



Arrangement of Circuit Walking and Bike Trail in Bakuriani, Borjomi Municipality

Environmental and Social Screening and Environmental Management Plan

**WORLD BANK FINANCED
Third Regional Development Project**

October 2016

Sub-project Description

Under the presented sub-project (SP), it is planned to arrange a new pedestrian and bicycle trail in Bakuriani. The SP site is located adjacent area to national circular motor way and in the central area of settlement Bakuriani. It is situated Samtskhe-Javakheti Region, Borjomi Municipality. Bakuriani, famous skiing resort in Georgia, is located at 30 km distance from Borjomi and 180 kilometers from Tbilisi.

The whole length of the trail will be 2750 m and the width – 2.5 m. The Bike path will be painted in brick red and will be separated from the remained part of the road. As there are located the private land plots along the trail to be arranged, on some sections the width of the trail does not exceed 1.70 meters. However, on the other sections the width of the trail enables to arrange the benches (16 pieces) and decorative litterbins (36 pieces) along the trail. The SP considers also arrangement of outdoor lighting, installing of the new lampions (11 items) and relocation of existing ones (27 items) is planned as well.

On the one side of the path privately owned land plots are located, on most of which, at this stage, are not buildings and accordingly, it is not known what purpose these plots will serve for. Therefore, in order not to restrict access to the land plots by cars and not to make problems to owners, land plots will be connected to the motor way via specially designated descents and ascents, which cross the path in several sections

As for the drainage system, on the top of the drainage pipes rainwater manhole with side inlet will be arranged, from which collected water will be discharged into the existing drainage channel.

In addition as the path is to be arranged along the motor way, the existing drainage pipes, located under the motor way, should be extended in accordance with the path width.

Along to the trail, there are the following linear constructions: sewerage pipelines registered as property of LTD “United Water Supply Company of Georgia”, internet communication network registered as property of JSC “Silknet”. In order to prevent any damage and suspension of the linear construction operation, the providers have already been informed in written about the planned activities.

In case of construction works will require suspension of the linear construction operating, local population will be notified about the planned activities prior to the starting of the works.

Thus, the SP envisages implementation of the following works:

- Arrangement of decorative stone curbs (2480 m) and drains with the concrete pipes (56m);
- Placing of warning signs and marking of pedestrian trail;
- Arrangement of the trail pavement with asphalt/concrete layer (2750 m);
- Arrangement of the benches (16 items) and placement of decorative litter bins (36 pieces);
- Installation of new lampions (11items) and relocation of existing lampions (27 items).

The trail has not been registered yet, at this stage, registration process of the mentioned area is under way by Borjomi Municipality. Due to the fact that trail passes along to the national motor way, which is managed by LEPL Roads Department of Georgia, MDF has obtained permission for arrangement of new circular walking and bike trail from LEPL Roads Department of Georgia. Borjomi municipality will be responsible for maintenance of the circular trail based on the “Investment Financing Agreement between Municipal Development Fund of Georgia and Self-governing Body of Borjomi Municipality”.

Environmental screening

(A) IMPACT IDENTIFICATION

Has sub-project a tangible impact on the environment?	The SP has a modest negative environmental impact and it is expected to have tangible long-term positive impact by providing comfortable environment for the local population and tourists.
What are the significant beneficial and adverse environmental effects of sub-project?	<p>The main impact will be during the construction phase, which includes works for arrangement of walking and bike trail in settlement Bakuriani.</p> <p>Implementation of the presented SP will improve touristic attraction of the site. The increased tourist flows will have positive social impact through improvement of employment opportunities and supporting the development of tourism-based economy and cultural heritage circuits in the Samtskhe -Javakheti region.</p> <p>The SP implementation will create opportunity for new jobs for local population and increase their incomes.</p> <p>The expected negative environmental impacts are likely to be short term and typical for small to medium scale rehabilitation works in urban landscape: noise, dust, vibration, and emissions from the operation of construction machinery; generation of construction waste; disruption of traffic and pedestrian Access.</p> <p>Approximately 400 m³ excess material (cut soil) will be produced, as a result of arrangement of drainage system and site preparatory works.</p> <p>Distance from the SP site to the nearest landfill is approximately 2.5km, located adjacent area to village Chacharaki.</p>

