ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

for the subproject

“Improving the accessibility and attractiveness of the “Sunny lake” settlement Mantovo and its surrounding”

August 2018, Konche
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1. Introduction

The Local and Regional Competitiveness Project (LRCP) is a four-year operation for investment, supported from European Union, which use IPA 2 funds for competitiveness and innovations in Macedonia. With LRCP is managed as hybrid trust fund, it consists of four components its administered the World Bank and its carried out by the Government of the Republic of Macedonia. The project provides funding for investment and capacity building for supporting sector growth, investment in destinations and the creation of prosperity in certain destinations. On regional and local level, the project supports selected touristic destinations in the country through a combination of technical assistance for improving destination management, investment in infrastructure and investment in connectivity and innovation. Investments are made through a grant scheme for regional tourism actors, such as municipalities, institutions, NGOs and the private sector. This environmental and social management plan (ESMP) is prepared for the activities undertaken for the subproject “Improving the accessibility and attractiveness of the Sunny lake settlement Mantovo and its surrounding”. The ESMP represents the environmental document consisting of a description of the project, technical details, scope, environment and location, on the basis of which environmental and social risks and measures for avoidance and mitigation are assessed. The application of measures for mitigation the perceived risks and problems identified in the ESMP is compulsory. ESMP is prepared in line with the Environmental and Social Management Framework (ESMF) that guides the project implementation. All activities of the sub-project must be implemented in line with the ESMF.

Lake Mantovo according to all characteristics is considered a tourist site with the highest potential in the area of Konche Municipality, i.e. the lake and its surroundings is a tourist resource on which the municipality plans to develop tourism. The lake is located at a distance of 15 km from Konce, 18 km from Radovis and 25 km from Stip, making it attractive for visitors from the wider area. To the lake itself, there is a “Sunny Lake settlement Mantovo” with an existing urban plan.

With the subproject will eliminate the lack of accessibility and attractiveness to the natural beauties in the surroundings of Lake Mantovo, including road rehabilitation, mapping and marking of hiking trails, setting lighting, urban equipment and promotion of the site. Priority segments that are targeted: domestic and regional short-holiday tourists, as well as independent active tourists. At the beginning, there will be one-day tours, with the possibility of continuing their stay.

The nature of the project targets Lake Mantovo, i.e. overcoming the limit of access to authentic natural beauties and activities that are a valuable resource in the municipality, and which are not sufficiently exposed within the destination. At this point the investment in infrastructure pointed at the target segments are limited, due to which priority has not been given to developing tourist destinations and attractiveness in nature.
By overcoming these shortcomings, the sub-project will contribute to increasing the attractiveness, and hence increasing the number of tourists and economic activities in the municipality.
2. Project description

2.1 Introduction

After the determined tourist potential of the accumulation Mantovo, the municipality of Konce started preparation of project documentation in order to improve accessibility and availability to the tourist location and increase its attractiveness. The achievement of this goal is foreseen through: satisfying the needs and expectations of the priority market segments and visitors through activities and attractions within the touristic location, improving the tourist infrastructure through accessibility to the tourist sites for recreation and rest of the potential visitors and promotion of the tourist location through the distribution of information (printed and electronic).

The realization of the project goals is expected to result with the following results:

- Rehabilitation of the local road Dam Mantovo – v. Gabrevci, with length of 6,575 meters in order to provide safe access to Lake Mantovo;
- Mapped and marked 2 hiking trails. One on the locality "Chukata" with length of 1,000 m and second path "Sunny lake settlement Mantovo" ("Vlachki Cottages" - Mantovo lake) with length 2,000 m;
- The attractiveness of the site "Vlashki Cottages - Monastery St. Giorgi" through illumination of the site;
- Installed urban equipment (benches and bins);

2.2 Project location

*Local road Dam Mantovo – village Gabrevci*

The route of the existing local road Dam Mantovo – v. Gabrevci is situated on south-west slopes, along the right bank of the Lakovichka River, i.e. the hydro accumulation Mantovo. The route is defined by the choice of fixed points determined on the basis of the configuration of the ground perceived in the situational bases and the recognition of the terrain carried out by the designer. The surroundings of the existing road are mostly abandoned fields with low solvency, rare forests and pastures.

*Hiking trail to Teskovechka Chuka:*

The hiking trail is an existing one. It starts from the local road approximately from the chainage km 2 + 850 and continues to the top of the hill Teskovechka Chuka.

*Hiking trail "Vlashki Kolibi – Monastery St. Giorgi:*

The hiking trail is an existing one. It starts from the site Vlashki Kolibi and moves along the banks of the accumulation Mantovo.
Lighting at the site Vlaski Kolibi:

With this project activity is planned illumination of the entrance of site Vlashki Kolibi.

Urban equipment:

It is envisaged to install urban equipment, benches and bins near the local road near the chainage km 3 + 300.

**Figure 1** Satellite image of overall project activities (Source: Goggle Earth)
Figure 2 Satellite view of a part of the local road, hiking trails (yellow), lighting (white) and the location planned for the installation of urban equipment (Source: Goggle Earth)

The project locations, according the Agency for Real Estate Cadastre of the Republic of Macedonia (www.katastar.gov.mk), cover a large number of cadastral parcels that enter the borders of the Municipality of Konce. Below is a list of Cadastre parcels on which the project activities will be realized:

Current owner of the road "Dam Mantovo – v. Gabrevci" is the Municipality of Konce.

The owner of the other locations where interventions are foreseen is the Republic of Macedonia. The route of the "Chukata" track (trail 1) covers:

- KP no. 1620 and 1621 registered in property list no.2 and no. 3, KO Dolna Vrashtica, owned by the Republic of Macedonia.
- The route of the "Vlashki Kolibi - Lake Mantovo" trail (trail 2) includes:
  - KP no. 936 registered in property list no.16, KO Dolna Vrashtica owned by the Republic of Macedonia.
  - KP no. 434 registered in property list No. 19, KO Dolna Vrashtica owned by the Republic of Macedonia.
  - KP no. 218 registered in property list no.35, KO Dolna Vrashtica owned by the Republic of Macedonia.
  - KP no. 226 registered in property list no.51, KO Dolna Vrashtica owned by the Republic of Macedonia.
KP no. 217 registered in property list no.120, KO Dolna Vrashtica owned by the Republic of Macedonia.

KP no. 976, 977, 110, 933, 934, 225 and 220, registered in property list no.17, KM Dolna Vrashtica owned by the Republic of Macedonia.

2.3 Technical and technological description of the activities

Local road Dam Mantovo – v. Gabrevci

The road will be reconstructed within its existing dimensions – no widening or extensions will take place. Horizontal solution: Horizontal elements - the curves with which the route is constructed, are suitable for speed V= 40(30) km/h. The speed of V= 40(30) km/h implies the application of $R_{\text{min}} = 45\text{m}$ with q = 7% which is generally respected.

The repair of damaged segments is planned by replacing the existing tampon layer with a new tampon $d = 30\text{cm}$ from a crushed stone with $\text{CBR}> 20\%$. In addition to the planned replacement of the tampon layer on damaged segments of existing asphalt surface, it is foreseen to completely remove the existing damaged asphalt surface and replace it with a new layer of asphalt with a layer like the previous $d = 7\text{cm}$ with asphalt BNHS-16. After repairing the damaged parts of the road, the whole asphalt surface is sprayed with bitumen emulsion on which a new layer of asphalt BNHS-16 is asphalted in a layer of $d = 5\text{cm}$.

Vertical - leveling solution. The level of the road is predetermined by the horizontal current of the route and the selected fixed points through which the route is withdrawn. This is conditioned with raising and lowering the level line, following the configuration of the terrain along the route.

The height elevations are in range from 453.00 to the beginning up to 476.00 at km 2 + 950. In the continuation, the level line is lowered at 424.30 at the end of the route.

The level is constructed with directions and curves that are in accordance with the road range and the project speed. The maximum applied longitudinal slope is 10%, and minimum 0.3%.

The winding of the carriageway was carried out with transverse slopes of $B = 40\text{ km / h}$, and with exceptionally applied horizontal curves for $B = 30\text{ km / h}$.

Solution of the cross-section: With its location, this road connection in perspective can grow to a regional road that is commented on in the introductory part of this report. However the transversal profile of the road as the first phase with this project:

- Pavement with one traffic lane $1\text{ m} + 3.50\text{ m} = 4.50\text{m}$
- flanges $2\times 0.50 = 1.00\text{m}$
Drainage: Drainage is solved by transverse and longitudinal slopes of the pavement structure itself. In this project, it is foreseen a complete clearing of the channels along the alignment, which will enable them to function normally. Additionally, it is anticipated making of AB culvert from two pipe profiles F1000 on chainage km 6 + 790.00 set with input and output head.

*Hiking trail to Teskovechka Chuka:*

The hiking trail is an existing one. It starts from the local road approximately from the station km 2 + 850 and continues to the top of the Teskovechka Chuka elevation. The trail is 1 km long. It is envisaged to mark the trail.

*Hiking trail “Vlashki kolibi – Monastery St. George”*

The hiking trail is an existing one. It starts from the site Vlashki Kolibi and moves along the banks of the accumulation Mantovo. The track is 2 km long. It is envisaged to mark the trail.

*Lighting at the site Vlaski Kolibi:*

With these project activities is planed illumination of the entrance of site Vlashki Kolibi. Plug-in, installation and placement of street lights are foreseen

*Urban equipment:*

Procurement and installation of 10 benches and the purchase and installation of 20 bins is planned.
3. Politics, legal and administrative framework

The process of environmental impact assessment serves as the primary contribution to the decision making process by the Macedonian authorities, which should approve the project before it is build and run by the World Bank, which provides funding for the project.

