



Arrangement of Tourism Infrastructure at Ananuri Castle

Subproject Environmental and Social Review

Third Regional Development Project
Funded by the World Bank

April, 2017

Description of Subproject

The subproject (SP) envisages arrangement of the light tourist infrastructure on the area adjacent to the Ananuri Castle and international highway - Mtskheta-Stepantsminda-Larsi, 60 km from Tbilisi, in village Ananuri.

The Ananuri fortified ensemble, dating from the 17 th century, is located on the left bank of the Aragvi River, along the famous original Georgian Military Highway. It incorporates a circuit wall with turrets, a porch, a Church of Virgin, a minor Church of Gvtaeba, a tower with a stepped pyramidal roof of Svanetian type, a single-nave Church *Mkurnali*, tower *Sheupovari*, a bell-tower, a spring and a reservoir. In the Church of the Virgin are buried some of the Eristavis (dukes) of Aragvi. The Church of the Assumption, built in 1689, has richly decorated facades with the fine relief carvings featuring human, animal and floral images, including a carved north entrance. It also contains the remains of a number of beautiful frescoes.

The Ananuri fortified ensemble is on the UNESCO Tentative list of protected cultural heritage.

Currently, approximately 7000 m² adjacent area to the Ananuri Castle is used for parking, while along the northern section, there are trading facilities and a public toilet near the road, on the same side. Makeshift trading counters are arranged in the southern part of the same territory, near the road running to the Complex.

Under the SP, the following works are envisaged:

- Removal of asphalt pavement on the adjacent area to the Ananuri Castle along the highway;
- Arrangement of walking paths and green lawns. Walking paths will be covered with granite slabs (1550 m²), external lightening poles (11 units) will be installed, benches (6 units) and litter bins (6 units) will be placed; Green laws will be arranged on 3000 m² area, decorative trees and bushes will be planted;
- Arrangement of parking area along the Mtskheta-Stepantsminda-Larsi motorway;
- Arrangement of basalt curbs along the walking area (520 m length);
- Arrangement of the asphalt pavement on the access road to the main entrance in the complex;
- Arrangement of the steps with granite pavement on the pedestrian path to the complex.

Environmental Screening and Classification

(A) IMPACT IDENTIFICATION

<p>Has sub-project a tangible impact on the environment?</p>	<p>The SP construction phase covers 3 months' period. The SP will have a small-scale and short impact on the environment only in the construction phase, while its long-term impact on the natural and social environment will be positive.</p>
<p>What are the significant beneficial and adverse environmental effects of the subproject?</p>	<p>SP is expected to have positive long-term environmental and social impact through arrangement of light tourist infrastructure and will improve touristic attraction. The increased tourist flows will have positive social impact through improvement of employment opportunities.</p> <p>The design of the touristic infrastructure is simple. The proposed morphology and use of materials appear to be seamlessly integrated into the natural environment. A pedestrian zone is created which introduces visitors in a quiet way in the gate area.</p> <p>Arrangements of the light touristic infrastructure will improve touristic attraction. The increased tourist flows will have positive social impact through improvement of employment opportunities. SP implementation will create opportunity for new jobs for local population and increase their incomes.</p> <p>SP interventions will take place outside of the of the Ananuri complex. No interventions are planned on the structural elements of the CH buildings. Therefore, the risk of negative impacts on the structural integrity and historical value of the Ananuri complex is minimal.</p> <p>The expected negative environmental and social impacts are likely to be short term: as a result of rehabilitation and construction works, dust and emissions from the operation of construction machinery will be increased (what is particularly true at the stage of removal of the existing asphalt pavement), background noise and vibration levels will rise, generation of different types of construction waste is expected, the flow of traffic may be temporarily obstructed.</p>

	<p>Because of removing the asphalt pavement, 435 m³ inert construction waste will originate.</p> <p>In the operation phase, increased tourist flows may have indirect negative environmental impacts: waste generation, vandalism, etc.</p>
<p>May the sub-project have any significant impact on the local communities and other affected people?</p>	<p>The long-term social impact of the SP will be beneficial (improvement of local population living conditions and growth of tourist flow), which will cause significant improvement of the conditions for social conditions of local population and tourists.</p> <p>Implementation of the SP will have impact on local vendors selling souvenirs and local products. These businesses are expected to be interrupted for around 3 months. A Resettlement Action Plan (RAP) will be prepared to comply with relevant Georgian laws and provisions of the WB OP 4.12 on Involuntary Resettlement, as well as the Resettlement Policy Framework of the RDP.</p> <p>Negative environmental impacts described above will be short term and limited to the construction site.</p>

(B) MITIGATION MEASURES

<p>Were there any alternatives to the sub-project design considered?</p>	<p>At the designing stage, a no-project alternative was considered, which was discarded, as the implementation of the SP will help attract both, the local and foreign visitors what will have a positive impact on the social standing of the local population.</p>
<p>What types of mitigation measures are proposed?</p>	<p>Reduction of adverse environmental impact during the rehabilitation and construction works will be possible through protecting the following key conditions: fencing the construction site and fixing the relevant signs throughout its perimeter, proper management of waste and constant monitoring, ensuring the technical functionality of machinery used during construction works, selecting less sensitive period (daytime) for construction works, If necessary, the population should be properly explained.</p>