	<p>Transportation of the inert materials and generated waste will slightly increase a road congestion, will cause disturbance of population/visitors and traffic interruption as well.</p> <p>Increased tourist flows may have indirect negative environmental impacts, such as waste, vandalism, etc.</p>
<p>May the sub-project have any significant impact on the local communities and other affected people?</p>	<p>On the one side of the trail to be arranged there are land plots registered as private property and on another side, there is a motor way. With the purpose not to limit access to the above-mentioned land plots, the presented SP envisages arrangement of entrances to the lands from the motor way.</p> <p>The long-term social impact will be positive, temporary jobs will be created during construction and hence, income of the part of local population will be increased. Implementation of the presented SP will improve touristic attraction and supporting the development of tourism-based economy and cultural heritage circuits in the Samtskhe-Javakheti region.</p> <p>Negative impacts are short term and limited to the construction site. They are related to the possible disturbance described above.</p> <p>Significant social impact of rehabilitation activities, like change of local demographic structure, influx of new settlers, secondary development, and increase of AIDS risks is not expected to occur.</p> <p>In case of construction works will require suspension of the linear construction operating, local population will be notified about the planned activities prior to the starting of the works.</p>

(B) MITIGATION MEASURES

Were there any alternatives to the sub-project design considered?	Discussions were carried out regarding to the width of central trail. Due to the fact that arrangement of wider pedestrian path is connected with unjustified expenditures of land acquisition, this alternative has been rejected and at this stage it was decided to arrange of maximum 2.5 meters wide trail. On the some section, the width of the trail does not exceed 1.70 meters.
What types of mitigation measures are proposed?	<p>The expected negative impacts of the construction phase can be easily mitigated. The contractor will be responsible for the waste disposal at the permitted location, use the quarry materials from the licensed quarries only, prevent water and soil from pollution (fuel spills due to equipment failure, raw asphalt/concrete spills), avoid disturbance of population (noise, dust, emissions) through proper work/supplies scheduling, traffic management, good maintenance of the construction machinery.</p> <p>In the process of the implementation period of rehabilitation works it is necessary to manage traffic movement. All underground communications existing in the zone of work implementation have to be opened before works start to adjust their depth insert and location in the plan. This process has to be monitored by responsible persons for those communications. Adjusted communications have to be fenced with relevant markings.</p> <p>In order to prevent any damage and suspension of the linear construction operating, prior to the construction works the providers have already been informed in written about the planned activities.</p> <p>In case of construction works will require suspension of the linear construction operation, local population will be notified about the planned activities prior to the starting of the works.</p>
What lessons from the previous similar projects have been incorporated into the sub-project design?	MDF have wide experience of implementation of medium and large scale road and streets rehabilitation subprojects financed by various donor organizations. Based on lessons learned from previous similar projects, design envisages not only rehabilitation of trail pavement but also arrangement of storm water pipes, which will backing further maintenance of the road cover.
Have concerned communities been involved and have their interests and knowledge been adequately taken into consideration in sub-project preparation?	MDF and local municipality will organize consultation meeting to discuss about EMP with local population before starting of construction works.

(C) CATEGORIZATION AND CONCLUSION

Conclusion of the environmental screening:

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

Subproject preparation requires:

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

Social Screening and Cultural Resource Screening of SP

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

¹ The trail has not been registered yet, at this stage, registration process of the mentioned area is under way by Borjomi Municipality. Due to the fact that trail passes along to the national motor way, which is managed by LEPL Roads Department of Georgia, MDF has obtained permission for arrangement of new circular walking and bike trail from LEPL Roads Department of Georgia.