National legal framework

The Environmental Impact Assessment procedure has been prescribed into the Law on Environment - Off. Gazette No. 53/05, 81/05 24/07, 159/08 и 83/09; 124/10, 51/11, 123/12, 93/13, 163/13, 42/14, 129/15 and 39/16 (Chapter XI/Articles 76-94) where the requirements of the EU Directives on EIA (Directive 85/337/EEC as amended by Directives 97/11/EC, 2003/35/EC and 2009/31/EC) have been transposed.

The procedure starts when the Investor (Project Proponent) who intends to implement a project submits a Letter of intent, in written and electronic form to the Ministry of Environment and Physical Planning (MoEPP – Directorate/Administration for Environment), which is the responsible authority for the entire procedure. The Administration for Environment is obligated to give feedback on the specific request whether they should or shouldn’t necessary develop SEA, EIA or Elaborate for environmental protection.

The Screening procedure is a stage during which the MoEPP determines whether an SEA, EIA or Elaborate should be carried out or not for a certain project. For the development of projects that do not belong to the list of the projects for which the EIA procedure has to be carried out (small scale projects), there is a requirement for the preparation of an Elaborate for environmental protection-Environmental Impact Assessment Report (EIA Report)” (relevant for the Category B projects under the WB OP 4.0.1 Environmental Assessment procedure).

During the EIA Procedure within the screening phase, if the decision has been that there is no need for EIA procedure to be carried out the investor should consult procedure for development of Elaborate for environmental protection (EIA Report). This procedure is obliged for small scale projects (e.g. Reconstruction or construction of local streets, roads, construction of local drinking water supply systems, sewage systems and small scale WWTPs - less than 10 000 p.e., etc.), causing short-term, minor negative impacts to the environment.

There are two Decrees that refer to the projects for which the EIA Report-Elaborate must be prepared:

- Decree on the list of projects for which the EIA Report – Elaborate should be prepared by the investor and the EIA Report need to be adopted by the Ministry of Environment and Physical Planning (Official Gazette of RM” No. 36/12);
- Decree on the list of projects for which the EIA Report – Elaborate should be prepared by the investor and the EIA Report need to be adopted by the Mayor of the municipality (Official Gazette of RM” No. 32/12) or Mayor of City of Skopje.
The content of Elaborate for environmental protection (EIA Report) should be in line with the Rulebook on EIA Report form and content and procedure for EIA Report adoption (Official Gazette of RM No. 123/12).

The Elaborate for environmental protection (EIA Report) contains the main characteristics of the project activities, the main positive and negative environmental impacts identified taking into account the site-specific baseline environmental data. Very simplified Environmental Protection Program comprises various measures that will prevent, mitigate and compensate the adverse impact on all environmental elements need to be developed based on the national environmental legislation and good international practice. No public hearing is proposed during the preparation and adoption of the Elaborate for environmental protection (EIA Report) (according to the national legislation).

List of legal regulations and documentation on which the proposed environmental management measures are based:

1. Law on Environment (“Official Gazette of the Republic of Macedonia” No. 53/05, 81/05, 24/07, 159/08, 83/09, 48/10, 124/10, 51/11, 123/12, 93/13, 187/13, 42/14, 44/15, 129/15, 192/15 and 39/16)
2. Law on Waste Management (“Official Gazette of the Republic of Macedonia” No. 68/04, 71/04, 107/07, 102/08, 143/08, 09/11, 51/11, 123/12, 147/13, 163/13, 51/15, 146/15, 156/15, 192/15, 39/16 and 63/16)
3. Law on protection against noise in the environment (“Official Gazette of the Republic of Macedonia” No. 79/07, 124/10, 47/11, 163/13 and 146/15)
4. Law on ambient air quality (“Official Gazette of the Republic of Macedonia” No.100/12, 163/13, 10/15 and 146/15)
5. Law on nature protection (“Official Gazette of the Republic of Macedonia” No. 67/04, 14/06, 84/07, 35/10, 47/11, 148/11, 59/12, 13/13, 163/13, 41/14, 146/15, 39/16 and 63/16)
8. Law on waters (“Official Gazette of the Republic of Macedonia” No.87/08, 6/09, 161/09, 83/10, 51/11, 44/12, 23/13, 163/13, 180/14 and 146/15);
10. Law on occupational health and safety ("Official gazette of the RM" No. 92/07, 136/11, 23/13 and 25/13)


According to the national legislation, for the activities envisaged by this sub-project, an elaborate for the protection of the environment has been prepared. The elaborate is approved by: Decision to approval of elaborate on environmental protection for Rehabilitation of a local road, v. Dolna Vrashtica to v. Gabrevci, from km 0 + 602.61 to km 6 + 792.60, archival number 12-6 from 07/11/2017, issued by the Municipality of Konce. The decision is in Annex of this document.

World Bank Environmental and Social Safeguard Policies

The World Bank environmental and social safeguard policies are regarded as a cornerstone of its support to sustainable poverty reduction. The objective of these policies is to prevent and mitigate undue harm to people and their environment in the development process. These policies provide guidelines for the WB and borrowers in the identification, preparation and implementation of programmes and projects. OP 4.01 Environmental Assessment (EA) is one of 10 environmental, social and legal safeguard policies of the WB. EIA is used in the WB to identify, avoid and/or mitigate the potential negative environmental impacts associated with lending operations. The purpose of EIA is to improve decision making, to ensure that project options under consideration are sound and sustainable, and that potentially affected people have been adequately consulted. The WB's environmental assessment policy and recommended processing are described in Operational Policy (OP)/Bank Procedure (BP) 4.01: Environmental Assessment.

This policy is considered to be the 'umbrella' policy for WB environmental 'safeguard policies'. In preparation of this documentation, the following policies are used:

- Operational Policy on Environmental Assessment (OP 4.01, 1999, revised April, 2013);
- Operational Policy on Physical Cultural Resources (OP 4.11, 2006);
- Operational Policy on Natural Habitats (OP 4.04, 2001), as well as

the WB's requirements on Information Disclosure detailed in the Access to Information Policy last revised in July 2015,

The WB OP/BP on Natural Habitats seeks to ensure that WB-supported infrastructure and other development projects take into account the conservation of biodiversity, as well as the numerous environmental services and products which natural habitats can provide to human society. The policy strictly limits the circumstances under which any WB-supported project can damage natural habitats, i.e. such land and water areas where most of the native plant and animal species are still present. Specifically, the policy prohibits WB support for projects which
would lead to significant loss or degradation of any Critical Natural Habitats, whose definition includes those natural habitats which are either:

- legally protected;
- officially proposed for protection;
- unprotected but known of high conservation value.

In accordance with the WB policy on Access to Information, Public Consultations and Disclosure should follow specific procedures: Environmental and Social Management Plans will be publicly published and available on the LRCP PIU/Cabinet of the Deputy Prime Minister of the Government of the Republic of Macedonia website, Municipality of Konce and Agency for promotion and support of tourism websites and will serve as the basic document for approval.

3.1 Public consultation about the Environmental and management plan for the project

The prepared Environmental and Social Management Plan (ESMP) for this project will be part of the bidding documentation and Contract with the Contractor (along the bills of quantities) who will be obliged for implementation of the envisaged measures according to the Mitigation and Monitoring Plan. Implementation of the ESMP is mandatory for the Contractor.

In line with the ESMF, this ESMP in English, Macedonian and Albanian must be publicly consulted prior to final approval of the sub-grant. Once the draft ESMP is approved by PIU Environmental Expert and WB Environmental Specialist it will be published on the website of PIU (CDMPEA), The Agency for Promotion and Support of Tourism and web site of impacted municipality of Konce where it will remain available to the public for at least 14 days. A hard copy will be available at PIU (CDMPEA) and Municipality of Konce call for comments and call for participation in the public consultation meeting (with time and venue) will accompany ESMP. The public consultation meeting will take place in the impacted municipality near the end of consultation period. Proactively, the Applicant (Municipality of Konce), will inform and invite major project stakeholders including local NGOs, impacted communities and municipalities directly and by appropriate means. The submitted comments will be included in the Report from the public hearing which will be part of the final version of ESMP. This way all comments from the public will be available to the applicants and they will take all relevant comments and will include the answers and remarks into the final ESMP.

ESMP must be publicly disclosed and consulted in English, Macedonian and Albanian Language. The implementation of the Environmental and Social Management Plan will ensure timely undertaking of the proposed measures and will contribute for realization of the project activities without significant environmental impacts.

Proactively, the Applicant will inform and invite major project stakeholders including local NGOs, impacted communities and municipalities directly and by appropriate means. During the
period of public debate, a contact person for gathering comments and remarks in addition to Environmental and Social Management Plan will be appointed and the remarks/comments will be included in the Report for public debate. Thus, comments and remarks will be taken into consideration and will be part of the Final Environmental and Social Management Plan.
4. Basic location data

The planned activities of the subproject for “Improving the accessibility and attractiveness of the “Sunny lake settlement Mantovo” and its surrounding” territorially belong to the municipality of Konce

**Municipality of Konce – institutional capacity and demography**

Konce municipality is a rural municipality in South-east Macedonia. The center of the municipality is the village Konce and there are 13 other settlements within the Municipality of Konce. The municipality is located below the slopes of Mount Serta, about 150 km away from the capital Skopje. The municipality of Konce has a total population of 3,690 inhabitants (2002) and a total area of 233.05 square kilometers. The population of the Municipality of Konce is mainly Macedonian, but there is also a small Turkish minority.

Pursuant to the Law on Local Self-Government, the municipality of Konce is defined as a unit of local self-government, founded in 1996 with the Law on Territorial Organization. Pursuant to the Law on Local Self-Government, the competencies of the units of local self-government are defined. The municipality is a service center for the citizens in the field of urbanism, communal activities, determination of taxes and income, competence in education, environmental protection, culture, sports, local economic development, etc. Konche municipality is organized into organizational units - departments.

1. Department for urbanism, environmental protection and local economic development,
2. Finance and Budget Department,
3. Department for normative legal affairs,
4. Department for Inspection Affairs.

