## ROAD DEPARTMENT OF GEORGIAN MINISTRY OFREGIONAL DEVELOPMENT AND INFRASTRUCTURE



# **Environmental and Social Management Plan**

## **REHABILITATION OF SECONDARY ROAD SECTION KHIDISTAVI-ATENI-BOSHURI (km12 to km22)**

Tbilisi, Georgia

2016

## PART I: GENERAL PROJECT AND SITE INFORMATION

| INSTITUTIONAL & ADMINISTRATIVE                        |   |  |  |   |  |  |
|---|---|--|--|---|--|--|
| Country   | Georgia   |  |  |   |  |  |
| Project title   | Rehabilitation of Secondary k   | khidistavi-Ateni-Boshuri Road  | Section km12- km22   |   |  |  |
| Scope of project and activity                         | As a first step for the dete<br>procedure of the Khidistav<br>assessed.   | As a first step for the determination of any rehabilitation measures and a pavement design procedure of the Khidistavi-Ateni-Boshuri road section the existing pavement condition was assessed.  |  |   |  |  |
|   | The road has an asphalt surface which generally in a poor to very condition and is locally deteriorated to a gravel surface. Signs of executed minor repair works have been observed.                                     |  |  |   |  |  |
|   | The existing asphalt pavement has nearly reached the end of its design life, and has along several sections experience premature failure. The existing asphalt surface shows all type of cracks and other deficiencies as |  |  |   |  |  |
|   | The width of the existing car<br>8 and 9 meters.  | riageway is 7 meters. The aver   | age width of the road  | bed varies between  |  |  |
|   | The road pavement will be<br>which will be cleaned, repai<br>additional signs will be insta   | rehabilitated. Existing artifici<br>red or replaced. The road sign<br>lled.  | ial structures, includ<br>as and safety fences w                 | ing drainage pipes,<br>vill be replaced and                             |  |  |
|   | Junctions and yard entries will be repaired. Existing bus stops, shelters shall be newly arranged.  |  |  |   |  |  |
| Institutional arrangements<br>(Name and contacts)     | WB     Project Management     Local Counterpart and/or Recipient       (Project Team Leader)     Giorgi Tsereteli     Gori municipality       Natalwa Stankowich     Image: Stankowich     Image: Stankowich              |  |  |   |  |  |
| Implementation<br>arrangements (Name and<br>contacts) | WB<br>Safeguard Supervision<br><b>Darejan Kapanadze</b><br>Environment<br><b>David Jijelava</b><br>Social   | Local Counterpart<br>Supervision<br>Technical Supervisor<br>LtD "Roads Rehabilitation<br>and Modernization<br>Supervision Direction")<br>Merab Jishiashvili  | Local<br>Inspectorate<br>Supervision<br>-                        | Contractor<br>LtD. AGT<br>Management<br>Meslehet, Tikinti<br>Xidmelteri |  |  |
| SITE DESCRIPTION                                      |   |  |  |   |  |  |
| Nu Ch   | khidistavi-Ateni-Boshuri km   | 12- km22 road section.   |  |   |  |  |
| Name of site  | Gori municipality, Shida Kar  | rtli Region  |  |   |  |  |
|   | Road section is located with  | in Gori Municipality of Shida  | Kartli Region, Easte   | ern Georgia, on the   |  |  |
| Describe site location                                | The road section goes throug  | gh settled rural areas and passe   | es 4 villages (Khidista  | ivi, Ateni, Bobnevi,  |  |  |
|   | and Biisi).   |  |  |   |  |  |
|   | Gori municipality and the St  | carriageway with a deteriorat  | $62.8 \text{ m}^2$ in total ) un                                 | der the National  |  |  |
| Who owns the land?                                    | Forest Agency of the Ministr  | ry of Environment and Natura   | l Resources Protectio  | on(LEPL).   |  |  |
| Description of geographic,                            | Location: The study road sect   | tion is located within Gori Mu   | nicipality of ShidaKa  | rtli Region,Eastern   |  |  |
| physical, biological,                                 | Georgia, on the right bank o<br>passes 4 villages (Khidistavi   | f river Mtkvari, at the norther<br>Ateni, Bobnevi, and Biisi)  | rn slope of the Triale   | ti Range. The Road  |  |  |
| socio-economic context                                | <b><u>Air</u></b> - Air quality in the proje  | ect area is good due to low tra  | ffic levels and the at   | osence of industrial  |  |  |
|   | Water and Soil - No pollutio  | n is reported.   |  |   |  |  |
|   | <b>Flora</b> –On the above mentic<br>orientalis) - 44 specimens, w<br>specimens and Georgian Oa<br>territory of the State Forest F  | <b>Flora</b> -On the above mentioned territory following tree species are met: Hornbeam <i>(Carpinus orientalis)</i> - 44 specimens, willow ( <i>Salix magnifica</i> )-24 specimens, wild pear ( <i>Pyroscommunis</i> ) - 3 specimens and Georgian Oak ( <i>Quercus iberica</i> ) - 65 specimens. These trees were located on the territory of the State Forest Fund. No Red Listed species are present within the project impact area |  |   |  |  |
|   | <b><u>Fauna</u></b> - The project road pass<br>Mostly fauna is presented by<br>to the small area of the proje   | s through the degraded territor<br>the species which does not ne<br>ect the impact on the fauna wil  | y and accordingly the<br>ed any special protec<br>ll be minimal. | e fauna is not reach.<br>ting measures. Due                             |  |  |