	<p>In case chance find is encountered in the course of earth works, the contractor must immediately stop any physical activity on site and informs the MDF. The MDF promptly notifies the Ministry of Culture and Monument Protection, which takes over responsibility for the following course of action. Works may resume only upon receipt of written permission from the Ministry of Culture and Monument Protection.</p>
<p>What lessons from the previous similar projects have been incorporated into the sub-project design?</p>	<p>The Municipal Development Fund of Georgia has a vast experience in implementing average and large donor-supported SPs related to the rehabilitation and construction of buildings and structures. Based on this experience, the SP envisages arrangement of the walking paths and landscaping.</p>
<p>Have concerned communities been involved and have their interests and knowledge been adequately taken into consideration in subproject preparation? In subproject preparation?</p>	<p>SP-specific draft EMP will be made available for village Ananuri community population and will be discussed in a consultation meeting prior to the tendering of construction works.</p>

Social Screening

Social safeguards screening information		Yes	No
1	Is the information related to the affiliation, ownership and land use status of the sub-project site available and verifiable? (The screening cannot be completed until this is available)	✓	
2	Will the sub-project reduce people's access to their economic resources, such as land, pasture, water, public services, sites of common public use or other resources that they depend on?		✓
3	Will the sub-project result in resettlement of individuals or families or require the acquisition of land (public or private, temporarily or permanently) for its development?		✓
4	Will the project result in the temporary or permanent loss of crops, fruit trees and household infrastructure (such as ancillary facilities, fence, canal, granaries, outside toilets and kitchens, etc.)?	✓	
If answer to any above question (except question 1) is "Yes", then OP/BP 4.12 Involuntary Resettlement is applicable and mitigation measures should follow this OP/BP 4.12 and the Resettlement Policy Framework			
Cultural resources safeguard screening information		Yes	No
5	Will the project require excavation near any historical, archaeological or cultural heritage site?	✓	
If answer to question 5 is "Yes", then OP/BP 4.11 Physical Cultural Resources is applicable and possible chance finds must be handled in accordance with OP/BP and relevant procedures provided in the Environmental Management Framework			

Walking paths, green lawns and parking area will be arranged on the land plot that is registered as Dusheti municipality ownership. Small buildings with area 174 m² (owned by State), 58 m² (owned by Dusheti municipality) and 157 m² (owned by Dusheti municipality) are situated in the SP site. They are rented out to private persons and used as souvenirs shops. No works related to those buildings are envisaged within the SP. Several makeshift trading counters are located on site and also used by local vendors (number will be specified while RAP development) for selling souvenirs and local products. These counters will have to be permanently removed from the site once the parking lot gets upgraded. A public toilet (16 m²) is located on the north point of the SP area that is operated by United Water Supply Company of Georgia. SP implementation will not interrupt functioning of the public toilet.

Environmental Review and Environmental Management Plan

1. Introduction

1.1. Background Information

The Government of Georgia referred to the World Bank with the request to fund the Third Regional Development Project (60 million USD). Total value of the project is 75 million USD; among them, the Government of Georgia is providing 15 million USD. The Subproject (SP) implementing organization is the Municipal Development Fund of Georgia (MDF).

The goal of the third project of the regional development is to improve infrastructure services and institutional capacities, supporting development of economics based upon the tourism of Samtskhe-Javakheti and Mtskheta-Mtianeti Regions. It is expected that from the indicated point of view the planned activities will bring direct benefit to the local population of the region – by increasing of reliability of the public infrastructure, improving its availability and quality, increasing of private sector investments, and sales in places of renovated cultural heritage places and towns (tourism related enterprises). In total, it is expected that income of the population will increase and the living conditions improve.

The SP for the Rehabilitation of tourist infrastructure adjacent to the Ananuri Architectural Complex is the part of the Third Regional Development Project (RDP 3), which was prepared, updated, approved and is being carried out in accordance with the acting legislation of Georgia and due to the policies of the World Bank.

1.2. Institutional Framework

MDF is a legal entity of public law, the objective of which is to support strengthening institutional and financial capacity of local government units, investing financial resources in local infrastructure and services and improving on sustainable basis the primary economic and social services for the local population (communities). MDF is designated as an implementing entity for the RDP 3 and is responsible for its day-to-day management, including application of the environmental and social safeguard policies.

MDF prepares and submits to the World Bank for approval the SP Appraisal Reports (SARs), with safeguards documents attached. These may include, as case may be, an Environmental Review (ER) along with an Environmental Management Plan (EMP), an EMP prepared using the Environmental Management Checklist for Small Construction and Rehabilitation Activities, and a Resettlement Action Plan (RAP).

The Dusheti Municipality is responsible for the operation and maintenance of the pedestrians and parking areas to be arranged within the SP at Ananuri Architectural complex.

1.3 Legislation and Regulations

According to the law of Georgia on Permit on Environmental Impact (2008), the SP does not require Environmental Impact Assessment and obtaining of Permit on Environmental Impact.

The SP triggers to the OP/BP 4.01 Environmental Assessment, OP/BP 4.11 Physical Cultural Resources safeguard policies and OP 4.12 on Involuntary Resettlement.