Utility services on the territory of the municipality of Konce are given by the municipal public utility company PCE Lakavica Konce in the part of: water supply, collection and drainage, public cleanup, collection and disposal of municipal waste, maintenance of street lighting, maintenance of local roads and streets etc. The municipality of Konce in the part of the environment has the capacity to manage through the department for urbanism, environmental protection and through the inspection department with an authorized communal inspector and junior inspector for environment protection. The municipality of Konce is a rural municipality based in the settlement Konce. Bodies of the municipality are: the mayor and the council of the municipality of Konce. The mayor as a body of the municipality is represented and represented by the municipality in accordance with its legal competences. The municipal council consists of nine members (councilors). The competencies of the municipal council are defined in the Law on Local Self-Government and in other by-laws. The municipal administration has a total of 15 employed persons, of whom 8 are civil servants. The public utility company has 11 employees.
The municipality is part of the Radovis region, and is statistically part of the South-East region. The municipality has a total population of 3,690 inhabitants with a population density of 15.17 inhabitants per square kilometer and a total area of 233.05 square kilometers. Within the Municipality of Konche there are 14 villages: Gabrevci, Garvan, Gorna Vrashtica, Gorni Lipovik, Dedino, Dolna Vrashtica, Dolni Lipovik, Dolni Radesh, Zagorci, Konche, Lubnica, Negrenovci, Rakitac and Skorusha. The Municipality of Konce is bordered with the Municipality of Stip, the Municipality of Negotino, the Municipality of Demir Kapija, the Municipality of Valandovo, the Municipality of Strumica, the Municipality of Vasilevo and the Municipality of Radovis.

Relief characteristics

The wider area of the municipality is a hilly region. The forestry and vegetation of the area is mostly rare. Low-lying forests, curved oak stems, hornbeam and other lower forest plants persist.

The morphology of the space is with a mildly distorted relief, with the presence of volcanic and degraded craters, as characteristic forms of Tertiary volcanism, giving the space specific landscapes landmarks. The slopes are crossed with numerous erosive furrows and parts. The development of the relief was mostly influenced by orogenic movements during the Alpine orogenesis, which began at the end of the Paleogene. At that time, the basic features of the relief built with tectonic processes are given. It must be pointed out that the old tectonic movements influenced the modern relief through various structures, through the position of the rocks, which directed today's erosion and the creation of the relief. Later, the younger tectonic movements in the course of the diluvium imposed a network of scattered lines. As a result of the
slopes processes, the development of diluvial-proluvial drifts, jaundice and so on. Expressed in parts of the terrain without vegetation as a result of the direction of the surface waters from precipitation in certain directions conditioned by the relief and the geological structure on the ground. As a result of river-fluvial erosion, the formation of thick plaques of unrelated alluvial-terrestrial seeds results.

**Hydrogeological characteristics**

Hydrogeological characteristics in the drainage area of the river Kriva Lakavica are of great importance for the hydrological regime. From the hydrogeological research carried out so far in the wider area and beyond, hydrogeological interpretation of the hydrogeological map were prepared. Hydrogeological mapping of the Republic of Macedonia is based on the lithological-tectonic structure of the terrain, the structure of the porosity and the filtration properties of the rocks. Given the criteria of the region, two basic types of hydrological environments are distinguished:

- Waterproofs divided into three groups: unbound quarterly sediments, solid green and similar rocks and carbonaceous rocks, and
- Not waterproof rocks are the most vulnerable: diluvial sediment, white granite, sericite-chlorite shale, Eocene conglomerates, and others.

Bearings of groundwater - aquifers: From the aspect of the hydrogeological and techno-economic values of the region, 4 types of aquifers of practical and thematic significance are identified: aquifers in lake sediments, aquifers in proluvial sediments, aquifers in marbles and a geothermal water zone.

**Climatic characteristics**

The region is affected by a moderate continental climate with distinct climatic elements that vary between the changed Mediterranean climate in the field and the mountainous climate in the mountains. The average annual temperatures in the plain range from 12.5 to 13.0 °C, and to the highest parts of the mountain range up to 7.5 °C. The warmest months are July and August, with an average temperature of 23 °C, and the coldest month is January at 1.2 °C. The average annual rainfall is 563 mm, with great variations from year to year. There is a difference between the mountain and the plains. Regarding the annual sum of sunny hours, the region has 2326 sunny hours a year, i.e. 6.4 hours per day.

**Hydrographic characteristics**

"Mantovo" is an artificial accumulation located on the river "Kriva Lakavica". The accumulation covers an area of 350 ha (494 ha) with different depths ranging from 1m. up to 40m. (20 m). Maximum elevation is 406.5 m with a total volume of 47.5 million m³ of water and a
useful volume of the accumulation of 40 million m\(^3\) of water. The accumulation "Mantovo" has a longitudinal shape and extends in the east-west direction.

On the north side it is bordered with the v. Dolna Vrashtica, on east with v. Gabrevci, on south with v. Dolni Radesh and on west with the v. Garvan, where the embankment of the dam itself is located.

The main sources of water flow are the rivers Lakavitsa, Konechka and Gabereshka. Also, as a larger catchment area, more torrents are flowing into the dam, such as: Zgorhovki, Skorushki and Borovski.

The accumulation "Mantovo" is characterized by quite high organic production because it lies on previously cultivated areas and meadows, as well as covered with bushy forest crops and not a small number of higher forest crops. The waters from this accumulation are used for irrigation. The irrigation system consists of two main channels: a left main channel with a length of 29762 m, with a permeable power of 24.3 m\(^3\) • sec\(^{-1}\); and a right-hand channel with a length of 19220 m, with a permeable power of 30.8 m\(^3\) • sec\(^{-1}\). Annually for the needs of agriculture, 8 to 10 million m\(^3\) • sec\(^{-1}\) water is spent, while 1 to 1.5 million m\(^3\) • sec\(^{-1}\) water is spent for the needs of the Bucim mine. The maximum depth of the reservoir is 40 m.

**Biodiversity and protected areas**

Forest and bushes habitats in the investigated area are generally represented by oak forests at different degrees of degradation. Almost the whole area is located in the typical belt of the downy oak and Oriental hornbeam forest. It is the dominant type of vegetation that determines the characteristics of the hilly areas and represents the lower vegetation belt.

Downy oak and oriental hornbeam forest (Querco-Carpinetum orientalis): belong to the oak forest association Querco-Carpinetum orientalis macedonicum Rud. 39 apud Ht. 1946. Downy oak (Quercus pubescens) and oriental hornbeam (Carpinus orientalis) are main edificators in these forests. Beside them, in this community there are other woody species, such as: Fraxinus ornus, Acer monspessulanum, Colutea arborescens, Coronilla emeroides, Rhamnus rhodopaea, and from the grassy species are characteristic Cyclamen neapolitanum and Carex halleriana. This association develops in almost all exposures (east, southeast, south, southwest and west) up to 600 m above sea level, but in some localities, in conditions of explicitly shallow and rocky dry soils with hot pedo-climates, it reaches up to 1000 m above sea level. In Macedonia, it is mainly widespread in the central and eastern parts.

According national legislation, in the vicinity of the project location there is not any protected area, or area designated for protection. Also, during the preparation of the project documentation, no rare or endangered species, plant or animal, was detected for the project area, or in its surroundings.
Demography

As part of the Municipality of Konce there are 11 settlements, out of which 6 are active, 3 are with very small number of inhabitants, while 2 villages do not have inhabitants at all. The total number of inhabitants in the municipality is 3,536. The population is mainly agricultural. According the data from 2011, the total number of students in the Municipality of Konce in 2011 increased by 6.5% in relation to the total number of students in 2007. Konche is the second municipality after the increase in the total number of students. According to the 2002 census, the largest ethnic groups were Macedonians, but the Turkish population also lives in the municipality. Perceptually, ethnic groups are represented:

<table>
<thead>
<tr>
<th>ethnic group</th>
<th>members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Macedonians</td>
<td>3009</td>
</tr>
<tr>
<td>Turks</td>
<td>521</td>
</tr>
<tr>
<td>Serbs</td>
<td>3</td>
</tr>
<tr>
<td>rest</td>
<td>3</td>
</tr>
</tbody>
</table>

Traffic

In the municipality of Konce, the local road network is in a very good condition, while for the streets in the settlements it cannot be said. In settlements Dedino, Lipovik and Gabrevci, only the streets that are serving as local roads, for connection with other settlements are asphalted, while streets across the other settlements are earthy, traced, some sections have a tampon but none is asphalted. If we take into account that the population is engaged in agriculture, and has a large number of agricultural mechanization, cars, vans and trucks for transport, then the need for building streets in the settlements is visible for their easier and safer movement.

Communal infrastructure

The communal infrastructure in the municipality of Konche is not at the required level. Problems exist in both the water supply and the sewerage network. Some of the smaller rural settlements still do not have a water supply network, and drinking water and other needs are supplied from local fountains and springs.

The sewerage network is also not at the required level. The majority of the settlements do not have a sewerage network and the problem of waste (fecal) waters is solved individually with septic tanks. However, there are problems in the settlements that have built a sewage network, where despite the construction of sewage networks, there are still households that are not connected to them. There is no water supply system in the villages of Gorna and Dolna Vraštica, nor in the weekend settlement Mantovo.
**Economic condition**

The once medieval episcopal center of Konce today is a typical rural municipality where agriculture, livestock, water economy and forestry were and will be directly involved in the development of the municipality of Konce with a special emphasis on the production of high quality tobacco of the type “Jaka” of about 1,000,000 kg from the producers of our municipality, which represents 5% of the total tobacco production in the Republic of Macedonia.

In the settlements in the municipality there are registered only small shopping facilities (shops), for line local road transport and small economic capacity for purchase and processing of milk.

