



Urban regeneration of historical streets in Dusheti

Environmental Review

Third Regional Development Project

Funded by the World Bank

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Tbilisi

Description of Subproject

The sub-project (SP) envisages urban regeneration of historical district in the town of Dusheti. Dusheti Municipality belongs to the Mtskheta-Mtianeti region. It is situated at an altitude of 900 meters above the sea level. Town of Dusheti is 50 kilometers away from Tbilisi and accessing the site is possible via Tbilisi-Mtskheta-Stepantsminda highway.

The SP envisages urban regeneration of the historical houses in Dusheti; in particular: 9 houses on the Erekle II Street (#1, #3, #5, #7, #9-#11, #13, #15, #17), 2 houses on Kostava street (#30, #32), 5 houses on St. Nino's street (#14, #16, #18, #19, #20), 11 houses and 3 building on Shota Rustaveli street (Houses: #39, #41, #43, #45 #51, #68, #70, #72, #74, #76, buildings: #14, #19, #56 and #64), the so-called House of Aperlov located at the intersection of Tsothe Dadiani str. #6 and Shamanauri str. #16 as well as one separately placed house on the so-called Theatre Street (#2) – house of Ilia Chavchavadze (famous Georgian writer), 3 houses on Ilia Chavchavadze street (#6, #8, #10), 6 houses on Shamanauri Street (#6, #12, #14, #22, #55, #57).

Overall, the SP will rehabilitate 37 residential houses and 3 public buildings. 24 of them have a status of the cultural heritage monuments (Order No. 03/224, 12.12.2013 of the Ministry of Culture and Monuments Protection).

Majority of the houses to be rehabilitated were built in the 19th century and the beginning of the 20th century. Because the houses had not been granted the status of cultural heritage monuments until 2013, their authenticity has been affected by numerous alterations and structural changes. Therefore, at the initial phase of preparing of the SP design, the Artistic-Stylistic Study, including the assessment of the current status, preserved original details and planning layout, and the available archive materials (historical data, sketch drawings) was carried out.

Based on the survey results and considering the existing technical conditions of the above-listed houses, the detailed designs were developed for their further rehabilitation and conservation. The designs envisage restoration of openings in its original form, arrangement of windows and stained-glass windows similar to original ones, demolition/removal of irrelevantly (in some places modern block and brick) built piles, filling up of the missing and damaged places with old Russian brick and with Georgian ones in some places; and restoration of houses' facades and roofs. The SP also includes restoration and preservation of wooden decors and structures. In particular, cleaning of structures from plastering, processing them using specific solution, painting or toning in some places, and lifting of later supplements. This method will fully return the original layout to the facades of houses.

SP also includes arrangement of fences (45 m), basalt paved sidewalks and outdoor illumination.

Environmental Screening and Classification

(A) IMPACT IDENTIFICATION

<p>Has sub-project a tangible impact on the Environment?</p>	<p>The SP will have a significant and positive long-term impact on the social environment; in particular, it will contribute to the improvement of living conditions of the local population and restoration and preservation of historic value of the buildings, which have the status of cultural heritage monuments.</p> <p>The expected negative environmental and social impact will be short-term and limited to the construction activities.</p>
<p>What are the significant beneficial and adverse Environmental effects of the subproject?</p>	<p>The SP is expected to have positive long-term social impact through improvement of living conditions of the houses. Urban regeneration of Dusheti 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 Mtskheta-Mtianeti region.</p> <p>The expected negative environmental impacts are likely to be short-term and typical to the medium scale construction and rehabilitation works implemented in the modified urban landscape, in particular: increased level of noise, dust, vibration and emissions from the operation of construction machinery; generation of construction, domestic and hazardous waste; increased traffic flow will result site access temporary obstruction and safety risks for pedestrians.</p> <p>Asbestos containing waste will be generated through demolition of roofing tiles (totally 750m²).</p> <p>The main risk related to the implementation of this SP is damaging authenticity, historic and aesthetic value of the CH monuments as well as structural damage to it due to improperly planned and/or undertaken works. However, if adequately performed, the reconstruction works will preserve the CH monuments from further damage. As the SP is to be implemented on a CH site, there is higher than average likelihood of encountering chance-finds during excavation works.</p>
<p>May the sub-project have any significant impact on the local communities and other affected people?</p>	<p>SP does not imply private land acquisition and no permanent impacts are envisaged on private or leased agricultural lands and private assets or businesses.</p>

	<p>The SP may require a temporary replacement of the individuals or families, which will be related only to the rehabilitation works and after completion of the works, they will return to their place of work and residence. According to World Bank's OP/BP 4.12 Involuntary Resettlement, an Abbreviated Resettlement Action Plan (ARAP) has been developed in that 40 buildings to be rehabilitated are divided into 83 independent areas, from which 11 areas are owned by the state, while other 72 areas are privately owned. Generally, as a result of the SP implementation, 100 PAPs including workers and public entities come under direct impact of the project.</p> <p>The long-term social impact of the SP will be beneficial.</p> <p>It will improve the living conditions of the local population, cost of the real estate will increased and historical value of houses will be restored and retained. This will make Dusheti more interesting and attractive for tourists that will increase the tourist flows and contribute to the further development of tourism related infrastructure and private sector in the region, creation of additional employment opportunities and improvement of locals' social-economic conditions.</p> <p>During the SP implementation employment opportunities for local population will be created. This positive impact will be short-term and temporary but it can partially, at least for a short time, improve the economic conditions of the locals.</p> <p>During rehabilitation works the negative social impacts will be related to the same factors described above for the environmental impacts. These impacts will be short term and limited to the construction site.</p>
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(B) MITIGATION MEASURES

<p>Were there any alternatives to the sub-project design considered?</p>	<p>Due to fact that the SP envisages rehabilitation of the existing infrastructure and the buildings to be rehabilitated have the status of the immovable cultural heritage monuments, no significant alternative options have been discussed. In the course of preparing of the SP design, the Artistic-Stylistic Study, included the assessment of the current conditions, preserved original details and planning layout, analyze of existing the archive materials, historical data, sketch drawings) of these Residential Houses was carried out.</p>
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<p>What types of mitigation measures are proposed?</p>	<p>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.</p> <p>Hazardous (asbestos containing) waste must be removed, packaged, stored, and disposed to the Dusheti municipal landfill located some 3-4 km away from Dusheti based on the relevant written agreement and in accordance with the technical regulations on special requirements for collection and processing of hazardous wastes (Resolution No145; 29.03.2016).</p> <p>To avoid negative impact on the people living and working in the buildings to be rehabilitated Abbreviated Resettlement Action Plan (ARAP) will be implemented before starting of rehabilitation activities.</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. 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. To avoid damage of the CH monuments, the restoration works should be carried out due to the permit issued by the Ministry of Culture and Monument Protection of Georgia.</p> <p>After the completion of the rehabilitation works, contracts for maintenance of the rehabilitated property will be signed with the owners by the National Agency for Cultural Heritage Preservation (NACHP) based on the Investment Financing Agreement between MDF and the NACHP to avoid damaging of rehabilitated houses.</p> <p>The proper management of solid waste generated during the exploitation phase will avoid expected negative environmental impacts and/or minimize it.</p>
<p>What lessons from the previous similar projects have been incorporated into the sub-project design?</p>	<p>MDF has vast experience in implementation of the medium and large scale rehabilitation and construction works and urban regeneration projects implemented with the support of the donor organizations.</p> <p>Based experience, obtained during the implementation of the similar projects, the SP envisages not only restoration of the damaged parts of the buildings, but whole rehabilitation of the</p>

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)	X	
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?		X
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?	X*	
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.)?		X
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		Yes	No
5	Will the project require excavation near any historical, archaeological or cultural heritage	X	
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			

*The SP requires a temporary replacement of the individuals or families, which will be related only to the rehabilitation works and after completion of the works, they will return to their place of residence. Abbreviated Resettlement Action Plan for the SP has been prepared and approved by WB.

