Municipal Development Fund of Georgia

REHABILITATION OF ABASTUMANI GREEN AND BLUE CORRIDOR
Preliminary Environmental and Social Review

Funded by the World Bank
Third Regional Development Project (RDP 3)

September 2021

Sub-project Description

Abastumani is one of the famous and popular resorts in Samtskhe-Javakheti region, located in the southern part of Georgia, in Adigeni Municipality; with a very diverse and explicit micro-climate is distinguished for high touristic and recreational potential, although at present this potential has not been properly utilized. Moreover, the added value of Abastumani is its triple merit, being a climate, spa and tourist resort simultaneously. Considerable part of the resort territory represents cultural heritage. Abastumani architecture is a unique blend of European, Georgian and Russian styles. Buildings are preserved from the 19th century or built in the early 20th century. Those buildings served as cottages (rest houses) for the wealthy segment of population. There are around 122 monuments of cultural heritage located in this tiny settlement along the Otskhi River. This fact allows us to state, that the entire Abastumani is a monument of cultural heritage and its "reanimation" and preservation stands to be an ultimate goal. The town is surrounded by Borjomi Kharagauli National Park on all four sides. Nevertheless, no Park Gateway context of Abastumai has been recognized, or mutual functional connections established. Therefore, capitalization on the gateway potential for enhancement of the destination (e.g., introduction of trail heads, installation of orientation and interpretation exhibits, etc.) would be one of the value-adding innovations that shall be explored during the integrated urban design concepts development. Recently the Municipal Development Fund of Georgia (MDF), with the support of the World Bank, has implemented several sub-projects in the town under the Third Regional Development Project (RDP3). In particular, the rehabilitation of 18 historical wooden houses and the rehabilitation of observatory.

The RDP3 interventions in Abastumani aim to support the town in strengthening its economic base and upgrading the living conditions of its inhabitants through investments that will improve its chances of becoming a viable tourism hub. To achieve this goal, MDF took a holistic approach to the urban upgrade of Abastumani, commissioned a study for identifying needs for urban improvements and the Preliminary Design for the Integrated Urban Upgrading of Abastumani. The concept of Blue and Green Corridor emerged from the delivered consultant services. It implies improvement of public spaces, arrangement of nature-friendly connectivity within the town, and upgrading artificial structures in the Otskhe riverbed. Producing detailed design and undertaking the designed civil works for three subprojects referenced under the Preliminary Design documents as P01 Green and Blue Corridor, P02 Urban regeneration of the Core Area and P05 Signage and Interpretation are underway (Annex 1). Thus, the presented report of **preliminary Environmental and Social Review (ESR)** was prepared for the following packages P01, P02 and P05 based on desk review of the preliminary design and other available materials describing baseline environment, as well as consultations with specialists and stakeholders from the project area. **This ESR will be updated based on later developed detailed engineering design and assessment of impacts on baseline environmental conditions.**

The subproject (SP) comprising P01, P02, and P05 investment packages includes following activities:

- **Rehabilitation of the existing road of a national importance (SH- 14)** (total length – 7,2 km, width 6-8 m), particularly - demolition of the existing asphalt road and side-walks; rehabilitation of road including sub-base, base and surface in porous asphalt (outer area); interlocking blocks with drainage and service ducts, ditches and outfalls, kerbs and edgings; rehabilitation or provision of side-walks (at least on one side or in the minimal sections) throughout the precincts in interlocking blocks; and provision of vertical and horizontal road signage.

- **Rehabilitation of secondary road network** (total length – 4,4 km), in particular - demolition of existing asphalt (where applicable) road; rehabilitation of road including sub-base, base and

surface in interlocking blocks with drainage and service ducts, ditches and outfalls, kerbs and edgings.

- **Arrangement of so called "pocket spaces"**[1], paved with interlocking blocks and equipped with street furniture, greeneries, water features and public lighting.

- **Arrangement of the underground space for utilities allocation** which will be done by the service providers.

- **Placement of Bus Stops** at a distance of approximately 250 – 300 meters, at key locations and immediately connected to the pedestrian network, properly equipped with shelters, lighting, and signage.

- **Arrangement of parking spaces** (approximately 70 formal parking lots will be available in the project area) with standard parallel parking lots measuring 2.5×5.0 m and 2.0×5.0.

- **Reconstruction and arrangement of Gabions and river embankment**, particularly - removal of waste and debris from the river bed, removal of infesting plants along the river bed[2], consolidation of the existing stone embankments including drainage outlets along both sides of the river; demolition of damaged stone embankments and reconstruction of new stone embankments modelled after the original ones including drainage outlets along both sides of the river; construction of new embankments with stone lining including drainage outlets along both sides of the river; treatment of the existing cement surfaces to mitigate their stark aesthetic impact through the use of colors; demolition and reconstruction of existing gabions; construction of new gabions.

- **Arrangement of retaining walls and relevant infrastructure for the road**: rehabilitation of the main road may require the reshaping the existing retaining walls or building new ones to prevent landslides and erosion: consolidation of existing retaining walls; demolition and reconstruction of existing retaining walls; construction of new retaining walls; demolition and reconstruction of stairs and/or ramps.

- **Reinforcement of Cultural Heritage (CH) bridges over Otskhe river: Tamar Bridge (B 00), Waterfall Bridge (B19) and Cable-way Bridge (B31).** Tamar Bridge (B00 - length 13m; width 3m) represents a traditional masonry bridge of high heritage value (National monument as in heritage list), will be strengthened at the base of its piers and abutments, any missing or loose stone either replaced or set properly in its original bedding, stone courses re-pointed as necessary, and a compatible safety railing provided. Waterfall Bridge (B19, length-10m, width-4m), also a traditional stone bridge, in this case from the later part of the 19th century will be consolidated at the abutments, the cement roadway over the extrados of the single elliptical arch dismantled and replaced by a stone paving. The re-instated traditional roadway will be contained within a double row of capstones supporting a heritage powder coated steel railing. Cableway Bridge (B31) (length 9m, width 1,5 m), as a reinforced concrete structure built in the 20th century, will require a different type of repairs. The reinforcing steel becomes thus subject to corrosion. Repairs consist

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of cutting out the damaged areas, replace any steel weakened by section loss and put back good quality concrete.

- **Reconstruction/rehabilitation of the following bridges**: B01 (pedestrian - length 13m; width 1,6m), B03 (Pedestrian/Cycle/Vehicular, length - 14 m, width- 1,9m), B06 (Pedestrian / Cycle / Vehicular, width – 7m), B08 (pedestrian), B09 (pedestrian bridge), B10 (Vehicular; 1 Way; length 12m,width 3,1 m), B11 (Vehicular bridge; length - 10m; width - 4m); B12 (pedestrian bridge); B13 (pedestrian bridge); B14 (pedestrian bridge); B15 (vehicular bridge on the main road has to be checked with instrumental methodology in the detail design phase and might be in need to be reinforced); B16 (pedestrian bridge), B17 (pedestrian bridge), B18 (vehicular bridge; length - 8m, width - 4m); B20 (pedestrian bridge, length 12m, width 1,3m); B21 (pedestrian, length - 15m; width - 6m); B33 (Vehicular bridge; length - 16m, width - 7m); B35 (Vehicular, length - 12m, width - 5m).

- **Construction of the following bridges**: B02 (pedestrian, cycle, vehicular, width – 4m), B04 (pedestrian, width - 2m), B05 (pedestrian, width – 3m), B07 (pedestrian, width -2m).

- **Soft landscaping of the SP area:** approximately 436 trees (see attachment 4), both for landscaping or ornamental purposes, of high or medium height, will be planted as semi-mature specimens in strategic locations to enhance the natural environment. The positioning of new trees will take into account street lighting efficiency. Indigenous species, able to resist to harsh weather conditions, will be preferred. Types of soft landscaping are foreseen: natural landscaping, to re-establish the natural environment of a particular area by cleaning and replanting operations; garden landscaping, to improve the green areas with a garden-oriented operation and includes the harmonious mixing of groups or unit planting (mall, lawn, flowerbed). The following works are planned to be implemented for landscaping: cutting of sick or damaged trees, including removal of stumps and roots and reinstatement of the natural soil; removal of dried branches; cleaning, removal of branches, shrubs, weeds and others; landscaping of river banks reintroducing appropriate riverine plant species; landscaping of parks ground including preparation of soil, planting of grassed areas, planting shrubs of mixed species; landscaping of flower beds with decorative patterns; planting of trees of first magnitude (mature height > 25 m), second magnitude (mature height 15 – 25 m) and third magnitude (mature height < 15 m);

- **Arrangement of outdoor lightning -** removal of existing lamp post, supply and installation of new lamp posts approximately every 30 m, including foundation blocks, conduits and power lines.

- **Arrangement of outdoor furniture:** supply and installation of bus shelters, benches, rubbish bins, bollards, bicycle racks, tree grates, waste disposal shields, railings, restoration of small monuments (fountains, drinking fountains, statues etc.).

During the development of each piece of infrastructure, the relevant environmental norms and regulations will be respected to avoid or minimize negative impact on the public health and the natural environment. Based on the formal letters (see attachments 5 and 6) and consultations with the Ministry of Environment Protection and Agricultural (MEPA), current activities under the SP are not subject to Environmental Impact Assessment.

Based on the preliminary information provided by the contractor[3], the road to be rehabilitated is provisionally divided into three sections: Section 1: km 0+000 – km 1+450 – Section from the beginning to the Abastumani central area and crossing relatively sparsely populated place; Section 2: km 1+450 – km 5+400 – The Central part of the Abastumani Town; and Section 3: km 5+400 – km 6+968 – Section - the non-residential area of Abastumani. Currently, the preliminary detailed design has been developed for only the third section (total length – 1,568 m), that covers area from km 5+400 to km 6+968. Under this section, the SP envisages cutting off three trees (160mm < D ≤ 240mm) within the Right of Way, demolition of the existing drain channels, and manholes located at inlets of the existing drain culverts, demolition of existing 6 culvert barrels, inlet chambers and headwalls at outlets, arrangements of sidewalks, drainage pipes and drain channels, arrangement of retaining walls for the road, placing of road signs, and marking of carriageway. This section of the road passes through the anthropogenically modified area. In accordance with documentation available for the contractor at present, due to inaccuracy of registration, some parts of the third section of the existing road are going inside the boundaries of Borjomi-Kharagauli National Park and the Emerald site.
MEPA has already rectified the most of errors in the Emerald site demarcation in cooperation with the Standing Committee of the Convention on the Conservation of European Wildlife and Natural Habitats; As for the above mentioned small parts, in accordance with the information/letter (N 10571/01, dated 08.10.2021, see attachment 7) of MEPA, considering the small area and scales, no preparation of additional documentation is required. Permission for road rehabilitation works in the traditional use zone of Borjomi-Kaharagauli National Park will be obtained from the Agency of Protected Areas (APA) under MEPA.