In addition to tobacco, the municipality of Konce has large resources and potentials for the production of healthy foods also have huge forest and water wealth. For the development of the wood industry, as well as for beekeeping, and especially hunting and fishing tourism, taking into account the Mantovo, Konce 1 and Konce 2 lakes and the richness of game in Konechka Mountain as one of the richest hunting grounds in the Republic of Macedonia.

**Culture and sports**

In the Municipality Konce, the FC Konce exists, and in the municipality a traditional football tournament is held during the holiday of the municipality on July 12th. Also, the women's soccer club "Sportski dopiri" persists in the municipality. From the cultural life, in the Municipality of Konce there are the following cultural associations FA “Cvetovi” from Dedino, KUA "Karadjaoglan" from Konce and KUA “Makedonski glas” from Gabrevci.

The church of St. Stephen is a medieval Macedonian Orthodox church church in the village of Konce. The church is located in the western part of the village, in the immediate vicinity of the Goce Delchev School. It was built in the middle Ages, more precisely in 1366, in the 14th century. In the past, the church was a monastery with monks and it was named the Holy Mother of God, which is still known today among the population. This name is also associated with the miraculous icon of the Holy Mother of God, which itself appeared from the Gevgelija region in the church.

No physical cultural resources will be impacted by the sub-project: the activities are not performed on or nearby culturally or archeologically protected objects or areas.
5. Environmental impacts

Realization of the planned activities of the subproject “Improving the accessibility and attractiveness of the “Sunny lake settlement Mantovo and its surrounding”, can cause certain impacts on the surrounding environment.

Preparation of this Plan is in order to locate and determine the existence of some harmful effects on the environment as a result of the project activities that will take place during the realization of the planned project activities.

The environmental impacts of this type of project activities are categorized into two main types of activities:
- Reconstruction phase,
- Operational phase.

5.1 Emissions

In the reconstruction phase the following emissions are expected:

- Fugitive dust emission from reconstruction activities;
- Exhaust gases from construction mechanization;
- Communal waste, construction waste and excavation waste;
- Sewerage and storm water;
- Noise from construction machinery;

In the operational phase, the following emissions are expected:

- Exhaust gases from mobile sources (vehicles);
- Noise;
- Communal waste.

5.1.1 Air emissions

Air pollution is caused by emission of pollutants from mobile and point sources, also by emissions of bio-chemical substances generated in the process of fuel combustion. Data on the distribution of polluting substances in the environment and changes in their concentration over time, as well as the impact of air quality on animal forms are also important indicators in the process of assessing the impact on air quality.
Reconstruction phase

During the phase of implementation of the project activities of the subproject “Improvement the accessibility and attractiveness of the ‘Sunny lake settlement Mantovo and its surrounding” following impacts on air quality were identified:

- Fugitive dust emission from reconstruction work;
- Emission of exhaust gases from construction machinery.

The dust generated by mechanical interventions of transport machinery and the combustion of fuel machines during reconstruction works, affects the near and distant environment depending on the size of the particles (aerodynamic diameter) and conditions during activities, primarily because of the speed of the wind (which affect their distribution - transmission). The impact of fugitive dust emissions generated during the reconstruction phase will be increased with emissions from construction machinery.

Emissions of exhaust gases in the air will be generated by construction machinery.

The most common pollutants produced by the exhaust gases are SO2, NOx, CO, PM10, unburned carbohydrates, sulfur, lead, benzene and other aromatic hydrocarbons that contribute to the secondary production of ozone, and they are all present as a direct or indirect threat to human health and the environment.

The type and quantity of exhaust gases will depend primarily on the type of fuel, the condition of the vehicles, the frequency of movement and the duration of their activities. However, the quality of fuel in Macedonia follows European standards and is controlled by accredited laboratories. So, we can conclude that emissions from mobile sources engaged within this sub-project do not pose a threat to air quality.

During the reconstruction activities, the most sensitive receptors that will be exposed to emissions in the air will be employees, the surrounding local population and the biodiversity near the local road envisaged for reconstruction. The impact on air quality can be assessed as short-term, local, indirect, reversible, with a low intensity of environmental impact.

Operational phase

During the operational phase, the impacts on the air will be present during the course of the traffic in the section in question, expressed through emission of exhaust gases from combustion of fuels in internal combustion engines. It is known that 1 liter of gasoline receives about 10 m² of harmful gases that negatively affect the human organism.

Air pollution from vehicles originates from several exhausts, of which the main part, 95-99%, belongs to the exhaust gases, and the rest is derived from the crankcase, carburetor and fuel tank. In the exhaust gases of internal combustion engines only about 280 pollutants are found. The distribution of the type of emissions depending on the conditions in which the traffic is taking place (urban environment or highway) according to the tests carried out in the EU is shown in the following table:
Table 1 Distribution of emissions from motor vehicles depending on the traffic conditions (%)

<table>
<thead>
<tr>
<th>Pollutant substance</th>
<th>Urban environment</th>
<th>Highway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon monoxide</td>
<td>54</td>
<td>24</td>
</tr>
<tr>
<td>Nitrogen oxides</td>
<td>24</td>
<td>51</td>
</tr>
<tr>
<td>carbohydrates</td>
<td>60</td>
<td>21</td>
</tr>
<tr>
<td>Sulfur dioxide</td>
<td>31</td>
<td>46</td>
</tr>
<tr>
<td>Solid particles</td>
<td>17</td>
<td>59</td>
</tr>
<tr>
<td>Aldehyde</td>
<td>51</td>
<td>29</td>
</tr>
</tbody>
</table>

In the operational phase, after the reconstruction of the local road, the amount of emitted exhaust gases will increase, but this quantity is not expected to drastically change the quality of atmospheric air.

5.1.2 Water pollution

Reconstruction phase

Water pollution can be physical, chemical and biological. Physical pollution is manifested by the presence of solid particles of debris on the ground, sand, which originate from reconstruction activities. Physical contamination of liquid substances is the presence of fats and oils. It can create a film that will prevent the oxygen supply in the water stream, which prevents the normal development of aquatic flora and fauna.

Chemical pollution occurs as a result of dissolving the present pollutants in the air. These pollutants occur as result from exhaust gases from reconstruction mechanization, emissions from pollutant components from industrial and processing facilities, dissolving certain components of the surrounding land, from the use of agrochemicals and pesticides, and from animal and plant waste. Chemical pollution can be manifested in all variations from strongly strong to strong acids.

Biological contamination is a consequence of the decay of organic substances that serve as foods to various microorganisms. This contamination can occur as result of amounts of biodegradable waste from the preparatory phase.

Locations for workers and for cleaning of the engaged mechanization are potential pollution spots, due to creation of fecal wastewater, solid waste and improper daily maintenance and cleaning of the mechanization.

Pollution of groundwater and soil can occur in case of accidents i.e. spillage of fuels, oils, bitumen emulsion etc. The nearest water body near the location is the Mantovo accumulation (approx. 200m).

Reconstruction activities can cause pollution expressed through the introduction of construction waste from concrete, asphalt or other building materials. The intensity of potential impacts will depend on the physical characteristics of the site as well as on the composition of the potential pollutants.
The above-mentioned possible impacts are expected in the reconstruction of the existing local road.

**Operational phase**

In the operational phase, the sources of emissions in the waters will generally be the same as so far (in case of accidents i.e. spillage of fuels and oils).

### 5.2 Waste generation and management

Proper management of generated waste, according to generally accepted international norms and national legislation will reduce negative impact of waste on surrounding environment.

The general state of the waste management can be assessed as partially satisfactory, because it did not meet the criteria laid down in the European waste management directives, in particular with regard to the collection of waste, the absence of an integrated waste management system and the state of municipal landfills, and the emergence of a large number of illegal landfills.

For collection and transport of communal waste in Municipality of Konce is responsible Municipal Public Communal Company “Lakavica” Konce.

**Reconstruction phase**

During the activities of the subproject “Improvement the accessibility and attractiveness of the Sunny lake settlement Mantovo and its surrounding” communal waste from workers, construction waste, scratched asphalt, waste from excavation (earthen material), and the occurrence of biodegradable waste will be generated in preparatory and reconstruction phase.

Waste producers are obliged to avoid generation of waste and to reduce the harmful effects of waste on the environment, human life and health.

For proper waste management, waste produced by workers, and inert waste that will not be reused, must be disposed at a legal landfill. Contractor of the reconstruction work will have to sign contract with a licensed communal enterprise that would raise and transport the generated waste. In this phase, hazardous waste generation is not expected, but if any, it is necessary to collect and transport it by a company licensed/specialized in the management of the particular type of hazardous waste. Disposal locations will be designated and approved by the Municipality and licensed in line with the national legislation.

Types of waste generated during the reconstruction activities of the reconstruction of the section, as well as the manner of its treatment are given in the following table:
Table 2 Types of waste and quantities

<table>
<thead>
<tr>
<th>Phase</th>
<th>No</th>
<th>Type of waste</th>
<th>Number from the list of types of waste (Official Gazette no. 100/2005)</th>
<th>Quantity of waste annually expressed in tons or gallons</th>
<th>Method of treatment of waste (processing, storage, transfer, disposal, etc.)</th>
<th>Name of the legal entity which operates with waste and location where waste is disposed (landfill)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reconstruction phase</td>
<td>1</td>
<td>Mixed communal waste</td>
<td>20 03 01</td>
<td>Cannot determine</td>
<td>Temporary storage in bags, the disposal containers located at reconstruction site</td>
<td>Licensed waste management enterprise</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Organic waste (plants, roots, shrubs, etc.)</td>
<td>20 02</td>
<td>The exact quantity cannot be determined</td>
<td>Storage location determined by municipality until the handing over to the municipal LCE</td>
<td>Licensed waste management enterprise</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Construction waste</td>
<td>17 03 02</td>
<td>The exact quantity cannot be determined</td>
<td>Storage at an adequate location until disposal of a legal landfill for construction waste</td>
<td>Licensed waste management enterprise</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>scratched asphalt</td>
<td>17 03 02</td>
<td>The exact quantity cannot be determined</td>
<td>Storage at an adequate location until reuse (if possible) or disposal of a legal landfill for construction waste</td>
<td>Licensed waste management enterprise</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Earth material</td>
<td>17 05 06</td>
<td>The exact quantity cannot be determined</td>
<td>Storage at an adequate location until reuse (if possible) or disposal of a legal landfill for construction waste</td>
<td>Licensed waste management enterprise</td>
</tr>
<tr>
<td>Operational phase</td>
<td>6</td>
<td>Mixed communal waste (from picnic area)</td>
<td>20 03 01</td>
<td>The exact quantity cannot be determined</td>
<td>Temporary disposal in containers and transport and disposal at legal landfills</td>
<td>Licensed waste management enterprise</td>
</tr>
</tbody>
</table>

Operational phase

During the functioning of the projected content, it is only expected to generate municipal waste from the visitors who used them. At this stage, the municipality will oblige the licensed waste management Company to regularly and appropriately collect the generated municipal waste and transport it to the appropriate place for disposal, i.e. to the local landfill.
5.3 Soil emissions

The impacts on the soil during the realization of the project activities will be insignificant, because there is no expansion of the existing road section.