Environmental Review and Environmental Management Plan

1. Introduction

1.1. Background Information

The SP for Urban Regeneration of Historical Streets in Dusheti will be implemented under the Third Regional Development Project (RDP III) which covers Samtskhe-Javakheti and Mtskheta-Mtianeti regions. The main goal of the RDP III is to improve infrastructure services and institutional capacities in the mentioned regions through supporting of tourism based economic development. It is expected that from the indicated point of view the planned activities will bring direct benefit to the local population of the regions – 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 sites and towns (tourism related enterprises). In total, it is expected that income of the population will be increased and the living conditions will be improved.

The Government of Georgia referred to the World Bank with the request to fund the third regional development project and in 2015 obtained the WB financial support (60 million USD) for RDP III implementation. The total value of the project is 75 million USD; among them, the Government of Georgia is providing 15 million USD.

The SP “Urban Regeneration of Historical Streets in Dusheti” is a part of the RDP3 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

MDF is a legal entity of public law, the objective of which activities is to support strengthening of institutional and financial capacity of local self-governing units, investing financial resources in local infrastructure and services and improving the primary economic and social services for the local population (communities) on the sustainable basis. 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, as this is obliged by the Environmental and Social Management Framework.

MDF prepares and submits to the World Bank for approval the SP design and bidding documentation, including SP Appraisal Reports (SARs) of SPs including environmental and social assessment documents, such as social and environmental screening, Environmental Review (ER) along with an Environmental Management Plan (EMP), or an EMP prepared using the Environmental Management Checklist for Small Construction and Rehabilitation Activities. In some

cases, based on the SP characteristics, preparation of temporary Resettlement Action Plan (RAP) may be required. The responsibility for RAP implementation lies on MDF.

The Ministry of Culture and Monument Protection of Georgia and Legal Entity of Public Law National Agency for Cultural Heritage Preservation of Georgia acting under the Ministry are also involved in the project implementation processes, and play an important role in its accomplishment. The Ministry is responsible for inventory, protection, preservation and promotion of the material and immaterial cultural heritage, tangible and intangible cultural heritage monuments of movable and immovable character, patterns produced during each historical era using materials and means as a result of cultural and creative activities and folklore, historical, archaeological, ethnological, memorial, religious, esthetic, artistic, scientific, technical, technological and other cultural values. The National Agency for Cultural Heritage Preservation of Georgia has the right to issue the permit for execution of restoration works at the monuments of cultural heritage and supervise ongoing works.

2. Legislation and Regulations

According to the Environmental Assessment Code (2017) of Georgia the SP does not require preparation of EIA and obtaining of Environmental Impact.

Since the SP will be implemented under the RDP III supported by the World Bank, it is necessary to carry out survey of the existing natural and social environment of the SP site and its adjacent territory, as well as cultural resources, and the assess the expected impacts in compliance with WB Safeguards Policy. In particular, considering the following policies:

- OP/BP 4.01 Environmental Assessment
- OP/BP 4.11 Physical Cultural Resources
- OP/BP 4.12 Involuntary Resettlement

Taking into consideration the above-mentioned policy documents and Environmental and Social Management Framework (ESMF) of RDP III, the screening of the expected impacts on natural and social environment and cultural resources was carried out. The screening classified the SP as a B (+) category that requires preparation of Environmental Review including environmental and social management plan.

Based on the SP characteristics and results of the SP environmental and social screening was revealed that the dwelling houses (total number houses 40) to be rehabilitated within the project represent the private property, except of one located at # 12 Erekle II Street, building of library which is under state ownership. The SP requires a temporary replacement of the individuals or families, which will be related only to the rehabilitation works and after completion of the works,

they will return to their place of residence. Abbreviated Resettlement Action Plan for the SP has been prepared and approved by WB.

After the completion of the rehabilitation works contracts for maintenance of the rehabilitated property will be signed with the owners by the National Agency for Cultural Heritage Preservation of Georgia based on the Investment Financing Agreement between Municipal Development Fund of Georgia and National Agency for Cultural Heritage Preservation of Georgia.

3. Subproject Description

The SP envisages urban regeneration of the historical houses in Dusheti; in particular: 8 houses on the Erekle II Street (#1, #3, #5, #7, #9, #11, #13, #12), 6 houses on Shamanauri Street (#6, #10, #14, #22, #55, #57), 5 houses on St. Nino's street (#13, #14, #16, #18, #20), 13 houses on Shota Rustaveli street (#14, #39, #41, #43, #51, #55, #56, #64, #68, #70, #72, #74, #76), 2 houses on Kostava street (#30, #32), 2 houses on Iliа Chavchavadze street #6, #8), as well as the so called House of Aperlov located at the intersection of Tsoṭne Dadiani str. #6 and Shamanauri str. #16 and Iliа Chavchavadze house on the so-called Theatre Street (#2).

The SP includes rehabilitation of 40 residential houses in common, out of which 24 have a status of the cultural heritage monuments (Order No. 03/224, 12.12.2013 Ministry of the Cultural Heritage and Monuments Protection).

Majority of the houses to be rehabilitated were built in the 19th century and beginning of the 20th century. As the houses were not granted with the status of cultural heritage monuments until 2013, their authentic face has been affected by numerous alterations and structural changes. For example: in some cases, the balconies were altered as glazed logia.

The SP envisages dismantling of old damaged roofs, wooden rooflines and constructions, doors and windows, damaged floors and ceilings of the balconies and stairs, restoration and preservation of wooden decors and structures.

Photos and a brief description of rehabilitation works for each house planned within the SP is provided in attachment 2

The volume and types of the works are described below.

Rehabilitation/restoration of the building's external façades, particularly:

- arrangement of brick walls - 65 m³
- arrangement of tin roofs - 4780 m²
- arrangement of tile roofs - 820 m²
- arrangement of doors and windows - 550 m²
- arrangement of wooden flooring - 150 m²
- arrangement of tile flooring - 90 m²
- restoration of the wooden balconies - 180 m², including timber processing by applying of combined prefabricated antiseptic mixture;
- painting works – oil paint 280 kg, oil varnish - 85 kg and water emulsion paint 125 kg;

- arrangement of fencing (45 m) using brick (6,000 psc) and sand/cement mortar - (3 m³);

The design of the SP also includes improvements of SP site and its outside perimeter:

- a. Arrangement of basalt sidewalks - 1 800 m
- b. Arrangement of outside illumination

SP includes removal of all existing stone and concrete curbs and covering of sidewalks with basalt slabs.