To avoid loss of historic value and unintended damage to the cultural heritage sites, design and methodology of restoration works is being cleared with the National Agency for Cultural Heritage Preservation of Georgia.

Investment Financing Agreement between MDF and Self-governing Body - Adigeni Municipality, responsible for maintenance of the rehabilitated facilities, will be signed shortly following the final approval of SAR.

Environmental and Social 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.
What are the significant beneficial and adverse environmental effects of the subproject?	The rehabilitation of the main road, secondary streets, the river embankments, the bridges, the pedestrian and cycling paths and the provision of new urban furniture and public lighting will in fact transform the image of Abastumani in an attractive community place and will contribute to its branding as a tourism destination. The planned works will have the positive impact on Otskhe River, as it is polluted with domestic waste. An aesthetically-consistent works on the

[3] SP represents the design-build contract, signed with the joint venture of ARALI LLC & ZIMO LLC.

	riverbanks will include cleanup of trash dumped to the riverbed and will have strongly positive environmental outcome. Expected negative environmental and social risks of impacts are likely to be short-term and typical for small- to medium-scale rehabilitation works in urban landscape: noise, dust, vibration, and emissions, water contamination from the operation of construction machinery; generation of construction waste; disruption of traffic and pedestrian access. All mentioned, the impacts are expected to be temporary and insignificant. Areas where direct impacts of the SP will be felt in the construction phase include: • construction sites; • access roads along construction sites; • sites of disposal of construction and household wastes; • borrow pits used as material sources; • Any other sites to be used by contractor, such as sites for labor camp, temporary material stockpiling and storage areas, etc. As the SP envisages rehabilitation, reconstruction and improvement of existing infrastructure in a very well-developed urban area and will not have a view environmental footprint, the environmental impacts are expected to be insignificant.
May the subproject have any significant impact on the local communities and/or other affected people?	No land take, physical relocation or other types of involuntary resettlement are expected during the SP implementation. In order to prevent impacts on private properties, the relevant topographic drawings will be developed. The SP is expected to have positive long-term social impact; particularly, its implementation will result in creating an enhanced network of public spaces and pedestrian areas, through new paving, public lighting and urban furniture with a strong place identity, reinforcing the pedestrian, intimate scale of the green spaces and residential compounds located along Abastumani west-east alignments of secondary streets and alleyways, creating spaces for socialization and for local small businesses to improve the livability and the tourism experience, including new cultural, commercial and sport facilities. The mobility concept foresees the development of a highly pedestrianized and environment-friendly urban space. Increased safety will be ensured by making roads safer for vulnerable users and reducing the severity of accidents by: improving traffic visibility and providing safe circulation design; introducing traffic-calming measures such as bumpers and/or special paving, recommending the adoption of restrictive speed limits; improving the public lighting system throughout the resort;

	providing or improving side-walks on the main road; allowing shared pedestrian, cycling and vehicular mobility only on the secondary network; using differentiated paving patterns and or materials (interlocking blocks, stone tiles or asphalt); placing urban fittings (e.g. bollards) to prevent vehicles to enter in pedestrian-only areas; creating pleasant, alternative nature trails only for pedestrian or cycling use; providing pedestrian crossing and bumpers. Negative impacts for local communities are short-term and limited to the construction site. They are related to the possible disturbance (noise, dust, vibration, and emissions) described above.

(B) MITIGATION MEASURES

Were there any alternatives to the sub-project design considered?	Based on the preliminary study of the SP area, the author of the preliminary design made the long list of potential interventions. At the following stages, the exercise moved from the "long list" to the "short list" of projects that were further developed through preliminary to tendering of works and implementation. The methodology applied by consultants to the prioritization and selection of investment packages followed a logical process: screening; shortlisting; preparation of investment package briefs; evaluation; and the final selection for recommending to the employer. Based on the developed briefs, each investment package alternative was assessed with the following criteria: alignment of the investment with the specific Integrated Urban Upgrading Concept Design (IUUCD) objectives, relevance of the investment subproject for the internal coherence of the IUUCD, stakeholder's consensus, preliminary environmental and social impacts, accessibility for all and so on. Application of the above screening and selection procedure led to the determination of Otshke river and the green area of the surrounding mountains as key elements of the natural wealth of Abastumani. The preliminary design is built on these elements and creates a "green-and-blue" corridor all along the settlement. These investment packages were chosen for support with this SP. No alternatives of the alignment of the main road passing through Abastumani were considered, as it represents the existing road and retaining the existing roadbed is considered to cause the lowest environmental and social impacts.
What types of mitigation measures are proposed?	Potential impacts are few in number, site-specific, largely reversible, limited to the SP site, and readily addressed through mitigation measures. The potential impacts that are associated mainly with construction can be mitigated to standard levels without difficulty through incorporation

	or application of recommended mitigation measures and procedures in the ESMP: demarcation of the construction site, traffic management, good maintenance of the construction machinery, observance of the established working hours, and organized disposal of waste to the formally agreed sites. The contractor will be responsible for the waste separation and disposal of various types of waste at the permitted locations or handing over to the authorized companies for further handing; obtaining of the national construction materials from the licensed quarries[4] only, prevent water and soil from pollution (fuel spills due to equipment failure, row asphalt / concrete spills etc.), avoid disturbance of population (noise, dust, emissions) through proper work / supplies scheduling, traffic management, good maintenance of the construction machinery, etc. Additionally, Construction site will be properly secured, and construction related traffic regulated, that includes: installation of the signposting, warning signs, barriers and traffic diversions, construction site and all trenches will be fenced and properly secured to prevent unauthorized access, appropriate lighting will be provided, adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement, ensuring safe access to homes, businesses, public service and other properties. In case a chance find is encountered in the course of earth works, the contractor will immediately stop any physical activity on site and informs the MDF. The MDF will promptly notify the National Agency of Cultural Heritage Preservation of Georgia, which takes over responsibility for the following course of action. Works will resume only upon receipt of written permission from the Agency. Work may be renewed only under the basis of written permission of ministry. All staff will be strictly prohibited from cutting / damaging plants in the project area and its adjacent territory. Large tress on and in the vicinity of the construction activities shall be marked and cordoned off with fencing, their root system protected, and any damage to the trees avoided. Trenches will not be kept open in the night/after working hours. This will allow to avoid risk of people or animals falling into trenches. Contractor's staff will be prohibited from hunting and will be given instructions on minimizing disturbance of fauna. In order to avoid water pollution dumping of any waste/material in the riverbed will be prohibited and good international practice of working in the waterways will be followed.
What lessons from the previous similar	Based on the experience gained from implementation of similar projects, present SP envisages not only rehabilitation of streets, but also

[4] Licensed quarries are located in Adigeni, Akhaltsikhe, villages Kakhareti, Ude and Vale.

subprojects have been incorporated into the project design?	rehabilitation of the river embankments, the bridges, the pedestrian and cycling paths and the provision of new urban furniture and public lighting as the SP aims improvement of the surrounding public space, in order to create a backbone for access and circulation as well as a high-quality public and recreational space.
Have concerned communities been involved and have their interests and knowledge been adequately taken into consideration in subproject preparation?	Due to circumstances related to COVID-19 outbreak, conduct of remote public consultation on the rehabilitation of Green and blue corridor in Abastumani may be required. Following national regulations in force by the time of consultation and following WHO guidelines, MDF will take decision on structuring the consultation process. If remote consultations are to be undertaken, MDF will use telephone communication to notify stakeholders of the planned public consultations on the draft ESMP. During phone conversation, information will be collected on the internet connection availability and most suitable format of virtual consultation. Those who have no means of communication, except for the phone will be provided with the information on the environmental and social aspects of the water system rehabilitation works by phone, and if they require visualization of the project, along with the documentation to be reviewed, then the authorized persons from the local Municipality will visit them as per the regulations and recommendations set by WHO and familiarize them with the relevant documents. The information booklets reflecting detailed information about the forthcoming consultation meetings will be placed at the most visited places by local residents. Information on conducting of remote mode public consultations will be uploaded as usual at the web site of MDF. The public consultations will be led by the Moderator along with the other official representatives (of PIU, Municipality, Community members, etc.), who will familiarize participants with the information aimed at better perceiving of information provided, present the illustrated material (presentation) and enable the participants (e.g., engineer, consultant, Municipality representative) of remote mode meeting to express the opinions. In the course of the presentation, each participant will be able to provide his/her feedback, ask the questions, and to be responded as well. Following questioning / responding, the Moderator will summarize the meeting and close it up. Upon finalization of public consultations, participants will be able to send additional and other type of information that they believe is important to be addressed until announced deadline. In case all limitations due to COVID-19 pandemic are abolished before the starting of the construction activates, the consultations with key stakeholders will be conducted through organizing face-to-face meetings.

D) CATEGORIZATION AND CONCLUSION

Based on the screening outcomes,

Subproject is classified as Environmental Category

A ☐

B ■

C ☐

Conclusion of the Environmental and Social screening:

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

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

1. Completion of the Environmental and Social Management Checklist for Small Construction and Rehabilitation Activities ☐
2. Environmental and Social Review, including development of Environmental and Social 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)	✓	
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 and Social Management Framework**.			

Environmental and Social Riview and Environmental and Social Management Plan

1. Introduction

1.1. Background Information

The SP will be implemented under the Third Regional Development Project (RDP 3) which covers Samtskhe-Javakheti and Mtskheta-Mtianeti regions. The main goal of the RDP 3 is to improve infrastructure services and institutional capacities in the mentioned regions through supporting of tourism based economic development. It is expected that 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 increase, and the living conditions will improve.

The Government of Georgia referred to the World Bank with the request to fund the RDP 3 and in 2015, obtained the World Bank loan (60 million USD) for its implementation. The total value of the project is 75 million USD, including contribution of the Government of Georgia in the amount of 15 million USD.

Present SP is a part of the RDP 3 and shall be prepared, reviewed, approved, and implemented in agreement with the requirements of the national legislation of Georgia 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 a project implementing entity for the RDP 3 and is responsible for its day-to-day management, including application of the environmental and social safeguard policies.