| Г                          |   |   |                      |                       |                      |  |  |
|----------------------------|---|---|----------------------|-----------------------|----------------------|--|--|
|                            | <b><u>Noise</u></b> - The current noise level is low due to low traffic levels and a lack of industrial facilities. |   |                      |                       |                      |  |  |
|                            | Constru   | Construction activities will have modest impact on those people who reside in existing villages               |                      |                       |                      |  |  |
|                            | (Immedi   | iately along the road) and this in  | mpact will be limit  | ed to the rehabilitat | ion phase.           |  |  |
|                            | <u>Social</u> –   | rehabilitation road section will  | pass 4 villages.     |                       |                      |  |  |
|                            | Informa   | tion for material resources near  | est from project are | ea                    |                      |  |  |
|                            |   | Existing borrow areas   | T' N                 | Usable                |                      |  |  |
|                            | #   | /quarries at or near  | License No.          | Quantity (m3)         | Material             |  |  |
|                            | 1   | KvemoBoshuri  | 100799               | 2268                  | Granite              |  |  |
|                            | 2   | Kareli  | 00527                | 115000                | Sand-Gravel          |  |  |
|                            | 3   | Kareli  | 100441               | 173100                | Sand-Gravel          |  |  |
|                            | 4   | Bernisi   | 00550                | 142000                | Sand-Gravel          |  |  |
|                            | 5   | Urbnisi   | 00518                | 200000                | Sand-Gravel          |  |  |
|                            | 6   | Skra  | 100400               | 60000                 | Sand-Gravel          |  |  |
|                            | 7   | Skra  | 00459                | 50000                 | Sand-Gravel          |  |  |
|                            | 8   | Gori  | 100003               | 617100                | Sand-Gravel          |  |  |
|                            | 9   | Gori  | 100318               | 59400                 | Sand-Gravel          |  |  |
|                            | 10  | Gori  | 00293                | 210000                | Sand-Gravel          |  |  |
|                            | 11  | Tiniskhidi  | 010295               | 72300                 | Sand-Gravel          |  |  |
|                            | 12  | Tiniskhidi  | 714                  | 100000                | Sand-Gravel          |  |  |
|                            | 12  | Tiniskhidi  | 714                  | 25000                 | Sand-Gravel          |  |  |
|                            | 10  | Tinisklidi  | 00342                | 23000                 | Sand Cravel          |  |  |
|                            | 14  | Tiniskiiidi<br>Tinishiidi   | 00407                | 200000                | Sand-Gravel          |  |  |
|                            | 15  |   | 00293                | 210000                | Sand-Gravel          |  |  |
|                            | 16  | ledotsminda   | 01085                | 155700                | Sand-Gravel          |  |  |
|                            | 17  | Akhaldaba   | 00504                | 50000                 | Sand-Gravel          |  |  |
|                            | 18  | Akhaldaba   | 00293                | 210000                | Sand-Gravel          |  |  |
|                            | 19  | Akhaldaba   | 01163                | 250500                | Sand-Gravel          |  |  |
|                            | 20  | Akhaldaba   | 100325               | 300000                | Sand-Gravel          |  |  |
|                            | 21  | Akhaldaba   | 0000168              | 18600                 | Sand-Gravel          |  |  |
|                            | 22  | Akhaldaba   | 100387               | 79500                 | Sand-Gravel          |  |  |
|                            | 23  | Akhaldaba   | 00551                | 100000                | Sand-Gravel          |  |  |
|                            | 24  | Akhaldaba   | 00970                | 150000                | Sand-Gravel          |  |  |
|                            | 25  | Akhaldaba   | 01163                | 250500                | Sand-Gravel          |  |  |
|                            | 26  | Akhaldaba   | 100395               | 330000                | Sand-Gravel          |  |  |
|                            | 27  | Sveneti   | 100526               | 123200                | Sand-Gravel          |  |  |
|                            | 28  | Sveneti   | 100146               | 520000                | Sand-Gravel          |  |  |
|                            | 29  | Sveneti   | 100565               | 336000                | Sand-Gravel          |  |  |
|                            | 30  | Gori  | 100277               | 186600                | Sand-Gravel          |  |  |
| Locations and distance for | 31  | Khidistavi  | 100430               | 55000                 | Sand-Gravel          |  |  |
| ipert aggregates, water    | 32  | Khidistavi  | 00649                | 800000                | Sand-Gravel          |  |  |
| stones                     | 33  | Uplistsikhe   | 100179               | 66300                 | Sand-Gravel          |  |  |
| LEGISLATION                |   | 1   | 100117               | 00000                 |                      |  |  |
| Identify national & local  | The pro   | iect triggers World Bank OP/B   | P 4.01 - Environm    | antal Assessment a    | nd according to its  |  |  |
| legislation &permits that  | principle   | es, has been classified as enviro   | nmental Category I   | 3. The present ESM    | P has been prepared  |  |  |
| apply to project activity  | to meet   | requirements of OP/BP 4.01.   |                      | · · · ·               | I I I                |  |  |
|                            | Georgia   | n legislation does not require a  | ny type of environ   | mental review, app    | roval, or permitting |  |  |
|                            | for the p   | project. Though according to the  | e national regulator | ry system,            | 1 0                  |  |  |
|                            | (i)   | Contractor company must be  | licensed,            |                       |                      |  |  |
|                            | (ii)  | Construction materials must b   | e obtained from lie  | ensed providers,      |                      |  |  |
|                            | (iii)   | Once contractor wishes to op<br>license.  | pen quarries, then   | the contractor mu     | st obtain respective |  |  |
|                            | (iv)  | If, in time of rehabilitation, o  | contractor wishes t  | o operate own aspł    | alt or concrete (Or  |  |  |
|                            |   | both) plants, he should have permission regarding specified limited level of pollutant substances in exhaust. |                      |                       |                      |  |  |