The SP envisages re-arrangement of staircases accessing the basements of the buildings' and covering with basalt slabs. The walls of all staircases will be plastered with sand-cement mortar. There will be arranged curbs with cross section of 20*10 cm in order to drain storm water from sidewalks. The similar curbs will be put around the trees along the sidewalks.

The existing drainage canals and its coverig grilles on the Rustaveli Street will be dismantled and the monolithic reinforced concrete canals covered with cast iron grilles will be installed.

The cobblestone pavement along the boulevard on Chavchavadze Street will be removed and paved with asphalt-concrete.

The design of outdoor illumination envisages installation of street decorative lamp posts (metal lampposts with total amount 117psc, height - 4 meters).

4. Baseline Environmental Conditions

The SP site is located in Dusheti Municipality, in the central part of Town Dusheti. Town Dusheti (an administrative Centre of Dusheti Municipality) is located in 54 km distance form Tbilisi. Access to the town Dusheti is possible through a paved local road connected to the Tbilisi-Mtskheta-Stepantsminda highway.

The town is located in Dusheti plane, on the both banks of the Dushetis-Khevi River, at an elevation of 900 m above sea level. Historically the structure of the town is formed on the left side of the river, where the network of the streets and roads is built in parallel and perpendicular to each other. Visually, the town is integrated in the existing original-natural landscape.

Tectonically, town Dusheti belongs to the zone of seismic intensity 8, according to the revised seismic zoning scale of Georgia.

Town Dusheti is located in moderately humid subtropical climate zone and is characterized with moderately cold winters and long warm summers. The average annual temperature in Dusheti is 11°C. The coldest month is January with average temperature - 1.6 ° C (minimum -20 ° C). The hottest month is July, the average temperature is + 21.22 ° C (maximum + 39 ° C). The medium annual precipitation is 800-1500 mm.

According to the population census 2014, the permanent population of the town is 6 167 (male - 2 997, female - 3 170), the share of Georgians in the Dusheti population is 95.1%. From the national minorities the most numerous are Ossetians – 3.5% of the whole population.

There are two public schools and three kindergartens in the Town. Private Medical Center owned by Geohospital Ltd provides outpatient care, in-patient clinic and an emergency service. There are the House of Culture, the School of Arts, Local History Museum, Library and the Cinema in the town.

Dusheti has a long and interesting history. Dusheti first appears in Georgian written records in 1215. In the 17th century, it served as a residence of the Aragvi Eristavi. In 1801, the Russians took over and granted Dusheti a town status. Next year, it became the center of Dushetsky Uyezd. The town and its environs were a scene of disturbances during the Russian Revolution of 1905, the peasants' revolt in 1918, and an armed clash during the 1924 August uprising against the Soviet rule. There are historical and architectural monuments in the town - Church of St. George (IX-X cc), so called Mokhelis Darbazi (Hall for State Officials), Chilashvili's castle and etc.

24 buildings from the 40 houses to be rehabilitated within the SP have the status of cultural heritage monuments of Georgia (Order # 03/224; 12.12.2013) are protected by the National Agency for Cultural Heritage Preservation of Georgia.

5. Potential Impacts

5.1. Construction Phase

5.1.1. Social Impacts

- **General set of social issues.** The impact of the SP on social environment will be positive, since the SP envisages the rehabilitation of damaged residential houses that will improve the living conditions of the local population. The growth of tourist flows in the region will facilitate tourism development of the region and improve the economic conditions of the locals.

The negative impact on the population will be minimal and related only to the rehabilitation works, as the civil activities may disrupt the coziness of the population. In some cases, the temporary relocation of the local population to the temporary accommodation may be required, only, if it is necessary for dwellers safety during the SP implementation.

- **Resettlement Issues.** SP does not imply private land acquisition and no permanent impacts are envisaged on private or leased agricultural lands and private assets or businesses. As SP envisages rehabilitation and restoration of the houses under private and state ownership, in compliance with World Bank's OP/BP 4.12 Involuntary Resettlement, an Abbreviated Resettlement Action Plan (ARAP) has been developed. according to the ARAP the 40 buildings to be rehabilitated are divided into 83 independent areas 11 areas of the 83 areas are owned by the state, while other 72 areas are privately owned. Generally, as a result of the SP implementation, 100 PAPs including workers and public entities come under direct impact of the project.
- **Positive impact related to Job opportunities for construction workers.** Job opportunities will be Limited and temporary during rehabilitation and limited during operation and

maintenance of the urban infrastructure, and will improve socio-economic conditions of the workers.

- **Health issues related to noise, emissions, and vibration.** These impacts are related to the rehabilitation and renovation works which will be 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.

5.1.2. Impacts on the Physical Cultural Property

The SP envisages rehabilitation of 40 houses from which 24 have the status of the cultural heritage monuments (Order No.03/224; 12.12.2013 of the Ministry of Cultural Heritage, Monuments Protection and Sport) and obviously, there is a risk of their damage in course of the rehabilitation / restoration works that in turn may result in losing or decreasing the buildings' historical value. Therefore, prior to the rehabilitation-restoration works, the design documents should be submitted to the LEPL National Agency for Cultural Heritage Preservation of Georgia under the Ministry of Cultural Heritage and Monument Protection of Georgia, which is authorized to issue a permit for implementation of works on the CH monuments.

The SP envisages the restoration of existing buildings and no large-scale earth works planned, and according to the data, the archaeological sites are not observed at the SP site. However, due to the historical background of the location, there is a risk of accidental archaeological findings, if rehabilitation works will require activities under the ground. If archeological objects or artefacts are discovered during earth works, the construction contractor is obliged to suspend the construction operations, informing the MDF and Ministry of Culture and Monument Protection about the chance finding and resume works only after respective permission is issued.

5.1.3. 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.);
- Hazardous (asbestos containing) waste.

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.

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).

Construction Related Wastes

Inert Construction Wastes

The following inert and non-hazardous wastes will be generated as a result of the dismantling of roofs and during the reinforcement of foundations of the houses:

- Tin roofing - $2\,030\text{ m}^2 = 12\text{ m}^3$
- Tile roofing - $820\text{ m}^2 = 17\text{ m}^3$
- Wood material - 125 m^3
- The mixed inert construction waste (bricks, concrete, metal) - 500 m^3

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

- Inert materials generated due to the demolition of existing building and arrangement of foundation, such as soil, rock, concrete, bricks and metals;
- 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.).

SP envisages dismantling of the asbestos containing roofing sheets with the total area 750 m², from which 8 m³ of hazardous (asbestos) waste will be generated.

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 cutting trees or of bushes. Also, the SP design does not include any activities which will interfere in the urban landscape or able to change it.

SP will not lead to a significant change of the landscape.

