ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN
for the sub-project
"Lake Prilep – New adventures, new opportunities"

Prilep, 2019

Content

1. INTRODUCTION 3

2. POLITICAL, LEGAL AND ADMINISTRATIVE FRAMEWORK 4

2.1 PUBLIC CONSULTATIONS OVER THE ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN FOR THE PROJECT 7

3. DESCRIPTION OF THE PROJECT 9

3.1 INTRODUCTION 9
3.2 LOCATION OF THE PROJECT 9
3.3 TECHNICAL AND TECHNOLOGICAL DESCRIPTION OF THE ACTIVITIES 11

4. BASIC INFORMATION 24

5. ENVIRONMENTAL IMPACT 31

5.1 EMISSIONS 31
5.1.1 Air Emissions 31
5.1.2 Water pollution 32
5.2 GENERATION AND WASTE MANAGEMENT 33
5.3 SOIL EMISSIONS 35
5.4 NOISE AND VIBRATIONS 35
5.5 BIODIVERSITY (FLORA AND FAUNA) 37
5.6 SOCIAL IMPACTS 37

6. IMPACT MITIGATION MEASURES 38

6.1 AIR 38
6.2 WATER 38
6.3 SOIL 39
6.4 NOISE 39
6.5 WASTE 40
6.6 BIODIVERSITY (FLORA AND FAUNA) 40

7. ENVIRONMENTAL MANAGEMENT PLAN AND SOCIAL ASPECTS 42

8. MONITORING ACTIVITIES 72

9. ROLES AND RESPONSIBILITIES FOR IMPLEMENTATION OF THE ENVIRONMENTAL MANAGEMENT PLAN AND SOCIAL ASPECTS 77

10. ANNEX: 78

1. Introduction

The Local and Regional Competitiveness Project (LRCP) is a four-year operation for investment, supported by the European Union, which uses IPA funds 2 for competitiveness and innovation in Macedonia. The LRCP is managed as a hybrid trust fund, it consists four components and its implemented by the World Bank and the Government of the Republic of North Macedonia. The project provides funding for investment and capacity building to support the sector's growth, investment in destinations and creating 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. Investment will be 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) has been prepared for the activities carried out for the sub-project "Prilep Lake - New Adventures New Opportunities". 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 the measures to mitigate the perceived risks and problems identified in the ESMP are compulsory. ESMP is prepared in line with the LRCP 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 and this ESMP.

Prilep Lake, is a recreational site of interest to the citizens, but also a tourist motive. The landscape is characterized by extremely interesting and rare geomorphological shapes as part of the area of Markovi Kuli and Treskavec, which are the hallmark of the city. The location is at a distance of 6.2 km from the city center of Prilep, about 4 km from the Boldering point, and access road is often used by pedestrians and cyclists. The surroundings of the lake abound with evergreen forests and untouched meadows, but lacking additional contents that will enrich the attractiveness of the site.

The subproject envisages improvement of the area around Prilep Lake, improvement of accessibility and infrastructure, as well as promotion of the attraction itself. The improvement of the area includes the arrangement of an existing picnic zone consisting of an access street with parking space, a plateau with terraces, gazzebos and urban equipment, open sports (basketball, handball and 2 for table tennis) playgrounds. Improving the accessibility to the Prilep Lake provides improvement of existing cycling path and arrangement of pedestrian paths with accompanying equipment and bicycle parking lots, road signs and signalization, as well as a new daily travel line with bus transportation. In order to improve tourist offer, there are activities for cooperation with local and national tourist agencies for incoming tourism, with an emphasis on the Prilep Lake as a tourist attraction.

Adventure tourism has the potential to positively transform people, environments and economies. Throughout the activities in the sub-project will contribute to the development of adventure tourism and will imply improvement of local competitiveness, businesses and employment in the destination.

2. Political, 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 conducted by Municipality of Prilep, while EU provides funding for the sub-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 (Sub-Project Beneficiary) 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 start EA process and develop Strategic Environmental Assessment (SEA) Report, Environmental Impact Assessment (EIA) Study or Elaborate for environmental protection.

The Screening procedure is a stage during which the MoEPP determines whether a 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 obligatory 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, as determined in national legislation with two Decrees.

Following two Decrees list 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 competent authority for approval of the EIA Report is the Department for Environment within 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 competent authority for approval of the EIA Report is 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 Elaborate (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)
6. Law on packaging management and packaging waste ("Official Gazette of the Republic of Macedonia" No. 161/09, 17/11, 47/11, 136/11, 6/12, 39/12 ,163/13,146/15 and 39/16)
7. Law on safety and health in working of the Republic of Macedonia ("Official Gazette of the Republic of Macedonia" No.92/07, 136/11, 23/13 ,25/13 137/13, 164/13, 158/14, 15/15, 129/15 and 192/15)
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);
9. Law for construction ("Official Gazette of the Republic of Macedonia" No. 70/13, 79/13, 137/13, 163/13, 27/14, 28/14, 42/14, 115/14, 149/14, 187/14, 44/15, 129/15, 217/15, 30/16, 31/16 and 39/16)
10. Law on occupational health and safety ("Official gazette of the RM" No. 92/07, 136/11, 23/13 and 25/13)

11. Law for protection of the cultural heritage ("Official Gazette of the Republic of Macedonia" No. 20/04, 71/04, 115/07, 18/11, 148/11, 23/13, 137/13, 164 / 13, 38/14, 44/14, 199/14, 104/15, 154/15, 192/15 and 39/16)

According to the national legislation, for the activities envisaged by this sub-project, three Elaborates for environmental protection were prepared. Decisions on approval for environmental protection elaborates are shown below:

- Decision on approval for environmental protection elaborate on an infrastructure project for bicycle path from "Markova Cesma" to the access road for the village Prisad cadastral municipality Oreovec and cadastral municipality Prisad, Municipality of Prilep - no.10-127/2 from 09.05.2019 issued by the Municipality of Prilep (Annex 1);
- Decision on approval for environmental protection elaborate on a project for access road with a parking space for light motor vehicles in accordance with the Urban Plan for cadastral municipality Dabnica, Municipality of Prilep – no.10-78/2 from 12.03.2019 issued by the Municipality of Prilep (Annex 2);
- Decision on approval for environmental protection elaborate for a tower electrical substation and 10 (20) KV transmission line connected to the sports recreation center cadastral municipality Dabnica, Municipality of Prilep – no. УП1-11/4 655/2019, issued by the Ministry of Environment and Spatial Planning of the Republic of North Macedonia (Annex 3).

World Bank Environmental and Social Safeguard Policies

The World Bank environmental and social safeguard policies are regarded as a corner stone 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 Plan will be will be publicly published and available on the LRCP PIU/CDPMEA website, Municipality of Prilep and Agency for promotion and support of tourism websites and will serve as the basic document for approval.

2.1 *Public consultations over the Environmental and Social 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 (part of this ESMP). Implementation of the envisaged measures in this ESMP is mandatory for the Contractor.

In line with the ESMF, this ESMP must be disclosed in English, Macedonian and Albanian language and 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 web site of PIU (CDMPEA), The Agency for Promotion and Support of Tourism and web site of impacted municipality of Prilep 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 Prilep 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 Prilep), 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 mandatory 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.

3. Description of the project

3.1 *Introduction*

After determination of the tourist potential of the Prilep Lake, the Municipality of Prilep started preparing project documentation in order to enrich the tourist offers, offered by Prilep Lake. The achievement of this goal is planned through: Meeting the needs and expectations of the priority market segments and visitors through activities within the touristic location, improvement of the tourist infrastructure through accessibility of 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).

3.2 *Location of the project*

The sports-recreational complex is located in the north-west coast of the artificial lake, in the immediate vicinity of the existing motel. The location is at a distance of 6.2 km from the city center of Prilep and about 4.0 km from the point where the Boulder international competition is held.

The complex is at an altitude of 750 - 760 meters. City of Prilep is at an altitude of 650 meters, so the height difference of 100-120 meters is not a problem to overcome by walking or cycling.

The beginning of the cycling route is from the eastern exit of the city, passes through the picturesque site "Markova Cheshma", where the route continues along the local road to the southern coastal zone of the artificial lake and moves along the rocky limestone slopes of the Kozjak Mountain to the village of Podmol.

In the following are given satellite images of the scope of the Sports and recreational center and the route of the cycling route. (Figure 1 and Figure 2), as well as a table with cadastral parcels that enter the boundaries of the Sports and Recreation Center. According to urban planning documentation all of the cadaster parcels within the sport and recreation center are unoccupied building land with purpose for sport and recreational use. All of the cadaster parcels are in ownership of the republic of North Macedonia and the beneficiary does not acquire the land expropriation as well as land conversion or conversion to current use of land or resettlement of local population.

Figure 1 Satellite view of the scope of the Sports and Recreation Center

Table 1 Cadaster plots that enter the borders of the scope of the Sports and Recreation Center

No. of the CP	Culture/purpose	Area (м2)	Ownership
1489	Building land	10286	Republic of North Macedonia
1490	Building land	997	Republic of North Macedonia
1485	Building land	590	Republic of North Macedonia
1484	Building land	1773	Republic of North Macedonia
1483	Building land	2001	Republic of North Macedonia
1482	Building land	1959	Republic of North Macedonia
1491	Building land	2571	Republic of North Macedonia
1492	Building land	4597	Republic of North Macedonia
1493	Building land	2882	Republic of North Macedonia
1476 (part)	Building land	2231	Republic of North Macedonia
1495	Building land	7228	Republic of North Macedonia
1497	Building land	5406	Republic of North Macedonia
1499	Building land	2731	Republic of North Macedonia
1501/1	Building land	1392	Republic of North Macedonia
1501/2	Building land	531	Republic of North Macedonia
1500	Building land	2384	Republic of North Macedonia

Figure 2 Satellite view of the alignment of the cycling path

3.3 Technical and technological description of the activities

BICYCLE TRACK

Existing situation: The location foreseen for the bicycle track is used by cyclists for recreation. The existing track is largely untidy dirt road without illumination that restricts movement in the evening. This bicycle track is just one segment from the longer track of 23 km around Prilep Lake and the City of Prilep to be developed and utilized in near future.

Newly-designed condition: The location of this sub-project is in Cadastre Municipalities (CM) Oreovec and Prisad, Municipality of Prilep, at an altitude of 689 to 830m. It starts from the site "Markova Cesma" and goes to the access road for the village of Prisad.

The length of the track is about 7300 meters and It will be, in its entire length, upgraded existing dirt road The activity envisages an asphalt bicycle track with a total cross-sectional profile of maximum 3,0m, lit up in the full length.

The project area is about 2.2 ha. The project scope, which is the subject of the development of an infrastructure project - bicycle track, is defined in the frames of cadastral parcels that have land use

(cadastre culture/ purpose) public road and are owned by the Republic of Macedonia: CM Oreovec (CP No.4460 / 1, 3453, 3450 and 457-part) and CM Prisad (CP No. 3020).

The surface, subject of the works is an existing dirt road. Within the project scope there are no archaeological sites or real estate architectural heritage.

The terrain through which the bicycle track passes is with no visible signs of an existing landslides, or landslides that could possibly occur. The categorization of the terrain (according to GN-200 standard) is 3rd and 4th category of soil (land).

In accordance with the positive legislation and in accordance with the technical documentation (Infrastructure Project), the following project elements have been adopted:

- Project speed - 30 km / h
- Bicycle track width - in accordance with the conditions of the PI (Infrastructure Project), maximum 3,00 m
- Lane construction - Asphalt /pavement

All other elements are in accordance with the applicable technical norms and standards for the design of this type of object.

Horizontal Solution: The bicycle track is a total length of about 7300 m. Horizontal curves are chosen to be in accordance with the urban (spatial) documentation as well as to enable efficient and safe traffic.

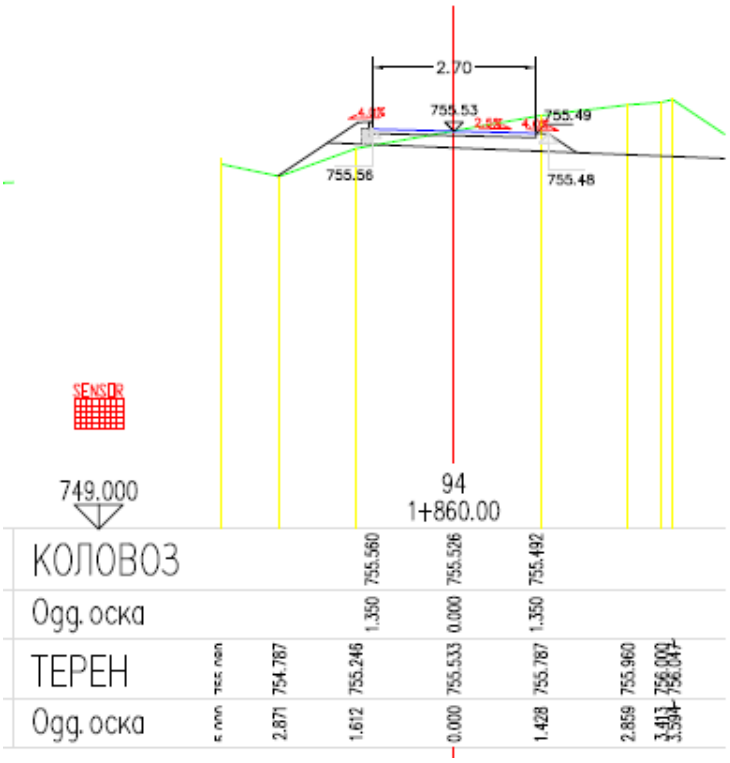

Figure 3 Cross-section of the bicycle track

Cross-section: The cross-section of the profile is defined by: The width of the lane, which is in accordance with the project documentation and in line with the existing situation on the ground (Figure 3).

