Municipal Development Fund of Georgia

Restoration and Adaptation of Borjomi Cavalry Building as a Museum, Borjomi Municipality

Sub-project Environmental and Social Screening and

Environmental Review

WORLD BANK FINANCED
THIRD REGIONAL DEVELOPMENT PROJECT

April 2019

Sub-project Description

The subproject (SP) site is located in the center of Borjomi – the former "New Cavalry Building", which was constructed in 1880 simultaneously with the nearby park. The building is distinguished for its architectural-artistic values and organically fits to the historic area – Merab Kostava Park (former "Remmert Park"). The building is a remarkable monument of the Georgian cultural heritage – its status has been granted by the order of Minister of Culture and Sports of Georgia: N3/87, 02.06.2010. The SP design has been already agreed with National Agency for Cultural Heritage Preservation of Georgia. The building is registered as the property of Borjomi municipality.

The building to be rehabilitated has two floors and a mansard, the ground floor will host museum foyer-box office, souvenir and book shop (57.38 sq.m), recreational zone (55.88 sq.m) including small café, temporary exhibition hall (44.12 sq.m), administration of museum (18.58 sq.m), museum staff (17.32 sq.m) and security service (11.70 sq.m). On the second floor, there will be permanent exhibition hall (69.15 sq.m), Storage and a conservation area (30.48 sq.m), presentation Hall (22.01), staff office (11.89 sq.m), WCs (4.80 sq.m). Educational space, library, media library and WCs will be placed on the third floor. New elevator will be arranged for people with disabilities in the south-west area of the building.

The building will be equipped with electric heating and ventilation systems, fire alarm and connected to the exiting water supply and central sewage systems. SP covers landscaping of the area adjacent to the Visitor Center. In particular, outdoor lighting and the layer of decorative grass clod will be arranged, benches and litterbins will be placed. Marking of the existing parking lot is also envisaged under the SP.

The building has the later attached iron-concrete pedestrian bridge, which connected the attic to the upper (M. Kostava) street and now it damages significantly the south part of the building. SP envisages demolition of the part of the bridge.

According to the "Investment Financing Agreement between Municipal Development Fund of Georgia and National Agency for Cultural Heritage Preservation of Georgia", the Agency will be responsible for maintenance of the museum.

Individual interventions of the SP include:

- Rehabilitation of the decorative wooden balconies and decorative elements of the building;
- Cleaning the building and its adjacent area from rubbish, waste and junk;
- Manual removal of the recent inscriptions made on the walls of the building;
- Restoration/rehabilitation of the decorative brickwork of the state-of-art fragments of the windows and doors;
- Filling and sealing of cracks on the façade walls with sand-cement mixture;

- Restoration/rehabilitation of the stairs providing entrance to the building, with their treads and landings made of massive basalt stones;
- Preservation and strengthening of the smoothed-tooled basalt stone facing of the facades;
- Installation of new wooden doors and windows;
- Arrangement of new tin roof for the building;
- Construction of new building for boiler and heating-cooling systems;
- Demolition of the part of the existing little pedestrian bridge;
- Arrangement of water supply, power supply and sewage systems;
- Landscaping of the surrounding area, including placing litterbins, benches and arraigning outdoor lightning, marking of the existing parking area.

Environmental Screening and Classification

(A) IMPACT IDENTIFICATION

Does the subproject have a tangible impact on the environment?	The SP will have a modest short-term negative environmental impact and it is expected to have tangible long-term positive impact on the natural and social environment, and cultural heritage.
What are the significant beneficial and adverse environmental effects of the subproject?	The SP is expected to have positive long-term social impact through provision of the Museum in Borjomi Municipality and implementation of restoration works for the Cultural Heritage (CH) monument. Arrangement of the infrastructure for the Museum will improve touristic attraction. The increased tourist flows will have positive social impact through improvement of employment opportunities and supporting the development of tourism-based economy and cultural heritage circuits in the Samtskhe-Javakheti region. The SP implementation will create opportunity for new jobs for local population and increase their incomes. As the SP is to be implemented on a CH site, there is higher than average likelihood of encountering chance-finds during excavation works. In case of chance finds during the earth works, the contractor should immediately stop any kind of physical work at the area and should inform MDF. MDF will in turn inform the National Agency of Cultural Heritage Preservation of Georgia that takes the responsibility for future actions. Work resuming may be provided only based on the written permission from the Ministry. The expected negative environmental and social impacts are likely to be short-term and typical to medium scale rehabilitation works in modified landscape: noise, dust, vibration, and emissions from the operation of construction machinery; generation of construction waste. Intense movement of heavy machinery and transportation of construction materials will cause nuisance for local population and tourists live adjacent area to the road and path to be rehabilitated. In operation phase proper management of generated solid waste and waste water should be ensured to reduce impact on the environment. The SP envisages arrangement of waste water treatment units for the public toilets and the café and litterbins as well. Increased tourist flows may have indirect negative environmental impacts, such as: waste generation, vandalism, etc.