MDF prepares and submits to the World Bank for approval the Subproject Appraisal Reports (SARs), with safeguards documents attached. For the present SP, an Environmental and Social Review (ESR) along with an Environmental and Social Management Plan (ESMP) is developed based on the environmental and social screening outcome and in agreement with the Environmental and Social Framework (ESMF) of the RDP 3.

SP represents the design-build contract and it has already been signed with the **JV of ARALI LLC & ZIMO LLC**. Preliminary design is being served as the basis for the development of detailed design.

1.3 Legislation and Regulations

During the development of each piece of infrastructure, the relevant environmental norms and regulations will be respected to avoid or minimize negative impact on the public health and the natural environment. Based on the formal letters and consultations with MEPA, current activities under the SP are not subject to Environmental Impact Assessment. World Bank's OP/BP 4.01 Environmental Assessment and OP/BP 4.11

Physical Cultural Resources triggered by RDP 3 are relevant for the present SP. OP/BP 4.01 is applicable because the SP implementation will include conduct of civil works that carry certain risks for natural and social environment and OP/BP 4.11 is applicable because the SP envisages conservation/consolidation of the cultural heritage monuments, particularly Tamar's bridge, Waterfall bridge and Cableway Bridge and that the SP area is located within visual security zone for the protection of cultural heritage monuments.

To avoid loss of historic value and unintended damage to the cultural heritage sites, design and methodology of restoration works is being cleared with the National Agency for Cultural Heritage Preservation of Georgia. Because the SP finances rehabilitation of the existing road part of which passes through a national designated projected area and an Emerald site, documentation justifying and permitting such intervention will be provided from the Ministry of Environmental Protection and Agriculture (MEPA) and the Agency of Protected Areas (APA) under it.

2. Subproject description

Abastumani is one of the famous and popular resorts in Samtskhe-Javakheti region, located in the southern part of Georgia, in Adigeni Municiality; with a very diverse and explicit micro-climate is distinguished for high touristic and recreational potential, although at present this potential has not been properly utilized. Moreover, the added value of Abastumani is its triple merit, being a climate, spa and tourist resort simultaneously. Considerable part of the resort territory represents cultural heritage. Abastumani architecture is a unique blend of European, Georgian and Russian styles. Buildings are preserved from the 19th century or built in the early 20th century. Those buildings served as cottages (rest houses) for the wealthy segment of population. There are around 122 monuments of cultural heritage located in this tiny settlement along the Otskhi River. This fact allows us to state, that the entire Abastumani is a monument of cultural heritage and its "reanimation" and preservation stands to be an ultimate goal. The town is surrounded by Borjomi Kharagauli National Park on all four sides. Nevertheless, no Park Gateway context of Abastumai has been recognized, or mutual functional connections established. Therefore, capitalization on the gateway potential for enhancement of the destination (e.g., introduction of trail heads, installation of orientation and interpretation exhibits, etc.) would be one of the value-adding innovations that shall be explored during the integrated urban design concepts development. Recently the Municipal Development Fund of Georgia (MDF), with the support of the World Bank, has implemented several sub-projects in the town under the RDP3. In particular, the rehabilitation of 18 historical wooden houses and the rehabilitation of observatory.

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existing retaining walls; construction of new retaining walls; demolition and reconstruction of stairs and/or ramps.

- **Reinforcement of Cultural Heritage (CH) bridges over Otskhe river: Tamar Bridge (B 00), Waterfall Bridge (B19) and Cable-way Bridge (B31).** Tamar Bridge (B00 - length 13m; width 3m) represents a traditional masonry bridge of high heritage value (National monument as in heritage list), will be strengthened at the base of its piers and abutments, any missing or loose stone either replaced or set properly in its original bedding, stone courses re-pointed as necessary, and a compatible safety railing provided. Waterfall Bridge (B19, length-10m, width-4m), also a traditional stone bridge, in this case from the later part of the 19th century will be consolidated at the abutments, the cement roadway over the extrados of the single elliptical arch dismantled and replaced by a stone paving. The re-instated traditional roadway will be contained within a double row of capstones supporting a heritage powder coated steel railing. Cableway Bridge (B31) (length 9m, width 1,5 m), as a reinforced concrete structure built in the 20th century, will require a different type of repairs. The reinforcing steel becomes thus subject to corrosion. Repairs consist of cutting out the damaged areas, replace any steel weakened by section loss and put back good quality concrete.

- **Reconstruction/rehabilitation of the following bridges**: B01 (pedestrian - length 13m; width 1,6m), B03 (Pedestrian/Cycle/Vehicular, length - 14 m, width- 1,9m), B06 (Pedestrian / Cycle / Vehicular, width – 7m), B08 (pedestrian), B09 (pedestrian bridge), B10 (Vehicular; 1 Way; length 12m,width 3,1 m), B11 (Vehicular bridge; length - 10m; width - 4m); B12 (pedestrian bridge); B13 (pedestrian bridge); B14 (pedestrian bridge); B15 (vehicular bridge on the main road has to be checked with instrumental methodology in the detail design phase and might be in need to be reinforced); B16 (pedestrian bridge), B17 (pedestrian bridge), B18 (vehicular bridge; length - 8m, width - 4m); B20 (pedestrian bridge, length 12m, width 1,3m); B21 (pedestrian, length - 15m; width - 6m); B33 (Vehicular bridge; length - 16m, width - 7m); B35 (Vehicular, length - 12m, width - 5m).

- **Construction of the following bridges**: B02 (pedestrian, cycle, vehicular, width – 4m), B04 (pedestrian, width - 2m), B05 (pedestrian, width – 3m), B07 (pedestrian, width -2m).

- **Soft landscaping of the SP area:** approximately 436 trees (see attachment 4), both for landscaping or ornamental purposes, of high or medium height, will be planted as semi-mature specimens in strategic locations to enhance the natural environment. The positioning of new trees will take into account street lighting efficiency. Indigenous species, able to resist to harsh weather conditions, will be preferred. Types of soft landscaping are foreseen: natural landscaping, to re-establish the natural environment of a particular area by cleaning and replanting operations; garden landscaping, to improve the green areas with a garden-oriented operation and includes the harmonious mixing of groups or unit planting (mall, lawn, flowerbed). The following works are planned to be implemented for landscaping: cutting of sick or damaged trees, including removal of stumps and roots and reinstatement of the natural soil; removal of dried branches; cleaning, removal of branches, shrubs, weeds and others; landscaping of river banks reintroducing appropriate riverine plant species; landscaping of parks ground including preparation of soil, planting of grassed areas, planting shrubs of mixed species; landscaping of flower beds with decorative patterns; planting of trees of first magnitude (mature height > 25 m), second magnitude (mature height 15 – 25 m) and third magnitude (mature height < 15 m);

- **Arrangement of outdoor lightning -** removal of existing lamp post, supply and installation of new lamp posts approximately every 30 m, including foundation blocks, conduits and power lines.

- **Arrangement of outdoor furniture:** supply and installation of bus shelters, benches, rubbish bins, bollards, bicycle racks, tree grates, waste disposal shields, railings, restoration of small monuments (fountains, drinking fountains, statues etc.).

During the development of each piece of infrastructure, the relevant environmental norms and regulations will be respected to avoid or minimize negative impact on the public health and the natural environment. Based on the formal letters (see attachments 5 and 6) and consultations with the Ministry of Environment Protection and Agricultural (MEPA), current activities under the SP are not subject to Environmental Impact Assessment.

Based on the preliminary information provided by the contractor[7], the road to be rehabilitated is provisionally divided into three sections: Section 1: km 0+000 – km 1+450 – Section from the beginning to the Abastumani central area and crossing relatively sparsely populated place; Section 2: km 1+450 – km 5+400 – The Central part of the Abastumani Town; and Section 3: km 5+400 – km 6+968 – Section – non-residential area of Abastumani Town. Currently, the preliminary detailed design has been developed for only the third section (total length – 1,568 m), that covers area from km 5+400 to km 6+968. Under this section, the SP envisages cutting off three trees (160mm < D ≤ 240mm) within the Right of Way, demolition of the existing drain channels, and manholes located at inlets of the existing drain culverts, demolition of existing 6 culvert barrels, inlet chambers and headwalls at outlets, arrangements of sidewalks, drainage pipes and drain channels, arrangement of retaining walls for the road, placing of road signs, and marking of carriageway. This section of the road passes through the anthropogenically modified area. In accordance with documentation available for the contractor at present, due to inaccuracy of registration, some parts of the third section of the existing road are going inside the boundaries of Borjomi-Kharagauli National Park and the Emerald site. MEPA has already rectified the most of errors in the Emerald site demarcation in cooperation with the Standing Committee of the Convention on the Conservation of European Wildlife and Natural Habitats; As for the above mentioned small parts, in accordance with the information/letter (N 10571/01, dated 08.10.2021, see attachment 7) of MEPA, considering the small area and scales, no preparation of additional documentation is required. Permission for road rehabilitation works in the traditional use zone of Borjomi-Kaharagauli National Park will be obtained from the Agency of Protected Areas (APA) under MEPA.

To avoid loss of historic value and unintended damage to the cultural heritage sites, design and methodology of restoration works is being cleared with the National Agency for Cultural Heritage Preservation of Georgia.

Investment Financing Agreement between MDF and Self-governing Body - Adigeni Municipality, responsible for maintenance of the rehabilitated facilities, will be signed shortly following the final approval of SAR.

3. Baseline Environmental Conditions

The SP site is located in Abastumani, Adigeni Municipality, Samtskhe-Javakheti region, on the south slope of the Meskheti mountain range, on valley of Otskhe River at 28 km distance from Akhaltsikhe, 25 km from

[7] SP represents the design-build contract, signed with the joint venture of ARALI LLC & ZIMO LLC.

Adigeni, 1340 m above the sea level. The Otskhe River flows along the SP area. It is the left tributary of Kvabliani River. The almost vertically upward slops of the gorge are covered by coniferous forest, dominated by the pine, which is the indispensable treatment for human with lung diseases when blooming. There is a moderately dry mountain climate in Abastumani, where the humidity raises up to 50% only in summer. The average annual precipitation is 626 mm. The average annual temperature is 6.4-6.5 °C in January and 17.2 °C in July.

Abastumani is a mountain-climatic resort, built in the 70s of XIX century. In the 30s of the 19th century, the scientific study of the thermal water has been carried out which showed that Abastumani thermal waters belong to the chlorine–sodium-sulfate-calcium containing hyperthermic healing waters and are used for the treatment of rheumatic, gynecological, dermatological and nervous diseases, and for metabolic disorders and chronic ulcers as well.