Reconstruction phase

At this phase, the following impacts will occur:

- Possible accidental leakages of fuels and oils from construction mechanization, a process that can cause impacts on groundwater, because its filtration goes through the soil;
- Inadequate management of the generated waste on the site.

Operation phase

In the operational phase, the emissions of exhaust gases resulting from traffic and generation of dust along the road will be with less intensity and impacts on the soil, due to the fact that improving the carriageway and quality of road section will reduce possibility of dust creation and will result with shortened period of driving through this section.

The effects on the soil will be indirect, cumulative, local and of minor intensity. Regarding the duration they will be continuous.

5.4 Noise and vibration

Reconstruction phase

During the realization of the foreseen project activities there will be an increased level of noise as a result of work of equipment and construction mechanization engaged in reconstruction of the local road and activities for installation of urban equipment (benches, waste bins).

The distance from the populated areas, the geological characteristics and the configuration of the terrain is essential for the impact of noise on the environment.

Meteorological conditions have a major impact on the intensity of noise and airborne shocks. The direction and speed of the wind affect the air shocks, while the sound distribution is influenced by wind speed and temperature, also depends on the height and configuration of the terrain.

The wind makes it to increase the intensity of the sound, that is, increasing the sound intensity is almost always in the direction of the wind. The influence of the wind on the intensity of noise is always greater in winter.

The limit values for the basic indicators for environmental noise are defined in Regulation on limit values of noise level ("Official Gazette" br.147/08). According to the degree of protection against noise limit values for basic indicators of environmental noise caused by various sources should not be higher than:
Table 3 Noise level in areas

<table>
<thead>
<tr>
<th>Field differentiated according to the level of noise protection</th>
<th>Noise level expressed in dB (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ld</td>
</tr>
<tr>
<td>Area of first degree</td>
<td>50</td>
</tr>
<tr>
<td>Area of second degree</td>
<td>55</td>
</tr>
<tr>
<td>Area of third degree</td>
<td>60</td>
</tr>
<tr>
<td>Area of fourth degree</td>
<td>70</td>
</tr>
</tbody>
</table>

Legend: -Ld - day (period from 07:00 to 19:00)-Lv - evening (time from 19:00 to 23:00) - Ln - night (time 23:00 to 07:00)

Areas under the protection level of noise are specified in the Rules for the locations of the measurement stations and metering stations ("Official Gazette of RM" no. 120/08).

- Area with I degree of noise protection;
- Area with II degree of noise protection;
- Area with III degree of noise protection;
- Area with IV degree of noise protection.

According the Rulebook for the locations of monitoring stations and measuring points ("Official Gazette of RM" no. 120/08), the project location will be in Area with I degree of noise protection, space intended for tourism and recreation, areas near medical equipment and hospitals, and area of national parks and nature reserves.

**Operational phase**

In the operational phase, at least the use of the local road is expected to result in a slight reduction compared to the previous one, as the friction of the tires with the newly installed asphalt will be reduced and cracks and holes will be fix. No noise is expected from the functioning of the other project elements.

**5.5 Biodiversity (flora and fauna)**

With the realization of the project, the impact of the activities foreseen with the project of the surrounding flora and fauna will occur in the reconstruction and operational phase. There are not rare and endangered species of flora and fauna as well as protected areas of nature in or near locations where project activities are planned (route of the existing local road as well as both of the hiking paths). The location is not in vicinity of protected areas, so no critical or natural habitats will be endangered.
Reconstruction phase

In this phase, the impacts on the surrounding biodiversity will occur as a result of the use of construction mechanization, noise generation, fugitive dust emission and emission of exhaust gases, as well as an increase in the number of employees at the site.

Operation phase

There are not rare and endangered species of flora and fauna along the section, there are primitive plants and arable land, so the impacts are considered insignificant if appropriate mitigation, indirect, cumulative, local, reversible and short-term measures are implemented.

5.6 Social impacts

Project activities do not include land expropriation and therefore there are no social impacts as a result of land expropriation and displacement-related problems. During the implementation of the projected activities, some impacts on the local population may arise as a result of the limited/partial function of the local road, increased noise, fugitive emissions of dust, etc. But these impacts will be short-term and limited to the space around the location foreseen by the project activities.
6. Mitigation measures

Mitigation measures are described in this section, and detailed mandatory mitigation measures are provided in a table in the chapter on the Mitigation and Monitoring Plan.

The contractor must agree to all requirements in order to eliminate the potential for injuries to workers, locals and tourists. All reconstruction activities must be carried out by trained workers.

Parties responsible for implementing the environmental mitigation and monitoring plan:

1. Contractor (company selected in the tender)
2. Supervision engineer
3. Applicant (Beneficiary) / Municipality of Konce.

6.1 Air

During reconstruction work, following preventive measures should be implemented in order to minimize negative impact on air:

- avoiding work mechanization in the so-called "idle";
- spraying with water to reduce the amount of fugitive dust;
- determination of the period for machine operation;
- residents / sensitive receptors will be informed about construction activities and working hours;
- Implementation of regular periodic and preventive maintenance of vehicles and construction machinery in order to reduce leakage and emissions.

6.2 Water

During reconstruction work, following preventive measures should be applied in order to minimize the negative impact on surface and groundwater:

- Carrying out regular maintenance of vehicles and construction mechanization and periodic repairs according to procedures in order to reduce leakage, emissions and dispersion. Maintenance, washing and repairs of vehicles and construction mechanization are forbidden on the construction site location;
- Contractor vehicles and construction mechanization use existing access roads;
- Careful selection of the location for building material, warehouses / disposal of the construction waste (in coordination with responsible municipal staff);
• The excavated soil should be adequately enclosed to secure its disbursement through erosion and final disposal in the aquatic environment;
• No waste of any type will be discarded into the environment, including water bodies;
• Watercourses will be isolated from the works;
• There will be surface runoff management to prevent water pollution;
• No contaminated water will be released to the environment without a prior treatment;
• Soil erosion measures will be applied wherever necessary.

6.3 Soil

The area of the reconstruction site will be limited on existing road with its embankments and drainage objects.

• Careful planning of the reconstruction works in order to reduce the negative effects and ensure the prevention of soil pollution;
• Reducing the size of the site due to the minimization of the land that will receive negative impact;
• All of the hazardous materials as fuels, lubricants, glues as well as packaging waste and hazardous wastes (if any) must be placed in separated appropriate containers (suitable to accept and contain any kind of leakages) located on construction site, protected from extreme weather conditions (rain, snow, wind);
• Protection of construction materials and stopping of construction activities in conditions of torrential rains;
• The area of the reconstruction site will be limited;
• All borrowings of gravel and sand, i.e. landfills where excess of excavated material will be disposed must posses’ appropriate permits/approvals;
• In case of occurrence of contaminated soil from the eventual release of oils from the construction mechanization, contaminated soil should be removed and treated as hazardous waste, and for the further handling of hazardous waste, the Contractor should act in accordance with Article 57 of the Law on Waste Management ("Official Gazette of RM" no. 68/04, 71/04, 107/07, 102/08, 134/08, 82/09, 124/10, 09/11, 47/11, 51/11, 163/11, 123/12, 147/13, 163/13, 51/15, 146/15, 156/15, 39/16 и 63/16);
• Geotechnical studies and works will take place where needed;
• Soil erosion prevention will be applied at vulnerable locations.
6.4 Noise

During the reconstruction works, following preventive measures should be implemented in order to minimize the negative impact on noise:

- Reconstruction activities can only take place during the daytime (07-19h);
- Reconstruction activities should be planned appropriately to reduce the use time of the equipment that creates the most intense noise;
- During the operations the engine covers of generators, air compressors and other powered mechanical equipment should be closed, and equipment placed as far away from residential areas as possible.
- use of best building practices with particular emphasis on noise levels.

6.5 Waste

During the reconstruction works, following preventive measures should be implemented in order to minimize the negative impact on waste:

- Classification of waste according to the national List of Waste (Official Gazette no.100/05);
- Determination of waste characteristics;
- Storage on places designated for that purpose;
- If the waste has one or more hazardous characteristics, the creator and / or owner is obliged to classify the category of hazardous waste and handle it as hazardous waste. There will be no waste types mixing;
- Establishing contact with authorized collectors, transporters of different fractions of waste and enabling its safe final disposal;
- Reconstruction activities will end (finish) only after all waste materials have been removed (no waste must be left on the construction site) / collected by authorized company;
- It is forbidden to burn waste at the reconstruction site.
- A waste that is generated during the stay and work of the Contractor employees, applying the best management practices, should be collected, transported and deposited in a landfill that meets the basic standards in accordance with the legal acts.