May the subproject have any significant impact on the local communities and/or other affected people?	The SP does not consider any land acquisition and does not entail any other type of resettlement. Negative impacts are short term and limited to the construction site. They are related to the possible disturbance described above. Any other negative impacts on local population and economic livelihoods of local people are not expected to occur. There are no street vendors that will need to be relocated. The long-term social impact will be positive, after construction and rehabilitation of the public facilities number of employees will be increased. Moreover, temporary jobs will be created during construction and hence, income of the part of local population will be increased. Employment of local citizens will increase: • SP implementation may increase temporary employment opportunities for local residents, because usually it is advantageous for contractors to hire local residents. • after the SP implementation, for maintenance/repairs of the restored infrastructure (long term income generation); • In tourism enterprises (given the SP importance for tourism growth, the local population can engage in activities to attract tourists by offering various services). This will contribute the development of the private sector and will lead to the growth of tourism-related production. Better transport conditions will be created which in turn will contribute development of tourism. After the construction works of tourist information center, café, administration office and other facilities, number of employed persons will increase, and income of local population will increase proportionally as well. It will increase presence of private sector and result in growing number of tourism related enterprises.
What impact has the subproject on the human health?	Additionally, the outdoor lighting system will provide safe movement as for locals and tourists. Moreover, rehabilitated infrastructure and opening of the Museum will consequently increase visitors' flow, which will have indirect economic benefit to the local population. Minor negative impacts are related to dust, emissions, noise and vibration during the construction period, but are short term and limited to the construction site.

(B) MITIGATION MEASURES

Were there any alternatives to the sub-project design considered?	During processing of the design for conservation of the CH monument, available archive materials were taken into consideration. Measures to ensure accessibility of the site for persons with limited mobility have been added to the initial design of tourist infrastructure.
What types of mitigation measures are proposed?	The expected negative impacts of the construction phase can be mitigated by demarcation of the construction site, traffic management, good maintenance of the construction machinery, observance of the established working hours, and well-organized disposal of waste to the formally agreed sites. Instead of transporting excess inert material through several settlements to the landfill, it may be disposed in an alternative location approved by local (municipal) governing bodies in written. The nearest landfill is located in Ardagani settlement, Borjomi municipality. In case of chance finds, works will be taken on hold and notification be sent to the National Agency for cultural heritage preservation of Georgia. Works will resume only upon written consent of Agency. The expected negative impacts of the SP can be easily mitigated by proper storage and handle of chemicals to be used for stones cleaning and treatment, proper disposal of empty boxes of chemicals to the formally agreed site, proper disposal of other types of waste, including removed scaffolding, proper using of personal protective equipment.
What lessons from the previous similar subprojects have been incorporated into the project design?	Based on the lessons learned from previous similar projects, design envisages not only construction of the new building but also arrangement of resting areas for visitors, landscaping of the SP area and installation of individual waste water treatment units.
Have concerned communities been involved and have their interests and knowledge been adequately taken into consideration in subproject preparation?	MDF and local municipality will organize consultation meeting to discuss draft ESR with local population before tendering of the construction works.

D) CATEGORIZATION AND CONCLUSION

Based on the screening outcomes,

Subproject is classified as environmental Category

A ☐

B ■

C ☐

Conclusion of the environmental screening:

1. Subproject is declined ☐
2. Subproject is accepted ■

If accepted, and based on risk assessment, subproject preparation requires:

1. Completion of the Environmental Management Checklist for Small Construction and Rehabilitation Activities ☐
2. Environmental Review, including development of Environmental Management Plan ■

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)	✓ [1]	
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 infra-structure (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**.			

Environmental Review and Environmental Management Plan

1. Introduction

1.1. Background Information

The Government of Georgia has requested the financing of $60 million from the World Bank for implementation of the Third Regional Development Project (RDP 3). The total project cost is $ 75 million and includes $15 million funding from the Government of Georgia. The proposed project will be implemented by the Municipal Development Fund of Georgia (MDF).

The proposed development objective of RDP 3 is to improve infrastructure services and institutional capacity to support the development of a tourism-based economy of the Samtskhe-Javakheti and Mtskheta-Mtianeti regions. The envisaged activities are expected to bring direct benefits to the residents of these regions as well as to the tourists visiting them. More specifically, implementation of the project is expected to improve access, quality and reliability of public infrastructure; increase the volume of private sector investment in the region; and increase points of sales (tourism-related enterprises) in renovated culture heritage sites and cities. The Government will benefit from improved institutional capacity of selected agencies and local-self-governments. Overall, the population is expected to see higher incomes and better quality of life.