According to the above mentioned safeguard policies and the Environmental and Social Management Framework (ESMF) adopted for the current program, the SP has been classified as B (+) category and requires preparation of Environmental Review (ER) and EMP, in compliance with guidance provided in the ESMF.

RAP will be prepared to comply with relevant Georgian laws and provisions of the WB OP 4.12 on Involuntary Resettlement, as well as the Resettlement Policy Framework of the RDP 3.

2. Subproject Description

The SP envisages arrangement of the light tourist infrastructure on the adjacent area to the Ananuri Castle Complex and international highway - Mtskheta-Stepantsminda-Larsi, 60 km from Tbilisi, in village Ananuri.

Currently, approximately 7000 m² area is used for parking, while along the northern section, there are trading facilities and a public toilet near the road, on the same side. Makeshift trading counters arranged in the southern part of the same territory, near the road running to the Complex.

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3. Baseline Environmental Conditions

The Ananuri Castle – a Feudal-Age fortress (XVI-XVIII cc.) is located near village Ananuri (Dusheti municipality).

In the past, this location was the key interchange of Aragvi Vicariate, where the principal roads from the north, through the Tergi and Aragvi gorges and from the central part of Kartli, through Dusheti, came together.

The Ananuri fortified ensemble, dating from the 17th century, incorporates a circuit wall with turrets, a porch, a Church of Virgin, a minor Church of Gvtaeba, a tower with a stepped pyramidal roof of Svanetian type, a single-nave Church *Mkurnali*, tower *Sheupovari*, a bell-tower, a spring and a reservoir. In the Church of the Virgin are buried some of the Eristavis (dukes) of Aragvi. The Church of the Assumption,

built in 1689, has richly decorated facades with the fine relief carvings featuring human, animal and floral images, including a carved north entrance. It also contains the remains of a number of beautiful frescoes.

The Ananuri fortified ensemble is on the UNESCO Tentative list.

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The territory of Ananuri community is located in the zone transient from moderately warm and dry climate to humid climate of the mountainous lands of east Georgia characterized by moderately cool summer and cold winter. The annual amount of precipitations is 650 mm, with most of the precipitations falling in summer. Average annual temperature is 9-8°C; the highest temperatures are fixed in August and the lowest temperatures are fixed in January.

The SP area is located on a rocky shelf. Geologically, the subgrade and slope are built with the Cretaceous Rocks – the dense- and average-layer limestones, which are slightly weathered and fissured. No hazardous geo-dynamic processes are observed in the area.

Ananuri Architectural Complex is located on the foreland by the Aragvi River, upon north-western shores of Zhinvali water reservoir. Zhinvali reservoir (capacity 520 mln m³, surface area 11.5 km², maximum depth 98 m) was formed in 1986 after construction of Zhinvali Dam and its 130 MW hydro-electric power station. Zhinvali water reservoir provides Tbilisi with drinking and utility water, also provides irrigation water to Samgori region.

According to the 2014 General Population Census Results the number of population in the Ananuri community is 1258. Most of the population lives in big villages, such as Ananuri (336), Tsikhisdziri, Pavleuri and Tsivtskaro, while the rest of people are residents of other eleven small villages.

The people in Ananuri community are mostly Georgians. There are some Ossetians and Russians, too. The majority of the community population is from 30 to 65 years old. 50,8% of the total population are men and 49,4% are women. Most of population is employed in primary agricultural production (cattle-breeding). Consequently, the major source of income for the majority of population is agriculture. 9,5% of the employed work in the service sector, 9,2% of them work in the educational field and 6,8% work in the building industry. In respect of **non-agricultural business**, tourism is more or less developed in Ananuri community. The community is attractive for tourists and holiday-makers. The problem in this respect is underdeveloped tourism infrastructure and lack of tourist services (hotels, restaurants, etc.). In addition, the population lacks the skills necessary to run a business. Ananuri has folk trade traditions, but the realization of the products is a problem.

There are two public schools functioning in Ananuri community (public school of village Ananuri and public school of village Pavleuri), and there are two elementary schools in villages Tsikhisdziri and Tsivtskaro. Ananuri community has: a kindergarten of village Ananuri, medical ambulatory of the community and village library.

The maintenance of the International highway - Mtskheta-Stepantsminda-Larsiis regular over the whole year. The road to surrounding villages is kept open during wintertime.

4. Potential Impacts

4.1 Construction Phase

4.1.1 Social Impacts

- **General set of social issues.** Significant social impact of construction activities, like change of local demographic structure, influx of new settlers, secondary development, job opportunities and increase of AIDS risks is not envisaged.
- **Resettlement Issues.** SP does not imply private land acquisition and no permanent impacts are envisaged on private or leased agricultural lands. Implementation of the SP will have temporary impact on number of local vendors selling souvenirs and local products. RAP will be prepared to comply with relevant Georgian laws and provisions of the WB OP 4.12 on Involuntary Resettlement, as well as the Resettlement Policy Framework of the RDP 3.
- **Positive impact related to Job opportunities for construction workers.** Limited and temporary during construction and limited during operation.
- **Health issues related to noise, emissions, and vibration.** Limited and temporary.
- **Traffic Disruption.** Local traffic can be impacted limited and temporary by transport activities related to the SP.
- **Safety and Access.** There will be no reduced access to areas adjacent to rehabilitation and no potential hazards to vehicles and pedestrians during rehabilitation downtime.