6.6 Biodiversity (flora and fauna)

As a measure for reducing the impacts of the use of construction machinery (vibration, noise and increased exhaust emissions) it is recommended to use proper construction mechanization with appropriate technical characteristics and use of adequate propellant fuels.
The footprint of reconstruction works should be reduced to a minimum at the reconstruction site at the planning stage. It is forbidden to collect firewood from and around the workspace. Animal harassment and the collection of plants in that area are prohibited.

With the commencement of reconstruction activities, more precisely with the beginning of earthworks, it is necessary to remove and appropriately dispose of the surface layer of the soil, which later in the final part of the reconstructive phase would be used for the re-cultivation of possible embankments or incisions. Greening will be carried out only with the native plant species.
7. Environmental and social management plan

The Environmental and social management plan (ESMP) is a document that defines the measures, procedures and responsibilities of the involved parties in implementation of the project. ESMP consists of a set of measures for reduction, monitoring and institutional measures that need to be taken during the implementation as well as operations to eliminate the negative environmental and social impacts, their compensation or reduction to acceptable levels.

The main mitigation / mitigation activities are described in Table 4.

The plan for reducing the environmental impact during reconstruction and in the operational phase indicates the measures for reduction, costs and responsibilities in the measures for their implementation. The plan finds better ways to undertake activities to reduce or eliminate adverse impacts.

The reporting on ESMP implementation will be quarterly. To assure a degree of leverage on the Contractor’s environmental performance an appropriate clause will be introduced in the works contracts, specifying penalties in case of noncompliance with the contractual environmental provisions, e.g. in the form of withholding a certain proportion of the payments until the corrective measures are applied and sub-project in compliance, its size depending on the severity of the breach of contract. For extreme cases a termination of the contract shall be contractually tied in.

Implementation of the ESMP defined measures will be monitored by the supervisor/supervising engineer, the authorized and/or state environmental and communal inspector as well as PIU environmental expert.

An acceptable monitoring report from the contractor or site supervisor would be a condition for full payment of the contractually agreed remuneration, the same as technical quality criteria or quality surveys.

The implementation of the measures will be followed before commencing work, during the reconstruction and after its completion.

The beneficiary (Municipality of Konce) is obliged to regularly submit quarterly reports on the implementation and monitoring of environmental mitigation measures (e.g. in the form of a tabular overview (tables mitigation plan and monitoring plan) with an additional column giving the status of the measures, observations and comments, and Monitoring of the measure (implemented / not implemented, results, observations, comments, concerns, when, etc.).
# Table 4 Environmental and social management plan

<table>
<thead>
<tr>
<th>Activity</th>
<th>Expected Environmental Impact</th>
<th>Mitigation Measure</th>
<th>Responsibility for Implementing Mitigation Measure</th>
<th>Period of Implementing Mitigation Measure</th>
<th>Cost associated with implementation of mitigation measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workers and local population</td>
<td><strong>Possible adverse social and health impacts for the workers and local population as a result of non-compliance with the safety measures</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Design/Preconstruction phase</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Design/Preconstruction phase - All activities**

- Planning of the time for startup of the project activates.
- Public is informed of works through Notification at Municipality Notice Board and web site and through other means, if needed.
- All needed permits, opinions and decisions have been obtained before the works commence.
- Local and Environmental inspections have been notified of works before they start.
- Set up a special traffic regime, approved by the competent authority (e.g. traffic police);
- safety measures for use of urban equipment are included into the design;
- Develop Accidental Situation Plan

Municipality of Konche, contractor, supervising engineer

Prior to start of reconstruction works

the expenditure is included in budget
Environmental management plan for the subproject “Improving the accessibility and attractiveness of the Sunny lake settlement Mantovo and its surrounding”

| Light pollution | Selection/design of lamps will include light pollution minimization. | Municipality of Konche, contractor, supervising engineer | Prior to start of reconstruction works | the expenditure is included in budget |

### Reconstruction phase

| Construction phase – all works | Possible adverse social and health impacts for the workers and local population as a result of non-compliance with the safety measures | Contractor and subcontractors have valid operating licenses; Implementation of Good construction practices during the reconstruction phase including:  
- Ensure proper marking of the project locations with tapes and warning signs as well as fencing off parts of construction that are dangerous and where necessary for any reason;  
- Installation of signs for reducing / limiting of the vehicle speeds near the project location  
- Access of non-authorized personnel within the project locations is not allowed.  
- Ensure good organization of the site and housekeeping;  
- Special traffic regime is set, approved by the competent authority (e.g. traffic police) for the vehicles of the contractor during the period of construction (together with the municipal staff and police department) and installation of signs to ensure safety, traffic flow and access to land and facilities;  
- Safe passages are provided for pedestrians;  
- Set up of vertical signalization and signs at the beginning of the project | Participants related to the performance of reconstruction activities | During the reconstructive phase of the project activities | the expenditure is included in the bill of quantities |

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reconstruction site;
- Machines should be handled only by experienced and appropriately trained personnel, thus reducing the risk of accidents;
- All workers must be familiar with the fire hazards and fire protection measures and must be trained to handle fire extinguishers, hydrants and other devices used for extinguishing fires.
- Workers must be adequately trained, certified and experienced for the work they are performing.
- Devices, equipment and fire extinguishers should be always functional, so in case of need they could be used rapidly and efficiently.
- First aid kits should be available on the site and personnel trained to use it.
- Procedures for cases of emergency (including spills, accidents, etc.) are available at the site.
- Wearing protective equipment and clothes (hardhats, etc.) at all times.

### Impacts on the air

<table>
<thead>
<tr>
<th>Construction phase – all works</th>
<th>Appearance of fugitive dust during reconstruction activities</th>
<th>- Spraying with water on windy and dry days to reduce the amount of fugitive dust;</th>
<th>Participants related to the performance of reconstruction activities</th>
<th>- During the reconstructive phase of the realization of the project activities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exhaust gases from construction machinery</td>
<td>- Prevent dusting during upload and unload;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Use of proper construction mechanization;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Avoiding work mechanization in the so-called &quot;idle&quot;;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Determining the duration of machine operation;</td>
<td></td>
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</tbody>
</table>
- Residents / sensitive receptors will be informed about construction activities and working hours;
- Vehicles loads likely to emit dust must be covered
- Roads are regularly swept and cleaned at critical points
- Keep the topsoil and stockpiles separate. Protect with sheets/fences in the case of windy weather.
- Locate stockpiles away from drainage lines, natural waterways and places susceptible to land erosion
- Ensure all transportation vehicles and machinery have been equipped with appropriate emission control equipment, regularly maintained and attested.
- Ensure all vehicles and machinery use petrol from official sources (licensed gas stations) and on fuel determined by the machinery and vehicles producer.

<table>
<thead>
<tr>
<th>Impacts on water and soil</th>
<th>Construction phase – all works</th>
<th>Participants related to the performance of reconstruction activities</th>
<th>During the reconstructive phase of the realization of the project activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Spillage of fuel or motor fats and oils, Discharge of waste water from workers Accident of construction machinery Blur the waters through the input of</td>
<td>- Carrying out regular maintenance of vehicles and construction mechanization and periodic repairs in accordance with the procedures in order to reduce leakage, emissions and dispersal The washing, maintenance and repairs to vehicles and construction machinery are forbidden to be carried</td>
<td>Participants related to the performance of reconstruction activities</td>
<td>During the reconstructive phase of the realization of the project activities</td>
</tr>
<tr>
<td>the expenditure is included in the bill of quantities</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| construction material or waste | out at the construction site itself.  
- The vehicles and construction machinery of the contractor use existing access roads  
- Careful selection of the location for building materials, warehouses/temporary storage of construction waste; location must be defined/approved by the Municipality.  
- The excavated earthen material should be adequately enclosed to ensure that it is deposited in the aquatic environment;  
- No mineral or other waste is to be stored near watercourses;  
- No water will be released to the a natural recipient without a prior treatment and no water will be released into the lake or its tributaries;  
- Prevent hazardous spillage coming from waste (temporary waste storage will be leakage-proof and those for hazardous or toxic waste equipped with secondary containment system, e.g. double walled or bonded containers).  
- If hazardous spillage occurs, curb and remove it, clean the site and follow procedures and measures for hazardous waste management.  
In the case of any run-off coming from works area possibly contaminated by hazardous substances shall be collected on site to a temporary retention basin and transported to an |
<table>
<thead>
<tr>
<th></th>
<th>adequate licensed waste water treatment plant.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Install/provide and maintain of proper sanitary facilities for workers. The wastewater from these sources should be transported to proper waste water treatment facilities.</td>
</tr>
<tr>
<td></td>
<td>- Prevent hazardous spillage coming from tanks (mandatory secondary containment system, e.g. double walled or bounded containers), construction equipment and vehicles (regular maintenance and checkups of oil and gas tanks, machinery and vehicles can be parked (manipulated) only on asphalted or concrete surfaces with surface runoff water collecting system.</td>
</tr>
<tr>
<td></td>
<td>- Working site run-offs with possible charge with suspended matter should be contained, spillage to natural flows is forbidden.</td>
</tr>
<tr>
<td></td>
<td>- Water, and other components, in concrete mixture shall be clean and free of harmful chemicals;</td>
</tr>
<tr>
<td></td>
<td>- Protection of construction materials and stopping reconstruction activities in conditions of heavy rains;</td>
</tr>
<tr>
<td></td>
<td>- All hazardous materials, such as fuel, lubricants, adhesives, and packaging waste are non-inert waste must be placed in special appropriate containers locked at construction site, protected from extreme weather conditions;</td>
</tr>
</tbody>
</table>
**Environmental management plan for the subproject “Improving the accessibility and attractiveness of the Sunny lake settlement Mantovo and its surrounding”**

