobblestones will be carried out, as well as on the dwellings adjacent to these roads and facilities, subject to the restoration project. This project does not include air discharges from chimneys, does not include water discharges, does not include the spread of vibrations, noises and electromagnetic waves in the distance. The noise level will be minimal and only in the works premises, not further afield. Implementation of these works will not be a concern for the city of Gjirokastra, only for some children located near these alleys. Impacts will be temporary and without accumulating

# 8. REHABILITATION OF THE IMPACTED ENVIRONMENT AND THE POSSIBILITY OF ITS RESTORATION TO THE PREVIOUS SITUATION.

The project itself, in its entirety, consists of infrastructure improvements and rehabilitation of damaged roads and facilities. The project involves the demolition of works beyond the criteria performed by the residents themselves and their rehabilitation with natural works and materials in order to enhance the monumental appearance and values of this city's museum. At the end of the project, these facilities will have a systemized and fully rehabilitated appearance.

# 9. POSSIBLE MEASURES TO AVOID AND MITIGATE NEGATIVE ENVIRONMENTAL IMPACTS.

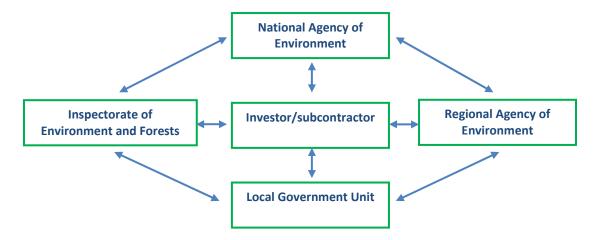
### **Environmental Management and Monitoring Plan**

properties in the environment of the area.

The main role and responsibility of environmental rehabilitation lies with the developing entity of the works, this can be realized by itself or through a subcontracting entity.

The institutions responsible for supervising of the rehabilitation works, the progress of the rehabilitation works, the supervision of the effects on the environment, for the reporting of the environmental monitoring data by the subject, etc., are: National Environmental Agency, Regional Environmental Directorate, State Inspectorate Forests, Waters and Tourism, Local

Government Unit (Municipality), as well as the developing / investing entity itself through the expert or subcontractor selected for this purpose.



In general, we present some of the recommended measures, which the developer must implement to minimize the negative impacts on the environment.

### Recommended precautionary measures for air impacts

Among other preventive, minimizing, rehabilitative, environmental impact measures we recommend:

- Applying the wetland of the shipyard / roads during the drought season to reduce and avoid dust build-up.
- Use of modern tools and methods for carrying out the works.
- Use of quality and efficient tools and materials.
- Monitoring of air quality during the working phase, measurement of PM10 particles and noise.
- Management of temporarily stored inert materials and waste produced by demolition and restoration.
- Prohibition of late-night work and respect of public peace.
- Wet of the squares and the yard during construction work and wash the vehicles before exiting the site to minimize the build-up of solid particles (dust) in the air.
- Transport vehicles to drive at low speed in residential areas and not to cause problems with road traffic in the area.
- Use of truck raincoats during the transport to avoid the spread of waste and inert on the roads of residential centers and national roads.
- The entity should ensure that there is no fire danger due to the works being carried out on the premises.
- The entity has full responsibility to rehabilitate all damaged surfaces.
- The entity should report periodically every 6 months to the National Agency of Environment for the implementation of the terms of the EIA approval decision or environmental statement.
- Rigorously apply the technical conditions of work on the site and the relevant signage.
- Hire local residents in this investment and pay local and central taxes on a regular basis.

- Inert waste should be deposited at the disposal sites approved or authorized by Gjirokastra Municipality.
- In the management of solid waste, the criteria of DCM Nr. 575, dated 24.06.2015 "On the approval of the requirements for the management of solid waste" should be respected.
- The entity that will carry out the transportation of these waste, in accordance with Article 57 of Law no. 10463, dated 22.09.2011 "On Integrated Waste Management", as amended, must be licensed under subcategory III.2.B, under the National Business Center (NBC) licensing system.
- Ensure the raw material is carefully selected and performed by entities licensed for this purpose. (Ref. Permission under Codes IV.1.B and III.1.B, according to NCD Registry)

### Monitoring of environmental elements.

Monitoring the quality of the environment and the level of its pollutants, discharges into the air, water, soil and damage to the biological environment, is performed according to some scientific criteria in terms of observations, collection and analysis of water and soil samples. while in terms of air pollution it is monitored directly in the field. The monitoring process aims to collect the data needed to observe and predict the role of the human and natural factor in environmental changes, where it is active.