5.2. Operation Phase

Potential impact related to the operation of the rehabilitated museum would be the following:

- Owners/users of the rehabilitated houses may wish to construct extensions to these buildings or undertake other modifications that have visual impact on the facades and/or compromise structural integrity of the houses;
- Increase of the number of tourists will result in the increased volume of waste and noise;
- Traffic will increase in the central part of the settlement, which will result in the increased level of local emissions and noise as well as traffic safety issues;

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

Pursuant to Paragraph 1.7 of Article 1 of the IFA, the Ministry of Cultural and Monument Protection (MCMP) concludes a Monument Maintenance Contract with the owners/authorized users of real estate carrying status of a cultural monument. In accordance with Clause 28 of the Law of Georgia on Cultural Heritage, the Monument Owner (authorized user) shall submit the information on current condition of the Monument as per the form approved by the Ministry, and in particular in accordance with the Decree #05/80 of November 3, 2015 of the Minister of Culture and Monument Protection of Georgia, within a 1 month period following receipt of the notification and execute the Monument Maintenance Contract in order to ensure protection of the monument from damage and destruction and to preserve historical-cultural values of the monument. In addition to the aforesaid, Clause 24 of the Law of Georgia on Cultural Heritage restricts carrying out any works at the monument, without obtaining the associated permit specified under the same law.

6. Environmental Management Plan

Based on the preliminary survey data of the existing natural and social environment as well as the cultural heritage and assessing the expected impacts on social and natural environment and cultural heritage, the relevant mitigation measures have been determined and Environmental Management Plan (EMP) have been developed that is the part of this ER. ER including EMP is integral part of the construction contract and implementation of EMP requirements is 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 Protection and Agriculture;
5. Construction waste must be disposed on the nearest municipal landfill in accordance with written agreement. The records of waste disposal will be maintained as proof for proper management as designed;

6. Hazardous (asbestos-containing) wastes should be removed, packaged, stored and finally disposed on the nearest municipal landfill, based on the written agreement and in accordance with the technical regulations on special requirements for collection and processing of hazardous wastes (Resolution No145; 29.03.2016);
7. According to the Waste Management Code of Georgia, if over 200 tons of nonhazardous waste or over 1000 tons of inert materials or any volume of hazardous waste is generated annually as a result of contractor's activities, they shall:
 - prepare and cause the Ministry of Environment Protection and Agriculture of Georgia to approve the inventory of the produced waste and Waste Management Plan for the Company;
 - appoint an environmental manager, and submit an information on his/her identity to the Ministry of Environment Protection and Agriculture of Georgia.

Copies of extraction licenses/Environmental Impact Permits (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			
Contractor mobilization	<p>Disruption of construction works due to sanctions from regulatory bodies against construction contractor resulting from the absence of required documents;</p> <p>Damage to the environment cause by unauthorized use of natural resources and unregulated discard of waste</p>	<ul style="list-style-type: none"> • The permit for implementation of restoration works at the CH monuments of issued by the National Agency for Cultural Heritage Preservation of Georgia should be obtained. • The following permits/licenses and agreements should be obtained by the works contractor and submitted to the MDF: <ul style="list-style-type: none"> - Agreement for disposal (stockpiling) of excessive soil - licenses for inert material extraction - 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 Protection and Agriculture; - Agreement on household and construction waste disposal on the nearest landfill. - Agreement on hazardous waste disposal on the nearest landfill. 	<p>MDF</p> <p>Construction contractor</p>
Notification of the local community on upcoming activities	<p>Hostile attitude of local communities and possible conflict leading to disruption of works;</p> <p>Inconvenience to local community from unexpected presence and activity of construction contractor</p>	<ul style="list-style-type: none"> - Place informational banner on the construction site carrying contact information about MDF, as well as works supervisor company and local municipality administration. - Make the banner from weather resistant material. - Provide information in Georgian and English languages. - Notify local community and other interested parties about the scope and timing of the upcoming works 	Construction contractor
Institutional arrangements for implementation of environmental mitigation measures	<p>Poor environmental and social performance of construction contractor;</p> <p>Occurrence of work-site trauma and other health damage due to poor understanding of health and safety rules by personnel</p>	<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

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
CONSTRUCTION PHASE			
<p>Construction works, including:</p> <ul style="list-style-type: none"> - Preparation of construction sites - Earth works - Installation of facilities - Machinery operations - Transportation operations 	<p>Deterioration of ambient air</p>	<ul style="list-style-type: none"> - All vehicles shall be maintained so that their emissions do not cause nuisance to workers or local population. - All vehicles shall be checked 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 and waste transported to/from the 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 	<p>Construction contractor</p>

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
	Distribution 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); - subsoil shall be stored in stockpiles, no more than 3m high with side slopes at a maximum angle of 60°; - Subsoil shall be segregated from topsoil stockpiles. 	Construction contractor
	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 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 gravel 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; 	Construction contractor

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
		<ul style="list-style-type: none"> - 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. 	
	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 the nearest municipal landfill based on the written agreement; - 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; - asbestos-containing waste should be removed, packaged, stored and finally disposed on the nearest municipal landfill, based on the written agreement and in accordance with the technical regulations on special requirements for collection and processing of hazardous wastes (Resolution No145; 29.03.2016 - Any construction or municipal wastes produced during construction stage should remove from the site area frequently; - Maintenance a waste management logbook to record wastes generated on site and waste flow. 	Construction contractor

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
	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	<p>Construction site shall be properly secured and construction related traffic regulated. This includes but is not limited to:</p> <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 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	<ul style="list-style-type: none"> - Ensuring that machinery move using only pre-determined routes; - Imposing of speed limitation to machinery; - Permanent supervision of works to prevent damage to private property and ensure implementation of rehabilitation works due to designs; - Incurred losses shall be fully compensated by the contractor. 	<p>Construction contractor</p> <p>Supervision company</p>
	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

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
	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"> - Rehabilitation / restoration works of residential buildings having the status of CH monuments should be carried out on the basis of the permit issued by the LEPL "National Agency for Cultural Heritage Preservation of Georgia (NACHP)" and in compliance with the Law of Georgia on Cultural Heritage; - Permanent suspension of construction operations and ensuring that these activities are met with the project approved by the NACHP; - Cleaning up and reinstatement of the SP area immediately after the construction works are completed. 	MDF, Construction Contractor NACHP
OPERATION PHASE			
	Adding extensions or other works (e.g. pipes for stoves on the exterior wall) that are not appropriate for cultural heritage	<ul style="list-style-type: none"> - Prohibition of the property owners to carry out any activity based on sole discretion, without prior agreement with the NACHP; - contracts for maintenance of the rehabilitated property will be signed with the owners by the NACHP. 	NACHP

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
Maintenance of the rehabilitated residential houses	Damage to residential houses having status of immovable monument of cultural heritage	<ul style="list-style-type: none"> - Protection¹ from damages the houses having status of the immovable CH monuments; - Elimination of damages conditioned due to natural circumstances, in a timely manner; - Management of waste generated during further rehabilitation works according to the applicable legislation; - Prohibition of the property owners to carry out any activity based on sole discretion, without prior agreement with the NACHP. 	<p>NACHP</p> <p>Dusheti Municipality</p>
	Pollution of environment with solid waste and waste water	<ul style="list-style-type: none"> - Placement of trash bins on the SP site; - Regular removal of the solid waste from the site to the municipal landfill; - Burning of waste should not be practiced. 	Dusheti municipality

¹ the Georgian Law on Cultural Heritage, the Monument Owner (authorized user) shall submit the information as per the form, approved by the Ministry, in particular by Decree #05/80 (See the Annex) dated November 3rd , 2015 by Minister of Culture and Monument Protection of Georgia, on current condition of the Monument within 1 month upon notification receiving and execute the Maintenance Contract for the Monument to provide protection of the monument from damage inflicting and destruction and historical-cultural values of the monument to be maintained.