4.1.2. Impacts on the Physical Cultural Property

The Ananuri fortified ensemble is on the UNESCO Tentative list.

The SP interventions will take place outside of the Ananuri castle complex. Intervention on the structural elements of the CH buildings is not planned. Hence the negative effects on the structural integrity of the monument and its historical value is not expected. The design of the touristic infrastructure is simple. The proposed morphology and use of materials appear to be seamlessly integrated into the natural environment. A pedestrian zone is created which introduces visitors in a quiet way in the gate area. Arrangement of the pedestrians and parking areas will not block the view on Ananuri castle.

The risks of impacting the physical cultural property during construction works are marginal and related to noise, dust, vibration, and emissions from the operation of construction machinery.

The chance of the new archaeological discoveries is minimal. Nonetheless, in cases of a possible encountering with chance finds works must hold immediately, the Ministry of Culture and Monument Protection shall be informed, and activity will resume works only upon formal permission from the National Agency for Cultural Heritage Preservation.

In operation phase, increased tourist flows may have indirect negative environmental impacts: waste generation, vandalism, etc.

4.1.2 Environmental Impacts

Soil Pollution

Potential pollutants from a SP of this nature include the following (this list is not exhaustive):

- Diesel fuel, lubrication oils and hydraulic fluids, antifreeze, etc. from construction vehicles and machinery;
- Miscellaneous pollutants (e.g. cement and concrete);
- Construction wastes (removed concrete cover packaging, stones and gravel, cement and concrete residue, wood, etc.).

Water Pollution

Water pollution may result from a variety of sources, including the following:

- Spillages of fuel, oil or other hazardous substance, especially during refueling;
- Releasing silt water from excavations;
- Silt suspended in runoff waters (construction water);
- Washing of vehicles or equipment;
- Exposure of contaminated land and groundwater.

Spillages may travel quickly downhill to a watercourse or water body. Once in a watercourse, it can be difficult to contain the pollution which can then impact over a wide area downstream. It is therefore vital that prompt action is taken in the event of any potential water pollution incident.

Once the working width has been stripped of topsoil(in minor volumes), the subsoil becomes exposed. During earthworks in a wet weather this may result in uncontrolled release of suspended solids from the work area.

Air Pollution and Noise

Potential impact of air pollution is minimal and related to operation of vehicles and heavy machinery at the construction site and during transportation of materials.

- Noise and vibration arising from heavy machinery and vehicles;
- Air emissions (from vehicles, bulldozers, excavators etc.);
- Dust (from vehicles);
- Fumes may be a concern linked to supply and transportation of materials.

Construction Related Wastes

Inert Construction Wastes

The following types of inert and non-hazardous construction waste are anticipated to be produced from these activities:

- When removing the bituminous concrete pavement in the rehabilitation phase, 435 m³ inert construction waste will originate;
- Contaminated soil with non-hazardous substance or objects;
- Packaging materials.

Hazardous Construction Wastes

Small quantities of the hazardous wastes will arise mainly from the vehicle maintenance activities. A number of hazardous wastes, which could be generated, include:

- liquid fuels;
- lubricants, hydraulic oils;
- chemicals, such as anti-freeze;
- contaminated soil;
- spillage control materials used to absorb oil and chemical spillages;
- machine/engine filter cartridges;
- oily rags, spent filters, contaminated soil, etc.).

Transport related impacts

The following impacts may have generated:

- Noise & Vibration Impacts;
- Traffic congestion (nuisance);
- Air pollution;
- Mud on roads;
- Refueling, maintenance and vehicle cleaning and related risks of soil and water contamination.

Topsoil losses due to topsoil stripping

- Topsoil washout due to improper storage and reinstatement;
- Silt runoff to watercourses and water bodies;
- Exposure of contaminated land.

Vegetation and Landscape

The SP does not envisage woodcutting or cutting of bushes. The SP design also does not envisage any changes of the landscape.

4.2. Operation Phase

Potential impact related to the operation of the tourist infrastructure would be the increase of the number of tourists will result in the increased volume of waste and noise.

Positive social impact will be related to the increasing of the tourist infrastructure that will have positive effect on the local population, in terms of employment.

5. Environmental Management Plan

Based on the expected impacts on social and natural environment and on cultural heritage, an EMP has been developed. ER including EMP is integral part of the construction contract and implementation EMP requirements are obligatory for contractor.

The contractor is required:

1. To obtain construction materials only from licensed providers;
2. If contractor wishes to open quarries or extract material from river bed (rather than purchasing these materials from other providers), then the contractor must obtain licenses for inert material extraction;
3. If contractor wishes to operate own asphalt (rather than purchasing these materials from other providers), then the contractor must obtain an environmental permit with an established ceiling of pollutant concentrations in emissions;
4. If contractor wishes to operate own concrete plant (rather than purchasing these materials from other providers), then the contractor must prepare technical report on inventory of atmospheric air pollution stationary source and agree with the Ministry of Environment and Natural Resources Protection (MoENRP);
5. Construction waste must be disposed on the nearest municipal landfill in accordance with written agreement.
6. If over 200 tons of nonhazardous waste or over 1000 tons of inert materials or more than 120 kg of hazardous waste is generated annually as a result of contractor's activities, they shall prepare and cause the Ministry of Environment and Natural Resources of Georgia to approve the Waste Management Plan for the Company, report on waste inventory and appoint an environmental manager, and submit an information on his/her identity to the Ministry of Environment and Natural Resources of Georgia in accordance with requirements of the "Waste Management Code".