|  | <ul> <li>(v) Disposal of the construction waste and excess ground generated in the course of earth works shall be placed in a selected locations agreed and approved by local governing bodies in written.</li> <li>(vi) Land plots along the road required for undertaking of planned works had been de-listed from the Torritory of the State Forget Fund and transfer to the Read Department.</li> </ul>  |  |  |  |
|--|--|--|--|--|
|  | from the remainly of the State Polest Pund and transfer to the Road Department.  |  |  |  |
| PUBLIC CONSULTATION  |  |  |  |  |
| Identify when / where the<br>public consultation process<br>shall take place | Environmental and Social Management Framework for the Secondary Road Asset Management<br>Project was disclosed through the RDMRDI web page and a stakeholder consultation meeting was<br>held on 14/07/2015. The present site-specific ESMP was disclosed through the same media and also<br>was delivered in hard copies to the Municipality of Gori. Consultation meeting with local<br>communities was held and the minutes of this meeting was attached to this ESMP |  |  |  |
| ATTACHMENTS  |  |  |  |  |
|  | Attachment 1: Project Location Map<br>Attachment 2: Minutes of public consultation;<br>Attachment 3: Waste disposal agreement ( <u>to be provided by contractor</u> );<br>Attachment 4: Borrowing license ( <u>as applicable by contractor</u> );<br>Attachment 5: Asphalt plant operation agreement ( <u>as applicable</u> );<br>Attachment 6: Other ( <u>as applicable</u> )   |  |  |  |

### PART II: SAFEGUARDS SCREENING AND TRIGGERS

\_\_\_\_\_

| ENVIRONMENTAL /SOCIAL SCREENING FOR SAFEGUARDS TRIGGERS |   |                |                               |  |  |  |  |
|---|---|----------------|-------------------------------|--|--|--|--|
|   | Activity/Issue                                      | Status         | <b>Triggered Actions</b>      |  |  |  |  |
|   | A. Roads rehabilitation                             | [x] Yes [ ] No | If "Yes", see Section III A   |  |  |  |  |
|   | B. New construction of small traffic infrastructure | [ ] Yes [x] No | If "Yes", see Section III A   |  |  |  |  |
|   | C. Impacts on surface drainage system               | [x] Yes [ ] No | If "Yes", see Section III B   |  |  |  |  |
| Will the site activity                                  | D. Historic building(s) and districts               | [ ] Yes [x] No | If "Yes", see Section III C   |  |  |  |  |
|   | E. Acquisition of land <sup>1</sup>                 | [ ] Yes [x] No | If "Yes", see Section III D   |  |  |  |  |
| following?  | F. Hazardous or toxic materials <sup>2</sup>        | [] Yes [x] No  | If "Yes", see Section V E     |  |  |  |  |
|   | G. Impacts on forests and/or protected areas        | [x] Yes [] No  | If "Yes", see Section III F   |  |  |  |  |
|   | H. Risk of unexploded ordinance (UXO)               | [ ] Yes [x] No | If "Yes", see Section III G   |  |  |  |  |
|   | I. Traffic and Pedestrian Safety                    | [x] Yes [ ] No | 'Yes", see Section III H      |  |  |  |  |
|   | J. Impacts on land property and use                 | [] Yes [x] No  | If 'Yes", see Section H below |  |  |  |  |
|   | K. Social risk                                      | [] Yes [x] No  | If 'Yes", see Section I below |  |  |  |  |

<sup>&</sup>lt;sup>1</sup> Land acquisition includes displacement of residents, change the way of life, this is concerning with land which was purchased/handed over and impact on persons living and/or unlawfully exist and or/performing business activities (Booths) on the land already purchased. <sup>2</sup> Hazardous or toxic materials contain, but is not limited to: asbestos, toxic paints, hazardous dissolvent materials, removal of lead containing materials and etc.