7. Public consultations

ER along with the ESMP will be open for the local population and will be discussed at a public consultation meeting which will be held in Dusheti before starting of construction works. Information about the activities planned within the sub-project will be open and available for all stakeholders.

8. Monitoring

MDF carries overall responsibility for monitoring of the SP implementation including environmental compliance of the SP. A consulting company hired for supervision of works will supplement MDF's in-house capacity for tracking SP implementation and environmental and social compliance of works undertaken under this SP. Environmental monitoring of the SP shall be implemented according with plan given below.

Field monitoring checklist will be filled out and photo material attached on monthly basis. Narrative reporting on the implementation of EMP 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.

9. 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 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.

10. Costs of Implementation

As costs of implementing the proposed mitigation measures are small and it is 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.

11. Grievance Redress Mechanism

Grievance Redress committee will be established at the municipal level. If the grievance will not unsolved 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 issues and received information about contact persons.

In addition, contractor is obliged to place informational banner on the construction site carrying contact information about contact persons of MDF, works Supervisor Company and local municipality administration. The banner will be made with weather resistant material and provide information in Georgian and English languages.

ENVIRONMENTAL 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 Along the roads Settlement	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	In the course of earth works	Prevent pollution of the construction site and its surroundings with construction waste;	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?)
Asbestos management	<p>Asbestos located on the SP site is appropriately contained and marked clearly as hazardous material;</p> <p>Asbestos-containing materials are sprinkled with water while handling;</p> <p>Staff handling asbestos-containing materials wear full uniforms, protective masks and goggles;</p> <p>Security measures are taken against unauthorized removal of asbestos-containing material from the site: waste is contained and marked clearly as hazardous material;</p> <p>Dismantled asbestos-containing pipes are immediately disposed on the nearest landfill - in village Tagveti, Khashuri Municipality under supervision of representatives of supervisory company.</p>	At construction site	<p>Inspection of documents</p> <p>Inspection of works</p>	In the course of demolition works	<p>Prevent pollution by toxic materials;</p> <p>Protect workers' health</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?)
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
Protection of Cultural Heritage	Rehabilitation / restoration of the houses are implemented in compliance with design approved by the NACHP	At and around the construction site	Inspection	In the course of construction works and after completion	Prevent damage of CH monuments and avoid losing of cultural value	MDF, Construction supervisor NACHP
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
Works completion	Waste and excessive materials are removed from the territory The soil contaminated with fuel or oils is cut off and removed from the site	Construction site and camp	Inspection	After works completion	prevent pollution of the construction site and its surroundings	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						
Maintenance of the rehabilitated infrastructure	<p>Infrastructure is monitoring regularly and damages detected in time</p> <p>Management of waste produced during maintenance of the rehabilitated infrastructure</p>	Rehabilitated facilities	Inspection	During operation of the facilities	<p>Prevent damage of the rehabilitated infrastructure</p> <p>Prevent pollution of the site with solid waste</p>	Dusheti Municipality

Annex1. Map of SP area and pictures



Attacheement 2. Description of houses and planned rehabilitated works

#1 and #3 Erekle II Street (Cultural Heritage Monument)

The SP envisages rehabilitation of the building façade of the house #1 and #3 on Erekle II Street and replacement of its roofing.



In particular, the design includes repairing and restoration of the façade plastering, replacement of the doors and windows, replacement of the wooden balconies and glass gallery with the new ones along the entire perimeter of the façade, arrangement of wooden staircases accessing to the balconies. Also, dismantling of the existing brick and wooden fences around the courtyard and the metal gate, and arrangement of new fence with mixed brick and stone masonry. Wooden planks and tin cover of the roof will be replaced by the gray color tin sheets.

#5 Erekle II Street (Cultural Heritage Monument)

The SP includes rehabilitation of the house facade and roof replacement. In particular, cleaning of the



façade from existing plastering, replacement of doors and windows, rebuilt a wooden balcony (similar to balcony of the house on Erekle II Street # 9) from Erekle II street side. There is also envisaged dismantling of the existing wooden fence and metal

gate and arrangement of new fence with mixed brick and stone masonry and a metal gate, replacement of wooden planks and tin cover of the roof by the gray color tin sheets.

#7 Erekle II Street

The project includes rehabilitation of the building facade, replacement of roof, restoration of the outside



decorative wooden balconies and replacement of doors and windows with new ones. Rehabilitation of facades includes cleaning of brick-work using sand jet blower, restoration of damaged areas, cleaning of forged balcony from existing paint and its painting, restoration of the wooden decorative elements from the yard, and replacing of the missing part with the new one, dismantling of the ugly staircase going to the second and arrangement of new wooden one using the existing wooden decorative elements. The wooden planks and tin cover will be replaced with new one.

decorative wooden balconies and replacement of doors and windows with new ones. Rehabilitation of facades includes cleaning of brick-work using sand jet blower, restoration of damaged areas, cleaning of forged balcony from existing paint and its painting, restoration of the wooden decorative



#9 and #11 Erekle II Street (Cultural Heritage Monument)



The Houses located on Erekle street #9 and # 11 actually are one building.

The house is a two-storey building with wooden balconies along the whole the facades. The SP envisages removal of the existin plastering from the façade and its re-plastering, replacement of doors and windows, replacement of wooden balconies on the entire length of the façade, arrangement of new stained-glass windows on the first floor, and repairing-restoration of the balcony from the yard side (with replacement of damaged elements),

replacement of wooden planks and tin cover of the roof (tile and tin sheets).

House located on #11 Erekle II Street is a two-storey building with wooden balconies along the entire facades of the building. The total area of the façade is 126 m², the total area of the roof is 225 m². The project considers removal of the existing façade plating and its re-plastering, repairing-resoration of the plastered cornices, replacement of the doors and windows, and wooden balcony on the entire length of the facade, arrangement of the stained glass windows



and repairing of the balcony from the yard side (replacing damaged elements) on the first floor, replacement of wooden planks and tin cover of the roof (tile and dark tin sheets).

#13 and #15 Erekle II Street (Cultural Heritage Monument)

The house is a one-storey brick building with a basement. The inner courtyard divides the building into two blocks. The right block is a residential home. The SP envisages rehabilitation of façade and replacement of roof cover. The façade rehabilitation works includes clearing of brick arches from fragments built with block and silicate brick, as well as changing the silicate brick parapet with the Georgian brick parapet. There will be arranged wooden stained glass windows inside the brick arches. The left block of the building is practically demolished. The SP envisages: cleaning of the building and yard from garbage and shrubbery; Reinforcement of some parts of the walls and rebuilding of the others, arrangement of the reinforced concrete roofs between the floors and staircase entering down to the basement; Restoration of damaged arches and brick parapets; Arrangement of roof with wooden structures that will be cover with gray tin sheets, the roofing cover will be changed in the right block of the building as well; The metal gate will be replaced with new one; fortified and re-built walls will be plastered with sand-cement mortar (in the interior), in the restored brick arches the wooden wooden stained glass windows will be arranged.