The SP is a part of the RDP 3 and shall be prepared, reviewed, approved, and implemented in agreement with the requirements of the Georgian legislation and the World Bank policies applicable to the RDP 3.

1.2. Institutional Framework

The Municipal Development Fund of Georgia (hereinafter: the 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 III 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 Subproject Appraisal Reports (SARs), with safeguards documents attached. These may include, as case may be, an Environmental and Social Review (ESR) along with an Environmental and Social Management Plan (ESMP), an ESMP prepared using the Environmental Management Checklist for Small Construction and Rehabilitation Activities, and a Resettlement Action Plan (RAP).

According to the “Investment Financing Agreement between Municipal Development Fund of Georgia and National Agency for Cultural Heritage Preservation of Georgia”, Agency will be responsible for maintenance of the museum.

1.3 Legislation and Regulations

According to the code of Environmental Impact Assessment of Georgia the SP is not subject to EIA and does not require preparation of EIA and obtaining Environmental conclusion.

The SP triggers to the OP/BP 4.01 Environmental Assessment and OP/BP 4.11 Physical Cultural Resources safeguard policies.

According to the above-mentioned safeguard policies and the Environmental and Social Management Framework adopted for the current program, the SP has been classified as B (+) category and requires preparation of an ESR

and an ESMP as part of it, in compliance with the guidance of the Environmental and Social Management Framework.

2. Subproject description

The Sub-Project (SP) on Restoration and Adaptation of Borjomi Cavalry Building as a Museum envisages:

- Cleaning the building and the adjacent area from rubbish, waste and junk
- Rehabilitation of the decorative wooden balconies and decorative elements of the building;
- Manual removal of the recent inscriptions made on the walls of the building;
- Restoration/rehabilitation of the decorative brickwork of the state-of-art fragments of the window and doors;
- Filling and sealing of cracks on the façade walls with sand-cement mixture;
- Restoration/rehabilitation of the stairs providing entrance to the building, with their treads and landings made of massive basalt stones;
- Preservation and strengthening of the smoothed-tooled basalt stone facing of the facades;
- Restoration of decorative façade cornices/corbels and of decorative elements of the high verge board of the garret floor;
- Installation of new wooden doors and windows;
- Arrangement of new tin roof for the building;
- Construction of new building for boiler and heating-cooling systems;
- Demolition of the part of the existing little pedestrian bridge;
- Arrangement of water supply, power supply and wastewater systems;
- Landscaping of the surrounding area: Placing litter bins, benches and arraigning outdoor lightning;
- Marking of the existing parking area.

The building to be rehabilitated has two floors and a mansard, the ground floor will host a museum foyer-box office, souvenir and book shop (57.38 sq.m), recreational zone (55.88 sq.m) including small café, temporary exhibition hall (44.12 sq.m), administration of museum (18.58 sq.m), museum staff (17.32 sq.m) and security service (11.70 sq.m). On the second floor, there will be permanent exhibition hall (69.15 sq.m), Storage and a conservation area (30.48 sq.m), presentation Hall (22.01), Staff office (11.89 sq.m), WCs (4.80 sq.m). Educational space, library, media library and WCs will be placed on the third floor. New elevator will be arranged people with disabilities in the south-west area of the building.

The building will be equipped with electric heating systems, fire alarm and connected to the exiting water supply and central waste water systems. SP covers landscaping of the area adjacent to the Visitor Center. In particular, outdoor lighting and the layer of decorative grass clod will be arranged, benches and litterbins will be placed. Marking of the existing parking lot is also envisaged under the SP.

The building has the later attached iron-concrete pedestrian bridge, which connected the attic to the upper (M. Kostava) street and now it damages significantly the south part of the building. SP envisages demolition of the part of the bridge.

According to the "Investment Financing Agreement between Municipal Development Fund of Georgia and National Agency for Cultural Heritage Preservation of Georgia", the Agency will be responsible for maintenance of the museum.

3. Baseline Environmental Conditions

The project site is located in the centre of Borjomi – The former "New Cavalry Building", which was constructed in 1880 simultaneously to the nearby park. The building is distinguished for its architectural-artistic values and organically fits to the historic area – Merab Kostava Park (former "Remmert Park"). The building presents a remarkable monument of the Georgian Cultural Heritage – its status has been granted by the order of Minister of Culture and Sports of Georgia: N3/87, 02.06.2010. The studies conducted revealed that the building is very important not only in terms of its history but its architectural-artistic context as well. Based on the archival-bibliographical researches, the author of the building has been revealed, which is German architect – Albert Zaltsman (1833-1897 years), who worked in Georgia. Two storied building with the attic and a tower is located deep of the park, neighboring the hill behind.