Environmental Management Plan

PART A: GENERAL PROJECT AND SITE INFORMATION

INSTITUTIONAL & ADMINISTRATIVE	
Country	Georgia
Project title	Regional Development Project 3
Sub-Project title	Arrangement of Bakuriani Central Trail (Borjomi Municipality)
Scope of site-specific activity	<p>Under the presented sub-project (SP), it is planned to arrange a new pedestrian and bicycle trail in Bakuriani. The SP site is located adjacent area to national circular road No. 100 and in the central area of settlement Bakuriani. It is situated Samtskhe-Javakheti region, Borjomi Municipality. Bakuriani, famous skiing resort in Georgia, is located 100 km from Borjomi and 180 kilometers from Tbilisi.</p> <p>The whole length of the trail will be 2750 m and the width – 2.5 m. The Bike path will be painted in brick red and will be separated from the remained part of the road. As for the land, located the private land plots along the trail to be arranged, on some sections the width of the trail does not exceed 1.70 meters. However, on the other sections the width of the trail enables to arrange the benches (16 pieces) and decorative litterbins (36 pieces) along the trail. The SP considers also arrangement of outdoor lighting, installing of the new street lighting (11 items) and relocation of existing ones (27 items) is planned as well.</p> <p>On the one side of the path privately owned land plots are located, on most of them, at this stage, are not buildings and accordingly, it is not known what purpose these plots serve for. Therefore, in order not to restrict access to the land plots by cars and not to create problems to owners, land plots will be connected to the motor way via specially designed descents and ascents, which cross the path in several sections</p> <p>As for the drainage system, on the top of the drainage pipes rainwater manhole cover on the side inlet will be arranged, from which collected water will be discharged into the existing drainage channel.</p> <p>In addition as the path is to be arranged along the motor way, the existing drainage system located under the motor way, should be extended in accordance with the path width.</p> <p>Along to the trail, there are the following linear constructions: sewerage system, which is registered as property of LTD “United Water Supply Company of Georgia”</p>

	<p>communication network registered as property of JSC "Silknet". In order to prevent damage and suspension of the linear construction operation, the providers have been informed in written about the planned activities.</p> <p>In case of construction works will require suspension of the linear construction operating, local population will be notified about the planned activities prior to the start of the works.</p> <p>Thus, the SP envisages implementation of the following works:</p> <ul style="list-style-type: none"> - Arrangement of decorative stone curbs (2480 m) and drains with the concrete pipes (56m); - Placing of warning signs and marking of pedestrian trail; - Arrangement of the trail pavement with asphalt/concrete layer (2750 m); - Arrangement of the benches (16 items) and placement of decorative litter bins (36 pieces); - Installation of new lampions (11items) and relocation of existing lampions (27 items). <p>The trail has not been registered yet, at this stage, registration process mentioned area is under way by Borjomi Municipality. Due to the fact that trail runs along to the national motor way, which is managed by LEPL Roads Department of Georgia, MDF has obtained permission for arrangement of new circular walking trail from LEPL Roads Department of Georgia. Borjomi municipality will be responsible for maintenance of the circular trail based on the "Investment Financing Agreement between Municipal Development Fund of Georgia and Self-governing Body of Borjomi Municipality".</p>		
Institutional arrangements (WB)	<p>Task Team Leader:</p> <p>Zaruhi Tokhmakhian</p>		<p>Safeguards Specialists:</p> <p>Darejan Kapanadze - Environment</p> <p>Davit Jijelava - Social</p>
Implementation arrangements (Borrower)	<p>Implementing entity:</p> <p>Municipal Development Fund of Georgia</p>	<p>Works supervisor:</p> <p>JV of "Soosung Engineering Co.Ltd." (Korea), "Voyants Solutions Pvt. Ltd." (India) SAMAN Corporation" (Korea)</p>	<p>Works contractor: (to be selected)</p>

		and "GZAMSHENPROJECT LTD" (Georgia)	
SITE DESCRIPTION			
Name of institution whose premises are to be rehabilitated	LEPL Roads Department of Georgia		
Address and site location of institution whose premises are to be rehabilitated	Borjomi, Meskheti st. # 5 Phone: (0367) 222416224499		
Who owns the land? Who uses the land (formal/informal)?	The trail has not been registered yet, at this stage, registration process of the mentioned area is under way by Borjomi Municipality. Due to the fact that trail passes along to the national motor way, which is managed by LEPL Roads Department of Georgia, MDF has obtained permission for arrangement of new circular walking and bike trail from LEPL Roads Department of Georgia. Borjomi municipality will be responsible for maintenance of the circular trail based on the "Investment Financing Agreement between Municipal Development Fund of Georgia and Self-governing Body of Borjomi Municipality".		
Description of physical and natural environment around the site	<p>Bakuriani is one of the most important skiing resorts in Georgia. Tens of thousands come annually to ski, snowboard, enjoy breathtaking views of Caucasus gorge, hike trails of nearby villages, horse ride, cycle. Bakuriani is suitable not only for recreation for families, but also for young people who love sports and enjoy being close to nature.</p> <p>Bakuriani is located in the Borjomi district, on the northern slope of the Trailleti Range, at an elevation of 1700 meters above sea level. The distance between Tbilisi and Bakuriani is 180 km and between Borjomi and Bakuriani it is just 30 km distance.</p> <p>The climate of Bakuriani is transitional from humid maritime to relatively humid continental. The climate of Bakuriani is transitional from humid maritime to relatively humid continental. Average annual temperature of the town is 4.3°C. The average temperature in January is -7.3°C while the average August temperature is 15°C. The annual precipitation is 734 mm (28.9 in). The depth of snow from December to March is 64 cm (25.2 in).</p> <p>The region around Bakuriani is covered by coniferous forests (mainly made up of spruce). The resort is located within the so-called Bakuriani</p>		