#17 Erekle II Street

The SP envisages replacement of the roof, refurbishment of the library (occupies 214.2 m² in the building) and Free Dining Hall of Dusheti Municipality for the People Deprived of Care (occupies 144.5 m² in the building), replacement of doors and windows with the new ones.



Rehabilitation of the facades includes its cleaning with sand jet blower, restoration of the damaged parts, re-building the balconies with metal railing (presumably these balconies existed in the past). The library book stack needs repairing of walls, ceiling and floor. Damaged parquet floor will be replaced with high quality laminated floor, the

plastering damaged from the dampness will be removed from the walls and it will be plastered with sand-cement mortar. The similar works will take place in the dining hall, the walls of the kitchen and WC's and floors of the kitchen and the product store-room will be finished with ceramic tiles. The wooden planks and tin cover of the roof will be replaced with new gray color tin sheets.

#30 Kostava street (Cultural Heritage Monument)

The SP envisages rehabilitation of the façade and the replacement of the roof, namely: cleaning the facade from the remained



plastering, restoration of plastered cornices, replacement doors and windows and canopies; dismantling the yard fence and metal gate and arrangement of new block fence and installation of metal gate, replacing wooden planking and tin cover of the roof.

#32 Kostava Street (Cultural Heritage Monument²)



The SP envisages the rehabilitation of the building façade and the replacement of the roof, namely: cleaning the facade from the remained plastering, restoration of plastered cornices, replacing doors and windows and canopies, dismantling of fence of the yard and the metal gate and arrangement of new block fence and

installation of metal gate, replacing wooden planking and tin cover of the roof.

² The House is included in the list of Cultural Heritage Monuments (Approved by the Order#03/224, dated 12.12.2013 of the Culture and Monuments Protection Minister) as a #28 Merab Kostava street / #3 Ilia Chavchavadze street.

14 St. Ninos Street (Cultural Heritage Monument³)

The house is a one-storey brick building with a basement that is damaged currently. The SP implies the following works: Restoration of the building and cleaning of yard from the rubbish and shrubbery. Some part of retining wall will be strengthened and other part rebuilt floors, between the floores the reinforced concrete slabs will be arranged, staircase leading down to the basement will be arranged, existing plaster from façade and inner walls will removed. A new roof with woodens structures will be arranged that will be covered with gray tin sheets, metal gate and fence will be replaced with new one, some part of the doors and windows will be restored and other replacemed with new ones, strengthened and rebuilt walles and filled walls of will be plastered with sand-cement mortar.



#16, #18 and #20 St. Ninos Street

The SP envisages restoration of facades and replacement of the roofs of the houses #16, #18 and #20 St. Nino Street.



At present, the **house # 16 (Cultural Heritage Monument⁴)**, is a one-storey with a basement, and requires repair and restoration of the façade of and plastered cornices, replacement doors and windows, and restoration of staircase passing to the facase and leading down to the basement (basalt slabs).

³ The House is included in the list of Cultural Heritage Monuments (Approved by the Order#03/224, dated 12.12.2013 of the Culture and Monuments Protection Minister) as a #4.

⁴ The House is included in the list of Cultural Heritage Monuments (Approved by the Order#03/224, dated 12.12.2013 of the Culture and Monuments Protection Minister) as a #6 Santa Nino Street.

The house # 18 represents the two-storey brick building, the first floor of which is poorly plastered and on the second floor is provided an ugly masonry. The project envisages removal of façade bad-quality plaster, plastering of entire façade with sand-cement mortar, replacement of doors and windows and restoration of stair steps.



House # 20 (Cultural Heritage Monument⁵) - Two-storey brick building with wooden balconies. The entire façade will be cleaned from poor quality and damaged plaster, the doors and windows will be replaced, the open balcony will be restored (the most part of the balcony will be replaced with new ones), the facade will be plastered with sand-cement mortar.

Roof plankins and gray tin cover of all three houses will be replaced. There will be arranged a basalt socle on the façade.

19 St. Ninos Street



The SP includes rehabilitation of building façade and replacement of the roof. As of today, one part of a House # 13 is a two-story and the other part – one-storey. The SP provides works for removal of bad-quality plaster and re-plastering of entire façade of the building with sand-cement mortar. Replacement of doors and windows and restoration of stair steps. The roof planking and tin cover will be replaced with gray color tin sheets.

39, # 41, # 43, # 45 and # 51 Shota Rustaveli Street



House # 39 (Cultural Heritage Monument⁶) The SP considers removal of existing plastering, re-plastering and painting. Replacement of roof rainwater drainage pipes on the roof; Restoration of doors and windows on the second floor and the main entrance door on the first floor. Replacement of large door and window on the first floor, finishing of the stair with basalt tiles at the main entrance of the building, cleaning and painting of the balcony railing.

⁵ The House is included in the list of Cultural Heritage Monuments (Approved by the Order#03/224, dated 12.12.2013 of the Culture and Monuments Protection Minister) as a #14 Sant Nino's Street.

⁶ The House is included in the list of Cultural Heritage Monuments (Approved by the Order#03/224, dated 12.12.2013 of the Culture and Monuments Protection Minister) as a #43 Shota Rustaveli Street

House # 43-41 (Cultural Heritage Monument⁷) is a two-storey brick building with a basement. The SP envisages rehabilitation of the façade, replacement of doors and windows in the basement and on the first floor of the building, doors and windows on the second floor will be restored, new stained glass windows will be installed and main entrance door restored. The entrance stairs will be finished with



Building #43

basalt slabs. The balcony railing of the house # 43 will be cleaned and painted. On the balcony of # 41 balcony railing similar to house # 43 balcony railing will be installed and painted.



Building #41



House # 45 is a two-storey brick building with basement. The project envisages rehabilitation of façade, removal of the old plastering and cleaning with special device. Replacement of ceiling planckes, tin cover and restoration of the facade; Replacing doors and windows on the both floors and a basement door. Cleaning and painting of a balcony railing.

House # 51 (Cultural Heritage Monument⁸) is a one-storey building with a basement which is built with brick. The SP includes rehabilitation of the façades, rearrange of shad of the building, replacing of stained-glass windows, doors, windows and the basement door, also finishing the stair at the entrance with basalt slabs.