The main objectives of monitoring process are:

- To detect changes and to accurately characterize quantitatively the tendencies (trends) of resource development.
- To provide information on the relationship between the conditions of pollution sources and their causes.
- To identify the quality of the environments where the person carries out his life or economic activity, in order to take the necessary measures to reduce emissions and improve the quality of environmental elements.
- To evaluate the effectiveness of policies and actions for the management of natural resources designed and undertaken.

The process of monitoring at the individual level, according to the law on environmental protection, is the duty of the investment company or the subcontractor for the elements in which it affects. According to DCM No. 1189. date 18.11.2009 "On the rules and procedures for the drafting and implementation of the national environmental monitoring program" points Ç1, Ç2, Ç5, Ç6, Ç7, Ç8 can be monitored by the investor himself. Monitoring should be performed for air discharges, noise, quality of water resources, as well as for rehabilitation works.

### Monitoring process

Legal requirements for monitoring:

- Law no. 10431 dated 09.06.2011 "On environmental protection", chapter VI "Monitoring the state of the environment";
- The entity is obliged to perform periodic monitoring according to the defined requirements.

### **Legal Framework of Environmental Monitoring**

Law no. 10266 dated 15.4.2010	On Air pollution protection
Law no. 9774 dated 12.07.2007	On noise assessment and administration in the
	Environment
DCM no. 1189 dated 18.11.2009	On the Rules and Procedures for Drafting and
	Implementing the National Environmental
	Monitoring Program
DCM no. 103 dated 31.03.2002	On environmental monitoring in the Republic of
	Albania
DCM no. 435, dated 12.09.2002	For the approval of air emission rates in the Republic
	of Albania
DCM no. 803 dated 04.12.2003	On the approve of air quality norms
Environmental minister Directive	On noise levels at certain environments
No. 8 dated 27.11.2007	
Environmental minister Directive	On the allowable values of air pollutants in the
No. 6527 dated 24.12.2004	environment from emissions of gases and noises
	discharged by road vehicles, and the manner of their
	control. amended by: Directive no. 12 dated
	15.06.2010
DCM no. 123, dated 17.2.2011	On Noise management
DCM 212 dated 00.05 2012	
DCM no. 313, dated. 09.05.2012	On the approval of regulation of public protection
	from environmental discharges

Monitoring is the duty of the investment company at the individual level for points Ç1, Ç2, Ç5, Ç6, Ç7, Ç8 of Decision No. 1189. dated 18.11.2009 "On monitoring in the Republic of Albania".

The investor or construction company will monitor these environmental pressure indicators only during the construction phase and specifically the following elements:

The air must be monitored by Suspended Solid matter (LNP) and noise (dB).

The frequency of monitoring will be determined according to the legal framework every 6 months to perform measurements and every three or six months to submit a short periodic report reflecting the work performed accompanied by photos, measures taken to reduce environmental pollution and the way of their implementation.

### Reporting.

The operator and / or supervisor will report on the implementation of the ESMP. The report will include a chapter on environmental performance, based on the facilities addressed in ESMP. The format of the report will be agreed between the operator / supervisor and the ADF. In case of accidents or negative impacts on the environment (provided in the EIA report), the supervisor engineer will report to the ADF. Due to the fact that the project is a site of cultural heritage, the supervisor must be licensed by National Institute for Cultural Monuments. The Institute of Cultural Monuments, as well as the Municipality of Gjirokastra, will closely monitor the project during its implementation and will address issues that they consider important, due to being cultural.

### 10. POSSIBLE TRANSBOUNDARY IMPACTS.

This project is not located near the state border, it does not affect the border areas and therefore its impact does not cause damage to the transboundary environment. The project does not affect the safety and health of neighboring countries, nor the inhabited centers of the region. Transboundary water resources are not affected, air quality in the transboundary context is not affected. For this chapter, detailed assessments and analyzes are not performed due to the location of the project within the state border and the distance it maintains with the border and neighboring states.