## PART III: MITIGATION MEASURES

| ACTIVITY  | PARAMETER                         | MITIGATION MEASURES CHECKLIST  |
|---|-----------------------------------|--|
| 0. General Conditions   | Notification and<br>Worker Safety | <ul> <li>a) The local construction and environment inspectorates and communities have been notified of upcoming activities</li> <li>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)</li> <li>c) All legally required permits have been acquired for construction and/or rehabilitation</li> <li>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</li> </ul>   |
|   |                                   | <ul> <li>and environment.</li> <li>e) Workers' PPE will comply with international good practice (always hardhats, as needed masks and safety glasses, harnesses and safety boots)</li> <li>f) Appropriate signposting of the sites will inform workers of key rules and regulations to follow.</li> </ul>  |
| A. General Rehabilitation<br>and /or Construction<br>Activities | Air Quality                       | <ul> <li>a) During excavation works dust control measures shall be employed, e.g. by spraying and moistening the ground</li> <li>b) Demolition debris, excavated soil and aggregates shall be kept in controlled area and sprayed with water mist to reduce debris dust</li> <li>c) During pneumatic drilling or breaking of pavement and foundations dust shall be suppressed by ongoing water spraying and/or installing dust screen enclosures at site</li> <li>d) The surrounding environment (sidewalks, roads) shall be kept free of soil and debris to minimize dust</li> <li>e) There will be no open burning of construction / waste material at the site</li> <li>f) All machinery will fit emission originating regulations, well maintained and serviced and there will be no excessive idling of construction vehicles at sites</li> </ul>  |
|   | Noise                             | <ul> <li>a) Construction noise will be limited to restricted times agreed to in the permit</li> <li>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</li> </ul>   |
|   | Water Quality                     | a) The site will establish appropriate erosion and sediment control measures such as e.g. hay bales and / or silt fences to prevent sediment from moving off site and causing excessive turbidity in canalization and nearby streams and rivers  |
|   | Waste management                  | <ul> <li>a) Waste collection and disposal pathways and sites will be identified for all major waste types expected from excavation, demolition and construction activities.</li> <li>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.</li> <li>c) Construction waste will be collected and disposed by licensed company</li> <li>d) In order to control waste disposal accuracy and compliance, waste disposal reports shall be done</li> <li>e) Whenever feasible Contractor will reuse and recycle appropriate and viable materials (except when containing asbestos)</li> </ul>  |
| B. Impacts on surface<br>drainage system                        | Water Quality                     | <ul> <li>a) There will be no unregulated extraction of groundwater, nor uncontrolled discharge of process waters, cement slurries, or any other contaminated waters into the ground or adjacent streams or rivers; contractor should obtain all necessary licenses and permits for water extraction and for further pouring out of used water in state current water system</li> <li>b) There will be proper storm water drainage systems installed and care taken not to silt, pollute, block or otherwise negatively impact natural streams, rivers, ponds and lakes by construction activities.</li> <li>c) There will be procedures for prevention of and response to accidental spills of fuels, lubricants and other toxic or noxious substances.</li> <li>d) Construction vehicles and machinery will be washed only in designated areas where runoff will not pollute natural surface water bodies.</li> </ul> |
| C. Historic building (s)  | Cultural Heritage                 | a) If construction works takes place to a designated historic structures or are located in a designated historic district, notification shall be made and  |