Lane construction adopted for the bicycle track: The lane is asphalted with thickness of 7 cm, a gravel layer with a thickness of 20 cm and concrete kerbs 5/22/80 placed on concrete fundament.

ACCESS STREET WITH PARKING FOR LIGHT MOTOR VEHICLES

The access road and the parking lot for light motor vehicles and bicycles provided for the easy access of visitors to the existing picnic area (future sports recreational complex) is planned to be constructed in the north-western coast of the artificial lake in the immediate vicinity of the existing motel object at a distance of 6,2 km from the city centre of Prilep and at an altitude of 755,60 to 760,66 meters.

The specific location foreseen for an access road with parking space covers several parts of cadastral parcels: CP1565 / 3, CP1567 / 3, KP1583 / 1, CP1567 / 1, CP1566 and CP1565 / 1.

Existing situation: The location foreseen for the access road and parking space is in the direction of north-south and is located on undeveloped land partly covered with tampon material used as existing access to the current parking location. This area is already used as a parking space for existing picnic site, and with the investment will lead to improvement and upgrade of the existing conditions in order to improve the access to the picnic and recreational area of all visitors.

Newly-designed condition: The location has the north-south direction. The access to the parking area for light motor vehicles and bicycles is provided by the existing regional road R1312 Prilep - Izvor - Veles from the west side.

In the frame of the technical documentation (Detail Design), an Electro-technical project has been developed to elucidate the lighting of the parking area and the access road.

An entry - access street is with a width of 6 (six) meters and a length of 34,60 m. It is planned to turn to the left with a residential street with a blind end. It has a width of 5,5 m (2 x 2,75 m).

At the beginning of the residential street (internal part of the access street), a parking space for 20 light motor vehicles and one parking place for people with disabilities is planned as well. The parking lot is planned parallel to the residential street and it is 15,5m width and 47,3m long. Access from the access road to the parking area is provided through residential street with a width of 5,5m', a radius of horizontal curve of 8m' and a long slope with a length of 19,3m and a slope of 5,18% from point 3 (759,00) to the point 2 (758,00).

The lane is closed with concrete kerbs with dim 20 / 22cm.

Sidewalks are paved with becaton tiles with d = 6cm and protected with concrete kerbs with dim. 8 / 20cm.

Project Elements: The following project elements have been adopted in this project:

- range of the roadway internal access road and street with parking space
- project speed V = up to 30 km / h
- roadway width of 5,5m '- 6,0m'
- Length of parking space 7,0 + 5,5 m'
- Length of access road 34,60m'
- length of the residential street 81,52m'
- length of the blind end 10,90m'
- total length of the traffic artery (access road and residential street) 116,12m'
- total length of parking space 50,10m'
- Total area of the access road with parking space P = 1447,28m^2.

In the first phase it is foreseen asphalting of the access road (from the regional road R239 as shown on picture below), the first segment of the residential street and the parking area closed with necessary concrete edges with dimension 20 / 22cm, while in the second phase it is foreseen to asphalt the residential street with its blind end, sidewalks and planting grass on the surrounding surfaces.

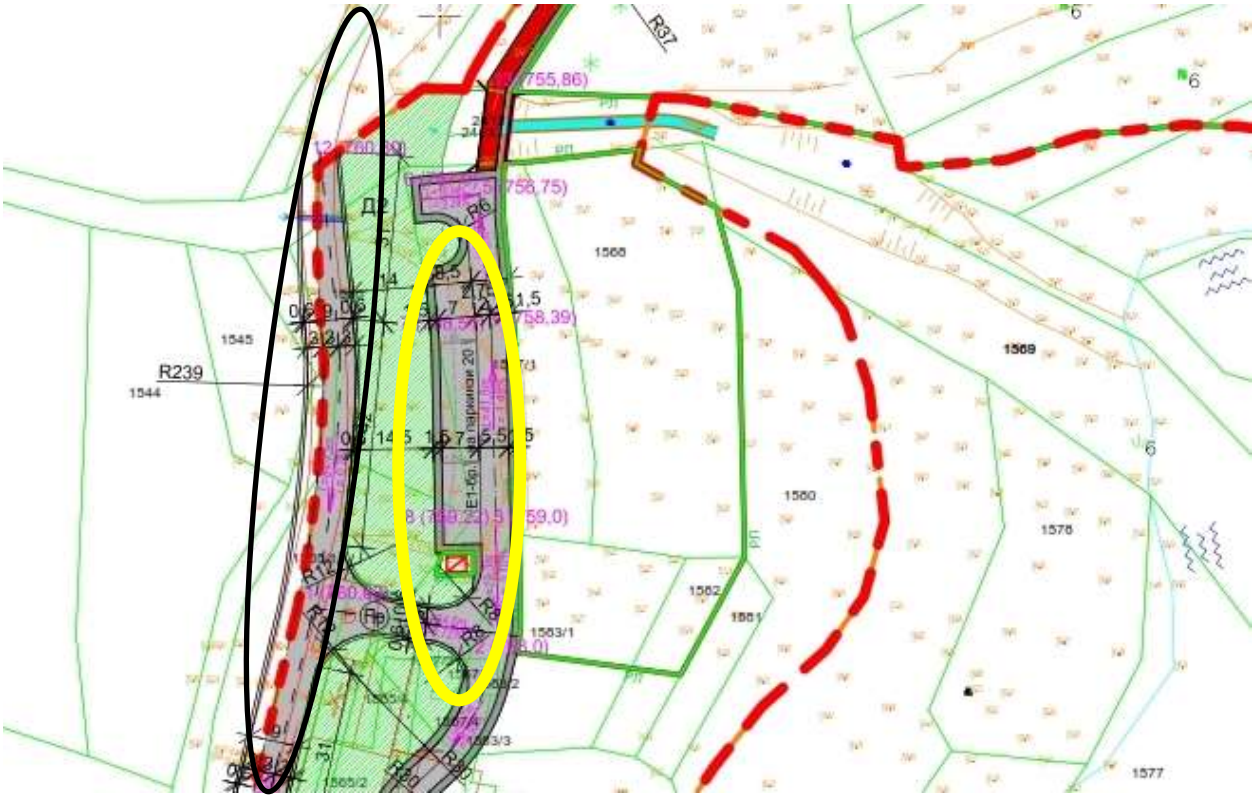

Figure 4 Schematic view of the Regonal road (marked with black), the access road and the parking space[1]

[1] The area marked with black is the existing regional road. The area marked with yellow is the existing parking area, where arrangement of access street and parking lot is planned.

Horizontal Solution: The traffic lanes on the access road are at a width of 3,0m' from the right and 3,0m' on the left side of the roadway. The residential street is with two traffic lanes with a width of 2,75 m' from the left and 2,75 m' on the right. The envisaged parking space is with a length of 47,3 m and a width of 15,5 m.

Lane construction: The lane structure of the street with parking space is chosen so that it enables efficient and safe traffic for this type of street.

Street lighting in the parking lot: The purpose of the public lighting is to ensure a comfortable and reliable traffic flow in night conditions, similar to that in daytime conditions. Considering the trend of energy saving, the LED - lamps that produce good light flux, consume little electricity and have a long duration (life). LED lighting for street lighting is designed to illuminate the parking lot.

Street lamps will be placed on galvanized poles H = 10m. Rolle 78W smart lamps, with automatic timing projected according to time period (brighter or darker) and the environment.

They are mounted on steel-galvanized poles with two sides. The assembly of the poles will be done on a concrete foundation, and for the protection against the voltage in the touch and in the trench, the iron- galvanized belt, a PVC warning belt and a power cable, are laid.

THE PLATEAU WITH TERRACES, GAZZEBOS AND URBAN EQUIPMENT

Existing situation: The location planned for the construction of a plateau with terraces, gazebos and installation of urban equipment is located within the area intended for sports and recreational center according to the spatial planning documentation.

Preparation of the terrain and performance of the contents: The terrain will be prepared with clearing of shrubs and grass (low vegetation).

Earth works: Earth works are carried out in accordance with the applicable regulations with the necessary excavation protection of the construction site. In the excavation it is necessary to perform selection of the excavated land with stronger deformable characteristics (gravel and sand). Those with weaker characteristics (humus, dust, clay) will be taken to the legal landfill for such purpose (landfill for inert waste), and the rest will be used for embankment. The excavation is carried out mechanically to the level/layer of crushed stone. The rest of the excavation is done combined mechanically and manually.

Multipurpose space: The largest object in the function of the recreational area is the multipurpose space, provided under the shades of the evergreen forest located on the site. The terrain is with relatively mild slope with West-East direction. Due to the immediate vicinity of the Regional road P1312 Veles - Izvor - Prilep, the access to the location is considerably facilitated, and thus the transport of materials. The multipurpose space is a complex of 3 gazebos and twenty benches which will serve as a place for resting of visitors and tourists (Figure 5), and plateau which will serve for performing cultural and entertainment manifestations, concerts and a place for socializing of tourists. All parts of the complex is constructed with natural materials - stone and wood in order to keep the natural ambient look.

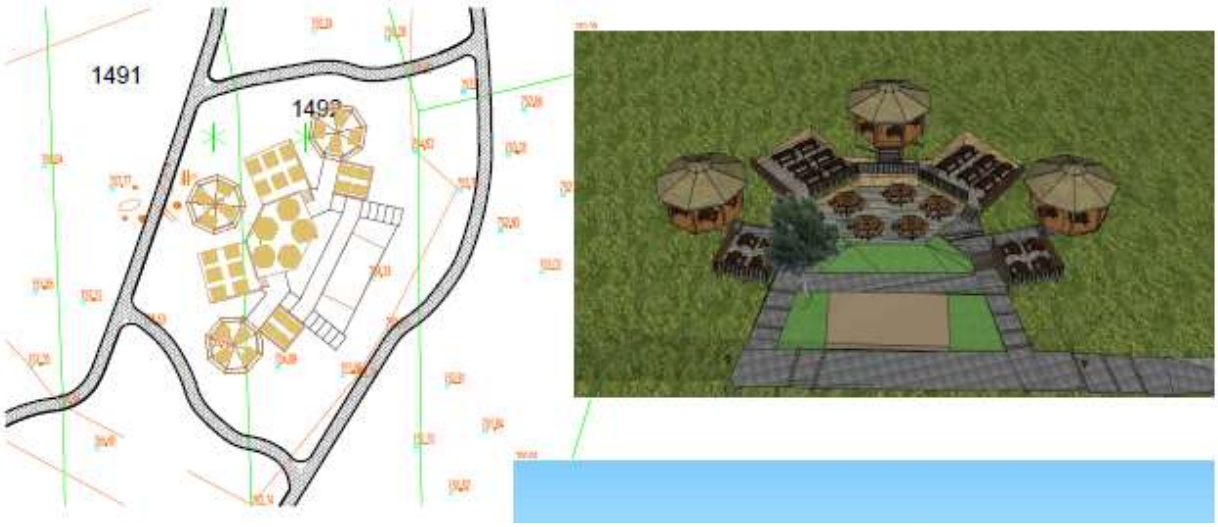

Figure 5 Schematic view and animation of the multimedia space

Gazebos: On the location envisaged for recreation in the frames of the multipurpose space connected with pedestrian paths, at previously determined locations, installation of small objects for rest - the gazebos of visitors - is planned (Figure 6). The gazebos are completely constructed of natural material - wood. They are covered with wooden roof construction together with wooden tables, seating benches and fence.