The cavalry building is built with the combination of the basalt quadrant stones and red brickwork; The building's roofing structure and already replaced tin cover are heavily damaged; Precipitation (rain water, melted snow) is infiltrated in the interior from the damaged roof and causes additional damages to the internal structure and architectural details of the building. The main principle of restoration will be maximal preservation of authentic parts and materials through repairing and treating, renovation or replacement only in cases of heavy damage and utmost necessity.

The mission of the museum was defined as a decorative-applied arts museum, but according to the specificities of collections, we reckon that it is possible to shorten the chronological frames to 18th-19th Centuries. This period presents a very interesting time frame for decorative-applied arts history in line with many different types of directions, styles, which are reflected in the architecture of Borjomi of that period and in the museum to be "New Cavalry" Building itself. Narrowing the chronological frames will not restrict the museum functions; on the other hand, it will make the museum more distinguished and attractive for the visitors and researchers, who work on the very difficult and interesting issues like these. In addition, based on the agency's request, the museum should exhibit the samples of decorative-applied arts, which were taken out of the Romanovs' burnt palace. The collection is not large – mainly it consists of porcelain, glass and some metal and wooden items. In addition, there are also a table and a chair, a sofa, clock, two mirrors and one harpsichord2 – around 200 artifacts.

The museum will have all components of contemporary museum, which makes it accessible not only for tourists, but also local inhabitants, moreover, for children of every age. There will be conducted many

various educational programs, which will be planed based on permanent and temporary expositions' exhibits. The museum will have a souvenir and book shops, café and the screening room/auditorium, where it is possible to show films about museum.

4. Potential Impacts

4.1 Construction Phase

4.1.1. Social Impacts

- **General set of social issues.** No significant social issues are associated with implementation and operation of this SP.
- **Resettlement Issues.** The SP does not imply private land acquisition and no permanent impacts are envisaged on private or leased agricultural lands and private assets or businesses.
- **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 reduced access to areas adjacent to rehabilitation and potential hazards to vehicles and pedestrians during rehabilitation downtime.

4.1.2. Impacts on the physical Cultural Property

The SP envisages implementation of rehabilitation/adaptation works of "New Cavalry Building" in Borjomi municipality, cleaning the building and the adjacent area from rubbish, waste and junk, rehabilitation of the decorative wooden balconies and decorative elements of the building, manual removal of the recent inscriptions made on the walls of the building, restoration/rehabilitation of the decorative brickwork of the state-of-art fragments of the window and doors, filling and sealing of cracks on the façade walls with sand-cement mixture, restoration/rehabilitation of the stairs providing entrance to the building, with their treads and landings made of massive basalt stones, preservation and strengthening of the smoothed-tooled basalt stone facing of the facades, restoration of decorative façade cornices/corbels and of decorative elements of the high verge board of the garret floor, installation of new wooden doors and windows, arrangement of new tin roof for the building; construction of new building for boiler and heating-cooling systems, demolition of the part of the existing little pedestrian bridge, arrangement of water supply, power supply and wastewater systems, Landscaping of the surrounding area

In the process of elaboration of the rehabilitation project there were considered the archive material, including restoration-measuring photos taken in the previous century. Therefore, the risk of negative impacts on the structural integrity and historical value of the ensemble complex is minimal. In course of rehabilitation and construction activities, especially during soil excavation works, chance finds may be encountered. In such cases, works will be immediately taken on hold and the Agency of cultural heritage preservation of Georgia will be informed. Works may resume only upon formal permission from the National Agency for Cultural Heritage Preservation.

Operational phase risks are related to management of visitation, preventing vandalism on site, maintenance of water supply and sanitation systems, and household waste management.

4.1.3. 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 (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 refuelling;
- Releasing silt water from excavations;
- Silt suspended in runoff waters ("construction water");
- Washing of vehicles or equipment;
- Exposure of contaminated land and groundwater;
- Impact on surface and/or underground water with chlorine-containingwaste water that are expected to be formed in washing and disinfection process before launching operation of newly installed water pipes.

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, 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

Construction Wastes

The following types of inert waste are anticipated to be produced from these activities:

- Natural materials (soil and rock);
- Contaminated soil with non-hazardous substance or objects;
- Inert materials generated due to the demolition works within the Monastery are (tiles, stones, white brick, wood);

- Packaging materials;
- Metals (including scrap metal and wire) – negligible amount of metal waste is expected;
- Debris and domestic waste located on the area for tourist infrastructure arrangement.

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

- Noise & Vibration Impacts;
- Traffic congestion (nuisance);
- Air pollution;
- Mud on roads;
- Refuelling, 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.