In Abastumani there are such important sights as: Abastumani Astrophysical Observatory, Abastumani Park of the 19th century, Church Akhali Zarzma (1899-1902), King Tamar's Fortress (IX-XI cc), Fortress of Melnisi (Middle Ages), Tamari's Bridge on Otskhe River (IX-XI centuries), Makhvilo Fortress (developed in medieval).

The road network in Abastumani is based on the SH14, an extra-urban road crossing the settlement for its entire length along the longitudinal axis, working as the main road infrastructure. The carriageway width varies from 6 to 10 meters. The driveway is partially surrounded by sidewalks paved with concrete or stone tiles. The road was designed and built in the last century, and recent full-scale rehabilitation was carried out in 2006-2007, after which planned maintenance and repairs have been carried out occasionally. Along the road there are various buildings including: private residences and courtyards, multistorey buildings, hotels, public facilities, and commercial properties. Due to specific and difficult terrain conditions, the road includes various types of artificial structures such as culverts, reinforced-concrete kettles, retaining walls and vehicular and pedestrian bridges crossing the Otskhe River.

Road signs are presented in minimal quantities and elementary security requirements are met. However existing road signs are aged, outdated and faded and there are many places where additional road signs would be required to meet current standards. Technical conditions of the road can be considered generally satisfactory, and no negative geodynamic process has been observed. Along the entire length, the surface has been realized by two-layers of asphalt concrete whose condition varies: it can be considered satisfactory in some places while in some locations are present longitudinal and transverse cracks, surface abrasion, small jabs, fractured scars, broken surface, etc.

Due to topographic constraints, the secondary road network is very limited. Most of the streets are completely unsealed and without any drainage, muddy in winter and dusty in summer. The streets are strictly connected to the bridges providing accessibility on one side or the other of the river and are often surrounded by green infill spaces, as residential units often don't have fences. Parking in Abastumani is generally not regulated. In particular, no parking space is explicitly defined along secondary roads, where the few vehicles are freely parked near the houses or destinations.

Footpaths and side-walks are, where available, in very bad condition, producing an environment generally uncomfortable and unpleasant for pedestrians. Above the side-walk of the main road or the secondary roads, which are used as pedestrian paths themselves, spontaneous paths have been traced on the hill side.

Natural features are the most characteristic assets of Abastumani with, as main characters, Borjomi-Kharagauli National Park, and the river Otskhe, running north-south through the whole settlement. The Otskhe River flows in Abastumani north-south, dividing the settlement in two parts and plays an important

role for the natural environment. The river is characterized by spring floods, with lower water levels in summer and winter. Maximum monthly flow rates are observed in May, while the average minor monthly flow rates coincide with the winter period. Secondary watercourses pour into the river in different parts of the settlement. The riverine areas are green infill spaces often left in their natural shape, with a grass cover hosting coniferous or leaf tree species. Their condition varies but often they are spoiled by shrubbery and dried branches. In residential areas, the Otskhe River is mostly contained by embankments protecting the settlement from flooding, often acting as lower retaining walls for the road network whereas in more natural environment, the river flows without protection or within stone gabions. The old stone river embankments are a very distinct feature of the Abastumani townscape; however, they are in a condition of neglect, visibly trashed, poorly terraced, and hardly maintained, with containment walls in ruin, vegetation growing wild, siltation problems and a drainage network in need of urgent upkeep. Road retaining walls have been built in certain parts of the upper section of the road, either for protecting the road from landslides or for allowing the road to pass through difficult terrains. Most of them are in good conditions and need only light repair.

Bridges are also a distinct feature of Abastumani. Currently, a reasonable number of bridges allow the permeability between the two riverbanks throughout the settlement; nevertheless, they are limited in width, have no side-walks and their position is not completely consistent with a comprehensive pedestrian network nor with an effective vehicular scheme. Similarly, to the rest of the road network, bridges require significant improvements be them structural, in size and in quality of paving. Most of the secondary bridges are connecting the local roads, with the exception of the bridge connecting to the Abastumani Yevgeny Kharadze Observatory. The secondary bridges and are either vehicular or pedestrian only. They are all made of concrete/steel structure, with metal railings in different patterns. All are very dilapidated and need to be rebuilt. Historic stone bridges, such as the Tamar Bridge, the Waterfall Bridge in front of the Main Baths and the Cableway Bridge represent cultural heritage of Abastumani.

In the Bath precinct, slightly mineralized springs are located providing water for the thermal facilities. The Goliath Spring, Snake Spring, Suravandi Spring provide a discharge of approx. 1 million l/day and are used for the treatment of diseases and wellness purposes.

At present, four trails connect Abastumani to the Borjomi-Kharagauli National Park. These are: 1. Western side. Starting close to the former Russian barracks and connecting the Tamar Fortress to the Observatory. The trail is very long and steep. Another access starts from the ancient tunnel used to supply water to the fortress. 2. Western side. Starting from Bath and arriving to the Astrophysical Observatory. 3. Western side. Starting from the Roscha park, the train runs parallel to the cable-way and arrives to the Observatory. 4. Western side. Starting from the Romanov Palace Complex and going uphill, the trail is located in a private area not accessible for visitors.

Plant species on the territory are described as following: Leaf species group plants: oak (Quercus), Walnut tree (Juglans regia), Birch tree (Betula), Elm (Ulmus), Buckeye (Aesculus), Alder, (Alnus), Maple (Acer), White willow (Salix Alba), Ash tree (Fraxinus), Teil (Tilia caucasica), Acacia (Acacia), Aspen (Populus), Hornbeam (Carpinus). Farinosa species group plants: The Colchic Box tree (Buxus colchica), Privet (Ligustrum), Caucasian jasmine (Philadelphus), Hardhack (Spiraea), Berberis (Berberis vulgaris), Elder-dogwood (Swida, Thelycrania), Lilac (Syringa), Rose (Rosa). Coniferous species group plants: Caucasian pine, or Sosnowski pine (Pinus sosnowskyi), Black pine (Pinus nigra), Oriental Spruce (Picea Orientalis), Silver spruce or spinous spruce (Picea pungens), Caucasian Sochi, Nordman Sochi (Abies nordmanniana), Oriental Biotab (Platycladus orientalis), Thuya (Thuja), Cypress (Cupressus). Herbaceous plants: Clover (Trifolium), Meadow-grass (Poa), Agrimonia (Xanthium strumarium), goosefoot (Chenopodium), Bindweed (Convolvulus arvensis), Nettle (Urtica), Meadow fescue, (Festuca pratensis Huds), St John's wort (Hypericum perforatum), Lily of the valley

(Convallaria), Chicory (Cichorium), Pigweed (Amaranthaceae), Great plantain (Plantago), Dandelions (dandelion). The botanical assessment revealed that in the area there are numerous diseased, bumpy and overgrown trees. In particular, the high natural maturity of some species induces the withering of the crowns, drying of side branches and widespread defects, all conditions that block the plants' ability to survive. While the phytosanitary status of the larger part of plants can be considered satisfactory, some specific conditions requiring intervention are indicated below. Aspens (Populus) are mostly old-aged and present Abeda mushroom (Polyporus squamosus) myceliums sickness, root throat mouldiness and defect. Therefore, they need appropriate treatment or replacement. Most of the Willows (Salix) are physically damaged. Most of the numerous coniferous and deciduous plants are covered with moss (Musci, Bryophyta). Box trees (Buxus) are damaged by moths (Cydalima perspectalis).

Covering more than 85,000 hectares of native forest and alpine meadows, the Borjomi-Kharagauli National Park is a protected area located 160 kilometers from the nation's capital of Tbilisi in the central part of Georgia that includes 3 regions: Imereti, Samtskhe-Javakheti and Shida Kartli. One of the largest national park in Georgia, it includes six administrative districts stretching from the resort of Borjomi to the town of Kharagauli. Together with adjacent Borjomi Nature Reserve, the total area is 851 square kilometers, which is more than 1 percent of the total territory of Georgia. The administrative and visitor centers of the Park are located in Borjomi and Kharagauli. The Park administration manages 4 various categories of protected areas – Borjomi Nature Reserve, Borjomi-Kharagauli National Park, Nedzvi Managed Reserve and Goderdzi fossil forest Natural Monument.

Borjomi-Kharagauli National Park was created with the aim of preserving the diversity of wild nature areas, especially its virginal mountain forests. Hiking through the northern part of the National Park (Kharagauli District) up to 1000m, visitor can find in a mixed broadleaved forest composed of chestnut trees, beech and hornbeam with intermittent alder trees, lime, colchic oak and others. The evergreen under-story represented by rhododendron, cherry laurel and others of the colchic forest lend them a distinctly subtropical appearance. Going up to 1400m to the middle part of the forest zone you will see beech forest and mixed coniferous-broad-leafed forest groves.

This part is especially picturesque at the end of October and beginning of November. On the upper belt of the forest zone (1800m), dark coniferous forests composed of spruce and fir prevail. In the gorges of the southern part of the National Park the distribution of elements of colchic vegetation is greatly reduced – instead, oak and pine tree forests are developed. Visitors who climb up to the subalpine zone of the National Park (1800-2200m) can observe subalpine forests and bushes composed mainly of rhododendron, subalpine meadows marked for their colorful variety, and subalpine tall grasses. Birch, Mountain maple and mountain oak as well as pine forests are well developed.

Borjom-Kharagauli Emerald Site (site code: GE0000010, date site designated as ASCI (Emerald): November of 2018) is situated in the Lesser Caucasus in central Georgia, southwest to the nation's capital of Tbilisi. Its greater area falls within the Borjomi-Kharagauli National Park, which is one of the largest national parks in Europe. The total area of the park is 5,300 square kilometers. Its particular uniqueness is diversity of geographical and ecological zones, landscapes, historical monuments and rich flora and fauna. The Emerald site extends from forests to the Alpine zone. The forest includes a wide variety of plant species; reputedly almost two thirds of those found in the entire country.

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 may be impacted to a limited extent and temporarily by traffic generated during construction phase of 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

Taking into consideration that the SP envisages conservation/consolidation of the cultural heritage monuments, particularly Tamar's bridge, Waterfall Bridge and Cableway Bridge and in addition the project area is located within visual security zone for the protection of cultural heritage monument, OP/BP 4.11 Physical Cultural Resources triggered by RDP 3 is relevant for the present SP.