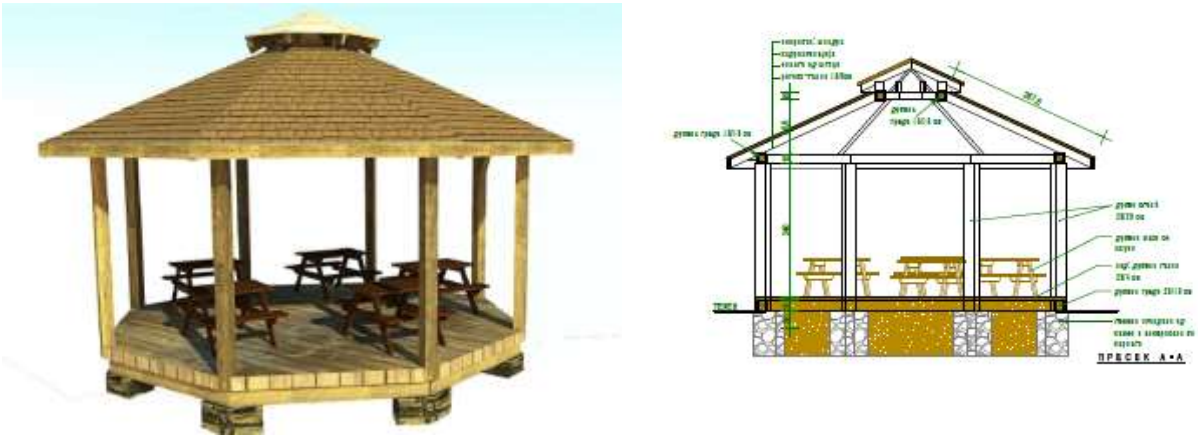

Figure 6 View of the predicted gazebos

Urban equipment (several types of tables and benches, garbage bins): It is planned to install the necessary urban equipment built of natural materials (Figure 7).

Figure 7 tables and benches

Info boards: info boards made of oak lumber will be developed and set up. Information boards will be placed in two locations (Figure 8).

Road signs: The signs will be placed along the paths. They will be made of oak lumber, anchored in the ground.

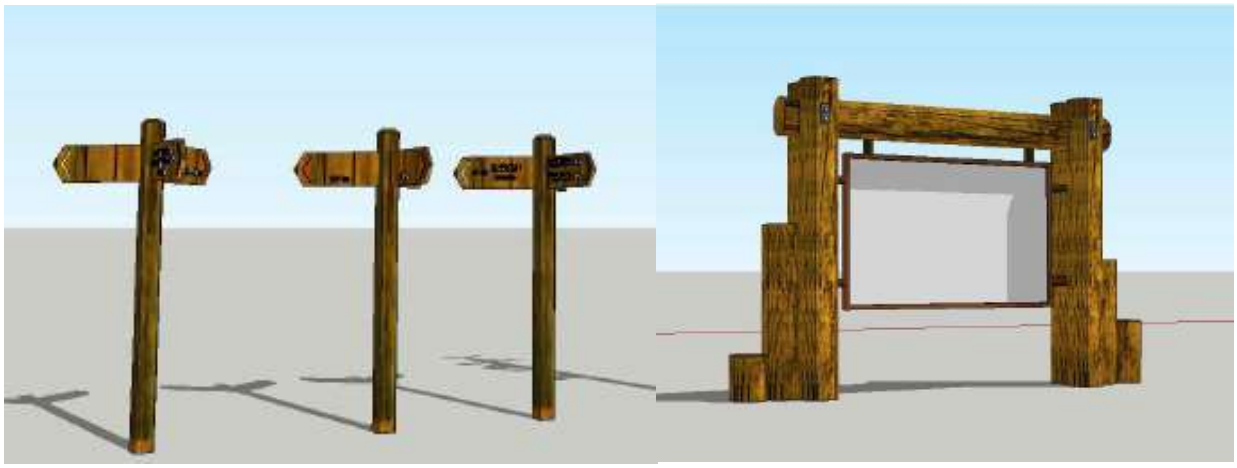

Figure 8 Road signs and info boards

Bicycle Parking: For easy access to the visitors, tourists and adventurers are planning to build a parking lot (Figure 9). Within the parking lot there is parking for bicycles (15 seats).

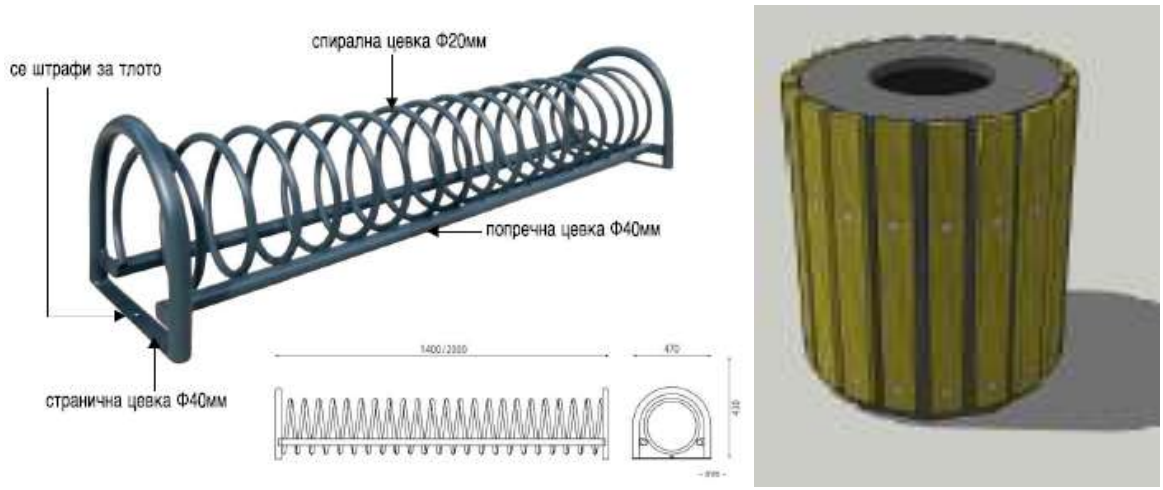

Figure 9 Bicycle Parking and garbage bin

OPEN SPORTS PLAYGROUNDS

The space for open sports playgrounds intended for easy access of visitors to the sports recreational complex is planned to be built in the north-west coast of the artificial lake.

The specific location foreseen for the open sports playgrounds includes several parts of cadastral parcels: CP 1476, CP 1492, CP 1493 and CP 1495.

Existing condition: The location foreseen for the open sports grounds is in the north-south direction and is located on land with purpose of use – sport and recreation according to planning and project documentation.

Description of functionality: The detail design envisages the construction of open asphalt sports playgrounds: a basketball playground with ping pong tables with dimensions of 47x17m asphalt surface (799 m2) and an outdoor sports playground for volleyball with dimensions of asphalt surface 22x13m (286m2).

Terrain preparation and construction of playgrounds

Preparation work: The terrain is prepared with clearing of shrubs and grassy vegetation.

Earth works: Earth works are carried out in accordance with the applicable regulations with the necessary insurance of the excavation. In the excavation it is necessary to perform selection of the excavated land with stronger deformable characteristics (gravel and sand). Those with weaker characteristics (excess excavated earth material, dust, clay) are taken to the legal landfill for inert waste, and the rest are used for embankment. The excavation is carried out mechanically to the lower level of the tiny stone. The rest of the excavation is done combined mechanically and manually.

Reinforced concrete works: AB bases are performed with anchors for the baskets and surfaces.

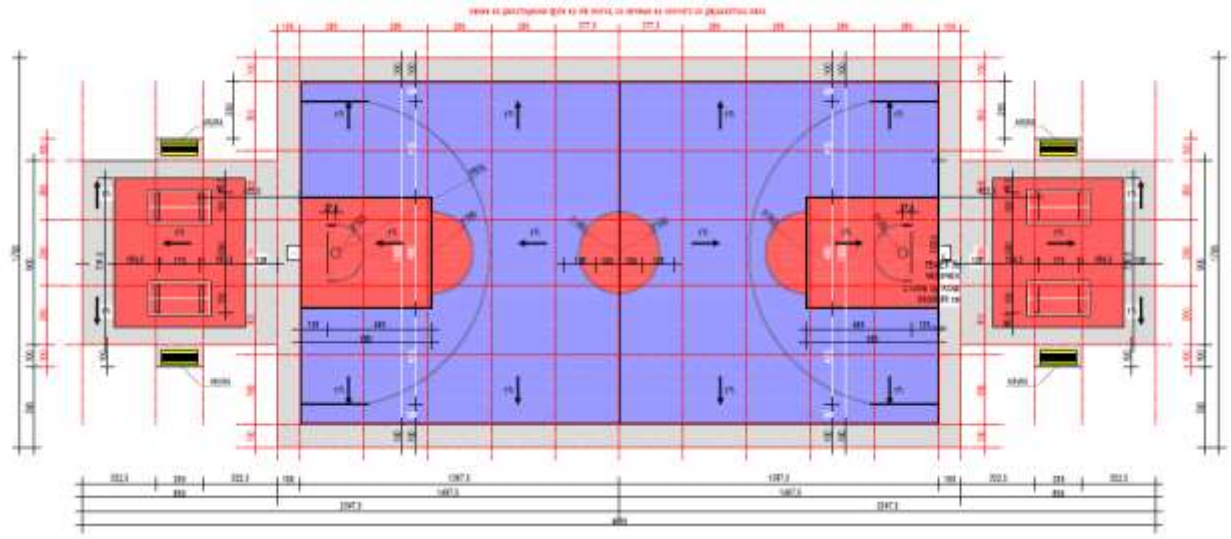

Figure 10 Schematic view of the basketball playground

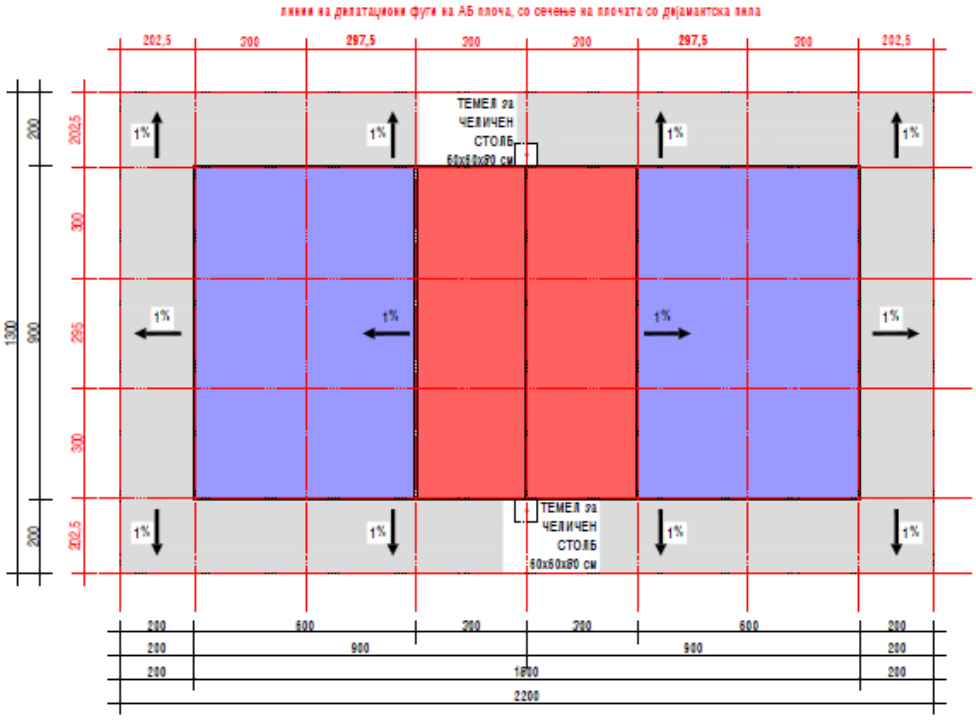

Figure 11 Schematic view of the volleyball playground

Equipment: On the ground there is a placement of two baskets of sizes according to FIBA standards for playing basketball, as well as two fabricated ping pong tables. It is also provided the installation of benches for visitors as well as bins. The open playground for volleyball will contain installed pillars and nets in accordance with standards.

PEDESTRIAN PATH

The pedestrian path are part of the sport recreational center and their main purpose is to ease the navigation and easy movement of the visitor in the complex, and will be built on the north-western coast of the artificial lake.

The specific scope provided for pedestrian path includes several parts of cadastral parcels: CP1349, CP1348, CP2411 / 1, CP1500, CP1498, CP1465 / 1, CP1501 / 2, CP1501 / 1, CP1497, CP1489, CP1488, CP1490, CP1491, CP1492, CP1495 and full CP1499.

Existing condition: The location for pedestrian path is in the north-south direction and is located on land with purpose of use – sport and recreation according to planning and project documentation. The area has an existing dirt path that will be improved with the envisaged investment.

Newly-designed condition: the path is with stretching direction north-south. Access to the pedestrian path is provided from the west side of the area from the existing regional road R1312 Prilep - Izvor - Veles and from the newly anticipated cycling track

The access of visitors to the pedestrian path is enabled by two approaches from the northwest side of the sport and recreational center. Pathway is with a width of 1,5m' and a length of 700m'. It is planned to be made of becaton tiles with thickness of 6cm on a sand base with thickness of 5cm on a well packed 15 cm gravel layer. They are protected by concrete curbs with dimension 8 / 20cm. The path is projected on the existing slope of the field from 0.61% - 21.46%. The highest altitude point is at 757,90 m a.s.l. at the entrance of the pedestrian path in order to level with the elevation of an existing cycling path in that part. The lowest altitude point at 756,75 m a.s.l. is at the end of the residential street is designed to provide better access to the track leading to the sports and recreational center. The total area of the pedestrian path is P = 1050m2.