	<p>Depression/caldera. The present-day area of the town was built up by the lava flows from the Mukheri volcano. The resort is connected with Borjomi by an electrified narrow-gauge railway. The highest mountain of the resort used for skiing is called Mount Kohta at around 2,200 meters above sea level.</p> <p>The SP site is located adjacent to circular motor way, in the central part of Bakuriani. It passes along to Koba Tsakadze street and land plots as well. Along to the circuit road there are located many touristics buildings such as hotels, sanatoriums, cottages etc. Adjacent to the trail there are not any trees or bushes.</p>
Locations and distance for material sourcing, especially aggregates, water, stones?	<p>Distance from the SP area to the nearest landfill is 2.5 km located adjacent area village Chacharaki. The distance to the nearest licensed sand-gravel pit is about 22 km.</p> <p>During the work, execution on the site the water was supplied from the local central water supply system.</p>
LEGISLATION	
National & local legislation & permits that apply to project activity	<p>The SP has been classified as low risk Category B according to the World Bank policies and the ESMF.</p> <p>Georgian legislation does not require any type of environmental review, approval, or permitting for the SP. Though according to the national regulatory system:</p> <ol style="list-style-type: none"> construction materials must be obtained from licensed providers, if contractor wishes to open quarries or extract material from river bed (rather than purchasing these materials from other providers), then the contractor must obtain licenses for extraction, if contractor wishes to operate own asphalt or Cement-concrete mixing 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 and technical report on inventory of atmospheric air pollution stationary source agreed with Ministry of Environment and Natural Resources Protection. Permanent placement of the inert material (cut ground and sedimentary soil) generated in the course of earth works in a selected location must be approved by local (municipal) governing bodies in written; If over 200 tons of non hazardous waste or over 1000 tons of inert materials or any volume of hazardous waste is generated annually (calculation apply to a calendar year) as a result of contractor's general activities, they shall prepare and cause the Ministry of Environment and Natural Resources of Georgia to approve the inventarisation of Waste

	<p>and Waste Management Plan for the Company, appoint an environmental manager, and submit an information on his/her identity to the Ministry of Environment and Natural Resources Protection of Georgia in accordance with requirements of the Waste Code of Georgia</p> <p>Copies of extraction licenses (if applicable), permits for operating asphalt/concrete plants (if applicable) and waste disposal permits will be attached to this EMP once the contractor is selected and mobilized to the works site.</p> <p>GOST and SNIP norms must be adhered.</p>
PUBLIC CONSULTATION	
When / where the public consultation process will take /took place	MDF and local municipality will organize consultation meeting to discuss about EMP with local population prior to the commencement of works.
ATTACHMENTS	
<p>Attachment 1: Site maps of the SPimplementation places, orthophoto and pictures;</p> <p>Attachment 2. Agreement on waste disposal (to be provided), Copies of extraction licenses (if applicable), permits for operating asphalt/concrete plants (if applicable),</p> <p>Attachment 3: Record on public consultation (to be provided)</p>	

PART B: SAFEGUARDS INFORMATION

ENVIRONMENTAL /SOCIAL SCREENING			
	Activity/Issue	Activity/Issue	Activity/Issue
Will the site activity include/involve any of the following?	A. road rehabilitation	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	See Section A below
	B. New construction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	See Section A below
	C. Individual wastewater treatment system	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	See Section B below
	D. Historic building(s) and districts	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	See Section C below
	E. Acquisition of land ²	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	See Section D below
	F. Hazardous or toxic materials ³	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	See Section E below
	G. Impacts on forests and/or protected areas	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	See Section F below
	H. Handling / management of medical waste	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	See Section G below
	I. Traffic and Pedestrian Safety	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	See Section H below

²Land acquisitions includes includes displacement of people, change of livelihood encroachment on private property this is to land that is purchased/transferred and affects people who are living and/or squatters and/or operate a business (kiosks) on land that is being acquired.