In order to keep the authenticity whenever possible, existing traditional models of street furniture and other open space components, such as materials, scale, proportion and even traditional patterns and forms, will be repaired and reinstated. When models are non-existent or lost, solutions will be based on simple, contemporary forms. Imitations or fake vintage solutions will be avoided to avert the risk of visual conflicts with the surrounding historic setting.

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, inform the MDF and Agency of Culture Heritage Preservation of Georgia about the chance find and resume works only after formal permission is issued.

Upon development of detailed design documents, they will be agreed with the LEPL National Agency for Cultural Heritage Preservation of Georgia which is authorized to issue a permit for implementation of works on the cultural heritage monuments.

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;
- Bad batches of asphalt, 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.

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 non-hazardous waste are anticipated to be produced from these activities:

- Natural materials (soil and rock);
- Soil mixed up with non-hazardous substances or objects;
- 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. A number of hazardous wastes, which could be generated, include:

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

Transport related impacts

- Accidents involving non-construction traffic and pedestians;
- Traffic congestion (nuisance);
- Noise & vibration;
- Air pollution;
- Mud on roads;
- Refuelling, maintenance and vehicle cleaning and related risks of soil and water contamination.

Topsoil loss due to topsoil stripping

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

4.2 Operation Phase

The SP will have a positive impact on the operation phase in terms of improving the living conditions of the local population.

5. Environmental and Social Management Plan

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

The contractor is required:

1. Obtain construction materials only from licensed providers;
2. If contractor wishes to open quarries or extract material from riverbed (rather than purchasing these materials from other providers), then the contractor must obtain license for the extraction of material from the National Mining Agency;
3. If contractor wishes to operate own asphalt plant (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 MEPA;
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 MEPA 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 Municipal development fund of Georgia in accordance with requirements of the Waste Code of Georgia.
7. If tree cutting or replanting will become necessary during the SP implementation, the contractor will undertake inventory of trees to be cut down or to be replanted before commencing activity and submit to MEPA (for Red Listed tree species) and Adigeni City Hall (for trees not included in Red List) for obtainment tree cutting permission. The permission document will include the compensation measures based on the presented inventory. Compensation fees will be paid and compensation activities will be implemented by contractor within the lifetime of the SP. The trees shall be cut under supervision of a designated specialist.
8. In case of chance find during earth works, contractor will take works on hold immediately, promptly notify construction supervisor and MDF and do not resume works until formal notice from the supervisor/MDF. It is responsibility of MDF to formally disallow physical activity at work site upon the notice on a chance find and to promptly contact the National Agency of Cultural Heritage Preservation of Georgia. MDF will give a notice to contractor allowing resumption of works in agreement with the Agency.

Copies of licenses for the extraction of natural construction materials (if applicable), agreed technical report on inventory of atmospheric air pollution for operating concrete plants (if applicable), and waste disposal agreements 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 – 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 MEPA – 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. Information about the contact persons in the MDF, works supervisor company and local municipality administration to whom people can apply with the complaints on environmental and social issues shall be placed on the banner. The banner must be made by weather resistant material. Inscriptions on the Informational banner should be in Georgian and English languages.	Construction contractor
Arrangements for implementation of environmental measures	Incompliance to Georgian Law and World Bank requirements Significant environmental and social impacts	– Appointing a person responsible for protection of social and natural environment and ESMP 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

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
		Construction Phase	
Construction works, including: - Preparation of construction sites - Earth works - Installation of facilities - Machinery operations - Transportation operations	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; – 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;	Construction contractor

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
		– 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.	
	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:	Construction contractor

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
		• 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; – 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
		– Handle topsoil in accordance with requirements of legislation of Georgia and develop reinstatement plan (if required).	
	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; – Ensuring 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;	Construction contractor

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
		– 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	– Prohibition of waste burning in the open space; – No use of paints with toxic ingredients or solvents or lead-based paints; – 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 Adigeni 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.	Construction contractor
	Impact on traffic flow	– Impose speed limitation to the SP machinery; – Ensure that SP machinery move using only pre-determined routes;	Construction contractor

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
		– The frequency of machinery movement shall be restricted.	
	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 – Ensuring safe access to homes, businesses, public service and other properties.	Construction contractor
	Impact on cultural heritage	– Discontinuing construction operations if a chance find is encountered and promptly notifying supervision engineer and/or employer; – Keeping of all physical activities on hold until formal notice from employer.	Construction Contractor

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
		– Formal suspension of works upon encountering of chance finds and prompt notification of the National Agency for Cultural Heritage Preservation (NACHP); – Cooperation with NACHP towards facilitation of archaeologic works on site, removal of finds from the site and/or *in situ* conservation; – Formal notification to supervision engineer and contractor on the resumption of works upon consent of NACHP.	NACHP
		–	
	Damage to private property	– Ensuring that construction machinery moves 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 as need be; – Reception and addressing of complaints/grievances: Grievance Redress committee will be established at the municipal level with the following composition: authorized representative of Adigeni Municipality Sakrebulo and city hall, Head of the Social Service, person in charge of relations with the water supply company, representative of the local NGO;	Construction contractor, MDF, Adigeni Municipality

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
		- If the grievance is 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.	
	Trauma, other health damage and death at work site	– 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
Handling of toxic materials	Damage to public and environmental health from toxic / hazardous materials and waste	– 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

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
Social Risk Management	Nuisance of local communities; Conflict between construction contractor and local communities.	– 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. – 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
	Violation of workers' rights and freedoms	– 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. – 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.	Construction Company

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
		– 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.	
Works in the waterway	Damage to riverbed, impeding water flow, pollution of river water	– Control erosion and sedimentation from onshore areas by restoring banks to natural contours and gradient with a top fill of native select material; – Do not stockpile trench spoil in water; – Avoid trench dewatering directly into flowing waters; – avoid spills of petroleum products and other chemicals (see also erosion and sedimentation, contamination from spills, waste disposal); – As soon as construction is finished, the riverbed and banks should be as promptly as possible returned to the initial condition. – All existing or temporary means of stream-crossings will be dismantled, removed, and disposed of before completion of works.	Construction Company
Operation Phase			
Operation of rehabilitated facilities	Pollution of environment with solid waste and wastewater	– Regularly deliver solid waste from the site to the municipal landfill, on the basis of a contract made with the municipal waste management company; – Prohibit open burning of waste; – Maintain sewage collector systems and toilets in good technical condition	Adigeni Municipality

Activity	Expected Negative Impact	Mitigation Measure	Responsible for implementation
Maintenance of the rehabilitated road of intrastate importance (SH-14)	Accidents and disruption of traffic	– Maintenance of relevant road signage for traffic safety; – Demarcation of the sections of road under repair; – Disposal of asphalt and or other waste from the repair works to the designated landfill.	Road Department under the Ministry of Regional Development and Infrastructure of Georgia

6. Monitoring

MDF carries overall responsibility for monitoring of the implementation of the environmental and social 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 (PAP), as required. Adigeni Municipality has assigned a responsible person – Vasil Megeneishvili, representative of Adigeni self-government body in Abastumani, to receive, review and react to the PAP grievances (Tel: 598 199 958).
The contact person from the MDF is Nutsa Gumberidze (Tel: +995 598 88 20 19, feedback@mdf.org.ge, 150 Davit Aghmashenebeli ave., 4th floor, 0112 Tbilisi, Georgia)

If the grievance will not be 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 were informed about the grievance redress process and receive information about contact persons.

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
Demarcation of work sites and work camps	Construction map site and all work sites are demarcated and fenced as required; Warning signs and installed at the entrance to work sites	Work camps and work sites	Inspection	Recurrent	Prevent unauthorized entry to work camps and work sites; Prevent health damage to communities and tourists	MDF, Construction Supervisor
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	In the course of earth works	Prevent pollution of the construction site and its surroundings with construction waste; Prevent damage and loss of physical cultural resources	MDF, Construction supervisor NACHP

Activity	What (Is the parameter to be monitored?)	Where (Is the parameter to be monitored?)	How (Is the parameter to be monitored?)	When (Define the frequency / or continuous?)	Why (Is the parameter being monitored?)	Who (Is responsible for monitoring?)
Handling of chance finds	Immediate halt of all physical activity by contractor in the vicinity of area where a chance find is encountered; Prompt notification of technical supervisor of works and employer on the chance find made by contractor; Notification of NACHP on the chance find by MDF; Cooperation with NACHP towards safe and timely conduct of archaeologic works required for removal of artifacts and/or *their in situ* conservation by MDF; Notification of works supervisor and contractor on resumption of works by MDF once cleared by NACHP; Resumption of works by contractor after a formal notice has been received from technical supervisor of work/employer	Sites where earth works are in progress	Inspection	In the course of earth works	Prevent damage of archaeologic artifacts and loss of physical cultural heritage	Construction supervisor MDF NACHP