Copies of extraction licenses (if applicable), agreed technical report on inventory of atmospheric air pollution for operating concrete plants (if applicable), and waste disposal agreement must be submitted to the MDF prior to the commencement of works.

GOST and SNIP norms must be adhered.

ENVIRONMENTAL MANAGEMENT PLAN

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
Pre-Construction Phase			
General Conditions	Incompliance to Georgian Law and World Bank requirements	The following permits/licenses and agreements should be obtained by the works contractor and submitted to the MDF: <ul style="list-style-type: none"> – licenses for inert material extraction (if extracted by contractor) – Permits for production of such construction materials that belongs to the activity subject to ecological examination – Technical report on inventory of atmospheric air pollution stationary source and agree with the Ministry of Environment and Natural Resources Protection (MoENRP) – Agreement on household and construction waste disposal on the nearest landfill. 	Construction contractor
Notification of the local community on upcoming activities	Incompliance to Georgian Law and World Bank requirements	The contractor shall place informational banner on the construction site. Information about the contact persons in the MDF, works supervisor company and local municipality administration to which people can apply with the complaints on environmental and social issues shall be placed on the banner. The banner must be made by weather resistant material. Inscriptions on the Informational banner should be in Georgian and English languages.	Construction contractor
Arrangements for implementation of environmental measures	Incompliance to Georgian Law and World Bank requirements Significant environmental and social impacts	<ul style="list-style-type: none"> – Appointing a person responsible for protection of social and natural environment and EMP implementation – Training of workers regarding social and environmental protection measures to be implemented – Delivery of supplies required for implementation of planned mitigation measures 	Construction contractor
Construction Phase			
Construction works, including:	Deterioration of ambient air	<ul style="list-style-type: none"> – All vehicles shall be maintained so that their emissions do not cause nuisance to workers or local people. All vehicles shall be checked 	Construction contractor

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
<ul style="list-style-type: none"> - Preparation of construction sites - Earth works - Installation of facilities - Machinery operations - Transportation operations 		<ul style="list-style-type: none"> and repaired in case of need to eliminate increased level of noise due to damaged parts; - Regular maintenance of diesel engines shall be undertaken to ensure that emissions are minimized, for example by cleaning fuel injectors. All plant used on site shall be regularly maintained so as to be in good working order at all times to minimize potentially polluting exhaust emissions; - Vehicle refueling shall be undertaken so as to avoid fugitive emissions of volatile organic compounds through the use of fuel nozzles and pumps and enclosed tanks (no open containers will be used to stored fuel); - Materials transported to site shall be covered/ wetted down to reduce dust. The construction site shall be watered as appropriate. Protective equipment shall be provided to workers as necessary; - During demolition works destruction dust shall be suppressed by ongoing water spraying and/or installing dust screen enclosures at site; - The surrounding environment (sidewalks, roads) shall be kept free of debris to minimize dust; - The removed bituminous pavement must be displaced in the shortest possible time. - earth works shall be suspended during strong winds; - Construction materials and storage piles shall be covered; - Stripped soil/ excavated ground shall be stockpiled properly; - There shall be no open burning of construction / waste material at the site; - There shall be no excessive idling of construction vehicles at sites; - The SP territory shall be reinstatement immediately after finalizing of construction works. 	

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
	Propagation of noise and vibration	<ul style="list-style-type: none"> – The maximum speed shall be restricted in residential areas to the safety level during the pass of the trucks; – Proper technical control and maintenance practices of the machinery shall be applied; – Activities shall be limited to daylight working hours; – No-load operations of the vehicles and heavy machinery are not allowed. Proper mufflers will be used on machinery; – Ensure that machinery is in good technical condition. 	Construction contractor
	Damage of soil	<ul style="list-style-type: none"> – Demarcation of construction sites' boundaries and access roads before construction works are launched; – Adherence to demarcated work site boundaries during operations; – Stripping of topsoil from work sites (whenever possible) before starting of earthworks and stockpiling for subsequent reinstatement, in compliance with the Technical Regulations on Stripping, Stockpiling, Use and Reinstatement of Topsoil (2014); – Topsoil shall be stored in stockpiles, no more than 2m high with side slopes at a maximum angle of 45°. The following shall also be taken into consideration: <ul style="list-style-type: none"> • Dedicated storage locations shall be used that prevents the stockpiles being compacted by vehicle movements or contaminated by other materials; • Topsoil shall be segregated from subsoil stockpiles; • No material shall be stored where there is a potential for flooding; • No storage at less than 25m from river/streams, subject to the site specific topography; – Topsoil stripping during heavy rains will not be allowed; 	Construction contractor

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
		<ul style="list-style-type: none"> - Stored topsoil shall be used for reinstatement and landscaping of the SP area immediately after completion of construction works. As appropriate, this may include leveling of ground surface, reinstatement of topsoil and measures to facilitate natural recovery of vegetation; Topsoil from the sites, which will not be reinstated to the initial conditions shall be distributed carefully on the surrounding area; - In the event that the stockpiles experience significant erosion the contractor will be required to implement corrective action, such as installing erosion matting over the stockpiles if further surface compaction and/or topsoil seeding fails. The Contractor shall protect the stockpiles from flooding and run-off by placing berms or equivalent around the outside where necessary; - The topsoil must be purchased and delivered in line with the requirements of the Technical Regulation (2014) on the removal, storage, use and recultivation of the topsoil”. - subsoil shall be stored in stockpiles, no more than 3m high with side slopes at a maximum angle of 60°; dedicated storage locations shall be used that prevents the stockpiles being compacted by vehicle movements or contaminated by other materials; subsoil shall be segregated from topsoil stockpiles. 	