<table>
<thead>
<tr>
<th>Impacts on soil</th>
<th>Construction phase – all works</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Carry out surface drainage works to divert rainwater that would erode the soil; Water for the construction will be supplied from the existing sources and there will be no new wells or use of natural waterbodies/courses.</td>
<td></td>
</tr>
<tr>
<td>- No anticorrosive will be applied at the site;</td>
<td></td>
</tr>
<tr>
<td>- When applying protective coatings and paint, measures will be taken against accidental spilling;</td>
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</tr>
<tr>
<td>- Apply storm water management and soil erosion prevention measures.</td>
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</tr>
<tr>
<td>In the case of water contamination, notify the competent authorities immediately (including water supply company).</td>
<td></td>
</tr>
<tr>
<td>- Fugitive emission of dust from scratching and removal of asphalt;</td>
<td></td>
</tr>
<tr>
<td>- Emissions of exhaust gases from the construction mechanization engaged for realization of activities;</td>
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</tr>
<tr>
<td>- Leakage of fuels and</td>
<td></td>
</tr>
<tr>
<td>- Careful planning of the reconstruction works in order to reduce the negative effects</td>
<td></td>
</tr>
<tr>
<td>- Reducing the size of the site due to the minimization of the land that will suffer a negative impact</td>
<td></td>
</tr>
<tr>
<td>- All hazardous materials, such as fuel, lubricants, adhesives, and packaging waste are non-inert waste and must be placed in special appropriate</td>
<td></td>
</tr>
<tr>
<td>Participants related to the performance of reconstruction activities</td>
<td></td>
</tr>
<tr>
<td>During the reconstructive phase of the realization of the project activities</td>
<td></td>
</tr>
<tr>
<td>the expenditure is included in the bill of quantities</td>
<td></td>
</tr>
</tbody>
</table>
Environmental management plan for the subproject “Improving the accessibility and attractiveness of the Sunny lake settlement Mantovo and its surrounding”

<table>
<thead>
<tr>
<th>Waste generation</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction phase – all works</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Generation of mixed communal waste</td>
<td>- Selection of the generated waste</td>
<td>Participants related to the performance of reconstruction activities</td>
</tr>
<tr>
<td></td>
<td>- Construction waste from reconstruction activities</td>
<td>- Identification and classification of waste according the national List of Waste (Official Gazette no.100/05),</td>
<td>During the reconstructive phase of the realization of the project activities</td>
</tr>
<tr>
<td></td>
<td>- Earth material</td>
<td>- Determination of waste characteristics;</td>
<td>the expenditure is included in the bill of quantities</td>
</tr>
<tr>
<td></td>
<td>- scratched asphalt</td>
<td>- Storage on places designated for that purpose;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Landfills for temporarily and final disposal must be licensed, and approved by the Municipality;</td>
<td></td>
</tr>
</tbody>
</table>

- Oils from construction mechanization, a process that can cause impacts on groundwater, as its filtration goes through the soil;
- Inadequate management of generated waste at a location;
- Pollution of groundwater and soil can occur in case of accidents and emergencies.

- Containers located at the construction site, protected from extreme weather conditions
- Protection of building materials and stopping reconstruction activities in conditions of heavy rains.
- The area of the reconstruction site should be limited.
- All purchase of gravel and sand, including places where the excess of the excavated material will be disposed, must possess appropriate permission / approval. There will be no taking mineral material (gravel, sand, stone, etc.) form the surrounding.
- In case of occurrence of contaminated soil from the eventual release of oils from the construction mechanization, contaminated soil should be removed and treated as hazardous waste.
- Containers for each identified waste category are provided in sufficient quantities and positioned conveniently.
- Waste collection and disposal pathways and licensed landfills/processing plants will be identified for all major waste types expected from demolition and construction activities. For management of hazardous wastes, instructions/guidelines from Ministry of Environmental Protection and Physical Planning will be sought and followed.
- Mineral (natural) construction and demolition wastes will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and temporarily stored in appropriate containers. Depending of its origin and content, mineral (soil stone, etc.) waste will be reapplied to its original location or reused and with approval form the Municipality.
- The records of waste disposal will be regularly updated and kept as proof for proper management, as designed.
- Whenever feasible the contractor will reuse and recycle appropriate and viable materials. Discarding any kind of waste (including organic waste) or waste water to the surrounding nature or water-bodies is strictly forbidden.
- Collect, transport and final disposal/processing of the communal waste by a licensed company.
<table>
<thead>
<tr>
<th>Construction phase</th>
<th>Toxic / hazardous materials and waste management. Materials management</th>
<th></th>
<th>Participants related to the performance of reconstruction activities</th>
<th>During the reconstructive phase of the realization of the project activities</th>
<th>the expenditure is included in the bill of quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td>- If the waste has one or more hazardous characteristics, the creator and / or owner is obliged to classify the category of hazardous waste and handle it as hazardous waste. - All waste will be collected and disposed adequately by licensed collectors and to licensed landfills; - Reconstruction activities will end (finish) only after all waste materials have been removed (no waste must be left on the construction site)/ collected by authorized company; - It is forbidden to burn waste at the construction site; - A waste that is generated during the stay and work of the Contractor employees, applying the best management practices, should be collected, transported and deposited in a legal landfill that meets the basic standards in accordance with the legal acts.</td>
<td>- Temporarily storage on site of all hazardous or toxic substances (including wastes) will be in safe containers labeled with details of composition, properties and handling information. Chemicals are managed, used and disposed, and precautionary measures taken as required in the Material Safety Data Sheets (MSDS). - Hazardous substances (including liquid wastes) will be kept in a leak-</td>
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</tbody>
</table>
| proof container to prevent spillage and leaking. This container will possess secondary containment system such as bunds (e.g. bounded-container), double walls, or similar. Secondary containment system must be free of cracks, able to contain the spill, and be emptied quickly.
- The containers with hazardous substances must be kept closed, except when adding or removing materials/waste. They must not be handled, opened, or stored in a manner that may cause them to leak.
- The containers holding ignitable or reactive wastes must be located at least 15 meters (50 feet) from the facility’s property line. Large amounts of fuel will not be kept at the site.
- The wastes are never mixed and are transported by specially licensed carriers and disposed/processed only in a licensed facility.
- Paints with toxic ingredients or solvents or lead-based paints will not be used.
- Hazardous waste will be transported and handled only by licensed companies in line with the national regulation.
- Hazardous waste will be disposed only to licensed landfills or processed in licensed processing plants |
- No new materials containing asbestos or lead-based paint will be used.
- Coarse aggregate in concrete applied and used in rehabilitation need to conform to durability and gradation requirements. The aggregate must be virgin (not used previously) and preferably locally produced.
- Mineral resources (aggregate, sand, gravel, etc.) are procured only from licensed companies with valid concessions for extraction/exploitation. The companies can prove H&S measures and environmental management is in place.
- Existing quarries and asphalt plants are used;
- Producer of asphalt, concrete, and the stone aggregate quarry has to obtain/hold all required working and emission permits and quality certifications, and has to present a proof of conformity with all national environmental and H&S legislation.
- Asphalt and bitumen emulsion application will take into account metrological data and conditions when planned and carried out (raining periods, overcast, cooler and dumper weather, etc.)
- Ensure all transportation vehicles and machinery have been equipped with appropriate emission control equipment, regularly maintained and attested.
- Positioning of the emulsion sprayer should be such so spaying beyond the area to be primed or primer sealed. All materials have to be approved by the site engineer.

**Impacts due to increased noise level**

| Construction phase – all works | Increased noise level as a result of reconstruction activities | Construction activities can only take place during the daytime (07-19h)  
- Construction activities should be planned appropriately to reduce the use time of the equipment that creates the most intense noise  
- During the operations the engine covers of generators, air compressors and other powered mechanical equipment should be closed, and equipment placed as far away from residential areas as possible | Participants related to the performance of reconstruction activities | During the reconstructive phase of the realization of the project activities | the expenditure is included in the bill of quantities |
| Construction phase – all works | Cultural Heritage (chance findings) | In the case of chance findings, the works must be stopped immediately and competent authorities, (Ministry of Culture, Directorate for Protection of Cultural Heritage – Skopje and Museum and Institute Shtip), informed within 24 hours following the national procedures. Works will recommence upon approval of competent authorities. | Participants related to the performance of reconstruction activities | During the reconstructive phase of the realization of the project activities | N.A. |
| Construction phase – all works | Impact to biodiversity | The working site will take minimal space needed;  
- Open fires and burning of waste | Participants related to the performance of | During the reconstructive phase of the | N.A. |
Environmental management plan for the subproject “Improving the accessibility and attractiveness of the Sunny lake settlement Mantovo and its surrounding”

<table>
<thead>
<tr>
<th>Operative phase</th>
<th>Waste management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction phase – all works</td>
<td>- Generate communal waste from visitors and users on the local road</td>
</tr>
<tr>
<td></td>
<td>- Concluding an agreement with a licensed waste management company for collecting and transporting generated waste to a licensed landfill</td>
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<td></td>
<td>- Beneficiary</td>
</tr>
<tr>
<td></td>
<td>In the phase of using the local road, hiking trails and urban equipment</td>
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<td></td>
<td>Depending on the tariff of the Municipal Communal Enterprise,</td>
</tr>
</tbody>
</table>

| is strictly forbidden; - Pouching and other types of disturbance of animals and plants and forest products is strictly prohibited; - When replanting or greening the site, only native plants will be used; |
| reconstruction activities |
| realization of the project activities |

Табела 11. План за ублажување на влијанијата
8. Monitoring activities

It is essential to design a monitoring program and tracking frequency in an appropriate manner in order to demonstrate the overall performance of the project as well as the short-term impacts of top-building activities. More specifically, as an integral and critical part of the EMP, the environmental monitoring program should include the following objectives:

- Determining the actual degree of impacts;
- Control of the impacts generated by the reconstruction process and the operational phase
- Checking the environmental pollution standards applicable to the project during reconstruction
- Checking and monitoring the process of implementation of environmental protection solutions during reconstruction;
- Propose mitigation measures in case of unexpected impacts
- Assessment of the impact of mitigation measures in the reconstruction and operational phases

The project will implement the environmental monitoring plan: (i) to check the work of the contractor during the implementation of the project in order to verify the contractual agreement with the envisaged mitigation measures, and then (ii) assess the actual environmental impact of the project in the years following the completion of the project. The main components of the monitoring plan are:

- Ecological parameters should be monitored;
- Specific areas, locations and parameters should be monitored;
- Applicable standards and criteria;
- Duration and frequency;
- Institutional responsibilities; and
- Costs.