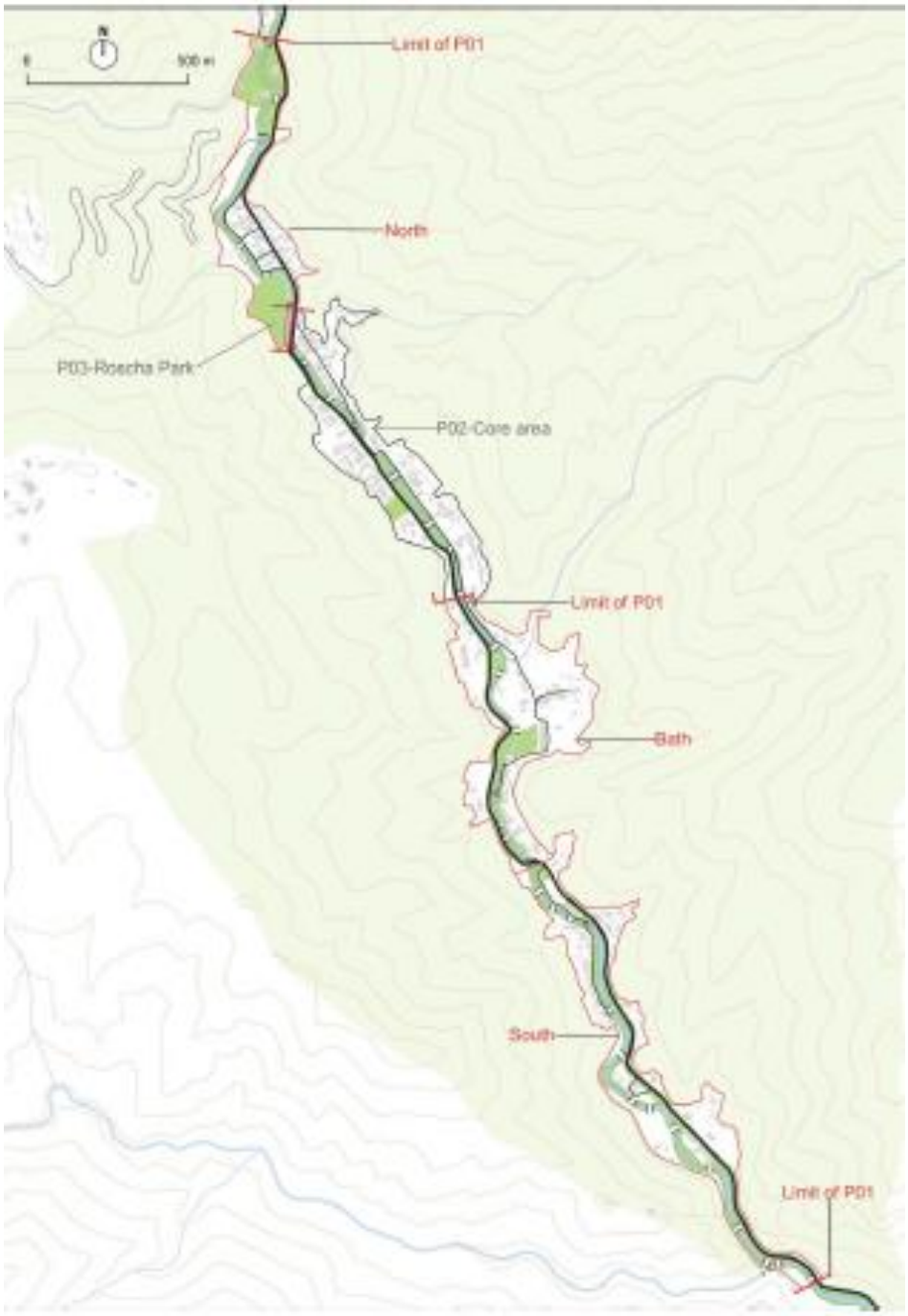
Activity	What (Is the parameter to be monitored?)	Where (Is the parameter to be monitored?)	How (Is the parameter to be monitored?)	When (Define the frequency / or continuous?)	Why (Is the parameter being monitored?)	Who (Is responsible for monitoring?)
Sourcing of natural construction material	Purchase of material from the existing suppliers if feasible; Obtaining of extraction license by the works contract and strict 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.	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 riverbanks, water pollution with suspended particles and disruption of aquatic life.	MDF, Construction supervisor
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

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?)
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 rehabilitation works	Prevent pollution by toxic materials Protect workers' health	MDF, Construction supervisor
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; Enforcement of the use of personal protective equipment; Informing of workers and personnel on the personal safety rules and instructions for operating machinery/equipment, and strict compliance with these rules/instructions	Construction site	Inspection	Unannounced inspections in the course of work	Limit occurrence of on-the-job accidents and emergencies	MDF, Construction supervisor

Activity	What (Is the parameter to be monitored?)	Where (Is the parameter to be monitored?)	How (Is the parameter to be monitored?)	When (Define the frequency / or continuous?)	Why (Is the parameter being monitored?)	Who (Is responsible for monitoring?)
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 response/resolution of feedback and complaints	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 Adigeni Municipality
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 Construction Contractor
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	Adigeni Municipality
Maintenance of the rehabilitated road of intrastate	Maintenance of relevant road signage for traffic safety;	Rehabilitated facilities	Inspection	During operation of facilities	Prevent road accidents and disruption of traffic	Road Department

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?)
importance (SH-14)	Demarcation of the sections of road under repair; Disposal of asphalt and or other waste from the repair works to the designated landfill.					

Attachment 1. Project area of P01



Attachment 2. Photo materials of the existing situation

Main Road (SH-14)




Secondary Road Network



River natural features and with concrete/stone river embankment

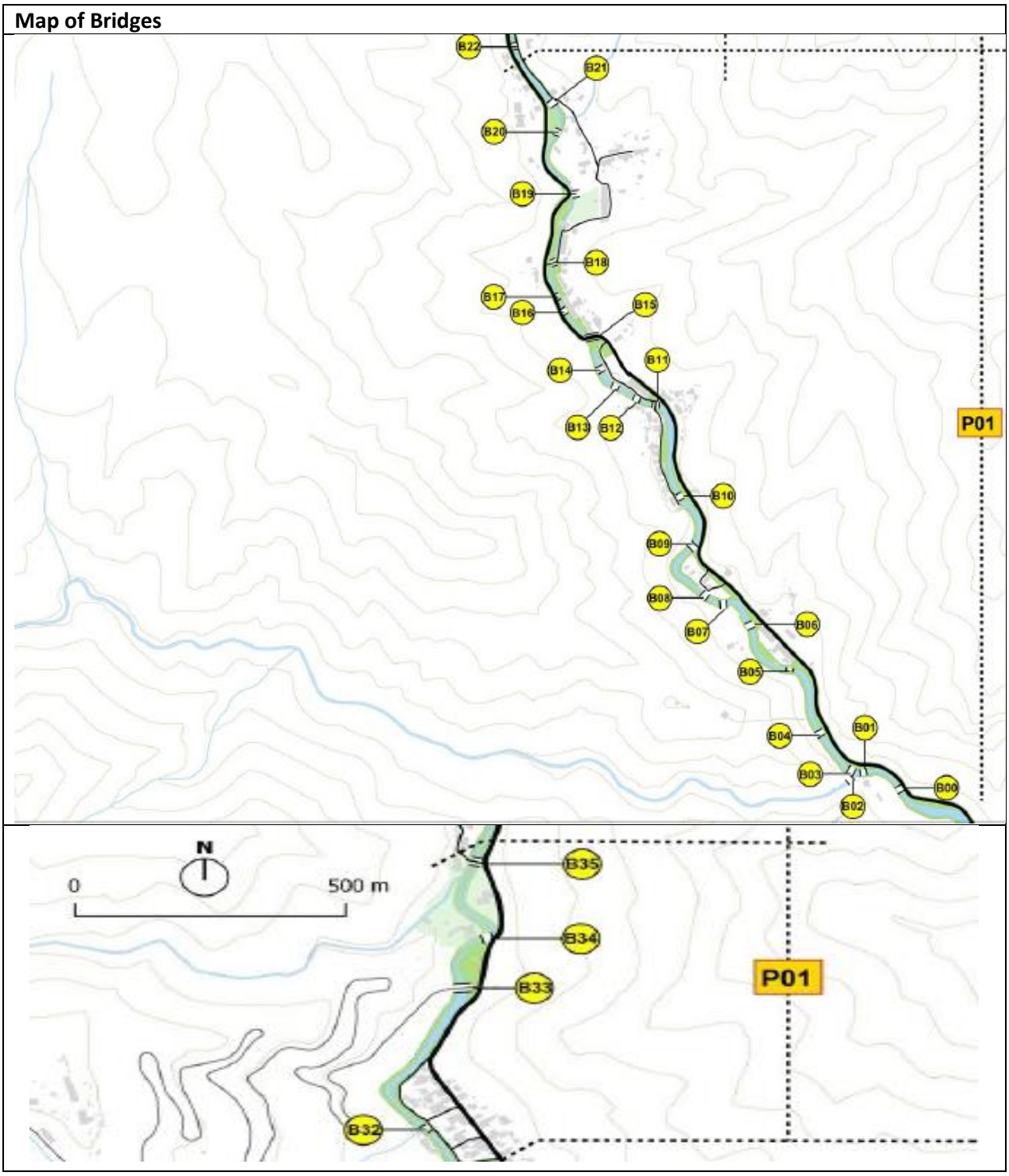

Bridges


River Otskhe


Renders

Attachment 3. Bridges

Map of Bridges



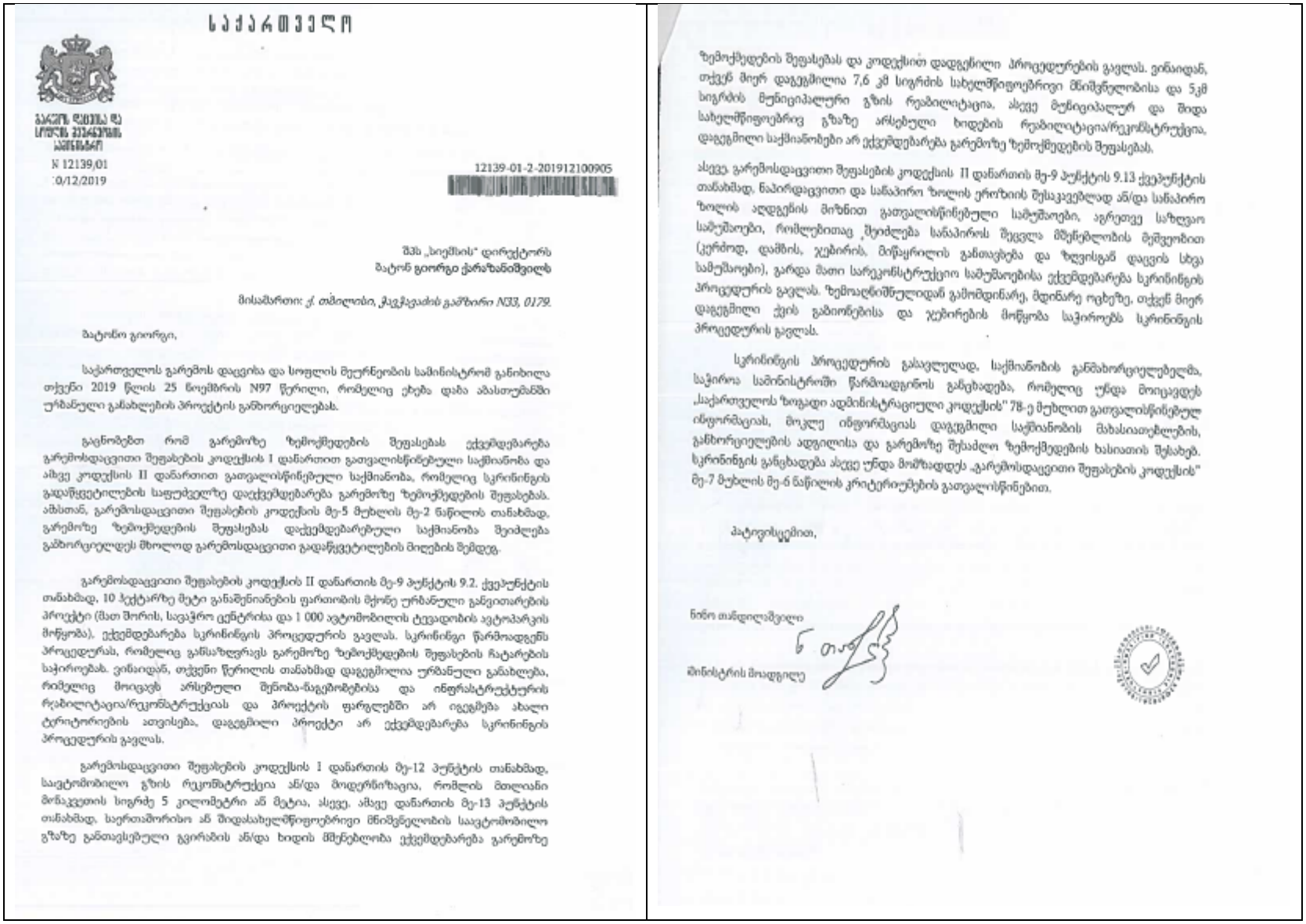
Cultural Heritage Bridges
 **Tamari's Bridge (B 00)**
 **Waterfall Bridge (B 19)**
 **Cableway Bridge (B 31)**