4.2 Operation Phase

Potential impact related to the operation of the provided light infrastructure would be the following:

- Increase of the number of tourists will result in the increased volume of waste and noise;
- The traffic will increase in adjacent area of CH sites, which will result in the increased level of local emissions and noise as well as traffic safety issues;
- Tours of sites of worshipping may conflict with local traditions and/or religious beliefs.

The potential risk of pollution is related to disruption of wastewater treatment process due to not proper operation and maintenance of the wastewater treatment units.

According to the “Investment Financing Agreement between Municipal Development Fund of Georgia and National Agency for Cultural Heritage Preservation of Georgia”, Agency will be responsible for maintenance of the museum.

5. Environmental and Social Management Plan

This Environmental and Social Management Plan (ESMP) has been prepared to ensure that negative environmental impacts associated with this SP are minimized.

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 between the construction company and the local municipality. The records of waste disposal will be maintained as proof for proper management as designed.
6. If over 200 tons of non-hazardous waste or over 1000 tons of inert materials or 120 kg of hazardous waste is generated annually (calculation apply to a calendar year) as a result of contractor's general activities, they shall prepare and cause the Ministry of Environment and Natural Resources Protection of Georgia to approve the Waste Inventory and Waste Management Plan for the Company, appoint an environmental manager, and submit an information on his/her identity to the National Agency for Cultural Heritage Preservation of Georgia in accordance with requirements of the Waste Code of Georgia.

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.

ENVIRONMETAL AND SOCIAL 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: – Agreement for disposal (stockpiling) of excessive soil – Licenses for inert material extraction (As required) – 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	Place informational banner on the construction site carrying contact information for MDF, works supervisor company and local municipality administration. Make the banner from weather resistant material. Provide information 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	– Appointing a person responsible for protection of social and natural environment and EMP implementation, – Training of workers regarding to 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: - Preparation of construction sites	Deterioration of ambient air	– All vehicles shall be maintained so that their emissions do not cause nuisance to workers or local people. All vehicles shall be checked and repaired in case of need to eliminate increased level of noise due to damaged parts;	Construction contractor

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
- Earth works - Installation of facilities - Machinery operations - Transportation operations		– 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; – 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	– 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	– 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 45^0. The following shall also be taken into consideration: • 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
		– 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; – subsoil shall be stored in stockpiles, no more than 3m high with side slopes at a maximum angle of 60^0; 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	– 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 is 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 grovel layer is arranged; lubricants, fuel and solvents shall be stored exclusively in the designated sites; No fuel, lubricants and solvents storage or re-fueling 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
	Pollution of environment by solid and liquid wastes	– Burning of waste is prohibited; – Paints with toxic ingredients or solvents or lead-based paints shall not be used.	Construction contractor

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
		– 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 Borjomi Municipality; – Temporarily storage of all hazardous or toxic substances shall be in safe containers labelled 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 a 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; – Upon completion of washing and disinfection of pipes and reservoirs the disinfection solution will be neutralized by the contractor prior to release to the environment – to avoid damage to terrestrial or aquatic organisms. In the case of disinfection via chlorination this is achieved by application of a reducing agent, such as sodium bisulfate to achieve de-chlorination. The reducing agent, in turn, must be applied by the contractor at the precise dosage to neutralize the disinfectant – but no more, since reducing agent residuals are also detrimental to aquatic ecosystems.	

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
	Impact on traffic flow	– 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	– Construction site shall be properly secured, and construction related traffic regulated. This includes but is not limited to: - Installation of the signposting, warning signs, barriers and traffic diversions: signs shall be clearly visible, and the public warned of all potential hazards; - 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	Construction contractor
	Damage to private property	– Ensuring that sub-project machinery move using only pre-determined routes; – Imposing of speed limitation to the sub-project machinery; – Incurred losses shall be fully compensated by the contractor.	Construction contractor
	Conflicts with local population or other affected people	– Meeting with local population (if required) – Reception and addressing of complaints/grievances: - Grievance Redress committee will be established at the municipal level with the following composition: authorized representative of Borjomi Municipality Sakrebulo and city hall, Head of the Social	Construction contractor, MDF, Borjomi Municipality

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
		Service, person in charge of relations with the water supply company, representative of the local NGO. - If the grievance will not unsolved at the local level, it will be lodged to the MDF. - MDF registers all received compliances, comments and how the compliance was addressed - During public consultations, the local population will be informed about the grievance redress issues and received information about contact persons.	
	Occupational health and safety risks	– 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	– Suspension of construction operations if archeological objects or artefacts are discovered during earth works, informing the MDF and Ministry of Education, Science, Culture and Sport about the chance find and resume works only after respective permission is issued; – Cleaning up and reinstatement of the SP area immediately after the construction works are completed.	MDF, Construction contractor