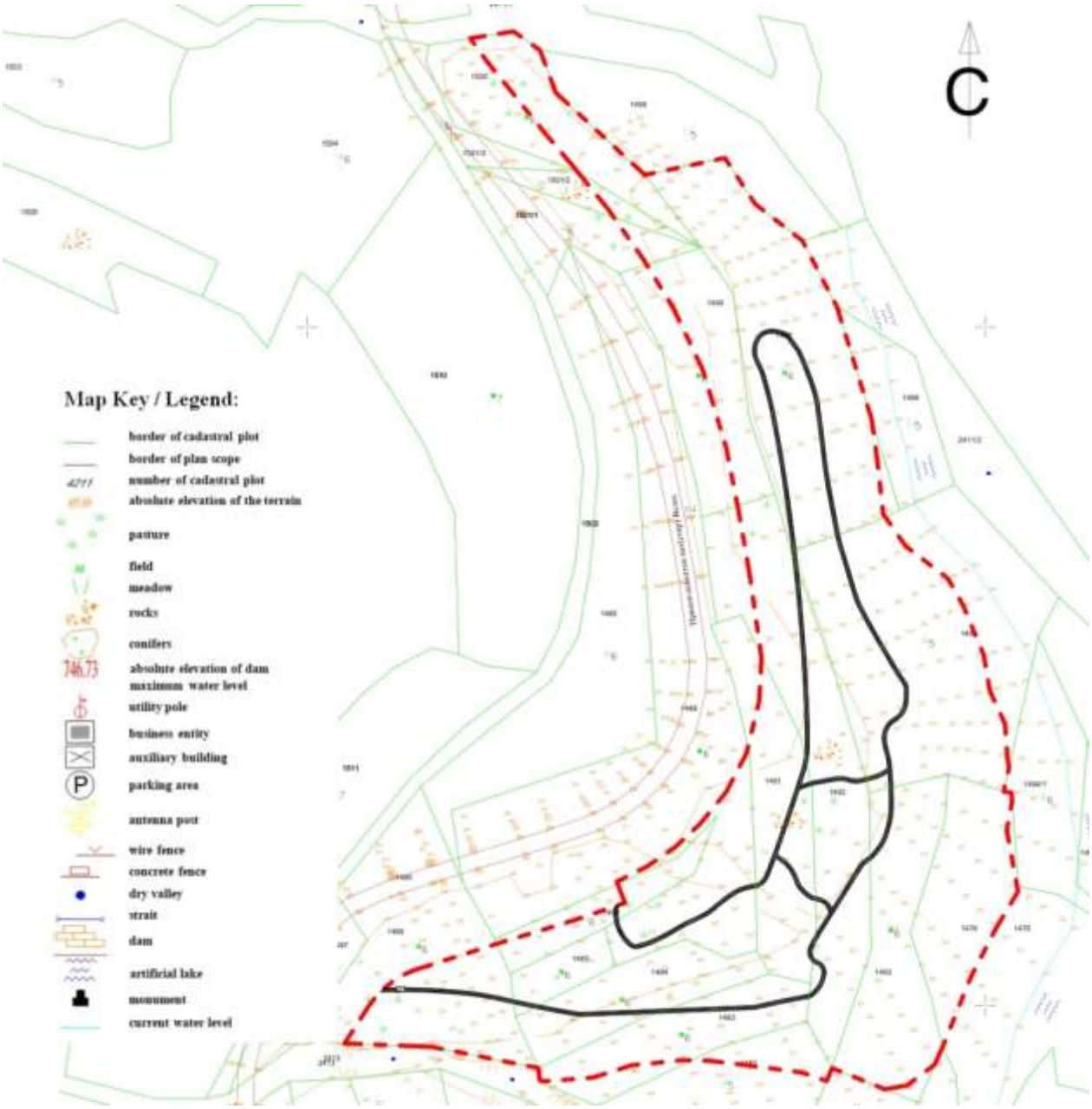

Figure 12 Display of the pedestrian paths within the sport and recreation centre

ELECTRICITY

The location of the lighting on the pedestrian paths is in a tourist and recreation center in the cadastral municipality of Dabnica, Municipality of Prilep.

Points of power: The complete newly designed lighting of the pedestrian path and bicycle path is planned to be powered by the newly designed pillar substation. This site for installation of the pillar substation is approved by the authorized distribution company - EVN KEC Prilep according to the project and urban documentation.

Power supply and earthen trench excavation: A PPOO-A 4x10mm2 cable will be installed on the connection between the candelabras. The length of the route is 400 m. The same type of cable will be placed between the pillars that will illuminate the bicycle track. The cable will be installed in trench of 0,8 m x 0,4 m.

On the multimedia plateau will be installed 28 lightening columns with 3,5 m high. On the parking lot 4 poles 10 m high will be installed, and on the bicycle it will be installed 25 poles for a kilometer, 6 m high. As a part of the project activities, a total 57 poles will be installed.

In places where the cable passes under pedestrian paths, the cable is drawn into plastic pipes F110 due to its mechanical protection.

Luminous feature of lamps and poles: Computer calculation is made for the brightness of lighting. Photometric characteristics for the pedestrian path.

Light fittings are designed with "Polar" Disano Italy type lamps, with a console type "hook" that will be placed on appropriate poles. Photometric characteristics for the bicycle path.

For the construction of electrical installation for public lighting along the bicycle path, are intended the so-called "SMART" lamps that have the ability to regulate during multi-level operation. The lamps have the capability to pre-programming 4 individual operating modes depending on the start-up time, with the ability to operate individually without central control. The lights have an astronomical calendar function built in to allow the operating modes to be adjusted depending on the change of day and night.

All poles are designed galvanized, because it is a site where there is a large evaporation (artificial lake) and moisture, so it is necessary to use moisture and rust resistant pillars.

Protection against excessive voltage: When performing all external lighting, a 25 x 4 mm grounding strip is provided which runs between all the pillars. All pillars have a grounding screw on which the grounding of the pillars should be done. The string is to be laid in the ground. Due to covering, the string should be well compressed.

Electrical calculation: Lighting of the pedestrian path in the tourist and recreation center in the cadaster municipality of Dabnica, Municipality of Prilep, Prilep, use metal poles with height H = 3,5 m with 1 lamps fitted to lines with 1 bulb with individual power of a 55W lamp.

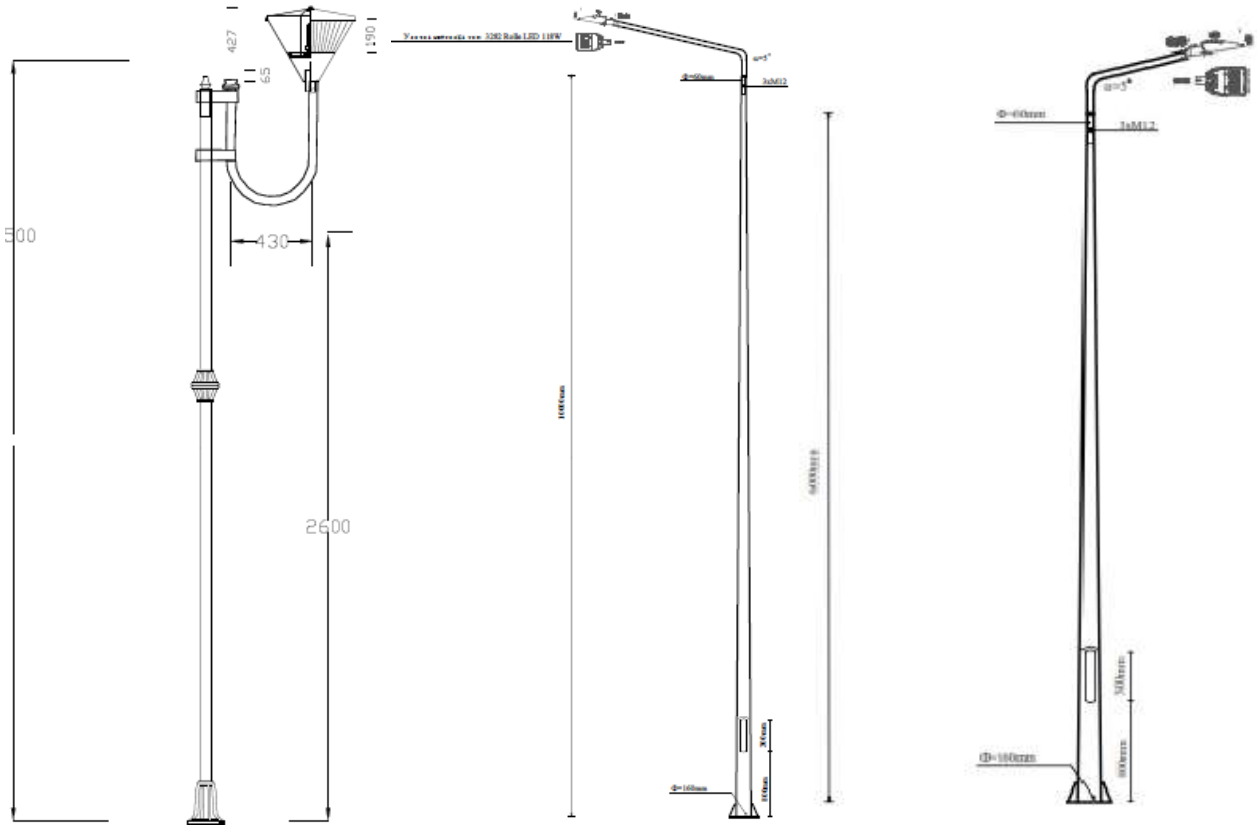

Figure 13 Display of the two models of candelabras

4. Basic information

The envisaged activities of the sub-project for "Prilep Lake - New Adventures, New Opportunities" and the surrounding area are part of the Municipality of Prilep.

Municipality of Prilep

The Municipality of Prilep is located in the central part of the southern region of the Republic of Macedonia. It covers a total area of 1,195 km2 and according to the area is the largest municipality in Macedonia. There are 59 settlements in total - the city of Prilep and 58 villages. It covers the Prilep field that extends through the northern part of the largest valley in Macedonia - Pelagonia.

Figure 14 Municipality of Prilep within Republic of Macedonia and the settlements in the Municipality of Prilep

The Municipality of Prilep is located at an altitude of 620 to 650 m, up to 680 m on the higher parts, while the highest mountains in the municipality are up to a height of 1,500 m. The city's coordinates are: 41^0 21 '22 "North latitude and 21^0 35' 7" Eastern latitude.

Relief features

The Municipality of Prilep has a diverse and quite complex physiognomy. It covers parts of two geographical zones: Vardar and Pelagonia. According to the relief characteristics, the geological composition and geomorphologic formations are divided into three parts: Prilepsko Pole, Raec and part of Mariovo.

Prilepsko Pole occupies the northern part of the Pelagonia Basin and represents an alluvial plain slightly inclined towards the Prilep River and its tributaries. The plain is verged by spacious low mountains and lies at an altitude of 600 - 700 m. The northern part of the Pelagonia Basin, i.e. the Prilep plain, is the southern sides of Dautica Mountain (2058 m) and Babuna Mountain (1499 m).

Between Mariovo and Prilepsko Pole rises the Mountain Selechka (1474 m), with its rounded sides, and the sides are cut off with numerous short watercourses (intermittent and permanent).

The mountain Dren (1664 m) rises between Prilepsko polje, Raecka Kotlina and Mariovo. Here is located Ligurasa (1152 m) through which Mariovo is connected with the valley of Raec, and through it and with the Vardar valley.

The valley Raechka is sloping eastward along of the same river and is a deluvial flood formed by river flows.

Geological features

In geotectonic terms, the territory of the Municipality belongs to geotectonic units: the Massiv Pelagonija and Vardar Zone.

The Pelagonian Massiv consists of terrains built of highly metamorphic rocks in this area represented by several varieties.

The Vardar Zone as a geotectonic unit belongs to the eastern parts of the Municipality and mainly consists of sediments of moderate maturity.

According to the geological characteristics and the basic properties of the rocks, the terrain is differentiated into three groups: unbound rocks, distributed along the valleys and their edge parts, valley walls of the mountains, poorly bound rocks spread over the neogene valleys and mountain highlands and firmly bound rocks that make up the stones and semi-truncated walls (granites, gneisses, amphibolites, carbonate rocks, sandstones and mikastas).