|  |  | approval/permits be obtained from local authorities and all construction activities planned and carried out in line with local and national regulation  |
|--|--|---|
|  |  | b) It shall be ensured, that provisions are put in place so that artifacts or other possible "chance finds" encountered in excavation or construction are noted and registered, responsible officials contacted and work activities delayed or account for such finds   |
| D. Acquisition of land                                     | Land Acquisition<br>Plan/Framework   | <ul> <li>a) No land acquisition is expected to be required for this project. In any case, in order to avoid any conflicts with the community, the Contractor will not enter into any plot without prior authorization from the Employer who should ensure that the property owner, and/or users, are informed in advance of any needs to enter their plots and the purpose and duration of such visit. If any damages occur as a result of such visit (e.g. damage to fences, access roads, etc.), the Contractor will be responsible for restoring the damaged asset or compensate as adequate in agreement with the affected party, and provide documented evidence of this to the Employer."</li> </ul>                        |
|  |  | b) In case the Contractor, its employees and/or subcontractors and corresponding employees receive any communications or complaints from the communications in the area of works and the public in general, it should keep a log of such communications and intermediately inform the Employer who will document and manage the complaint as per its Grievance Redress Mechanism."  |
| E. Toxic materials   | Asbestos management  | <ul> <li>a) If asbestos is located on the project site, it shall be marked clearly as hazardous material</li> <li>b) When possible of asbestos will be appropriately contained and sealed to minimize exposure</li> <li>c) Asbestos prior to removal (If necessary) will be treated with a wetting agent to minimize asbestos dust</li> <li>d) Asbestos will be handed and disposed by skilled &amp; experienced professionals</li> <li>e) If asbestos material is stored temporarily, the waste should be securely enclosed inside closed container and marked appropriately. Security measures will be taken against unauthorized removal from the site.</li> <li>f) Removal of asbestos will not be reused</li> </ul>          |
|  | Toxic / hazardous<br>waste management  | <ul> <li>a) Temporarily storage on site of all hazardous or toxic substances will be in safe containers labeled with details of composition, properties and handling information</li> <li>b)Containers of hazardous substances shall be placed in an leak-proof container to prevent spillage</li> <li>c) Waste shall be transported by specially licensed carriers and disposed in licensed facility</li> <li>d) Paints with toxic ingredients or solvents or lead-based paints will not be used</li> </ul>  |
| F. Affected forests,<br>wetlands and/or protected<br>areas | Ecosystem protection   | <ul> <li>a) Works within the territory of the State Forest Fund are disallowed prior to completion of de-listing and user right transfer to this territory from the Nationa Forest Agency to the RD</li> <li>b) Tree cutting must be held down to minimum by adjusting alignment of access roads, using small machinery or manual labor in individual locations, etc.</li> <li>c) All trees that have to be extracted must be marked and their removal must be entered into tree-cutting ledger on daily basis</li> </ul>   |
| G. Risk of unexploded ordinance (UXO)                      | Hazard to human<br>health and safety   | a) Before to start any excavation activities, Contractor shall verify that the construction area has been checked and cleared regarding UXO by appropriate authorities  |
| H. Traffic and pedestrian<br>safety                        | Direct or indirect<br>hazards to public<br>traffic and<br>pedestrians by<br>construction<br>activities | <ul> <li>In compliance with national regulations, ensure that the construction site is properly secured and construction related traffic regulated. This includes but is not limited to:</li> <li>Use signposting, warning signs, barriers and traffic diversions so that the work site is clearly visible and the public warned of all potential hazards</li> <li>Apply traffic management system and train staff, especially for site access and near-site heavy traffic; provide safe passages and crossings for pedestrians where construction traffic interferes.</li> <li>Adjust working hours to local traffic patterns, e.g. avoid major transport activities during rush hours or times of livestock movement</li> </ul> |

|                              |   | • If required, undertake active traffic management by trained and visible staff at the site for safe passage for the public  |
|------------------------------|---|--|
|                              |   | If school children are in the vicinity, include traffic safety personnel to direct traffic during school hours   |
|                              |   | Ensure safe and continuous access to all adjacent office facilities, shops and residences during construction  |
| I. Social Risk<br>Management | Public relationship<br>management<br>Labor management | <ul> <li>Assign local liaison person within Contractor's team to be in charge of communication with and receiving requests/ complaints from local population</li> <li>Consult local communities to identify and proactively manage potential conflicts between an external workforce and local people</li> <li>Raise local community awareness about sexually transmitted disease risks associated with the presence of an external workforce and include local communities in awareness activities.</li> <li>Inform the population about construction and work schedules, interruption of services, traffic detour routes and provisional bus routes, blasting and demolition, as appropriate.</li> <li>Limit construction activities at night. When necessary ensure that night work is carefully scheduled and the community is properly informed so they can take necessary measures.</li> <li>At least five days in advance of any service interruption (including water, electricity, telephone, bus routes), advice community through postings at the work site, at bus stops, and in affected homes/businesses.</li> <li>Address concerns raised through Grievance Redress Mechanism established by the Employer within the designated timeline within the scope of Contractor's liability</li> <li>To the extent possible, work camps should not be located in close proximity to local communities</li> <li>Siting and operation of worker camps should not be located in close proximity to local communities</li> <li>The Contractor will recruit unskilled or semi-skilled workers from local people.</li> <li>The Contractor will 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. A temporary septic tank system should be established for any residential labor camp and without causing pollution of nearby watercourses</li> <li>The Contractor will raise awareness of workers on overall relationship management with local populati</li></ul> |