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
Handling of toxic materials	Toxic / hazardous materials and waste management	– Temporarily storage on site of all hazardous or toxic substances will be in safe containers labeled with details of composition, properties and handling information – The containers of hazardous substances shall be placed in a leak-proof container to prevent spillage and leaching – The wastes shall be transported by specially licensed carriers and disposed in a licensed facility.	Construction Company
Social Risk Management	Public relationship management	– Assign local liaison person who is in charge of communication with and receiving requests/ complaints from local population. – Consulted local communities to identify and pro-proactively manage potential conflicts between an external workforce and local people. – Rise local community awareness about sexually disease risks associated with the presence of an external workforce and include local communities in awareness activities. – Inform population about construction and work schedules, interruption of the services, traffic detour routes and provisional bus routes, blasting and demolition, as appropriate. – Limit construction activities at night. When necessary, carefully schedule night-time works and inform affected community so they can take necessary measures. – At least five days in advance of any service interruption (including water, electricity, telephone, bus routes), advise affected community through postings at the project site, at bus stops, and in affected homes/businesses.	Construction Company
	Labor management	– To the extent possible, locate work camps away from local communities. – Undertake sitting and operation of worker camps in consultation with neighboring communities. – Recruit unskilled or semi-skilled workers from local communities to the extent possible. Where and when feasible, provide worker skills training to enhance participation of local people.	Construction Company

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
		– Provide adequate lavatory facilities (toilets and washing areas) in the work site with adequate supplies of hot and cold running water, soap, and hand drying devices. Establish temporary septic tanks for any residential labor camp and without causing pollution of nearby watercourses. – Raise awareness of workers on overall relationship management with local population, establish the code of conduct in line with international practice and strictly enforce them, including the dismissal of workers and financial penalties of adequate scale.	
Operation Phase			
Operation of Museum	Pollution of environment with solid waste and waste water	– Regularly deliver solid waste from the site to the landfill; – Burning of waste should not be practiced. – proper fences, rails and other safety measures will be taken – Sewage collector systems and biological wastewater treatment facility should be maintained in good technical condition; – Operations & Maintenance Training (upon facility start-up and 4x seasonally during guarantee period) will be executed by works contractor, including supply of Operations Manual and preparation of Training Program (Summary Report).	National Agency for Cultural Heritage Preservation of Georgia (NACHP) Borjomi Municipality

6. Monitoring

MDF carries overall responsibility for monitoring of the implementation of the environmental mitigation measures. A consulting company hired for supervision of works will supplements 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 monthly basis. Environmental monitoring of the SP shall be implemented according with plan given below.

Narrative reporting on the implementation of ESMP will be provided on 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 have according to the Georgian law for extracting material, operating asphalt/concrete plants, disposing various types of waste, etc.

7. Remedies for ESMP 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 ESMP.

The contractor is obliged to carry out any of its activities pursuant to the Georgian Environmental Legislation 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 Quantities 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 ESMP are expected to be integrated into the pricing of various construction activities.

9. Grievance Redress Mechanism

Appropriate grievance redress mechanism was established to solve grievances of Project-Affected People, as required. Borjomi Municipality has assigned a responsible person – Giorgi Kipiani, the head of architecture, infrastructure and supervision department of Borjomi City Hall, to receive, review and react to the grievances of affected persons (Tel: 557 09 08 68). The contact person from the MDF is Nutsa Gumberidze (Tel: +995 598 88 20 19, feedback@mdf.org.ge, 150 Davit Aghmashenebeli ave., 3rd floor, 0112 Tbilisi, Georgia.) 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 compliances, comments and how the compliance was addressed. During public consultations, the local population will be informed about the grievance redress process and receive information about contact persons. Contact information

for GRM will be continuously visible and available on site and MDF as well as contractor and LSG will maintain grievance log.

MONITORING MANAGEMENT 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 the formally designated locations;	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
Sourcing of inert material	Purchase of material from the existing suppliers if feasible; Obtaining of extraction license by the works contract and strict	Borrowing areas	Inspection of documents Inspection of works	In the course of material extraction	Limiting erosion of slopes and degradation of ecosystems and landscapes; Limiting erosion of river banks, water pollution with suspended	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?)
	compliance with the license conditions; Terracing of the borrow area, backfilling to the exploited areas of the borrow site, and landscape harmonization; 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.				particles and disruption of aquatic life.	
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
Toxic / hazardous materials and waste management	Chemicals located on the SP site, appropriately contained and marked clearly as hazardous material; Security measures are taken against unauthorized removal from the site.	At SP site	Inspection of documents Inspection of works	In the course of rehabilitationworks	Prevent pollution by toxic materials Protect workers' health	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?)
Trafic 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
Information sharing and grievance redress	Local population (especially owners of land adjacent to construction site) are informed about the start of construction works. Grievance redress contact information is announced; Grievance log is maintained	Construction site and/or nearby settlement and buildings Construction site Nearby settlement and buildings	In person, by mail, phone or other means (with records) Evidence of GRM information available on accessible place Evidence of grievance log and timely	Prior to beginning of construction works (min 2 weeks) Throughout the duration of the sub-project	Minimize nuisance to local population, give opportunity for questions and feedback Ensure that questions and grievances are addressed in a timely manner	MDF local authorities