According to the stability, predominantly there are stable terrains, built of carbonate rocks, granites, gneisses and mikastas, there are relatively stable, which are relatively stable and occupy larger areas and are composed of flush and alluvial - deluvial sediments and volcanic sediments and unstable terrains that are susceptible to erosion that make up neogene clays, clay sands, jackals, diluvial, proluvial and other segments.

Hydrological features

In hydrological terms, the terrain in the municipality of Prilep appears as compacted pecotine and karststone type of editions. In the alluvial - deluvial deposits, a sinew-type has been formed. They accumulate water supplies at different levels of depth. Prilepsko Pole is a well-developed terrain, which is indicated by the fact that drilled subarteric wells down to 30 m have a capacity of 3-10 l / sec. Lightweight and low-lying terrains are on Zlatovrv, Babuna, Dren and Mountain Selechka.

Seismological features

Seismological research on the territory of the Republic of Macedonia indicates that the Municipality of Prilep is characterized by relatively low seismic activity. Earthquakes that occur on the

surface are caused by local epicenter hot spots with epicenter intensity up to 7^{o} according to the ICS scale. So far, micro-seismic research has not been conducted for the city of Prilep.

Climate features

The territory of the Municipality of Prilep belongs to the area of moderate - continental climate, with a weak influence on the Mediterranean climate, which makes the winters cold and wet, and the summers hot and dry.

The Municipality of Prilep lies quite in the south and is not very far from the Aegean Sea, and it shares about 70 km from the Thessaloniki Bay, fact which does not exhaust the possibility of sea impact on the climate. But the fact that the territory of the Municipality of Prilep is located at an altitude of 550 to 800 meters, and from the south there are high mountain massifs that contribute to the impact of the warm air masses from the Aegean Sea having a significantly lower value. The medium and high mountains that surround this area also have an impact on the formation of the climate. In the area, in its flat part (Prilepsko Pole), annual seasons with extreme temperatures occur: summer with an absolute temperature of + 40 Celsius and more, and winter with an absolute minimum of -30 Celsius.

Average annual temperature of 11.4 Celsius, i.e. average annual maximum of 17.1 Celsius and average annual minimum of 6.1 Celsius. The average amplitude is 11 Celsius, while the difference between the absolute maximum (+ 39.4 Celsius) and the asphalt minimum (-22.4 Celsius) is 61.8 Celsius, which is a typical feature of the continental climate. Temperatures with a value lower than -20 Celsius can be expected every 6 years once, with a value of -15 Celsius for 2 years once and with a value of -10 Celsius occurs every year.

The warmest month is July (August), and the coldest month is January. Autumn is hotter than spring, and the transition from winter to summer is the opposite, so spring and autumn are not enough seasons.

The average autumn frost is November 5th and the spring is the April 7th. The average ice-cold period is 154 days, the extreme 229 days. The vegetation period with average daily temperature of more than 50 ° C starts at 12 March and ends on November 27, and from 10 Celsius begins on April 10 and ends on October 27, which shows that in the vegetation period there are conditions for damage to the agricultural crops from the occurrence of autumn and spring frosts.

Due to the special geographical conditions the area of the Municipality of Prilep is with less precipitation from the areas that lie east and west of it, that is, in the surrounding mountains there are larger amounts of precipitation than in the basin level. Minimum rainfall is in July, and with low monthly precipitation in August and September. The average annual amount of precipitation is 576 mm (Prilep). The main maximum of precipitation is in May, or 12% of the annual rainfall. Spring and autumn are almost the same amount of precipitation. In winter, precipitation is 24%, and in summer 20% of annual precipitation. During the vegetation period, precipitation is 331mm or 58% of the annual rainfall. On average, 122 rainy days occur in Prilep. On average, there are 30.3 days with snow cover, i.e. days when it is higher than 1 cm in the plain part, up to 80 days in the mountains.

Hydrographic features

The hydrographic net in the Municipality of Prilep is made up of rivers that flow into the Crna River: River Orevoechka, Dabnichka, Selechka and River Suva. All these watercourses meet southwest of the urban area in the Prilep River, which, after 3.5 km, flows into River Crna, with an average flow of 0.18 m3 / sec. The streams of the River Orevoechka and Dabnichka are partially regulated through the coverage of the urban area of the city. The slopes of the Markovi Kuli and Zelenik from the north and the Selechka Mountain from the west and southwest are largely dissected with torrential rays which, in times of bad weather, despite the partially made bore channels, because of their inadequate maintenance, deposition earth and other material on the streets in the city.

At a distance of 7 km from the town of Prilepska River, the accumulation of Lake Prilep was built, with an area of 54 ha and a volume of 5-6 million m3 of water.

The phenomena and the groundwater regime in the municipality have been sufficiently explored. The perceptions of the relevance of groundwater to local surveys indicate that high groundwaters occur along the banks of the rivers. Relatively good knowledge exists about the character, the number, the spatial distribution of the sources that are of special importance. The general characteristic of the sources is a pronounced oscillation of the latency both during the year and in perennial periods.

The static groundwater level ranges from 1.0 to 4.0 m. below the level of the terrain. This data should be further checked due to the depth of foundation of the objects. It has been obtained from previous individual drilling in the field for the needs of the larger buildings so far built, as well as from observing the oscillations at the levels in separate wells.

Biological diversity

There is a great variety of vegetation and wealth of plant elements on the territory of the Municipality of Prilep. The vegetation on this territory has not been sufficiently studied, especially in relation to the vegetation of the pastures that are widely distributed.

Natural vegetation in the plain parts is completely changed, and many vegetation types are irreversibly missing. There are fragments of the coastal vegetation. In the mountainous regions there are completely degraded areas, but there are also those who deserve attention according to the presence of certain forest types. Oaks, beech and pine forests are found.

Animal communities of fauna are explored and known by the group of birds and mammals. With a particularly hunting economic significance are: rabbit, Polish partridge, and stone partridge, and in small part of the doe and the pheasant.

Ichthofauna is made up of a large number of fish species mainly represented in the River Crna: carp, barbel, maple, cork, belvica, fallen, red-headed, etc.

Protected Areas: The project area does not enter in any of the areas protected by law, areas proposed for protection and other internationally recognized or important areas.

Demography

In the Municipality of Prilep, an area of 511.97 km2 is inhabited by 71.899 inhabitants, of which 68.148 in the city or 94.78% against the territorial division of 1996 and the 1994 Census. According to the first Census results in 2002, in the Municipality of Prilep there are 73.351 inhabitants, ie there are 23.227 households and 27.721 apartments. 68,331 of the population are Macedonians or 93%, while the rest are Gypsies 4.433, Turks 126, Serbs 169, Albanians 21, Vlachs 17, Bosnians 17 and others 237.

In the spatial limits of the Municipality of Prilep, the population is concentrated in 31 settlements, of which 30 are rural and one urban settlement.

In the total population of the Republic of Macedonia (2,022,547), the Municipality of Prilep participates with 3,6%, according to the 2002 Census.

About 95% of the population in the Municipality is concentrated in the city's settlement.

Part of the settlements regarding the configuration features are hilly and mountainous, and the populated places with a larger number of inhabitants are flat.

Economic situation in the Municipality of Prilep

The economy of the Municipality of Prilep plays a significant role in the economy of the Republic of Macedonia. From the data that exist in the State Statistical Office (MAKSTAT base, 2013), there are 71 290 business entities in the country. If we compare the number of business entities in the Municipality of Prilep, 2 763, there is an indicator that Prilep has a significant contribution to the economy of the country.

As in other regions and in this region, the most important drivers of economic development are micro and small enterprises. In the Municipality of Prilep, micro and small enterprises account for as much as 99% of the total production. The table below gives the active business entities in size of the Municipality of Prilep.

The economy in Prilep is most represented in the following branches: tobacco industry, food industry, mining, agriculture (the most represented culture is tobacco), textile industry, trade, industry for machinery and robotics, metal processing industry, etc.

The following table shows the structure of business entities in the municipality of Prilep.

Table 2 Structure of business entities according to the National Classification of Activities by Economic Sector

No.	Business Sector	No. of registered subjects
1	Agriculture, forestry and fisheries	91
2	Mining and quarrying	12
3	Manufacturing industry	358
4	Production of food products and beverages, production of tobacco products, textile products	/
5	Fabrics, tanning, finishing and production of leather, production of suitcases, bags and footwear, processing of wood and wood products, pulp production, paper and paper products	8

6	Electricity, gas, steam and air conditioning supply	118
7	Water supply, waste water disposal, waste management and environmental remediation activities	1167
8	Construction	264
9	Wholesale and retail trade, repair of motor vehicles and motorcycles	127
10	Transport and storage	28
11	Accommodation facilities and food service activities	7
12	Information and communications	18
13	Financial and insurance activities	185
14	Real estate activities	51
15	Professional, scientific and technical activities	4
16	Administrative and support service activities	33
17	Public administration and defense, compulsory social security	135
18	Education	38
19	Activities of health and social care	119
20	Art, entertainment and recreation	/
21	Other service activities	/
Total		**2763**

The local economic development of the Municipality of Prilep is characterized by developed food industry, nonmetal industry, textile industry, metal processing industry and electrical industry, as well as developed industry for graphic design, printing and packaging.

Culture

Specific in its location, historical development and of course its cultural characteristics, Prilep is a city that abounds with cultural and historical landmarks of all kinds.

In the historical sources Prilep is mentioned for the first time in 1014. The territory of the city and its surroundings were one of the most important strategic, political and military areas of this part of the Balkans. In the Pelagonia part were very important crossroads on the roads from the Aegean and the Adriatic Sea. The ancient highways Via Egnatia and Via Militaris had their most natural connection through Prilep. Also, through Prilep, the shortest trade-caravan route took place, and the Venetian and Dubrovnik merchants and couriers headed for Thessaloniki from the direction of the Adriatic Sea. Over the centuries, the Hellenic, Roman, Byzantine and Slavic cultures encountered and collided in this space.

From the cultural institutions located on the territory of the Municipality of Prilep, the following are the most important ones:

National Institution - Institute for the Protection of Cultural Monuments and Museum, Prilep, in which the following departments operate today:

- Department of Archeology
- Department of History
- Department of Ethnology
- Department for documentation
- Department of architecture

- Department of Art History
- Department for legal protection of monuments of culture
- Department for protection, conservation and restoration
- Department for technical (illustrative) documentation

Tobacco Museum, owned by the Tobacco Institute - Prilep, and under the expert guidance of the Institute and Museum - Prilep was founded in 1973, which until now, were collected and processed about 1,700 exhibits divided into four groups: exhibits for the enjoyment tobacco; exhibits from the production, advertising and current affairs of the tobacco industry; exhibits from traditional tobacco production etc.

The Memorial Museum "Kuzman Josifoski-Pitu" is located on the street "Mara Josifoska"No. 20 in Prilep. The house was built in the late 19th century. Inside was born the national hero Kuzman Josifovski-Pitu (1915-1944). In 1971 the house was proclaimed as Monument of Culture.

The Memorial Museum "11 October 1941" is located in the center of Prilep. The building was built towards the end of the XIX century. During the fascist occupation (1941-1944), this building was turned into a police station .On October 11, 1941; fighters from Prilep Partisan Detachment committed an armed attack on the Police station and other facilities, which started the uprising of the Macedonian people against the fascist occupiers. The building has a ground floor and one floor. The museum setting is from 1961, and it was redecorated in 1982.

The Revolution Park is located on the southern outskirts of Prilep. It was built in 1961 in honor of the dead fighters from the National Liberation War, and the author is the architect Bogdan Bogdanovic. As part of the Park of the Revolution is the common grave - crypt, known as the "Tomb of the Undefeated", declared a cultural monument in 1989.

Public municipal institution (PMI) Public Library "Borka Taleski" - Prilep, with its organized, highly skilled and professional operation, it is a center of the culture in the Municipality of Prilep. From 1973 to the present, the Library has been publishing. Various activities, debates, promotions, exhibitions, scientific symposiums, press conferences, etc. are taking place every day in the library. It is made possible by the commissioning of a renovated multimedia hall that meets all European standards with audio visual and technical criteria.

5. Environmental impact

Realization of the planned activities of the sub-project "Lake Prilep - New Adventures, New Opportunities" will cause certain impacts on the surrounding environment.

Preparation of this ESMP 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 according to two main phases:

- Construction phase,
- Operational phase.

5.1 *Emissions*

In the construction phase, the following emissions are expected:

- fugitive emission of dust from construction activities;
- exhaust gases from construction machinery;
- accidental spills
- communal, construction waste and excavation waste;
- noise from transport machinery.

In the operational phase, the next emissions are expected:

- exhaust gases from mobile pollution sources (vehicles);
- noise;
- communal waste.

5.1.1 Air Emissions

Air pollution is caused by emission of pollutants from mobile and static sources, also by emissions of bio-chemical substances generated in the process of fuel combustion. Data of the pollutants distribution 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 of air quality.