³Toxic / hazardous material includes but is not limited to asbestos, toxic paints, noxious solvents, removal of lead paint, etc.

PART C: MITIGATION MEASURES

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
0. General Conditions	Notification and Worker Safety	<p>(a) The local construction and environment inspectorates and communities have been notified of upcoming activities</p> <p>(b) The public has been notified of the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works)</p> <p>(c) All legally required permits have been acquired for construction and/or rehabilitation</p> <p>(d) The Contractor formally agrees that all work will be carried out in a safe and disciplined manner designed to minimize impacts on neighboring residents and environment.</p> <p>(e) Workers' PPE will comply with international good practice (always hardhats, as needed masks and safety glasses, harnesses and safety boots)</p> <p>(f) Appropriate signposting of the sites will inform workers of key rules and regulations to follow.</p> <p>(g) In case of construction works will require suspension of the linear construction operating, local population will be notified about the planned activities prior to the starting of the works.</p>
A. General Rehabilitation and /or Construction Activities	Air Quality	<p>(a) The surrounding environment (sidewalks, roads) shall be kept free of debris to minimize dust</p> <p>(b) There will be no open burning of construction / waste material at the site</p> <p>(c) There will be no excessive idling of construction vehicles at sites</p> <p>(d) Truck loads should be confinement and protected with lining.</p>
	Noise	<p>(a) Construction noise will be limited to restricted times agreed to in the permit</p> <p>(b) During operations the engine covers of generators, air compressors and other powered mechanical equipment shall be closed, and equipment placed as far away from residential areas as possible</p> <p>(c) The machinery should move only along the preliminarily agreed route;</p> <p>(d) The maximum allowed speed should be restricted;</p> <p>(e) Proper technical control and maintenance practices of the machinery should be applied;</p> <p>(f) No-load operations of the vehicles and heavy machinery are not allowed. Proper mufflers will be used on machinery.</p>
	Water Quality	<p>(a) Contractor will be required to organize and cover material storage areas. The material storage sites should be protected from washing out during heavy rain falls and flooding through covering by impermeable materials. Appropriate erosion and sediment control measures will be established such as e.g. hay bales and / or silt fences to prevent sediment from moving off site and causing excessive turbidity in nearby streams and rivers;</p> <p>(b) Contractor will plan all excavations, topsoil and subsoil storage so as to reduce to a minimum any runoff;</p>

		<p>(c) Revision of vehicles will be required to ensure that there is no leakage of fuel and lubricating materials. All machinery will be maintained and operated such that all leaks and spills of materials will be minimised. Daily plant checks (Vehicle Maintenance Procedure) will be undertaken to ensure no leaks or other problems are apparent. Vehicle maintenance, cleaning, degreasing etc. will be undertaken in designated areas, of hard-standing, not over made ground. Maintenance points will not be located within 50m of any watercourse;</p> <p>(d) Lubricants, fuel and solvents should be stored and used for servicing machinery exclusively in the designated sites, with adequate lining of the ground and confinement of possible operation and emergency spills. Spill containment materials (sorbents, sand, sawing, chips etc.) should be available on construction site;</p> <p>(e) Wet cement and/or concrete will not be allowed to enter any watercourse, pond or ditch.</p> <p>(f) Works on the bridges. Contractor shall ensure proper handling of paints materials, oil and lubricants to avoid any spillage of them into the water. It is not advised to paint the metal railings with the sprayer. Storage of potentially polluting materials within 50 m of watercourses is prohibited. Dumping of waste in the rivers/watercourses is prohibited.</p>
	Waste management	<p>(a) Waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and construction activities.</p> <p>(b) Mineral construction and demolition wastes will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers.</p> <p>(c) The records of waste disposal will be maintained as proof for proper management as designed.</p> <p>(d) Whenever feasible the contractor will reuse and recycle appropriate and viable materials.</p>
	Material supply	<p>a) Use existing plants, quarries or borrow pits that have appropriate official approval or valid operating license.</p> <p>b) Obtain licenses for any new quarries and/or borrowing areas if their operation is required;</p> <p>c) Reinstate used sections of quarries and/or borrowing areas as extraction proceeds on or properly close quarries if extraction completed and license expired;</p> <p>d) Haul materials in off peak traffic hours;</p> <p>e) Place speed regulating, diverting, and warning signs for traffic as appropriate.</p>
	Earthworks	<p>a) Topsoil should be stripped before starting of earthworks;</p> <p>b) Proper topsoil storage practice should be applied to ensure to maintain physico-chemical and biological activity of the soil; Temporary protective silt fencing should be erected to avoid erosion (wash down);</p> <p>c) Stored topsoil should be used for reinstatement and landscaping.</p> <p>d) Topsoil from the sites, which will not be reinstated to the initial conditions will be distributed carefully on the surrounding area.</p> <p>e) Topsoil will be reinstated separately from subsoil, with care taken to avoid mixing of the materials. The topsoil reinstatement will be sufficient to restore the fertile depth to the initial conditions as judged by the topsoil strip during visual observation and comparison of the reinstated site and adjacent land. When replacing the topsoil Contractor will program the works such that the areas furthest away from the stockpiles are reinstated first</p>