⁷ The House is included in the list of Cultural Heritage Monuments (Approved by the Order#03/224, dated 12.12.2013 of the Culture and Monuments Protection Minister) as a #45 Shota Rustaveli Street

⁸ The House is included in the list of Cultural Heritage Monuments (Approved by the Order#03/224, dated 12.12.2013 of the Culture and Monuments Protection Minister) as a #47 Shota Rustaveli Street

68 Shota Rustaveli Street

House is a one-storey building. The SP envisages rehabilitation of the building entire façade from Rustaveli Street. The following works will be implemented within the SP: dismantling of existing doors, windows and grilles; Removal of old tin coverer from the roof and water drain pipes; demolition of damaged wooden structures; Cleaning the façade from old plastering using sand-Jet machine. The reconstruction works include: restoration



of damaged wooden structures of the roof, arrangement of roof cover and water drain system; Restoration of the damaged façade revealed after old plaster removal; Installation of wooden doors and windows with metal grilles; inside the new door a simple profile staircase with basalt slabs will be arranged. Repairing and restoration parts of interior (engineering elements) damaged during the demolition works.

#70 Shota Rustaveli Street



The SP considers complete rehabilitation of the building façade from the side of Rustaveli Street. The reconstruction will not result in change the existing area of the building. Rehabilitation works include: dismantling the existing doors, windows and metal gate; removing the rebuilt parts of doors' and windows' openings on the first floor; removing the old tin cover of the roof and the water drain pipes; dismantling the damaged wooden structures and plancking

of the roof; Cleaning the façade from old plaster using sand-jet machine. Reconstruction works include: restoration of damaged wooden structures of the roof; Restoration of earlier parametres of the gate; installation of new roof cover (gray color) and water drain system; Restoration of façade damaged elements identified after the removal of old plaster; Installation of wooden doors and windows; Installation of metal gate, façade plastering with sand-cement mortar and painting; Arrangement of a simple profile staircase with basalt slabs in front of the new door.

#72 Shota Rustaveli Street

There are two buildings on this address. One of them is two-storey building with attic and has a one-storey building attached on it. The SP envisages full rehabilitation of the building façade from the side of Rustaveli street. The SP considers the dismantling of the existing doors, removal of the old tin cover from the roof and the water collecting pipes, removal of damaged wooden structures and planking of the roof, cleaning the façade from the old plastering with sand-jet blower, restoration of damaged wooden structures on the roof; Arrangement of roof cover and water drain system; Restoration of the damaged façade which was revealed after the removal of the old plastering; reconstruction of the attic incomplete wall and façade plastering with sand-cement mortar. Installation of wooden doors and windows; plastering the façade with sand-cement mortar and painting, setting a simple profile staircase with basalt slabs in front of the new door.



#74 Shota Rustaveli Street

The artistic value of the building is quite high and it plays an important role in creating of visual appearance of the street. According to the SP the rehabilitation of the building façade will be carried out from Rustaveli Street. The reconstruction works include: dismantling of existing doors, windows and grilles, metal structure of balcony overlap and wooden floor; Removal of old tin cover of the roof and water drain pipes; Removal of damaged wooden structures of the roof; Clearing the façade from old plater (basement) using sand-Jet machine, restoration of roof damaged wooden structures; Arrangement of new roof cover and water drain system; Restoration of the damaged elements of the façade identified after removal of the old plater; Installation of metal and wooden doors and windows, arranged a simple profile stair steps with basalt slabs in front of the entrance door. Installation of staircase and its railing in the basement; repairing and restoration of the interior parts (engineering elements) damaged during the dismantling works; replacement of balcony floor with a new cover; cleaning and painting balcony railings with metal paint.



#76 Shota Rustaveli Street (Cultural Heritage Monument)

The SP considers demolition of façade damaged elements and dismantling of the existing tin cover and damaged wooden structures of the roof, doors and windows, clearing the staircase accessing to the basement, dismantling the railing, demolition of basement wall, cleaning the façade with sand-Jet blower; restoration of wall damaged fragments, Installation of doors and windows, facades' plating with sand-cement mortar, installation of wooden structures and the new roofing cover with gray tin sheets of the roof, and water drain pipes, painting the



doors and windows, arrangement of metal railing, basalt stair steps, staircase of leading down to the basement and its painting.

House of Aprellov (Cultural Heritage Monument⁹)

Aprellov House is located in the corner of Dadiani and Shamanauri streets. The SP includes the following works: Rehabilitation of the roof – entire replacement of the roof cover and planking, arrangement tile roofing on the building and tin cover on the balcony, fragmental strengthening of the roof wooden



structures, rehabilitation of the balcony and glass gallery – rearrangement of wooden columns and railings, fabrication and installation of new wooden rail post and and windows glass gallery. Complete replacement of ceiling planking and floors of the balcony. The replacement of doors and windows is not provided by the project. They will be cleaned, processed and painted with oil paints, plastering and

mixed masonry of all four facades will be cleaned, processed and repaired; the stairs on the facades will be repaired, replaced and painted, along the building a concrete water offtake will be arranged to protect the building from precipitation. The mixed fences and gates from Dadiani and Shamanauri streets will be changed.

Ilia Chavchavadze's house (Cultural Heritage Monument¹⁰)

The building is located on Theater Street in which some time lived Ilia Chavchavadze, the famous Georgian writer and political figure. Currently, the building is amortized and needs necessary and urgent rehabilitation works. The SP envisages restoration of the exterior appearance, which includes rehabilitation of the facades, restoration of wooden units and decors of glass gallery and windows and doors of façade. All wooden items, decors, doors and windows will be processed and painted with oil paints.



#6 and #8 Ilia Chavchavadze street (House #8 is a monument of cultural heritage)

Chavchavadze Street is located in perpendicular to Erekle II and Nazi Shamanauri streets. There will be replaced damaged roof of the house # 6 with dark gray tin and restored and painted the damaged parts of the façade within the project.



⁹ The House is included in the list of Cultural Heritage Monuments (Approved by the Order#03/224, dated 12.12.2013 of the Culture and Monuments Protection Minister) as a #6 Tsothe dadianis / #16 Nazi Shamanauri Street

¹⁰ The House is included in the list of Cultural Heritage Monuments (Approved by the Order#03/224, dated 12.12.2013 of the Culture and Monuments Protection Minister) as a #2 Teatri Street

The rehabilitation works of the **house # 8** includes restoration of brick facades and cleaning with sand-jet blower. Also, along the rehabilitation perimeter the fence and 3 new wooden gates will be arranged and 1 door rehabilitated.

#10 Ilia Chavchavadze Street (Cultural Heritage Site¹¹)

The one-storey building built with old Russian brick is located on the intersection of Shamanauri and Chavchavadze streets and façades come out on both streets, the building has a basement and a low parapet on both sides of the street, it is covered with usual black tin.



The SP envisages removal of the existing roof and arrangement of the dark tin sheets on the new wooden structure; Cleaning of the façade using sand-jet blower, replacing of the existing doors and windows with new wooden doors and windows, restoration of the entrance wooden door, in its original face;

Restoration of the entrance door; Restoration of brickwork, plastering space between the bricks similarly to the existing. Re-arrangement of the stairs at the entrance; arrangement.