Constructiuon Phase

During the phase of performing construction activities near the location of Lake Prilep, the following will appear in the air:

- Fugitive emission of dust from construction work;

- Emission of exhaust gases from construction machinery and vehicles for transport of building materials and waste.

Dust generated by mechanical interventions of machinery, transport vehicles and the combustion of fuel machines during construction works, affects the environment depending on the particle size (aerodynamic diameter) and meteorological conditions during the activities, due to the speed of the wind (which affect their prevalence - transmission). The impact of fugitive dust emissions generated during the construction phase will be strengthened along with the emissions from construction machinery.

Emissions of exhaust gases in the air will be generated by construction machinery and vehicles used for transport of materials, goods and people.

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 secondary ozone production and they are all present as a direct or indirect threat to human health and 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 mobile sources do not pose a threat to air quality.

During construction activities, the most sensitive receptors that will be exposed to emissions in the air will be employees, neighboring biodiversity near the location of recreational sports center.

The impact on air quality can be assessed as short-term, local, indirect, irreversible, rapid, with low intensity of environmental impact.

Operational Phase

In the operational phase, during the functioning of the recreational center on the Lake Prilep, only the effects of the air can be detected from the use of the parking space expressed through emissions of exhaust gases from the vehicles of the visitors.

5.1.2 Water pollution

Construction Phase

Water pollution can be physical, chemical and biological. Physical pollution is manifested through the presence of solid particles from debris and sand resulting from construction activities. Physical pollution from liquid substances is caused by 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 polarities in the air. These pollutants can result from exhaust gases from construction 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 strong-base to strong acid.

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

The locations provided for the stay of workers and for the maintenance and cleaning of the mechanization are potential polluters, through fecal wastewater, solid waste and improper 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 closest water source near the location is Lake Prilep.

Construction activities can cause pollution expressed through the introduction of construction waste from concrete or other building materials. The intensity of potential impacts will depend on the physical characteristics of the location as well as on the composition of the potential pollutants.

The above-mentioned possible impacts would be expected during the realization of the construction activities, foreseen by the sub-project "Lake Prilep - New Adventures, New Opportunities".

Operational phase

In the operational phase, emissions in the surrounding surface water parts are generally not expected, because the project activities foresee the facility to join the existing sewerage network, which will accept and take away the wastewater from the sports and recreational center.

5.2 Generation and waste management

Proper management of generated waste in accordance with generally accepted global standards will reduce the impact of waste on surrounding environmental media.

The general state of the waste management in Republic of North Macedonia can be assessed as partially satisfactory since it does not meet the criteria determined in the European waste management directives, especially with the waste collection, the absence of an integrated waste management system and the state of municipal landfills, and the occurrence of a large number of illegal landfills.

The Municipality of Prilep must sign a contract with appropriate permits for handling and transport of waste generated during the activities of the sub-project.

Construction Phase

During the activities of the sub-project "Lake Prilep - New Adventure, New Opportunity" there will be generated communal/solid waste from workers, construction waste from construction activities, waste from excavation (earth) and there are possibilities of occurrence of biodegradable (grass and low vegetation) waste in the preparatory activities.

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

The Contractor will sign a waste collection, transport and disposal contract with the licensed waste management company.

For proper waste management, waste produced by workers, and inert waste that will not be used, must be disposed at a legal landfill. The transport of the generated waste will be the obligation of the contractor of the construction works or it will need to sign an agreement with the licensed waste management company for collection, transport and disposal of the generated waste. In this phase, hazardous waste generation is not expected, but in case of generation of this type of waste, it is necessary to be collected and transported by a licensed company specialized in managing the particular type of hazardous waste.

Types of waste generated during the implementation of the sub-project, the operational phase as well as the way of its treatment are given in the following table:

Table 3 Types of waste and quantities

Phase	Number	Generated waste	Number of the List of types of waste (Official Gazette No. 100/2005)	Quantity of annual waste production (ton/l)	Waste management (processing, storage, transportation, disposal, etc.)	Legal entity for waste management, waste disposal location
Construction phase	1	Mixed communal waste	20 03 01	Can not be determined at this stage[2]	Temporary disposal in containers and landfilling in legal landfills	Local communal enterprise
	2	Organic waste (plants, trees, shrubs, etc.)	20 02	The exact quantity can not be determined	Storage of a location determined by the Municipality of Prilep until the final delivery to appropriate legal landfill.	Local communal enterprise
	3	Construction waste from construction activities	17 03 02	The exact quantity can not be determined	Storage at an adequate location until disposal to a legal landfill for construction waste	Local communal enterprise
	4	Earth material	17 05 06	around 2600m^3	Storage at an adequate location until disposal to a landfill for inert waste	Local communal enterprise
	5	Hazardous waste (if any)	/	The exact quantity can not be determined	Storage at an adequate location in adequate storage containers until further transfer and treatment	Concluding an agreement with a licensed company to deal with the appropriate type of waste that would arise

[2]The amount of generated municipal waste will depend on the number of engaged workers during the rehabilitation activities, the period and the time required for the implementation of the planned activities

Operational phase	6	Mixed communal waste	20 03 01	Can not be determined at this stage	Temporary disposal in containers and landfilling in legal landfills	Local communal enterprise

*Hazardous waste, according to the List of types of waste (Official Gazette No. 100/2005)

Operational Phase

During the functioning of the foreseen project activities, the generation of municipal waste is only expected from the project visitors and users. At this stage, the municipality will oblige the Public Utility Company "Komunalec" to regularly and appropriately collect the generated municipal waste and transport it to the appropriate place for disposal, i.e. to the legal landfill.

5.3 Soil Emissions

The impacts on the soil during the realization of the projected activities will be insignificant, because there is no expansion of the section, it is the existing road where the traffic was maintained in the past period.

Construction Phase

In this phase, the following effects will occur:

- Fugitive emission of dust from construction activities;
- Emission of exhaust gases from construction mechanization engaged for realization of activities;
- Leakage 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 generated waste at a location;
- Pollution of groundwater and soil can occur in case of accidents and emergencies.

Operational phase

No impact on the soil is expected in the operational phase.

5.4 Noise and Vibrations

Construction Phase

During the activities for realization of the foreseen project activities there will be an increased level of noise as a result of construction activities for the construction of the foreseen objects, mostly during the construction of the access road and the parking lot.

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 have an impact on the air shocks, while the distribution of the sound is influenced by the wind speed and temperature, also depends on the height and the configuration of the terrain.

The wind seems to increase the intensity of the sound, or, increasing the intensity of the sound 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 of environmental noise are defined in the Rulebook on limit values at noise level ("Official Gazette of the Republic of Macedonia" No. 147/08). According to the degree of noise protection, the limit values for the basic indicators of environmental noise caused by different sources should not be greater than:

Table 4 Noise level by area

Areas that differ according to the degree of protection against noise	**Noise level expressed in dB (A)**		
	Ld	Lv	Ln
First degree area	50	50	40
Second degree area	55	55	45
Third degree area	60	60	55
Fourth degree area	70	70	60

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

Areas below the level of noise protection are prescribed in the Rulebook on locations of monitoring stations and measuring points ("Official Gazette of the Republic of Macedonia" 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 to the Regulation on the locations of monitoring stations and measuring points ("Official Gazette of RM" No. 120/08), the location of the sports - recreational zone with multimedia space and bicycle path will be in the area with 1stdegree for protection against noise, which is intended for tourism and recreation.

Operational Phase

In the operational phase, in the functioning of the project activities, the unison of the noise that would be expected is from the presence of the visitors of the recreational center.

5.5 Biodiversity (flora and fauna)

With the realization of the sub-project, the impact of the activities foreseen with the project of the surrounding flora and fauna will occur in the construction phase and in the operational phase.

Construction 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 exhaust emissions. Also, increasing the number of employees on the site will cause disruption to biodiversity.

Operational phase

In the surroundings of the recreational center, there are widespread plants and arable land, so the impacts are considered insignificant if appropriate mitigation measures are implemented, indirect, cumulative, local, immediate and short-term.

Regarding the light pollution, due the fact that in the immediate vicinity of the project location, was lightened by the old restaurant, and the calculations for required intensity of light and electricity consumption, no light pollution is expected to the animal species that surrounds the project location. Nevertheless, the Applicant will care to install lights designed for reduced level for light pollution.

5.6 Social Impacts

Sub-Project activities do not include land expropriation and therefore there are no social impacts as a result of land expropriation and resettlement-related problems. During the implementation of the projected activities, some impacts on the local population may arise as a result of the operation 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 with the sub-project activities.

6. Impact Mitigation Measures

Mitigation measures on identified possible environmental impacts 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 construction activities must be carried out by trained workers.

Parties responsible for implementing the environmental protection program:

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

6.1 Air

During construction work, monitoring of preventive measures should be implemented in order to minimize negative impact on air.

- Avoiding the operation of mechanization in the so-called "idle time";
- Spraying with water to reduce the amount of fugitive dust (in dry periods);
- Determining the duration of machine operation;
- Residents (visitors) / sensitive receptors will be informed about construction activities and working hours;
- Regular maintenance of vehicles and construction machinery and timely repairs in order to reduce possibilities of leakages and emissions.

6.2 Water

During construction works, following preventive measures will be applied in order to minimize the negative impact on surface and groundwater:

- Regular maintenance of vehicles and construction mechanization and periodic repairs in accordance with the procedures in order to reduce leakage, emissions and dispersal of pollutants (during construction). The maintenance and repairs of vehicles and construction machinery are forbidden to be carried out at the construction site itself.
- The vehicles and construction machinery of the contractor must use existing access roads.
- Careful selection of the location for building materials, warehouses/temporary storage of construction waste (in coordination with responsible municipal staff).
- The excavated earthen material should be properly enclosed to prevent its disposal in the aquatic environment.

- No waste of any type will be discarded into the environment, including water bodies;
- Watercourses are notpart of the works in any of proposed activities within this sub-project;
- 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

During construction work, monitoring and preventive measures should be implemented in order to minimize the negative impact on the soil:

- Careful planning of the construction works in order to reduce the negative effects and to enable the prevention of soil contamination.
- Reducing the size of the site due to the minimization of the land that will suffer from negative impact.
- All hazardous materials, such as fuel, lubricants, adhesives and packaging waste are non-inert waste and must be placed in special appropriate containers (suitable for accepting and storing all materials) placed on the construction site, protected from extreme weather conditions (rain, wind).
- Protection of building materials and stopping construction activities in conditions of heavy rains.
- The area of the construction 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, the polluted soil should be removed and treated as hazardous waste, and for the further treatment 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 and 63/16).
- Geotechnical studies and works will take place where needed;
- Soil erosion prevention will be applied at vulnerable locations.

6.4 Noise

During construction works, the following preventive measures should be applied in order to minimize the negative impact of noise:

- Construction activities can be performed only daytime (07-19 hr) as determined by the permit.

- Construction activities should be properly planned in order to reduce the work of equipment that creates the greatest noise.
- During operation, the covers for engine generators, air compressors and other mechanical equipment requiring electrical power supply should be closed and the equipment should be positioned as far as possible from the resident area.
- Use of the best building practices with particular emphasis on noise levels.

6.5 Waste

During all phases of the construction works, following preventive measures should be implemented in order to minimize the negative impact of waste:

- Selection of generated waste;
- Classification and labeling of waste according to the National Waste List (Official Gazette No. 100/05);
- Determining the type of the waste;
- Storing waste to places designated for that purpose;
- If the waste has one or more dangerous characteristics, the creator and/or the holder are obliged to classify it in the category of hazardous waste and treat it as hazardous waste.
- Establishing contact with authorized collectors, transporters of different types of waste and providing safe final accommodation.
- Construction activities will be completed only when all wastes created in construction acis removed (must not remain waste at the construction site) / will be collected by the authorized services.
- It is forbidden to burn waste on construction site.
- Waste that will be created during the stay and work of the contractor's workers, by applying the best management practices, should be collected, transported and placed 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 space that will be covered by the construction works should be reduced to a minimum at the construction 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 construction activities, more precisely with the beginning of earthworks, it is necessary to properly remove and appropriately dispose of the surface layer of the soil,

which later in the final part of the constructive phase would be used for the re-cultivation of possible embankments or cuttings.

Since no significant impacts are expected, only the possibility of treads from the vehicles, and as mitigation measure for eliminating such phenomena, it is recommended setting appropriate traffic signalization information for the presence of wild animals on the road as well as limiting the traffic speed.

7. Environmental and Social Management Plan

The Environmental and Social Management Plan is a document that defines the measures, procedures and responsibilities of the involved parties in the implementation of the project. The Environmental Management and Social Aspects Plan consists of a set of measures for reducing, monitoring and institutional measures to be taken during implementation as well as operations to eliminate negative environmental and social impacts, their compensation or reduction to acceptable levels.

The main mitigation / mitigation activities are described in Table 5.