### **ESIA Appendixes:**

Appendix I: Social and Environmental Management Plan

Appendix II: Property Cadastral Maps

Appendix I: Social and Environmental Management Plan

## A. Environmental and social mitigation measures plan

				st (EUR)	-	responsibility	
Phase	The issue	Mitigation actions	Installation	Implementation	Installation	Implementatio n	Reviews
Preconstruction	Cleaning of workplace from inert materials, soil and surrounding vegetation	In consultation with the Municipality of Gjirokastra, providing a suitable method for recycling building materials and scrap metals			ADF/Municip ality of Gjirokastra	Contractor	As given in projection
Preconstruction	Materials obtained from illegal or unauthorized locations may put pressure on natural resources	Request for official approval or valid exploitation license			Stone quarry	The contractor must have all permits	Asphalt or concrete are not going to be used during rehabilitation. Specific stones will be used in accordance with the technical design.
Construction	Dust created during the transport of stone materials	The load should be covered or wet		-	Construction contractor	Construction contractor	
Construction	Dust created during construction	By spraying water at construction and material disposal sites	NA	-	Construction contractor	Construction contractor	
Construction	Air pollution and noise that come from machinery, transport and burning of engines in the field	Working machinery in the yard should not be allowed, use of tested and suitable machinery It is not allowed opened or closed burning at construction site	Minimal	Minimal	Construction contractor	Construction contractor	
Construction	Concerns caused by humans and animals noise	Released noises should be checked to not exceed the norms set in the regulations	Minimal	-	Construction contractor	Construction contractor	
Construction	Traffic that can create noise, fire relief, loading traffic around	Materials transport should be done during minimal traffic hours. Use alternative routes to minimize traffic load. Works should be performed alternately in order to avoid this problem.	NA	Minimal	Construction contractor	Construction contractor	

Construction	Pedestrian and vehicle safety.	Appropriate lighting and well-defined safety signs. Media announcement for the start of works.	As specified in the tender documents	Minimal	Construction contractor	Construction contractor	
Construction	Water and soil pollution from inadequate waste disposal	Properly collect and manage all waste including excavated material that can be disposed of in places approved by the Municipality of Gjirokastra.	Minimal	-	Construction contractor	Construction contractor	Most of the generated waste can be recycled
Construction	Occupational health and safety of workers	Workers must be equipped with instructions about occupational safety and protective equipment (goggles, masks, helmets, boots, etc.); traffic insurance; medical emergency equipment to be present on site).		Minimal	Construction contractor	Construction contractor	
Construction	Impact on vegetation, trees, lawns, etc.	Vegetation cleaning should be kept to a minimum.	NA	In accordance with national regulations, for a cutted down tree, 3 should be planted	Construction contractor Forest Directorate		
Construction	Random discovers of cultural and historical objects of interest	In case of random finding objects during excavations and general works, the work should be stopped immediately, the area will be provided and the relevant authority will be informed within 3 days. Authorities will be available to respond and detailed actions must be taken to continue the work.		In case of accidental findings, the owner of the project will pay it according to Albanian law for all investigations	Contractor, ADF, Municipality of Gjirokastra		Albanian legislation details all actions in case of accidental findings.
Construction	Working and employment conditions:		As given in projection	Minimal	Construction contractor,	Construction contractor	It is a legal requirement to provide workers protective equipments.

	b) New job postions c)Employees Accommodation d) Safety of employees on site	education / information related to STD  b) Informing the local population about vacancies. Maximum involvement of local workers.  c) Accommodation needs will be assessed in all workers' camps. Provide standard accommodation.  d) To provide employees with safety instructions and protective equipment (goggles, masks, helmets, boots, etc.)  e) Training of construction workers  f) Mechanism of complaint for employees to find reasonable					
Operation / Maintenance	Noise pollution for local population and the workers caused by the road maintenance works, lighting and the paronamic point	issues related to work  Limit activities during the day (or as agreed with the local authority).	Minimal	Minimal	Maintenance Contractor / LGU	Maintenance Contractor / LGU	To be specified in the documents of the maintenance contract-technical specifications about realization of maintenance work, in cooperation with the Institute of Cultural Monuments.  It is recommended that maintenance work by the responsible authority, as established in cooperation with the Institute of Cultural Monuments.