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
	Water and soil pollution	<ul style="list-style-type: none"> – Provision of staff with toilets and bathrooms, and centralized discharge of generated wastewater in the sewer systems if possible or install temporary structures; – Ensuring that machinery are well maintained; – Refueling of machinery using respectively equipped refueling trucks, and using of drip trays during refueling operations; – Refueling and maintenance of machinery only at a specially devoted site, where topsoil is tripped and gravel layer is arranged; lubricants, fuel and solvents shall be stored exclusively in the designated sites; No fuel, lubricants and solvents storage or refueling of vehicles or equipment will be allowed near the cultural heritage site; – Ensuring that construction materials are appropriately stockpiled and stored in the specially designated and temporarily constructed storage facilities; – Temporarily storage on site of all hazardous or toxic substances shall be in safe containers labeled with details of composition, properties and handling information; Spill containment materials (sorbents, sand, sawing, chips etc.) should be available on construction site; – Ensure that all spills are cleaned up immediately, and contaminated soil is respectively disposed off; – Wet cement and/or concrete will not be allowed to enter any watercourse, pond or ditch. – Cleaning up of the entire SP territory from construction waste as soon as the construction works are finalized. 	Construction contractor

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
	Pollution of environment by solid and liquid wastes	<ul style="list-style-type: none"> – Burning of waste is prohibited; – Paints with toxic ingredients or solvents or lead-based paints shall not be used. – Different types of waste (construction, hazardous, household) shall be collected separately; special sites shall be designated for waste accumulation and pollution prevention measures shall be applied there; – Construction inert waste and excess soil should be disposed on territory allocated by the Dusheti Municipality or on municipal landfill; – Temporarily storage of all hazardous or toxic substances shall be in safe containers labeled with details of composition, properties and handling information; Uncontrolled storage of hazardous wastes on the construction area is prohibited; the containers of hazardous substances shall be placed in an leak-proof container to prevent spillage and leaching; shall be handed over to a permitted waste management company, on a contractual basis; – Any construction or municipal wastes produced during construction stage should remove from the site area frequently; – Agreements on the disposal of waste shall be obtained prior disposal is undertaken; – Maintenance a waste management logbook to record wastes generated on site and waste flow. 	Construction contractor
	Impact on traffic flow	<ul style="list-style-type: none"> – Impose speed limitation to the SP machinery; – Ensure that SP machinery move using only pre-determined routes; – The frequency of machinery movement shall be restricted. 	Construction contractor
	Health and safety risks for local community	<ul style="list-style-type: none"> – Construction site shall be properly secured and construction related traffic regulated. This includes but is not limited to: <ul style="list-style-type: none"> • Installation of the signposting, warning signs, barriers and traffic diversions: signs shall be clearly visible and the public warned of all potential hazards; 	Construction contractor

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
		<ul style="list-style-type: none"> • Construction site and all trenches shall be fenced and properly secured to prevent unauthorized access (especially of children); • Appropriate lighting should be provided; • Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement; • Imposing of speed limitation to SP machinery • Ensuring that SP machinery move using only pre-determined routes 	
	Damage to private property	<ul style="list-style-type: none"> – Ensuring that machinery move using only pre-determined routes; – Imposing of speed limitation to machinery; – Incurred losses shall be fully compensated by the contractor. 	Construction contractor
	Conflicts with local population or other affects people	<ul style="list-style-type: none"> – Meeting with local population (if required) – Reception and addressing of complaints/grievances 	Construction contractor
	Occupational health and safety risks	<ul style="list-style-type: none"> – Informing of the SP labor about potential health and safety risks, and instructing them regarding safety measures to be adhered (before launching construction works and during civil works) – Ensuring that required personal protection equipment (e.g. helmets, gloves, etc.) is supplied and used by workers as appropriate – Ensure safety of machinery operations – Provision of safety signs for high risk zones – Implementation of measures recommended for air protection and noise abatement 	Construction contractor
	Impact on cultural heritage	<ul style="list-style-type: none"> – Suspension of construction operations if archeological objects or artefacts are discovered during earth works, informing the MDF and Ministry of Culture and Monument Protection about the 	MDF, Construction contractor

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
		chance finding and resume works only after respective permission is issued; – Cleaning up and reinstatement of the SP area immediately after the construction works are completed.	
Operation Phase			
Operation of the pedestrians and parking area	Pollution of environment with solid waste	– Regularly deliver solid waste from the site to the municipal landfill, on the basis of a contract made with the municipal waste management company; – Burning of waste should not be practiced.	Dusheti Municipality

6. Monitoring

MDF carries overall responsibility for monitoring of the implementation of the environmental mitigation measures. Consulting companies hired for supervision of works will supplement MDF's in-house capacity for tracking environmental and social compliance of works undertaken under this SP. Field monitoring checklist will be filled out and photo material attached on a monthly basis. Environmental monitoring of the SP shall be implemented according to the plan given below.