Existing bridges to be rehabilitated and reconstructed	
 	
	
	

Attachment 4. Plant Species to be used for greening the SP area

Road network	Main road	Recommended tree plants are: • *Pinus, Ulmus, Carpinus.* Recommended shrub species are: • *Buxus colchica, Ligustrum, Philadelphus, Spiraea, Berberis vulgaris, Swida, Thelycrania, Syringa, Rosa.* Recommended species for flowering: • *Begonia, Balsamine.* In case of arrangement of road side patterns, it is advisable to water the grass by hydrostatic method.
	Secondary road	Recommended tree plants are (both ordinary and decorative forms): • Coniferous tree plants: *Picea excels; Pinus sosnowskyi, Pinus pinea, Caucasian Ash, Abies nordmanniana, Cedrus deodara.* • Deciduous tree plants: *Quercus, Acer, Betula, Ulmus, Tilia Caucasica, Tilia tomentosa, Weeping willow, Salix babylonica, Aesculus, Fraxinus exelsior, Sorbus aucuparia, Acacia, Sophora Japonica.* Recommended shrub species are (both ordinary and decorative forms): • *Taxus baccata, Juniperuc sabina, Platycladus orientalis, Thuja, Buxus colchica, Prúnus laurocérasus, Ligustrum, Pyracantha coccinea, Philadelphus, Berberis vulgaris, otinus, Rosa, Syringa, Spiraea.* Recommended species for flowering are: • *Begonia, Balsamine, Viola.*
	Core area	It is advisable to use plants resistant to disease and pests such as: *Taxus baccata, Thuja, Juniperuc sabina, Prúnus laurocérasus, Ligustrum.*
Parks and green areas	School park	Recommended tree plants are (both ordinary and decorative forms): • Conifeorus tree plants: *Picea excels; Pinus sosnowskyi, Pinus pinea, Caucasian Ash, Abies nordmanniana, Cedrus deodara* • Deciduous tree plants: *Quercus, Acer, Betula, Ulmus, Tilia Caucasica, Tilia tomentosa, Weeping willow, Salix babylonica, Aesculus, Fraxinus exelsior, Sorbus aucuparia, Acacia, Sophora Japonica;* Recommended shrub species are (both ordinary and decorative forms): • *Taxus baccata, Juniperuc sabina, Platycladus orientalis, Thuja, Buxus colchica, Prúnus laurocérasus, Ligustrum, Pyracantha coccinea, Philadelphus, Berberis vulgaris, Otinus, Rosa, Syringa,* Spiraeia. Recommended species for flowering are: • Begonia, Balsamine, Viola.
	Thermal area	Recommended tree plants are (both ordinary and decorative forms): • Conifeorus tree plants: *Picea excels, Pinus sosnowskyi, Pinus pinea, Caucasian Ash, Abies nordmanniana, Cedrus deodara;* • Deciduous tree plants: *Quercus, Acer, Betula, Ulmus, Tilia Caucasica, Tilia tomentosa, Weeping Willow, Salix babylonica, Aesculus, Fraxinus exelsior, Sorbus aucuparia, Acacia, Sophora Japonica.* Recommended shrub species are (both ordinary and decorative forms): • *Taxus baccata, Juniperuc sabina, Platycladus orientalis, Thuja, Buxus colchica, Prúnus laurocérasus, Ligustrum, Pyracantha coccinea, Philadelphus, Berberis vulgaris, otinus, Rosa, Syringa, Spiraea.* Recommended species for flowering are: • *Begonia, Balsamine, Viola.*

Attachment 5. Letter of MEPA on the requirements of the Environmental Assessment Code of Georgia for the presented SP



საქართველო

გარემოს დაცვის და სოფლის მეურნეობის სამინისტრო

№ 12139/01
10/12/2019

12139-01-2-201912100905

შპს „სიემსის“ დირექტორს
ბატონ გიორგი ქარაზანიშვილს

მისამართი: ქ. თბილისი, ჭავჭავაძის გამზირი N33, 0179.

ბატონო გიორგი,

საქართველოს გარემოს დაცვისა და სოფლის მეურნეობის სამინისტრომ განიხილა თქვენი 2019 წლის 25 ნოემბრის N97 წერილი, რომელიც ეხება დაბა აბასთუმანში ურბანული განახლების პროექტის განხორციელებას.

გაცნობებთ რომ გარემოზე ზემოქმედების შეფასებას ექვემდებარება გარემოსდაცვითი შეფასების კოდექსის I დანართით გათვალისწინებული საქმიანობა და ამავე კოდექსის II დანართით გათვალისწინებული საქმიანობა, რომელიც სკრინინგის გადაწყვეტილების საფუძველზე დაექვემდებარება გარემოზე ზემოქმედების შეფასებას. ამასთან, გარემოსდაცვითი შეფასების კოდექსის მე-5 მუხლის მე-2 ნაწილის თანახმად, გარემოზე ზემოქმედების შეფასებას დაქვემდებარებული საქმიანობა შეიძლება განხორციელდეს მხოლოდ გარემოსდაცვითი გადაწყვეტილების მიღების შემდეგ.

გარემოსდაცვითი შეფასების კოდექსის II დანართის მე-9 პუნქტის 9.2. ქვეპუნქტის თანახმად, 10 ჰექტარზე მეტი განაშენიანების ფართობის მქონე ურბანული განვითარების პროექტი (მათ შორის, სავაჭრო ცენტრისა და 1 000 ავტომობილის ტევადობის ავტოპარკის მოწყობა), ექვემდებარება სკრინინგის პროცედურის გავლას. სკრინინგი წარმოადგენს პროცედურას, რომელიც განსაზღვრავს გარემოზე ზემოქმედების შეფასების ჩატარების საჭიროებას. ვინაიდან, თქვენი წერილის თანახმად დაგეგმილია ურბანული განახლება, რომელიც მოიცავს არსებული შენობა-ნაგებობების და ინფრასტრუქტურის რეაბილიტაცია/რეკონსტრუქციას და პროექტის ფარგლებში არ იგეგმება ახალი ტერიტორიების ათვისება, დაგეგმილი პროექტი არ ექვემდებარება სკრინინგის პროცედურის გავლას.

გარემოსდაცვითი შეფასების კოდექსის I დანართის მე-12 პუნქტის თანახმად, საავტომობილო გზის რეკონსტრუქცია ან/და მოდერნიზაცია, რომლის მთლიანი მონაკვეთის სიგრძე 5 კილომეტრი ან მეტია, ასევე, ამავე დანართის მე-13 პუნქტის თანახმად, საერთაშორისო ან შიდასახელმწიფოებრივი მნიშვნელობის საავტომობილო გზაზე განთავსებული გვირაბის ან/და ხიდის მშენებლობა ექვემდებარება გარემოზე ზემოქმედების შეფასებას და კოდექსით დადგენილი პროცედურების გავლას. ვინაიდან, თქვენ მიერ დაგეგმილია 7,6 კმ სიგრძის სახელმწიფოებრივი მნიშვნელობისა და 5კმ სიგრძის მუნიციპალური გზის რეაბილიტაცია, ასევე მუნიციპალურ და შიდა სახელმწიფოებრივ გზაზე არსებული ხიდების რეაბილიტაცია/რეკონსტრუქცია, დაგეგმილი საქმიანობები არ ექვემდებარება გარემოზე ზემოქმედების შეფასებას.

ასევე, გარემოსდაცვითი შეფასების კოდექსის II დანართის მე-9 პუნქტის 9.13 ქვეპუნქტის თანახმად, ნაპირდაცვითი და საბაპირო ზოლის ეროზიის შესაკავებლად ან/და საბაპირო ზოლის აღდგენის მიზნით გათვალისწინებული სამუშაოები, აგრეთვე საზღვაო სამუშაოები, რომლებითაც შეიძლება საბაპიროს შეცვლა მშენებლობის მეშვეობით (კერძოდ, დამბის, ჯებირის, მიწაყრილის განთავსება და ზღვისგან დაცვის სხვა სამუშაოები), გარდა მათი სარეკონსტრუქციო სამუშაოებისა ექვემდებარება სკრინინგის პროცედურის გავლას. ზემოაღნიშნულიდან გამომდინარე, მდინარე ოცხეზე, თქვენ მიერ დაგეგმილი ჭის გამოწებისა და ჯებირების მოწყობა საჭიროებს სკრინინგის პროცედურის გავლას.