### **B: Environmental and Social Monitoring Plan**

			How will be	When will it be	Why will the			Cost	Institutional r	esponsibility
Phase	Which activity / impact will be monitored?	Where will it be monitored?	monitored / the type of monitoring equipment	monitored? (frequency of measurements or continuity)	parameter be monitored? (Optional)	Indicators	Placeme nt	Functioning	Placement	Functioning
Preconstruction	Equipment with a permit or license valid for quarries and other materials	Stone quarry location	Inspection of all necessary documents	Before starting work	To ensure sustainable use of materials	Equipment with official approval or valid license	-	-	Stone quarry operator	Stone quarry operator
Construction	Coverage and wetting of transported materials that can generate dust, such as stones, sand or gravel	Workplace, any equipment	Supervision	In continuity	To avoid air pollution	Covered trucks. Supervisor Engineer Reports.	-	Minimal	ADF	Supervisor
Construction	Construction workload, traffic congestion, traffic management complaints	On the construction site	Visual supervision	Regularly by the supervisor	To provide minimal traffic concern	Number of received complaints	-	Minimal	ADF	Supervisor
Construction	Noise disturbances for humans and animals, as well as workers on site	Site, tallest buildings	Noise measurement, inspection	Once for each machine when the work starts and after each complaint	To ensure compliance of work with environment, health and safety	Number. of registered complaints	Minimal	Minimal	ADF	Supervisor
Construction	Air, dust and particle pollution parameters	On the construction site	Sampling	After complaints	To provide minimum emissions during the work	Number of registered complaints, reports to	Minimal	-	ADF	Supervisor

						environmental authorities				
Construction	Water and soil quality (suspension particles, oils and greases)	On and near the construction site	Sampling	After complaints	To avoid leaks during the works	Number. of registered complaints	Minimal	Minimal	ADF	Supervisor
Construction	Signage	On and near the construction site	Visually by the supervisor	Regularly	To ensure clear placement of safety signs	Number of signs	Minimal	ADF	Supervisor	Minimal
Construction	Waste disposal in the authorized place	On site for timely collection and departure to the landfill	Official designation by the LGU	Before the work starts	To ensure good waste management	Determination by the Municipality, the amount of waste that will be removed	Minimal	ADF	Supervisor	Minimal
Construction / insurance of workers	Protective equipment (glasses, masks, helmets, boots, etc. Traffic organization)	The site	Inspection	Unauthorized inspections during work		Work recorded accidents number	-	Minimal	Supervisor, ADF	Supervisor
Construction / Damage of trees, lawns, etc.	Loss and impact on vegetation	The site	Supervision, photographic reports	During materials and constructions supply		Reports of frequent visits of the environmental expert		Minimal	Supervisor, ADF	
Construction / Random finding of objects	Cultural properties	The site	Expert visits from ICM, regular inspections	in continuity		Catalog of found objects, including photographic and written documentation	It should be part of regular activities	Minimal	Supervisor, ADF ICM	Supervisor, ADF, ICM

Functioning Safety of vehicles and pedestrians when there are no construction activities	Visibility	On and near the construction site	Observation	Once a week , at evening		Number of warning signs, number of registered accidents	Minimal	Minimal	LGU	Maintenanc e contractor
Increase of urban waste due to the increase in the number of visitors in the country	Visual impact	On and near the work place	Site visit and communication with local authorities	Once every two days by the LGU for maintance	For aesthetic reasons	Lack of land waste, empty bins	It should be part of the activities carried out regularly by the LGU		LGU	LGU
b) Creation of new jobs c) Accommoda tion of employees d) Safety of employees on site	examinations for employees 2) Training for disease projection, including STD	On and near the construction site	Field visits and communication with employees and the community	Once a week by ADF	To ensure the correct application of health and safety criteria	Clear and informed employees on the procedures provided with protective equipment	It should be part of routine activities	Minimal	ADF, supervizor, contractor	Supervisor, contractor

6) Ac	commodati				
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8) Co	omplaints				
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### **Appendix II: Property Cadastral Maps**