## PART IV: MONITORING PLAN

## **Construction Phase**

| Activity                            | What<br>(Is the parameter to be<br>monitored?)   | Where<br>(Is the parameter to be<br>monitored?)                               | How<br>(Is the parameter to be<br>monitored?)            | When<br>(Define the frequency /<br>or continuous?)                    | Why<br>(Is the parameter being<br>monitored?)  | Who<br>(Is responsible for<br>monitoring?) |
|-------------------------------------|--|---|--|---|--|--|
| Supply of construction<br>materials | Purchase of the construction<br>materials from licensed<br>providers   | Offices and warehouses<br>of material suppliers,<br>and borrowing sites       | Checking documents;<br>Inspection of material<br>quality | In the process of signing<br>the agreements for<br>material provision | Ensure technical quality of<br>construction;<br>Protect human health and<br>environment  | Roads Department<br>(RD)                   |
| Works in the forested<br>territory  | No physical activity takes<br>place in the territory of the<br>State Forest Fund until de-<br>listing and user right transfer<br>procedures are complete<br>Movement of construction<br>vehicles and machinery,<br>storage, or other activities do<br>not damage and cause cutting<br>of trees unless tree extraction<br>is required for arranging road<br>surface and shoulders<br>Threes that must be extracted<br>are labeled prior to removal<br>and each extracted tree is<br>entered into the tree cutting<br>ledger (species and diameter | Work site within<br>forested territory<br>Construction<br>contractor's office | Checking documents<br>Visual observation                 | Prior and in the course<br>of works within the<br>forested territory  | Ensure compliance with the<br>national legislation;<br>Minimize impact on forested<br>area;<br>Facilitate procedure of hand<br>over of loggs generated<br>through tree cutting | RD   |

| Transportation of<br>construction materials<br>and waste<br>Movement of<br>construction equipment | Technical condition of<br>construction vehicles and<br>machinery;<br>Adequacy of the loading trucks<br>for transported types of cargo,<br>and canopy coverage of cargo<br>transported in open trucks;<br>Movement of construction<br>vehicles and machinery along<br>pre-defined routes.   | Routes for<br>transportation of<br>construction materials<br>and construction wastes | Inspection of roads<br>adjacent to the<br>construction site and<br>included in the agreed-<br>upon routes of<br>transportation | Unannounced checks<br>during the working<br>hours   | Avoid air and road pollution<br>eith dust and solid matter;<br>Reduce traffic disruption   | RD;<br>Traffic Police |
|---|--|--|--|---|--|-----------------------|
| Operation of<br>Construction<br>machinery on site   | <ul> <li>Proper technical condition of construction machinery:</li> <li>no excessive exhaust,</li> <li>no fuel leakage,</li> <li>respect of working hours</li> <li>no damage to trees and other vegetation what does not need to be creared for the purposes for road construction</li> </ul>  | Construction site  | Inspection   | Within and off working<br>hours   | Reduce air and soil pollution<br>caused by equipment<br>operation;<br>Reduce noise and dust<br>nuisance to local population  | RD                    |
| Contamination<br>ofsurface waterduring<br>rehabilitation of the<br>bridge                         | Suspended solids,organic<br>compounds, lubricants, fuel,<br>solvents, heavy metals, pH<br>value,mineral oils   | Rehabilitation of the bridge   | Inspection   | During rehabilitation<br>works near in the water<br>Unannounced<br>inspections during works<br>nearwatercourses | Reduce water pollution caused<br>by equipment operation;   | RD                    |
| Servicing of<br>construction machinery  | <ul> <li>Washing vehicles and<br/>machinery off-site of in the<br/>location sufficiently distant<br/>from water bodies;</li> <li>Servicing vehicles and<br/>machinery with oils and<br/>lubricants off-site or in an<br/>especially arranged location<br/>on-site;</li> <li>technical adequacy of the<br/>servicing location:</li> <li>solid, insulating floor or<br/>adsorbent layer (sand,<br/>gravel, membrane),</li> </ul> | Construction site and<br>construction base (if<br>applicable)                        | Inspection   | Entire period of<br>machinery operation   | Avoid land and water pollution<br>with oil products due to<br>servicing of vehicles and<br>machinery;<br>Be ready for fire emergency<br>action to promptly localize fire<br>source and minimize material<br>damage | RD                    |