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?)
			response/resolution of feedback and			
Restoration and compensation for accidental damage	Owners who experience loss or damage of crops, structures, or other assets as a result of construction are duly compensated or their damages restored	Construction site	MDF ascertains presence of damages and evidence of compensation/restoration via Supervisor reports and site visits	Throughout the duration of the sub-project	Assets and livelihoods of population in the project area are improved, or at minimum restored to pre-project level.	Contractor (under monitoring from MDF and Supervision Consultant)
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	Borjomi Municipality
Maintenance and protection of the Site after the rehabilitation	No unauthorized construction and no informal land use in the vicinity of SP site	Rehabilitated facilities	Inspection	During operation of facilities	Prevent loss of the historical and aesthetic values of the site and surrounding area	Borjomi Municipality, National Agency for Cultural Heritage Preservation of Georgia,
Servicing of water supply scheme and sewage systems	Water supply scheme does not leak and water supply uninterrupted	Arranged facilities	Inspection	During operation of facilities	Prevent water loss and water logging of the site Prevent pollution of surface and ground water with untreated sewage	Borjomi Municipality

Attachment 1. Cadastral information and pictures of the site

Cadastral information of tourist infrastructure

*N 64.23.03.115

ამონაწერი საჯარო რეესტრიდან

განცხადების რეგისტრაცია	მომზადების თარიღი
N 882015564143 - 02/10/2015 16:23:48	08/10/2015 13:58:40

საკუთრების განყოფილება

ზონა	სექტორი	კვარტალი	ნაკვეთი
ბორჯომი	ქ. ბორჯომი		
64	23	03	115

მისამართი: ქალაქი ბორჯომი

ნაკვეთის საკუთრების ტიპი: საკუთრება
ნაკვეთის დანიშნულება: არასასოფლო სამეურნეო
დაზუსტებული ფართობი: 565.00 კვ.მ.
ნაკვეთის წინა ნომერი:
შენობა-ნაგებობის ჩამონათვალი: შენობა N1(არასაცხოვრებელი), განაშენიანების ფართი-417 კვ.მ. შენობა N2(არასაცხოვრებელი), განაშენიანების ფართი-34 კვ.მ.

მესაკუთრის განყოფილება

განცხადების რეგისტრაცია : ნომერი 882014512935 , თარიღი 25/09/2014 17:32:30
უფლების რეგისტრაცია: თარიღი 01/10/2014

უფლების დამადასტურებელი დოკუმენტი:

- ბრძანება N1/1-2057 , დამოწმების თარიღი:17/09/2014 , სახელმწიფო ქონების ეროვნული სააგენტო
- განკარგულებაN119 , დამოწმების თარიღი:23.09/2014 , ბორჯომის მუნიციპალიტეტის საკრებულო
- მიმართვა N1867 , დამოწმების თარიღი:25/09/2014 , ბორჯომის მუნიციპალიტეტი

მესაკუთრეები:
ბორჯომის მუნიციპალიტეტი

მესაკუთრე: **აღწერა:**
ბორჯომის მუნიციპალიტეტი

იპოთეკა

საგადასახადო გირავნობა:

რეგისტრირებული არ არის

შეზღუდული სარგებლობა

განცხადების რეგისტრაცია ნომერი 882015564143 თარიღი 02/10/2015 16:23:48	უზუფრუქტუარი: სსიპ "საქართველოს კულტურული მემკვიდრეობის დაცვის ეროვნული სააგენტო"; მესაკუთრე: ბორჯომის მუნიციპალიტეტი; საგანი:565 კვ.მ. მიწის ნაკვეთი და შენობა N1(არასაცხოვრებელი), განაშენიანების ფართი-417 კვ.მ. შენობა N2(არასაცხოვრებელი), განაშენიანების ფართი-34 კვ.მ. ;
უფლების რეგისტრაცია: თარიღი 08/10/2015	**უზუფრუქტის ხელშეკრულება N401, დამოწმების თარიღი02/10/2015, სსიპ "საჯარო რეესტრის ეროვნული სააგენტო"**