6 Nazi Shamanauri Street (Cultural Heritage Monument)



House is a two-story building, constructed with Old Russian brick and covered with ordinary black tin. The project envisages replacement of existing roof and arrangement of dark tin roofing. Replacement of wooden doors and windows, restoration of the wooden entrance door in its original form. The later rebuilt part will be rearranged with new metal structure, which will strengthen the cracked wall, the exterior damaged parts of the brick wall from the

street will be plastered and façade will be cleaned with sand-jet blower, gate from the Shamanauri street side will be replaced, damaged part of the wooden balcony will be cleaned, the damaged wooden structure of the balcony changed and strengthened with new wooden columns on both floors. Structures and details of the wooden balcony also will be restored.

¹¹ The House is included in the list of Cultural Heritage Monuments (Approved by the Order#03/224, dated 12.12.2013 of the Culture and Monuments Protection Minister) as a #43 Nazi Shamanauri and #47 Tsoetne Dadiani streets.

22 Nazi Shamanauri Street(Cultural Heritage Monument¹²)



The one-storey brick building, which is later plastered, is located on Shamanauri street and its one façade goes out to the St. Nino Street. It is roofed with painted tin cover. The building has a basement and a small yard that is bordered by a fence.

The SP includes the following works: Removal of

roof cover and wooden structures, strengthening of brick walls with reinforced concrete belts, arrangement of new ceiling rafter, rafter construction, plancking and tin cover; fence demolition and construction of a new one with brick; the old plastering will be removed from the walls, replastered and painted, the wooden doors and windows on the outer perimeter will be replaced, painted and the original appearance will be returned to building.



12 Nazi Shamanauri Street (Cultural Heritage Monumen¹³t)

The two-storey old brick building is located on the corner of Shamanauri and Rustaveli streets. There is a



large basement in the building which has entrance from Rustaveli Street. The project includes removing of the existing roof cover and arranging a dark tin layer on a new wooden construction of the ceiling rafter. Restoration of demolished parts of the building such as: brick arche and doors at entrance of the yard, entrance door from

Shamanauri Street, arched opening and corner of the building and wooden door of the building. Restoration of stained glass windows on the first floor – cleaning from old paint and re-painting. Cleaning and restoration of damaged brick casing, also of the wooden decorative elements of balcony and staircase. The doors and windows will be completely changed, stained glass windows and basement on the first floor will be cleaned, and parapet will be restored.



¹²The House is included in the list of Cultural Heritage Monuments (Approved by the Order#03/224, dated 12.12.2013 of the Culture and Monuments Protection Minister) as # 16 St. Ninos Street / #16 Nazi Shamanauri Street

¹³ The House is included in the list of Cultural Heritage Monuments (Approved by the Order#03/224, dated 12.12.2013 of the Culture and Monuments Protection Minister) as # 55 Shota Rustaveli Street / #12 Nazi Shamanauri Street

#14 Nazi Shamanauri Street

The house is an ugly one-storey brick building which later was plastered and covered with curved asbestos



sheets. The building is damaged and requires serious constructive works. The SP envisages demolition of the existing roof cover and wooden structures, strengthening of the brick walls with reinforced concrete belts and arranging new roof structures, wood planking and roof cover, balcony with new constructions will be arranged as well, including: reinforced concrete roofing, wooden beams, columns, floor, ceiling and walls of the balcony. Part of the walls will be built with usual red bricks. The new wooden doors and windows will be installed, a brickwork fence will be arranged

from the side of Shamanauri Street, from the balcony corner to the entrance of the next house yard, and a gate will be installed in the of the bridge and the gates of the gate.

55 Nazi Shamanauri Street (Cultural Heritage Monument)

The house represents the building built with Old Russian brick, with a flat brick arches typical to the town

and this street. The SP envisages dismantling of the old roof and arrangement of a dark tin cover on the new structure wooden ceiling rafter, the brickwork of façades on the second floor cleaned and restored, lines between the bricks will be plastered, doors and windows, all brick decorative elements and ornamental iron balcony railing and decorative plastering of the balcony on the firstst floor restored, there will be arranged wooden stained glass windows and decorative lights.



#57 Nazi Shamanauri Street (Cultural Heritage Monument¹⁴)



The house is a one-storey brick building, with backyard. In the left corner of the bulding from the Shamanauri street is located a store, after it is a living area, and in the rest area of the bulding floors and ceiling is demolished. Building was reconstructed several times and plastered.

The SP includes rehabilitation of the façade and replacement of the roof namely, removal of the existing façade plastering and the cleaning from the

waste; Strengthening of damaged retaining wall, restoration of damaged arches and parapetes, arrangement of a new roof with wooden structures that will be covered with dark gray tin layer, metal gate

¹⁴ The House is included in the list of Cultural Heritage Monuments (Approved by the Order#03/224, dated 12.12.2013 of the Culture and Monuments Protection Minister) as a #57 Nazi Shamanauri Street/#57 Shota Rustaveli Street

be changed with wooden one; Built and Strengthened walls will be plastered with a sandcement mortar, old plastering from the facades coming out on the Shamanauri and Rustaveli streets will be removed, replastered and painted with a high quality water-resistant paint.

#14 Shota Rustaveli Street



The two-storey building is built of stone and brick mixed masonry, and which later have been plastered. The second floor is built with brick. The rehabilitation works include removal of the existing roof and arrangement of the dark tin layer on the new wooden structure of ceiling rafter. Removal of cement plastering on the first floor and restoration of the old masonry, cleaning and restoration of the brick façade on the entire the perimeter of the façades. Restoration of metal balcony, changing of the doors and windows, restoration of decorative elements and installation of decorative lights is also envisaged under the design.

balcony, changing of the doors and windows, restoration of decorative elements and installation of decorative lights is also envisaged under the design.

#19 Shota Rustaveli Street



The SP includes to repair the damaged parts of facade and painting works.

64 Shota Rustaveli Street (Cultural Heritage Monument)

House is a two-storey building built with mixed masonry, a brickwork is around the windows and other part of building built with a stonework. The



SP envisages full rehabilitation of the building façade from Rustaveli Street. Main rehabilitation works are as follows: dismantling of existing doors, windows and

grilles; Removal of the old tin roof cover and the stormwater drain pipes; removal of damaged wooden structures of the roof; Cleaning the façade from old plastering using sand-jet blower, demolition of damaged elements, restoration of wall damaged fragments, installation of doors and windows, façade plastering with sand-cement mortar, installation the wooden structures of the roof and roof cover with gray tin sheets, installation water collecting pipes, painting the doors and windows, arrangement of stair steps with basalt slabs.

56 Shota Rustaveli Street (Cultural Heritage Monument)

Building of the former bank at Rustaveli str. # 56 is a two-storey building built with brick masonry, covered with tile and tin. The SP envisages rehabilitation of the facades and damaged balconies of the building. The facades' rehabilitation includes cleaning of the brick walls sand-jet blower and furnishing works. The same method will be used for cleaning of brick fence and smoke pipes. Wooden doors and windows are to be cleaned, processed and painted with oily paint.



Two gates of honour represented on the facades will be replaced with new ones which will be similar to existing doors. Amortized wooden items, wooden balconies on both floors and wooden staircases will be removed and arranged again. The amortized roof cover and the main gate of the courtyard will be replaced; the metal staircase will be repaired. In the inner courtyard on the entire perimeter of the building and along the fence will be arranged concrete waterdrain which will protect the building from the rains.