The Supervising engineer, engaged by the Municipality, has an obligation to monitor and evaluate the implementation of the proposed measures within the Monitoring Plan and to inform the investor and the LRCP Project Office/Municipality of Konce. The Municipality will report on the state of the environment and implementation of mitigation and monitoring measures in the regular sub-project progress reports and in the separate ESMP Implementation Report on quarterly basis (if not differently arranged with the Environmental Expert, approved by the WB Environmental Specialist) to the Environmental Expert.
## Environmental management plan for the subproject “Improving the accessibility and attractiveness of the Sunny lake settlement Mantovo and its surrounding”

### Table 5 Monitoring plan

<table>
<thead>
<tr>
<th>What</th>
<th>Where</th>
<th>How</th>
<th>When</th>
<th>By Whom</th>
<th>How much</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parameter is to be monitored?</td>
<td>Is the parameter to be monitored?</td>
<td>Is the parameter to be monitored (what should be measured and how)?</td>
<td>Is the parameter to be monitored (timing and frequency)?</td>
<td>Is the parameter to be monitored— (responsibility)?</td>
<td>is the cost associated with implementation of monitoring</td>
</tr>
</tbody>
</table>

**Preconstruction phase**

1. Checking the necessary documentation (permits, EIA Report, etc.)
   - Offices of the municipality of Konč
   - Visual inspection of the necessary documentation
   - Before the start of the reconstruction activities
   - Supervision engineer, municipality representative, LRCP EE, (responsibility)
   - Included in sub-project budget

2. Notification of public and relevant institutions
   - Offices of Contractor
   - Visual inspection of the necessary documentation
   - Before the start of the reconstruction activities
   - Supervision engineer, municipality representative, LRCP EE, (responsibility)
   - Included in sub-project budget

3. Traffic plan is in place
   - Office of Municipality
   - Documentation inspection
   - Before the start of the reconstruction activities
   - Supervision engineer, municipality representative, LRCP EE, (responsibility)
   - Included in sub-project budget

**Reconstruction phase**

4. Occupational health and safety measures for workers, Safety measures for local population and other visitors on construction site; Safety of pedestrians; use of protective
   - All works
   - Verification of documentation and visual checks during the execution of the reconstruction works
   - During preparatory work and constantly in the course of reconstruction work
   - Supervision engineer, LRCP EE, Municipality inspection
   - Included in sub-project budget
Environmental management plan for the subproject “Improving the accessibility and attractiveness of the Sunny lake settlement Mantovo and its surrounding”

<table>
<thead>
<tr>
<th>equipment</th>
<th>All works</th>
<th>Visual inspection of the presence of dust and exhaust gases; measuring in the case of complaints or negative inspection findings</th>
<th>Constantly during the performance of reconstruction work</th>
<th>Supervision engineer, LRCP EE, Municipality inspection</th>
<th>Included in sub-project budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Occurrence of fugitive dust during reconstruction activities Exhaust emissions from reconstruction mechanization and vehicles</td>
<td>All works</td>
<td>Visual inspection of the presence of dust and exhaust gases; measuring in the case of complaints or negative inspection findings</td>
<td>Constantly during the performance of reconstruction work</td>
<td>Supervision engineer, LRCP EE, Municipality inspection</td>
<td>Included in sub-project budget</td>
</tr>
<tr>
<td>6. Spillage of fuel or motor fuel and oils, Discharge of waste water from workers Accident of construction machinery Blur the waters through the input of construction material or waste</td>
<td>All works</td>
<td>Visual inspection of the presence of oil stains on the soil. Visual inspection for discharges and oil stains in the nearest water body; sampling and laboratory testing in the case of contamination</td>
<td>Constantly during the performance of reconstruction work</td>
<td>Supervision engineer, LRCP EE, Municipality inspection</td>
<td>Included in sub-project budget</td>
</tr>
<tr>
<td>7. Leakage of fuels and oils from construction mechanization, a process that can cause impacts on groundwater, as its filtration goes through the soil; Inadequate management of generated waste at a location; Pollution of groundwater and soil can occur in</td>
<td>All works</td>
<td>Visual inspection of the presence of oil stains on the soil; sampling and laboratory testing in the case of larger spills</td>
<td>Constantly during the performance of reconstruction work</td>
<td>Supervision engineer, LRCP EE, Municipality inspection</td>
<td>Included in sub-project budget</td>
</tr>
<tr>
<td>Case of accidents and emergencies.</td>
<td>8. Generation of mixed communal waste  Construction waste from construction activities  Earth material scratched asphalt; waste management and adequate collection, transport and disposal</td>
<td>All works</td>
<td>Physical selection of waste by type of waste  Control of documentation for handed over waste to licensed companies; Visual inspection for inadequate temporarily (disposed) waste and all other mitigation measures given in mitigation plan; Municipality approvals; waste records</td>
<td>Constantly during the performance of reconstruction work</td>
<td>Contractor, Supervision engineer, LRCP EE, Municipality inspection</td>
</tr>
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</tr>
<tr>
<td>9. Occurrence and generation of hazardous waste from construction activities</td>
<td>All works</td>
<td>Visual inspection of the presence of hazardous waste; check waste records; Control of documentation for handed over waste to licensed companies;</td>
<td>Constantly during the performance of reconstruction work</td>
<td>Contractor, Supervision engineer, LRCP EE, Municipality inspection</td>
<td>Included in sub-project budget</td>
</tr>
<tr>
<td>10. Increased noise level as a result of reconstruction activities</td>
<td>All works</td>
<td>Auditive noise level assessment; measuring in the case of complaints or negative inspection findings.</td>
<td>Constantly during the performance of reconstruction work</td>
<td>Contractor, Supervision engineer, LRCP EE, Municipality inspection</td>
<td>/</td>
</tr>
</tbody>
</table>

**Operative phase**

**Waste management**
## Environmental management plan for the subproject “Improving the accessibility and attractiveness of the Sunny lake settlement Mantovo and its surrounding”

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Action</th>
<th>Timeframe</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste management</td>
<td>- Rehabilitation of local road</td>
<td>- Hiking trail to Treskovachka Cuka</td>
<td>- Lighting at the site Vlaski Kolibi: Urban equipment</td>
</tr>
</tbody>
</table>
ANNEX:

Decision to approval of elaborate on environmental protection for Rehabilitation of a local road, v. Dolna Vrashtica to v. Gabrevci, from km 0 + 602.61 to km 6 + 792.60
ОШТИНА КОЧЕ
РЕПУБЛИКА МАКЕДОНИЈА


РЕШЕНИЕ
за одобрување на елаборат за заштита на животната средина
за Рехабилитација на локален пат с.Долна Враштица до с.Габревци од
КМ 0+602.61 до КМ 6+782.60

Општина Конче

СЕ ОДОБРУВА Елаборатот за заштита на животната средина заверен во Ул.1 Бр. 12-6 од 11.07.2017 година за вршење на дејност или активност според Уредбата за дејностите и активностите за кои задолжително се изработува елаборат, а за чие одобрување е надлежен Градоначалникот на општината (Ст.в. на РМ бр.80/2009, 32/2012 и 44/2013), Прилог I Поглавје Х Точка 1 на ЕЛС Општина Конче, со роковите предложени во програмата за животната средина.

Образложен

Од ЕЛС Општина Конче е поднесено бараке и заверено со Ул.1 Бр.12-6 од 11.07.2017 година за одобрување на Елаборат за заштита на животната средина за вршење на дејност или активност според Уредбата за дејностите и активностите за кои задолжително се изработува елаборат, а за чие одобрување е надлежен Градоначалникот на општината (Ст.в. на РМ бр.80/2009 и 32/2012), Прилог I Поглавје Х Точка 1 и приложената документација кон истиот, констатира дека во предметниот елаборат заверен со Ул.1 Бр.12-6 од 11.07.2017 година составен од текстуален дел и графички прилози е изработен според бараката дефинирани со Правилникот за формата и содржината на елаборатот за заштита на животната средина, постапката за нивно одобрување, како и начинот за водење на регистарот за одобрени елаборати (Службен весник на
Environmental management plan for the subproject “Improving the accessibility and attractiveness of the Sunny lake settlement Mantovo and its surrounding”

РМ број 50/2009). Се анализирани сите извори и видови на можни влијајања врз животната средина и се земени во предвид сите неопходни компоненти во вршењето на дејноста односно активности за која се однесува елaborатот и врз основа на што се димензионарани и дефинирани мерките за заштита на медиумите и областите на животната средина.


Во врска со напред наведеното го издаваме Решението како во диспозитивот, а сопственикот на инсталацијата се задолжува целосно и без исключуши да се придржува кон пропишаните режим и мерки за заштита предвидени во Елaborатот за заштита на животната средина, како и кон дополнителни решенија во колку низ работата на објектот се покаже потреба од зголемен обем и вид на превенција.

Упатство за правно средство: Против оваа решение имате право за жалба во рок од 15 (петнаесет) дена до Министерот кој раковди со органот на Државната управа надлежен за работите од област на животната средина.

Дата
11.07.2017г.

Изработил:
Марко Ќрадаков

Контролирал:
Томе Даниловски

Одобрил:
Зоран Горданов

ГРАДОНАЧАЛНИК НА ОПШТИНА
КОНЧЕ
БЛАГОЈ ЈОВАНОВ