Narrative reporting on the implementation of EMP will be provided on a monthly and quarterly basis as part of the general progress reporting of MDF. MDF will also be expected to obtain from contractors and keep on file all permits, licenses, and agreement letters which contractors are required to have according to the Georgian law for extracting material, operating asphalt/concrete plants, disposing various types of waste, etc.

7. Remedies for EMP Violation

MDF, as a client of construction works, will be responsible for enforcing compliance of contractor with the terms of the contract, including adherence to the EMP.

The contractor is obliged to carry out any of its activities pursuant to the environmental legislation of Georgia currently in force, and in case if any noncompliance is revealed, the contractor shall be liable to cover at its own expense all damage liquidation costs.

8. Costs of Implementation

Costs of implementing the proposed mitigation measures are small and difficult to single out from the costs of construction operations. Nonetheless, it is recommended that Bill of Materials presented in the tender documentation carry a line item for the disposal of waste and excess materials. Other costs of adherence to good environmental practice and compliance with this EMP are expected to be integrated into the pricing of various construction activities.

9. Grievance Redress Mechanism

Grievance Redress committee will be established at the municipal level with the following composition: authorized representative of Dusheti Municipality Sakrebulo and Gangeoba, Head of the Social Service, person in charge of relations with the water supply company, representative of the local NGO.

If the grievance will not be solved at the local level, it will be lodged to the MDF. As for grievance monitoring MDF registers all received complaints, comments and how the complaint was addressed. During public consultations, the local population will be informed about the grievance redress issues and received information about contact persons.

MONITORING PLAN

Activity	What (Is the parameter to be monitored?)	Where (Is the parameter to be monitored?)	How (Is the parameter to be monitored?)	When (Define the frequency / or continuous?)	Why (Is the parameter being monitored?)	Who (Is responsible for monitoring?)
CONSTRUCTION PHASE						
Supply with construction materials	Purchase of construction materials from the officially registered suppliers	In the supplier's office or warehouse	Verification of documents	During conclusion of the supply contracts	To ensure technical reliability and safety of infrastructure	MDF, Construction supervisor
Transportation of construction materials and waste Movement of construction machinery	Technical condition of vehicles and machinery Confinement and protection of truck loads with lining Respect of the established hours and routes of transportation	Construction site	Inspection	Unannounced inspections during work hours and beyond	Limit pollution of soil and air from emissions; Limit nuisance to local communities from noise and vibration; Minimize traffic disruption.	MDF, Construction supervisor, Traffic Police
Earthworks	Temporary storage of excavated material in the pre-defined and agreed upon locations; Backfilling of the excavated material and/or its disposal to	Construction site	Inspection Permanent oversight by archaeologists	In the course of earth works	Prevent pollution of the construction site and its surroundings with construction waste; Prevent damage and loss of physical cultural resources	MDF, Construction supervisor NACHP

Activity	What (Is the parameter to be monitored?)	Where (Is the parameter to be monitored?)	How (Is the parameter to be monitored?)	When (Define the frequency / or continuous?)	Why (Is the parameter being monitored?)	Who (Is responsible for monitoring?)
	the formally designated locations;					
Sourcing of inert material	<p>Purchase of material from the existing suppliers if feasible;</p> <p>Obtaining of extraction license by the works contract and strict compliance with the license conditions;</p> <p>Terracing of the borrow area, backfilling to the exploited areas of the borrow site, and landscape harmonization;</p> <p>Excavation of river gravel and sand from outside of the water stream, arrangement of protective barriers of gravel between excavation area and the water stream, and no entry of machinery into the water stream.</p>	Borrowing areas	<p>Inspection of documents</p> <p>Inspection of works</p>	In the course of material extraction	<p>Limiting erosion of slopes and degradation of ecosystems and landscapes;</p> <p>Limiting erosion of river banks, water pollution with suspended particles and disruption of aquatic life.</p>	MDF, Construction supervisor

Activity	What (Is the parameter to be monitored?)	Where (Is the parameter to be monitored?)	How (Is the parameter to be monitored?)	When (Define the frequency / or continuous?)	Why (Is the parameter being monitored?)	Who (Is responsible for monitoring?)
Generation of construction waste	Temporary storage of construction waste in especially allocated areas; Timely disposal of waste to the formally designated locations	Construction site; Waste disposal site	Inspection	Periodically during construction and upon complaints	Prevent pollution of the construction site and nearby area with solid waste	MDF, Construction supervisor
Traffic disruption and limitation of pedestrian access	Installation of traffic limitation/diversion signage; Storage of construction materials and temporary placement of construction waste in a way preventing congestion of access roads	At and around the construction site	Inspection	In the course of construction works	Prevent traffic accidents; Limit nuisance to local residents	MDF, Construction supervisor
Workers' health and safety	Provision of uniforms and safety gear to workers; Informing of workers and personnel on the personal safety rules and instructions for operating machinery/equipment, and strict compliance with these rules/instructions	Construction site	Inspection	Unannounced inspections in the course of work	Limit occurrence of on-the-job accidents and emergencies	MDF, Construction supervisor