		<p>with reinstatement getting progressively closer to the stockpiles, thus reducing the number of vehicle movements over the reinstated topsoil. The reinstated topsoil will then be harrowed, where practical, to protect the stability and promote vegetative growth.</p> <p>f) In case chance find is encountered in the course of earth works, the contractor must immediately stop any physical activity on site and informs the MDF. The MDF promptly notifies the Ministry of Culture and Monument Protection, which takes over responsibility for the following course of action. Works may resume only upon receipt of written permission from the Ministry of Culture and Monument Protection.</p>
H Traffic and Pedestrian Safety	Direct or indirect hazards to public traffic and pedestrians by construction activities	<p>In compliance with national regulations the contractor will insure that the construction site is properly secured and construction related traffic regulated. This includes but is not limited to</p> <ul style="list-style-type: none"> - Signposting, warning signs, barriers and traffic diversions: site will be clearly visible and the public warned of all potential hazards - Traffic management system and staff training, especially for site access and near-site heavy traffic. Provision of safe passages and crossings for pedestrians where construction traffic interferes. - Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement - Active traffic management by trained and visible staff at the site, if required for safe and convenient passage for the public. - To arrange speed bumps to reduce vehicle speed and appropriate signs (road narrows/mind pedestrians) in agreement with local traffic police.

PART D: MONITORING PLAN

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

	In case of chance finds immediate suspension of works, notification of the Ministry of Culture and Monument Protection, and resumption of works exclusively upon formal consent of the Ministry.					
Sourcing of inert 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 river banks, 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

Traffic disruption and limitation of pedestrian access	Installation of traffic limitation/diversion signage; Storage of construction materials and temporary placement of construction waste in a way preventing congestion of access roads	At and around the construction site	Inspection	In the course of construction works	Prevent traffic accidents; Limit nuisance to local residents	MDF, Construction supervisor
Workers' health and safety	Provision of uniforms and safety gear to workers; Informing of workers and personnel on the personal safety rules and instructions for operating machinery/equipment, and strict compliance with these rules/instructions	Construction site	Inspection	Unannounced inspections in the course of work	Limit occurrence of on-the-job accidents and emergencies	MDF, Construction supervisor
Completion of construction	Rake or loosen all compacted ground surfaces Ensure that waste and surplus materials are removed from site, or otherwise dealt with according to the wishes of landowners or local residents Excavate any contaminated soil from fuel depots / workshops, remove and reshape the area.	All construction and camp sites	Inspection	After completion of construction	Prevent pollution of the construction site and nearby area after SP implementation	MDF, Construction supervisor
OPERATION PHASE						
Maintenance of rehabilitated trail	Maintenance of relevant road signage for traffic safety;	Rehabilitated sections of roads	Inspection	During maintenance works	Prevent road accidents and	Borjomi municipality

	Demarcation of the sections of streets under repair; Disposal of asphalt and or other waste from the repair works to the designated landfill.				disruption of traffic	
--	--	--	--	--	-----------------------	--

Site map



Photomaterials



Renders