The plan for reducing the environmental impact during construction 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 Prilep) 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 5 Environmental Management Plan and Social Impacts

Table5. Mitigation Plan					
Construction Phase					
Activity	Expected impacts on the environment	Proposed mitigation measure	Responsibility for the implementation of the mitigation measure	Period for implementation of the mitigation measure	Cost related to the implementation of the mitigation measure
Workers and local population					
Design/Preconstruction phase					
Design/ Preconstruction phase - All activities	Possible adverse social and health impacts for the workers and local population as a result of non-compliance with the safety measures	- Planning of the time for startup of the project activities. - Public information of works commencement through Notification at the Municipality Notice Board and web site and through other publicly accessible sites (including the site of the works). - All legally required permits, opinions and decisions have been obtained before the works commence. - Local Construction and Environmental inspectorates have been notified of works before they start. - The Contractor formally agrees that all works will be carried out in a safe and disciplined manner designed to minimize	Municipality of Prilep, contractor, supervising engineer	Prior to start of reconstruction works	the expenditure is included in the bill of quantities

		impacts on nearby residents and environment; - Appropriate signposting of the sites will inform workers of key rules and regulations to follow. - 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 and Procedures with a focus on water contamination risks.			
	Light pollution	Selection/design of lamps will include light pollution minimization.	Municipality of Prilep, contractor, supervising engineer	Prior to start of reconstruction works	the expenditure is included in the bill of quantities
Construction 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	- All required permits have been obtained; - 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; - Installation of signs for reducing / limiting of the vehicle speeds near the project location;	Participants related to the performance of construction activities	During the constructive phase of the realization of the project activities	the expenditure is included in the bill of quantities

		- 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 site and facilities; - Safe passages are provided for pedestrians; - Set up of vertical signalization and signs at the beginning of the 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; - Workers' PPE will comply with international good practice (always hardhats, as needed masks, gloves, and safety glasses, harnesses and safety boots, etc.) - no activities to be undertaken in adverse weather conditions, - provision of emergency (first) aid service at construction site. - provision of fire safety and safety from other hazards, - training of workers, in particular those working with electricity; - adopt and apply procedures for prevention of electricity related accidents, and other types if needed; - coordinate works with the competent power company. .			
Impacts in the air					
During the execution of the planned construction, assembly and other project activities planned	- Appearance of fugitive dust during construction activities; - exhaust gases from machinery and transport vehicles for delivery of building materials.	- Spraying with water on windy and dry days to reduce the amount of fugitive dust; - Prevent dusting during upload and unload; - Use of proper and well serviced construction mechanization; - Avoiding work of mechanization in the so-called "idle mode"; - Defining the duration of machine operation;	Participants related to the performance of construction activities	During the constructive phase of the realization of the project activities	the expenditure is included in the bill of quantities

		- Residents / sensitive receptors will be informed about construction activities and working hours; - Careful loading and unloading operations; - Vehicle 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 and wind 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 use fuel determined by the machinery and vehicles producer. - Clean the vehicle tires, where necessary, to prevent dirt being carried onto the roads			
Impacts on water					
Construction phase – all works	- Spills of fuel, motor oils or bitumen; - Discharge of waste water from workers; - Discharge of waste water	- Regular maintenance of vehicles and construction mechanization and periodic repairs in accordance with the procedures in order to prevent/reduce leakage, emissions and dispersal;	Participants related to the performance of construction activities	During the constructive phase of the realization of the project activities	the expenditure is included in the bill of quantities

	from maintenance and clearing of the construction mechanization; - Accident of construction mechanization; - increased water turbidity due to the input of construction material or waste.	- The maintenance and repair of vehicles and construction mechanization is forbidden to be carried 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; this location must be defined/approved by the Municipality. - The excavated earth material should be adequately enclosed to prevent its deposition 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 adequate licensed waste water treatment plant; - Install/provide and maintain proper sanitary facilities for workers to prevent			

		any sewage being discharged on site. The wastewater from these sources should be transported to proper waste water treatment facilities; - Provide services from licensed operator for portable sanitary facilities; - Prevent hazardous spillage coming from tanks (mandatory secondary containment system, e.g. double walled or bunds); - 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; - Working site run-offs with possible charge with suspended matter should be contained, spillage to natural flows is forbidden; - Water, and other components, in concrete mixture shall be clean and free of harmful chemicals; - Protection of construction materials and stopping reconstruction activities in conditions of heavy rains; - 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; - Carry out surface drainage works to divert rainwater that would erode the soil; - Water for the construction will be supplied form the existing sources and			

		there will be no new wells or use of natural waterbodies/courses. - No anticorrosive material will be applied at the site; - When applying protective coatings and paint, measures will be taken against accidental spilling; - Apply storm water management and soil erosion prevention measures; - In the case of water contamination, notify the competent authorities immediately (including water supply company).			
Impacts in the soil					
Construction phase – all works	- Fugitive emission of dust from construction activities; - Emission of exhaust gases from the construction mechanization engaged for realization of the activities; - Leakage 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 generated waste at the site; - Pollution of groundwater and soil can occur in case of accidents and emergencies.	- Careful planning of the construction works in order to reduce the negative effects; - Reducing the size of the site as possible, to minimize the area of negative impact; - All hazardous materials, such as fuel, lubricants, adhesives, and packaging waste are non-inert waste and must be placed in special suitable containers with secondary containment located at the construction site, protected from extreme weather conditions; - Protection of building materials in conditions of heavy rains; - The area of the construction site should be limited; - All landings of gravel and sand, including places where the excess of the excavated material will be pilled, must possess appropriate permission / approval. There will be no excavation of mineral material (gravel, sand, stone,	Participants related to the performance of construction activities	During the constructive phase of the realization of the project activities	the expenditure is included in the bill of quantities

		etc.) form the surrounding; - In case of occurrence of contaminated soil from the eventual release of oils from the construction mechanization, polluted soils should be removed and treated as hazardous waste.			
Waste generation					
Construction phase – all works	- Generating mixed communal waste - Generating organic waste - Construction waste from construction activities - Earth material - Scratched and waste asphalt	- On-site sorting of generated waste; - Classification and labeling of waste according to the National Waste List (Official Gazette No. 100/05); - Determination of waste characteristics; - Storage on places designated for that purpose; Landfills for temporarily and final disposal must be licensed, and approved by the Municipality; - 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 the 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	Participants related to the performance of construction activities	During the constructive phase of the realization of the project activities	the expenditure is included in the bill of quantities

		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; - Collection, transportation and final disposal/processing of the communal waste by a licensed company; - 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.			
Construction phase – all works	- Toxic / hazardous materials and waste management -	- 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-proof container to prevent spillage and leaking. This container will possess secondary containment system such as bunds (e.g. embankment-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	Participants related to the performance of construction activities	During the constructive phase of the realization of the project activities	the expenditure is included in the bill of quantities

		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; - Design and install impermeable oil tank (bund) bellow the pillar substation for collection and evacuation of eventual oil leakage, with appropriate capacity (volume) of at least 110% capacity sized to hold 110% of the maximum capacity of oil ion transformer. Regular inspection throughout the substation operational period will be performed to ensure the containment is secure. The substation is adequately protected (enclosed), and warning signs visibly displayed; - Carry out regular control/maintenance of pillar substation in order to timely detect any eventual oil leakage and/or failure risks; - Oil refilling (if required) for the			

		equipment of the pillar substation shall be performed by authorized company). - In the case of SF6 use as insulator, ensure continuous SF6 gas monitoring with pressure measurement unit and control eventual gas leakage. In a case of gas leakage, prior to SF6 gas density drops below the critical level, the bay will be closed and out of service until the problem			
	- Materials management	- 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 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 excavation/exploitation. The companies should 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.	Participants related to the performance of construction activities	During the constructive phase of the realization of the project activities	the expenditure is included in the bill of quantities

		Asphalt and bitumen emulsion application will take into account meteorological 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 construction activities	- Construction activities can be performed only at daytime (07-19 hrs.) as determined by the permit; - Local residents will be informed about the working time. Night-time construction operations only when necessary and after consultation with local residents; - Care will be taken when unloading vehicles to minimize noise. Delivery vehicles will be routed so as to minimize disturbance to local residents. Delivery vehicles will be prohibited from waiting within or close to the site with their engines running; - Construction activities should be adequately planned to reduce the work	Participants related to the performance of construction activities	During the constructive phase of the realization of the project activities	the expenditure is included in the bill of quantities

		of the equipment that generates noise the most; - During operation, the covers for engine generators, air compressors and other mechanical equipment requiring electrical power supply should be closed and the equipment should be positioned as far as possible from the resident area; - Use of the best construction practices with particular emphasis on noise levels.			
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 National Institution, Institute for Protection of Cultural Monuments and Museum - Prilep), informed within 24 hours following the national procedures. Works will recommence upon approval of competent authorities; - Ensure all contractors/sub-contractors and other relevant parties are trained in the use of the chance find procedures.	Participants related to the performance of construction activities	During the constructive 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 is strictly forbidden; - Pouching, hunting, logging, fishing 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; - Adjacent wetlands and streams	Participants related to the performance of construction activities	During the constructive phase of the realization of the project activities	N.A.

		shall be protected from construction site run-off with appropriate erosion and sediment control feature to include but not be limited to hay bales and silt fences.			
Operational phase					
Waste management					
Operational phase – all activities	Generating communal waste from visitors	Concluding an agreement with a licensed waste management company for collecting and transporting generated waste to a licensed landfill	Beneficiary	In the phase of using the local road, hiking trails and urban equipment	Depending on the tariff of the Municipal Communal Enterprise,

Table 5. Mitigation Plan

The following tables with mitigation measures (Table 6, Table 7 and Table 8) are taken from the Environmental protection elaborates that were prepared according the National legislation. Implementation of the mitigation measures given in tables (6, 7 and 8) is mandatory during the envisaged activities within sub-project "Lake Prilep – New adventures, new opportunities"

Table 6 Impact mitigation measures environmental protection elaborate on an infrastructure project for bicycle path from "Markova Cesma" to the access road for the village Prisad cadastral municipality Oreovec and cadastral municipality Prisad, Municipality of Prilep.

Impact mitigation measures				
A (significant impact)	B (medium impact)	C (little impact)	Insignificant	
Construction phase				
Environment element	Impact assessment	Impact mitigation measures	Responsible body / institution	Date of commencement / completion of measures
Flora	A (-)	Efficient clearing of the construction route, occasionally spraying plants exposed to dust with water,	Contractor	During construction
		During the construction works all appropriate measures should be implemented in order to minimize the negative impact on the natural habitats of living organisms		
		Existing access roads to be used		
		Provided distance between the wires and the ground in order to minimize the risk of fires,		
		Avoiding loud sound signals from vehicles and construction machinery in areas where there are habitats of particular species,		
		Careful selection of the location for construction material, storage / disposal of construction debris, selection of a location with minimal environmental impact.		
Fauna	A (-)	To use the most adequate methods of construction in order to reduce the anxiety in living organisms, especially in birds,	Contractor	During construction

		During the construction works all appropriate measures should be implemented in order to minimize the negative impact on the natural habitats of living organisms.		
		Existing access roads to be used		
		Avoiding loud sound signals from vehicles and construction machinery,		
		Careful selection of the location for construction material, storage / disposal of construction debris		
		The contractor should not allow workers to catch animals, destroy the habitats, collect eggs from turtles, birds, etc.		
		The construction phase should not be performed in the evening and at night, because it requires artificial light that will disturb animals, especially those active at night.		
Visual appearance of the landscape	A (-)	Minimizing the surface of the construction site in order to minimize impacts on the landscape / careful planning and designing of works	Investor / Contractor / Licensed waste management company	According to the performance dynamics
		Immediate disposal of the construction debris to a specific landfill for inert waste		
Land erosion	A (-)	Careful planning of construction works in order to reduce the negative effects and ensure the prevention of soil contamination.	Investor / Contractor / Licensed waste management company	According to the performance dynamics
		Reducing the size of the site in order to minimize the land that suffers negative impact		
		Restrictions on the movements of vehicles and the use of machinery that exerts less pressure on the land		
		Preventing further loss of vegetation along the roads		

		Prohibition of construction activities in conditions of heavy rains.		
		Clearing the construction site after completion of construction.		
Air quality	B (-)	Careful setting of work hours near settlements.	Investor / Contractor	According to the performance dynamics
		Restriction of unnecessary traffic on the construction site.		
		Spraying with water along access roads on windy and dry days to reduce the amount of fugitive dust.		
		Conducting regular maintenance of vehicles and construction machinery, as well as procedures for periodic repairs in order to reduce leakage, emissions and dispersion.		
		Using quality (in terms of national standards) fuel for vehicles.		
		Using masks for workers when working in dusty conditions.		
		Providing measures for the protection of transport vehicles and equipment.		
Generating and managing waste	A (-)	Establishing contact with authorized collectors, transporters of different fractions of waste and its safe final disposal.	Investor / Contractor / PUC Komunalec Prilep / private companies	
		Generated waste should be stored in places marked according to the type of waste (hazardous / non-hazardous / inert) up to the time of its collection, transport and final disposal.		
		Waste taken away from the construction site should be covered to prevent dispersion along the road.		