Activity	What (Is the parameter to be monitored?)	Where (Is the parameter to be monitored?)	How (Is the parameter to be monitored?)	When (Define the frequency / or continuous?)	Why (Is the parameter being monitored?)	Who (Is responsible for monitoring?)
OPERATION PHASE						
Management of the solid waste	Trash binds provided on site and arrangement in place for timely regular out-transporting of waste	Rehabilitated facilities	Inspection	During operation of facilities	Prevent littering of the site and area around it	Dusheti Municipality
Maintenance and protection of the site after the rehabilitation	No unauthorized construction and no informal land use in the site	Rehabilitated facilities	Inspection	During operation of facilities	Prevent loss of the historical and aesthetic values of the site and surrounding area	Dusheti Municipality NACHP

Attachment 1. Map of SP area, cadastral information and pictures



Ananuri Castle

SP Area



საქართველოს საგარეო ურთიერთობების სამსახური N 71.55.07.997

ამონაწერი საჯარო რეესტრიდან

განცხადების რეესტრაცია: N 882016316292 - 23/05/2016 11:56:34

შემაჯავრობის თარიღი: 23/05/2016 14:20:48

საკუთრების განყოფილება

წინა დღეობა	საქმის მასა	კვანძის ნომერი	საგანი	საგნის საკუთრების განმარტება საგნის აღნიშვნა: არსებული სამკვეთი დამკვეთის ფართობი: 3096.00 კვ.მ. საგნის წინა ნომერი
71	55	07	997	

მისამართი: ძაღვის დეზუაი, სოფელი მანჯრა

შემაჯავრობის განყოფილება

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შემაჯავრობის რეესტრაცია თარიღი: 25/09/2015

უფლის დამფასებლები: ლეკუჭიძე

- არსებულა N1/1-3672 , დამოწმების თარიღი: 15/09/2015, სსიპ "სამკვეთი" ქონების ეროვნული სააგენტო"

შემაჯავრობის

სსიპ თვითმმართველი თემი დეზუაის მუნიციპალიტეტი, ID ნომერი 229324451

შემაჯავრობის

სსიპ თვითმმართველი თემი დეზუაის მუნიციპალიტეტი

დაწერილი

ამონაწერი

საგანმართლო განმარტება

რეესტრირებული არ არის

ვალიანობა

ქალაქი/სოფელი

რეესტრირებული არ არის

სოფლის რეესტრირებული

რეესტრირებული არ არის

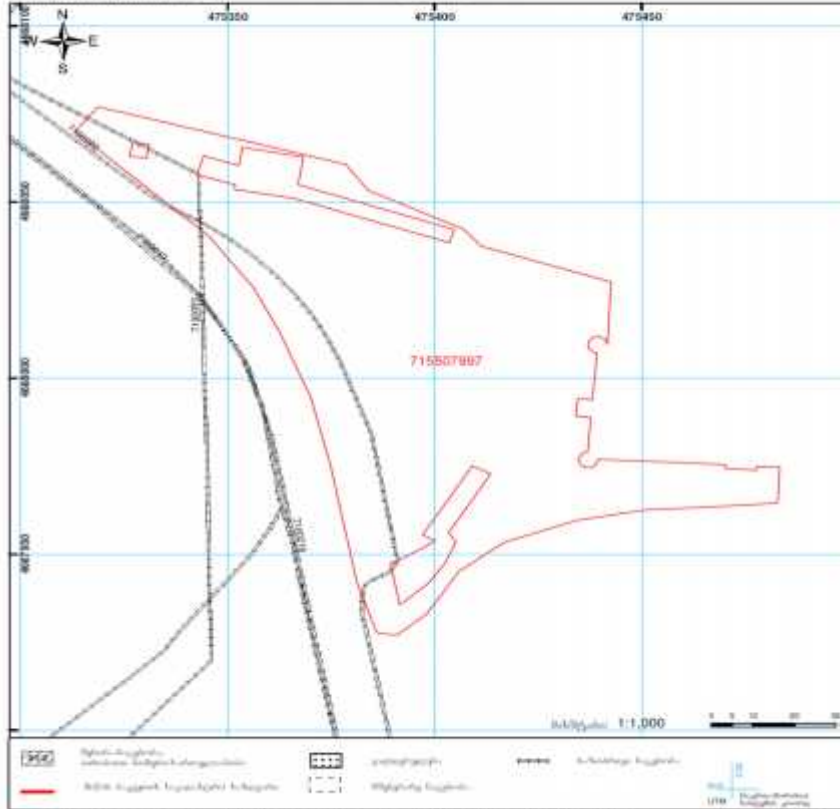
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ფურცელი: 1/2



საქართველოს საგარეო ურთიერთობების სამსახური
საქმის რეესტრაცია: ნომერი 882015341337
საგანმართლო განმარტება
საგანმართლო განმარტების თარიღი: 22.06.15

საგანმართლო განმარტების ნომერი: 71.55.07.997
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საგანმართლო განმარტების ნომერი: 3096
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საგანმართლო განმარტების ნომერი: 715507997
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საგანმართლო განმარტების ნომერი: 22.06.15

Photoes