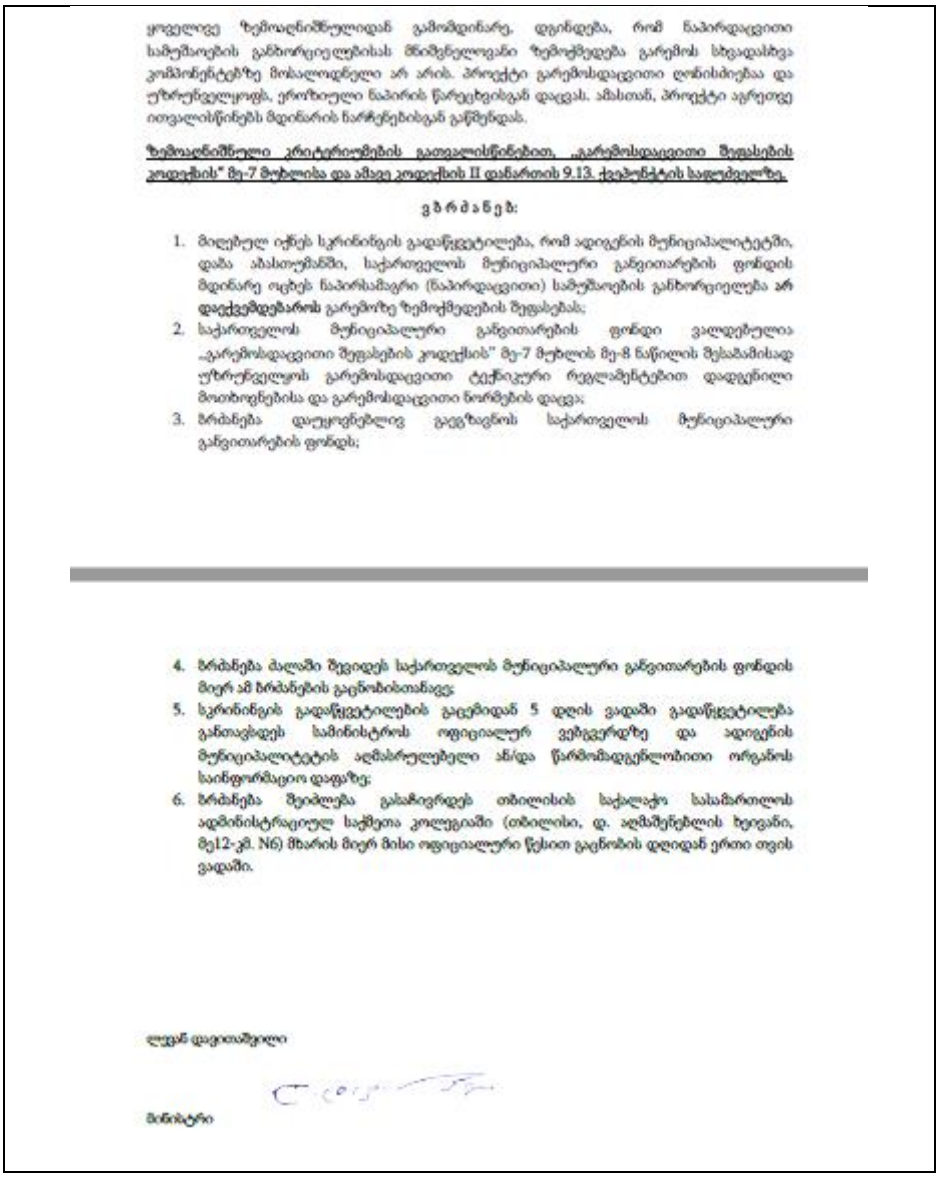
სკრინინგის პროცედურის გასავლელად, საქმიანობის განმახორციელებელმა, საჭიროა სამინისტროში წარმოადგინოს განცხადება, რომელიც უნდა მოიცავდეს „საქართველოს ზოგადი ადმინისტრაციული კოდექსის“ 78-ე მუხლით გათვალისწინებულ ინფორმაციას, მოკლე ინფორმაციას დაგეგმილი საქმიანობის მახასიათებლების, განხორციელების ადგილისა და გარემოზე შესაძლო ზემოქმედების ხასიათის შესახებ. სკრინინგის განცხადება ასევე უნდა მომზადდეს „გარემოსდაცვითი შეფასების კოდექსის“ მე-7 მუხლის მე-6 ნაწილის კრიტერიუმების გათვალისწინებით.

პატივისცემით,

ნინო თანდილაშვილი

მინისტრის მოადგილე

Attachment 6. Environmental decision presented in the Order (#2-1236) of the Ministry of Environment Protection and Agriculture regarding Otskhe River embankment works



ყოველივე ზემოაღნიშნულიდან გამომდინარე, დგინდება, რომ ნაპირდაცვითი სამუშაოების განხორციელებისას მნიშვნელოვანი ზემოქმედება გარემოს სხვადასხვა კომპონენტებზე მოსალოდნელი არ არის. პროექტი გარემოსდაცვითი ღონისძიებაა და უზრუნველყოფს, ერთობიული ნაპირის წარეცხვისგან დაცვას. ამასთან, პროექტი აგრეთვე ითვალისწინებს მდინარის ნარჩენებისგან გაწმენდას.

<u>ზემოაღნიშნული კრიტერიუმების გათვალისწინებით, „გარემოსდაცვითი შეფასების კოდექსის" მე-7 მუხლისა და ამავე კოდექსის II დანართის 9.13. ქვეპუნქტის საფუძველზე,</u>

ვ ბ რ ძ ა ნ ე ბ:

1. მიღებულ იქნეს სკრინინგის გადაწყვეტილება, რომ ადიგენის მუნიციპალიტეტში, დაბა ახასთუმანში, საქართველოს მუნიციპალური განვითარების ფონდის მდინარე ოცხე ნაპირსამაგრი (ნაპირდაცვითი) სამუშაოების განხორციელება **არ დაექვემდებაროს** გარემოზე ზემოქმედების შეფასებას;
2. საქართველოს მუნიციპალური განვითარების ფონდი ვალდებულია „გარემოსდაცვითი შეფასების კოდექსის" მე-7 მუხლის მე-8 ნაწილის შესაბამისად უზრუნველყოს გარემოსდაცვითი ტექნიკური რეგლამენტებით დადგენილი მოთხოვნებისა და გარემოსდაცვითი ნორმების დაცვა;
3. ბრძანება დაუყოვნებლივ გაეგზავნოს საქართველოს მუნიციპალური განვითარების ფონდს;

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4. ბრძანება ძალაში შევიდეს საქართველოს მუნიციპალური განვითარების ფონდის მიერ ამ ბრძანების გაცნობისთანავე;
5. სკრინინგის გადაწყვეტილების გაცემიდან 5 დღის ვადაში გადაწყვეტილება განთავსდეს სამინისტროს ოფიციალურ ვებგვერდზე და ადიგენის მუნიციპალიტეტის აღმასრულებელი ან/და წარმომადგენლობითი ორგანოს საინფორმაციო დაფაზე;
6. ბრძანება შეიძლება გასაჩივრდეს თბილისის საქალაქო სასამართლოს ადმინისტრაციულ საქმეთა კოლეგიაში (თბილისი, დ. აღმაშენებლის ხეივანი, მე12-კმ. N6) მხარის მიერ მისი ოფიციალური წესით გაცნობის დღიდან ერთი თვის ვადაში.

ლევან დავითაშვილი

მინისტრი

Attachment 7. Letter of MEPA

საქართველო
GEORGIA

გარემოს დაცვისა და სოფლის მეურნეობის სამინისტრო
MINISTRY OF ENVIRONMENTAL PROTECTION AND AGRICULTURE OF GEORGIA

N 10571/01
08/10/2021

10571-01-2-202110081539

ბატონებო,

ნინო თანდილაშვილი

მინისტრის მოადგილე

ერთობლივი საწარმო შპს „არალი"-ს და შპს „ხიდი"-ს წარმომადგენელს

ბატონ რაულ ჯანდიერს

ბატონო რაულ,

თქვენი 2021 წლის 14 სექტემბრის N16528 წერილის პასუხად, რომელიც ეხება ახალციხის მუნიციპალიტეტში, შიდასახელმწიფოებრივი მნიშვნელობის შ-14 ჭყონთხი (საღორეა) - ბაღდათი - ახალციხე - ზესტაფონის საავტომობილო გზის მონაკვეთის კმ 5+400 კმ 6+968 რეაბილიტაციის (1568 ll), გაცნობებთ შემდეგს:

საპროექტო ტერიტორია ესიზღვრება ბორჯომ-ხარაგაულის (GE0000010) ზურმუხტის ქსელგადებულ ტერიტორიას. გაცნობებთ, რომ ზურმუხტის დასტატებული (Designated), კანდიდატ (Candidate) და შეთავაზებულ (Proposed) ტერიტორიებზე „ბუნებრივი ჰაბიტატების და ველური ფაუნისა და ფლორის კონსერვაციის შესახებ" (№92/43/EEC) ევრო-დირექტივის თანახმად ტერიტორიის მესაკუთრე ვალდებულია დაიცვას აღნიშნული ფართობი უარყოფითი ზემოქმედებისაგან და დაცვის მიზნით საქმიანობა ისე, რომ დაცული იქნას ტერიტორიის ის ეკოლოგიური მახასიათებლები და კომპონენტები, რომელთა დასაცავადაც შეიქმნა ზურმუხტის ტერიტორია. ამ შემთხვევაში თუ ზურმუხტის ტერიტორიაზე დაგეგმილ ნებისმიერ საქმიანობას შესაძლოა ზეგავლენა ჰქონდეს ტერიტორიის ეკოლოგიურ მახასიათებლებზე. საქართველო-ევროკავშირის ასოცირების ხელშეკრულების XXVI დანართის მიხედვით, ბუნების დაცვის თვის, „ბუნებრივი ჰაბიტატების და ველური ფაუნისა და ფლორის კონსერვაციის შესახებ" (№92/43/EEC) დირექტივის მუხლის მოთხოვნის შესაბამისად, ნებართვის/ლიცენზიის გაცემის შემდეგ, საქმიანობის დაწყებამდე, საქმიანობის განხორციელებული ვალდებულია წარმოადგინოს ეს ზურმუხტის ქსელზე ზეგავლენის შეფასება, თუმცა წარმოდგენილი შუა-ფაილშია და განხილვაში მითითებული სამუშაოების ზემოქმედების მასშტაბიდან გამომდინარე, საქართველოს გარემოს დაცვის და სოფლის მეურნეობის სამინისტრო არ არის წინააღმდეგი გამხორციელდეს ზემოთ აღნიშნული საქმიანობა. მიუხედავად აღნიშნულისა, საჭიროა პროექტი დაიგეგმოს და განხორციელდეს ისე, რომ საფრთხე არ შეექმნას ევროპის ველური ბუნებისა და ბუნებრივი ჰაბიტატების დაცვის მიზანს (მოწინააღმდეგეთა კონვენციით დაცულ სახეობებსა და ჰაბიტატებს).

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