ვალდებულება

ყადაღა/აკრძალვა:

რეგისტრირებული არ არის

მოვალეთა რეესტრი:

რეგისტრირებული არ არის

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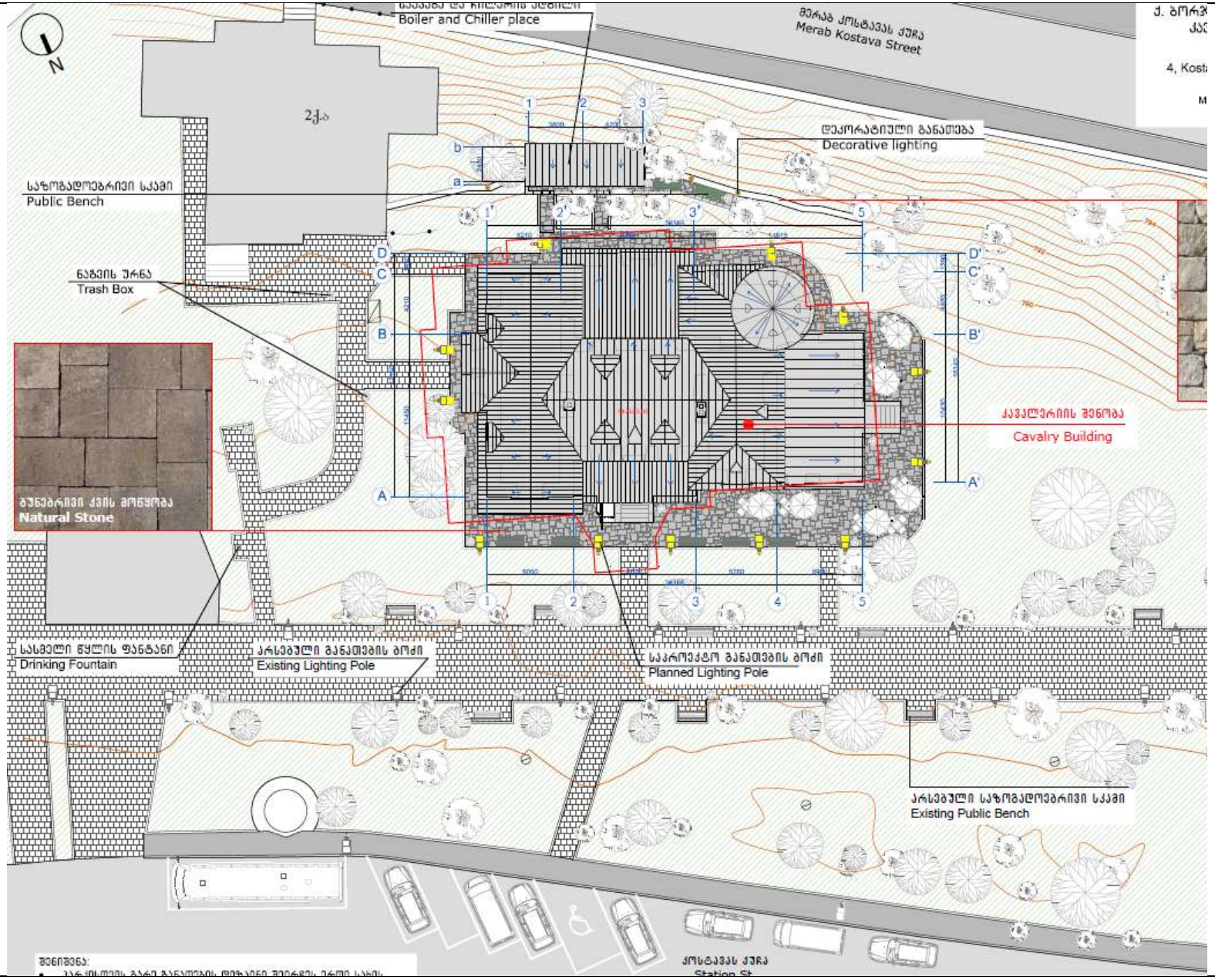
Boiler and Chiller place
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Decorative lighting
საზოგადოებრივი სკამი
Public Bench
ნაგვის урна
Trash Box
კავალერიის შენობა
Cavalry Building
ბუნებრივი ქვის მოწყობა
Natural Stone
სასმელი წყლის ფანტანი
Drinking Fountain
არსებული განათების ბოძი
Existing Lighting Pole
საპროექტო განათების ბოძი
Planned Lighting Pole
არსებული საზოგადოებრივი სკამი
Existing Public Bench
შენიშვნა:
კოსტავას ქუჩა

Photomaterial of the existing situation

Museum, renders