|                                     | <ul> <li>containment barriers<br/>allowing enough sapce for<br/>holding fuel over the<br/>maximum amount expected<br/>on the location at a time,</li> <li>emergency fire-fighting kit,</li> <li>sedimentation pool at car<br/>wash area.</li> </ul>  |  |  |                                      |  |  |
|-------------------------------------|--|--|--|--------------------------------------|--|--|
| Extraction of inert<br>material     | Purchase of inert material from<br>the existing providers if<br>possible;<br>Obtaining license for extraction<br>of material by the Contractor<br>and strict adherence to the<br>terms of such license;<br>Terrace processing of the<br>borrow pits, backfilling of<br>excess material, and<br>harmonization with landscape;<br>River bed gravel extraction<br>away from water flow,<br>arrangement of gravel barriers<br>for isolating extraction area<br>from water flow, prevention of<br>water flow entry by vehicles<br>and machinery;<br>Demarcation of borrow areas<br>with warning signs | Borrow areas   | Checking documents<br>Inspection of activities | The period of material<br>extraction | Reduce slope erosion and<br>damage to the ecosystem and<br>landscape;<br>Reduce river bank erosion,<br>water pollution with<br>suspended particles, and<br>impact on the aquatic life;<br>Protection of animals and<br>people from accidents | RD<br>National Environment<br>Agency of the<br>Ministry of<br>Environment and<br>Natural Resources<br>Protection |
| Generation of<br>construction waste | Temporary storage of inert and<br>hazardous wastes separately at<br>the designated locations;<br>Timely disposal of waste to the<br>formally designated landfills;<br>Hand-over of hazardous wastes<br>to licensed deactivating and<br>processing companies.   | Construction site and<br>base (if applicable);<br>Locations designated<br>for waste disposal | Checking documents;<br>Visual observation      | Entire period of<br>construction     | Avoid pollution of the<br>environment  | RD;<br>GoriMunicipality  |

| Accumulation of<br>household waste      | Provision of waste containers<br>on-site;   | Construction site and<br>base (if applicable) | Visual inspection                | Entire period of<br>construction   | Avoid pollution of soil and water with household waste   | RD;<br>GoriMunicipality   |
|---|---|---|----------------------------------|--|--|---|
|   | municipality for regular out-<br>transporting of waste  |   |                                  |  |  |   |
| Generation of liquid<br>waste           | Arrangement and operation of<br>toilets compliant with sanitary<br>norms on-site;<br>Arrangement of drainage<br>system for storm water<br>collection and periodic<br>cleaning of the system from<br>silt;   | Construction site and<br>base (if applicable) | Visual inspection                | Entire period of<br>construction<br>Increased frequency of<br>inspection in periods of<br>high precipitation | Avoid flooding of<br>construction site and base;<br>Reduce pollution of surface<br>and ground water  | RD  |
|   | Arrangement of sedimentation<br>pool for waste water collection<br>on-site  |   |                                  |  |  |   |
| Operation of asphalt-<br>concrete plant | Obtaining permit for impacting<br>environment by Contractor<br>and strict adherence to its<br>terms;<br>Placement of plant in the<br>location permissive for<br>minimal disturbance of local<br>population;<br>Arranging sedimentation pool<br>for capturing of liquid<br>discharges from plant | Construction site and<br>base (if applicable) | Checking documents<br>Inspection | Before establishment of<br>plant and during entire<br>period of its operation                                | Reduce inconvenience for<br>local population due to plant<br>operation;<br>Reduce air and surface water<br>pollution from emissions and<br>discharges from plant | RD;<br>National Environment<br>Agency of the<br>Ministry of<br>Environment and<br>Natural Resources<br>Protection |
| Safety of labor                         | Provision of uniforms and<br>personal protective gear to<br>workers and enforcement of<br>their use;<br>Consistency with the rules of<br>exploitation of the construction<br>equipment and machinery  | Construction site                             | Inspection of the activities     | the whole construction period  | reduce the probability of accidents  | RD  |

# **Operation Phase**

| Activity  | What<br>(Is the parameter to be<br>monitored?)  | Where<br>(Is the parameter to be<br>monitored?)     | How<br>(Is the parameter to<br>be monitored?) | When<br>(Define the frequency / or<br>continuous?) | Why<br>(Is the parameter being<br>monitored?)  | Who<br>(Is responsible for<br>monitoring?) |
|---|---|---|---|--|--|--|
| Cleaning road surface<br>and shoulders from<br>waste        | Trash deposited from moving<br>vehicles timely colleacted and<br>removed;<br>Bodies of animals overrun by<br>vehicles timely collected and<br>removed | Carriageway and<br>shoulders of the road<br>section | Inspection                                    | Quarterly  | Prevent road littering;<br>Road safety   | Gorimunicipality                           |
| Keeping road drainage<br>system operational                 | Periodic cleaning of<br>drainageditches from silt and<br>trash  | Drainage system long<br>the road section            | Inspection                                    | Quarterly  | Maintaining drainage system<br>capacity for preventing road<br>flooding and water damage | Gorimunicipality                           |
| Confinement of<br>accidental spills and<br>clean-up         | Timely confinement,<br>deactivation, and removal of<br>liquid or powder spills of cargo<br>in case of road accidents                                  | On the road and its immediate surroundings          | Inspection                                    | Upon occurenace of accidents, as required          | Prevent pollution of soil and water  | Traffic Police;<br>Gorimunicipality        |
| Disposal of waste from<br>regular road maintenance<br>works | Collection and timely disposal<br>of waste from maintenance<br>works to the designated landfill   | On the road and its<br>immediate surroundings       | Inspection                                    | Towards completion of scheduled maintenance works  | Prevent enviornment pollution  | Gorimunicipality                           |

### **Attachment 1: Project Location Map**



Attachment 2:

#### MINUTES

#### Of public consultation meeting on Environmental Management plan for

### Rehabilitation of Khidistavi-Ateni-Boshuri km12 - km 22 road section

17.11.2016

Ateni Municipality

Chairman of meeting - Gia Sopadze, Head of Environment Protection Unit, Resettlement and Environment Protection Division

Secretary of meeting - Maya Vashakidze, Environmental Consultant Roads Department of Georgia

Speakers: Gia Sopadze, Maya Vashakidze

Attendees of the Meeting: See attachment 1

The goal of the public discussion was to inform the local communities about the purpose of the upcoming works, their timeline; temporary inconvenience expected from the construction works; and planned measures for mitigating the expected negative environmental impact. Local stakeholders had possibility to ask questions and express their opinion during the public discussion, so that their comments could have been considered in the final version of the Environmental Management Plan.

Mr. Gia Sopadze, Head of Environment Protection Unit, Resettlement and Environment Protection Division and Ms. Maya Vashakidze, Environmental Consultant were representatives of the Roads Department of Georgia.

Mr. Gia Sopadze and Ms. Maya Vashakidze informed attendees about the Environmental Management Plan of rehabilitation works under Secondary Road Asset Management Project.

Mr. Gia Sopadze opened the meeting and informed attendees about the roads construction on the territory of municipality, he also discussed the meaning of Secondary Roads Asset Management Project for Georgian economic development.

Ms. Maya Vashakidze made a presentation of Environmental Management Plan. She covered the scope of planned works, their possible impact on the natural environment and human health. Also was overviewed mitigation measures proposed to reduce negative environmental impacts of the project in the construction and operation phases.

| N⁰ | Questions   | Answers   |
|----|---|---|
| 1. | When will the rehabilitation works of the road start? | The rehabilitation works will start as soon as<br>the tender will be announced and the winner<br>will be contracted |

| 2. | How the dus the rehabilita | t problem be<br>tion works? | reduce | d during | The company who will be implementing the rehabilitation works will be obliged to water the site to prevent dust prevention |
|----|----------------------------|-----------------------------|--------|----------|--|
| 3. | Will local entrance?       | population                  | have   | asphalt  | The asphalt entrance will be arranged only for<br>the population who live along the rehabilitation<br>road section         |

Representatives of Roads Department of Georgia: Gia Sopadze (signed) Maya Vashakidze (signed)

| საჯარო განხილვა |                 |   |           |  |
|-----------------|-----------------|---|-----------|--|
| Nº              | სახელი, გვარი   | საკონტაქტო ინფორმაცია<br>(ტელეფონი, ელ. ფოსტა, მისამართი) | ხელმოწერა |  |
| F               | -hzn 356-1031   | 599-55-11-48  | 3         |  |
| 654             | on 19h13sty     | 39819 4206  | 5 com     |  |
| 53              | 530 37/35 50560 | 577 90 5788   | 52 827    |  |
| 6               | zahs bygha      | 595 03 17 18  | 6.600     |  |
| O,              | 1050 zogshad    | 599 52 38 14  | 0.7mm     |  |
| 5               | aas 356033900   | 598-22-70.00  | 3 \$      |  |
| 2.0             | 15 a Dola       | 129-29-27-50  | 1.00-     |  |

|    |                          | საჯარო განხილვა   |           |  |
|----|--------------------------|---|-----------|--|
| Nº | სახელი, გვარი            | საკონტაქტო ინფორმაცია<br>(ტელეფონი, ელ. ფოსტა, მისამართი) | ხელმოწერა |  |
|    | $5b$ , $proms J_3 r pro$ | 595005910   | bi om     |  |
|    | 8-16-55 4312735-55       | 551 626208  | 8.455     |  |
|    | an 0320 - po jan 123050  | 551-58-04-45  | Soul      |  |
|    | 20307 20503-0-           | 599-12-14-85  | JUN       |  |
|    | vourpublic Suyus         | 577 - 920 - 859   | J. 2.14   |  |
|    | 3723h 872 mm             | 599 513 - 719   | 5.20      |  |
|    | 210628-24000             | FF1/62339   | 3.10/10   |  |

|    |                   | საჯარო განხილვა   |           |
|----|-------------------|---|-----------|
| N⁰ | სახელი, გვარი     | საკონტაქტო ინფორმაცია<br>(ტელეფონი, ელ. ფოსტა, მისამართი) | ხელმოწერა |
| 5  | 0080 808533       | 544-53-40-01  | 5.5.5.5   |
| H. | sur sylvzign      | 32ml 33<br>551-40-45-18                                   | 8.557     |
| U  | hlins Lyh2 500    | 551-77-22-84  | FM        |
| 6, | ngmemb yggerdarge | 595 - 33 - 99 - 15  | 6. LAR    |
|    |                   |   |           |
|    |                   |   |           |
|    |                   |   |           |