		Construction activities will end (finish) only after all waste materials have been removed (no waste must be left on the construction site)		
		It is forbidden to burn waste at the construction site		
		The generated waste, if possible, should be reused as construction material.		
		Construction debris should be disposed of permanently at an inert waste landfill.		
		The waste that is generated during the stay and lunch of the workers, applying the best management practices, should be collected, transported and deposited at the legal landfill.		
Cultural, historical and archaeological heritage	Insignificant impact	Prohibition of performing any economic activities that are not in accordance with the objectives and the measures for protection determined by the legal act for proclaiming a natural good or the spatial plan for a special purpose area.	Investor / Contractor	According to the performance dynamics
		Establishing the principles of nature protection under the Law on Protection of Nature.		
Noise and vibrations	A (-)	Activities carried out near residential areas to be performed only during daytime	Investor / Contractor	According to the performance dynamics
		Construction procedures should be planned appropriately to reduce the time of use of the equipment that generates the most intense noise.		
		Use of the best construction practices with particular emphasis on noise levels.		
OPERATIONAL PHASE				
Flora	A (-)	Building vegetation compartments, preferably indigenous;	Investor / Contractor	According to the performance dynamics

		Renewal of the surface layer of soil by planting of certain plant species;		
Land erosion	B (-)	Maintenance of vegetation cover on the soil surface sensitive to erosion.	Investor / Contractor	According to the performance dynamics
		Restrictions on the movements of vehicles and the use of machinery that exerts less pressure on the land.		
		Planting / rehabilitation of vegetation in order to reduce the spread of exhaust gases, particles, dust.		
		Rehabilitation of eroded channels and bringing them to their natural state / replanting of vegetation.		
		Clearing the site of intervention after completion of the regular inspection.		
Noise	C (-)	Protection of critical surrounding buildings (kindergartens, schools, hospitals) with temporary sound barriers.	Investor / Contractor	According to the performance dynamics
Socio economic effect	A (+)	Positive socio-economic gain for the region.	Investor / Contractor	According to the performance dynamics
		Improved employment opportunities.		
		Improved access, lower transport costs and better commodity market.		
DECOMMISSIONING PHASE				
Flora	A (+)	Recovery of natural habitats.	Investor / Contractor	According to the performance dynamics
Fauna	A (+)	Recovery of natural habitats.	Investor / Contractor	According to the performance dynamics
Generating and managing waste.	A (+)	There will be no generating of waste.	Investor / Contractor	According to the performance dynamics
Noise	A (+)	Termination of noise emissions.	Investor / Contractor	According to the performance dynamics

Air quality	A (+)	There will be no emissions from exhaust gases from vehicles.	Investor / Contractor	According to the performance dynamics
Land erosion	A (+)	Plan to return to the initial state which gives details of the final sorting, drainage and sediment control, as well as measures to recover the soil and vegetation.	Investor / Contractor	According to the performance dynamics
Soil	A (+)	Prevention of soil compaction.	Investor / Contractor	According to the performance dynamics
Visual appearance of the landscape	A (+)	Obligation of the contractor to clear and restore the used surfaces to the original condition.	Investor / Contractor	According to the performance dynamics
Land purchase / compensation for use of private land	A (+)	Obligation of the contractor to clear and return the used surfaces to the original condition if in the operational phase he had a land that he bought for use.	Investor / Contractor	According to the performance dynamics

Table 7 Impact mitigation measures for environmental protection elaborate on a project for access road with a parking space for light motor vehicles in accordance with the Urban Plan for cadastral municipality Dabnica, Municipality of Prilep.

Impact mitigation measures				
A (significant impact)	B (medium impact)	C (little impact)	Insignificant	
Constructional phase				
Environment element	Impact assessment	Impact mitigation measures	Responsible body / institution	Date of commencement / completion of measures
Flora	A (-)	Efficient clearing of the construction route, occasionally spraying plants exposed to dust with water,	Contractor	During construction
		During the construction works all appropriate measures should be implemented in order to minimize the negative impact on the natural habitats of living organisms		
		Existing access roads to be used		

		Provided distance between the wires and the ground in order to minimize the risk of fires,		
		Avoiding loud sound signals from vehicles and construction machinery in areas where there are habitats of particular species,		
		Careful selection of the location for construction material, storage / disposal of construction debris, that is selection of a location with minimal environmental impact.		
Fauna	A (-)	To use the most adequate methods of construction in order to reduce the anxiety in living organisms, especially in birds,	Contractor	During construction
		During the construction works all appropriate measures should be implemented in order to minimize the negative impact on the natural habitats of living organisms.		
		Planning of construction activities in order to avoid mating seasons of living organisms,		
		Existing access roads to be used		
		Avoiding loud sound signals from vehicles and construction machinery,		
		Careful selection of the location for construction material, storage / disposal of construction debris		
		The contractor should not allow workers to catch animals, destroy the habitats, collect eggs from turtles, birds, etc.		
		The construction phase should not be performed in the evening and at night, because it requires artificial light that will disturb animals, especially those active at night.		
Visual appearance of the landscape	A (-)	Minimizing the surface of the construction site in order to minimize impacts on the landscape / careful planning and designing of	Investor / Contractor / Licensed waste management	According to the performance dynamics

		works	company	
		Immediate disposal of the construction debris to a specific legal landfill for inert waste		
Land erosion	A (-)	Careful planning of construction works in order to reduce the negative effects and ensure the prevention of soil contamination.	Investor / Contractor / Licensed waste management company	According to the performance dynamics
		Reducing the size of the site in order to minimize the land that suffers negative impact		
		Restrictions on the movements of vehicles and the use of machinery that exerts less pressure on the land		
		Preventing further loss of vegetation along the roads		
		Prohibition of construction activities in conditions of heavy rains.		
		Planting / rehabilitation of vegetation along the roads in order to reduce the spread of exhaust gases, particles, dust.		
		Clearing the construction site after completion of construction.		
Air quality	B (-)	Careful setting of work hours near settlements.	Investor / Contractor	According to the performance dynamics
		Restriction of unnecessary traffic at the construction site.		
		Spraying with water along access roads on windy and dry days to reduce the amount of fugitive dust.		
		Conducting regular maintenance of vehicles and construction machinery, as well as procedures for periodic repairs in order to reduce leakage, emissions and dispersion.		
		Using quality (in terms of national standards) fuel for vehicles.		
		Using masks for workers when		

		working in dusty conditions.		
		Providing measures for the protection of transport vehicles and equipment.		
Generating and managing waste	A (-)	Establishing contact with authorized collectors, transporters of different fractions of waste and its safe final disposal.	Investor / Contractor / PUC Komunalec Prilep / private companies	
		Generated waste should be stored in places marked according to the type of waste (hazardous / non-hazardous / inert) up to the time of its collection, transport and final disposal.		
		Waste being taken away from the construction site should be covered to prevent dispersion along the road.		
		Construction activities will end (finish) only after all waste materials have been removed (no waste must be left on the construction site)		
		It is forbidden to burn waste at the construction site		
		The generated waste, if possible, should be reused as construction material.		
		Construction debris should be disposed of permanently at an legal inert waste landfill.		
		The waste that is generated during the stay and lunch of the workers, applying the best management practices, should be collected, transported and deposited at the legal landfill.		
Cultural, historical and archaeological heritage	Insignificant impact	Prohibition of performing any economic activities that are not in accordance with the objectives and the measures for protection determined by the legal act for proclaiming a natural good or the spatial plan for a special purpose	Investor / Contractor	According to the performance dynamics

		area.		
		Establishing the principles of nature protection under the Law on Protection of Nature.		
Noise and vibrations	A (-)	Activities carried out near residential areas to be performed only during daytime	Investor / Contractor	According to the performance dynamics
		Construction procedures should be planned appropriately to reduce the time of use of the equipment that generates the most intense noise.		
		Use of the best construction practices with particular emphasis on noise levels.		
OPERATIONAL PHASE				
Flora	A (-)	Building vegetation compartments, preferably indigenous;	Investor / Contractor	According to the performance dynamics
		Renewal of the surface layer of soil by planting of certain plant species;		
Land erosion	B (-)	Maintenance of vegetation cover on the soil surface sensitive to erosion.	Investor / Contractor	According to the performance dynamics
		Restrictions on the movements of vehicles and the use of machinery that exerts less pressure on the land.		
		Planting / rehabilitation of vegetation in order to reduce the spread of exhaust gases, particles, dust.		
		Rehabilitation of eroded channels and bringing them to their natural state / replanting of vegetation.		
Socio economic effect	A (+)	Positive socio-economic gain for the region.	Investor / Contractor	According to the performance dynamics
		Improved employment opportunities.		

		Improved access, lower transport costs and better commodity market.		
DECOMMISSIONING PHASE				
Flora	A (+)	Recovery of natural habitats.	Investor / Contractor	According to the performance dynamics
Fauna	A (+)	Recovery of natural habitats.	Investor / Contractor	According to the performance dynamics
Generating and managing waste.	A (+)	There will be no generating of waste.	Investor / Contractor	According to the performance dynamics
Noise	A (+)	Termination of noise emissions.	Investor / Contractor	According to the performance dynamics
Air quality	A (+)	There will be no emissions from exhaust gases from vehicles.	Investor / Contractor	According to the performance dynamics
Land erosion	A (+)	Plan to return to the initial state which gives details of the final sorting, drainage and sediment control, as well as measures to recover the soil and vegetation.	Investor / Contractor	According to the performance dynamics
Soil	A (+)	Prevention of soil compaction.	Investor / Contractor	According to the performance dynamics
Visual appearance of the landscape	A (+)	Obligation of the contractor to clear and restore the used surfaces to the original condition.	Investor / Contractor	According to the performance dynamics
Land purchase / compensation for use of private land	A (+)	Obligation of the contractor to clear and return the used surfaces to the original condition if in the operational phase he had a land that he bought for use.	Investor / Contractor	According to the performance dynamics

Table 8 Impact mitigation measures for environmental protection elaborate for a tower electrical substation and 10 (20) KV transmission line connected to the sports recreation center cadastral municipality Dabnica, Municipality of Prilep.

No	Description of measure	Purpose of measure expressed through mitigation of impacts on the environment	Timetable for implementation of the improvement plan within 5 years	
			Month and year: 2019 and beyond	Funds

1.	Protection against air emissions:			
	-Planting greenery on all available areas; -Reduced frequency of transport vehicles at the location; -Monitoring.	Better air quality, emissions will be within discharges as sources of ambient air pollution from mobile and stationary sources. Regular monitoring of ambient air quality, monitoring the limit values of concentrations of emissions in the air.	Permanently, until the termination of operation of the installation. -Monitoring; =once a year	According to the price list of the contractor
2.	Protection against emissions in the water and wastewater:			
	-Reducing of pollutants in the wastewater within permissible concentrations.	Reducing of emissions in the water and wastewater. Bringing environmental pollution from wastewater into water and sewage within the permissible limits and meeting the necessary standards and norms for protection of water bodies and sewage.	Permanently, until the termination of operation of the installation. -Monitoring; Determining concentrations of harmful substances in wastewater, according to the Decree on classification of waters =once a year	According to the price list of the contractor
3.	Protection against waste:			
	-Reduction of waste generation. -Segregating waste fractions according to types and how hazardous it is. -Regular collection and disposal of temporary removed waste by the licensed operator, that is authorized legal entity - Supply of containers and bags for temporary waste disposal.	Reducing the amounts of waste. Protection of ambient air, soil and water. Meeting the necessary standards and norms for protection from waste pollution.	Permanently, until the termination of operation of the installation. -Containers; =After starting work -Disposal; =In accordance with the agreement and the dynamics of the authorized operator, ie the agreed buyer.	According to the price list of the contractor
4.	Protection against emissions in the soil:			
	- Reduction of generating waste matter (solid and liquid waste) to a	Reduction of waste matter. Protection against soil contamination.	Permanently, until the termination of operation of the	Cannot be predicted

	sustainable level. - Supply of containers and bags for temporary waste disposal. - Separation of waste according to the types and danger category. - Regular collection and disposal of temporary waste.		installation. -Containers; =After starting work -Disposal; =In accordance with the agreement and the dynamics of the authorized operator, ie the agreed buyer.	
5.	Protection against noise, vibration and non-ionizing radiation:			
	- Rational use of machine operation time and regular servicing, - Monitoring the prescribed limit values - Purchase of new machinery and equipment, respecting the principles of Best Available Techniques -Monitoring	Reducing the intensity of noise, vibration and non-ionizing radiation. Meeting the necessary standards and norms for protection against noise, vibration and non-ionizing radiation.	Permanently, until the termination of operation of the installation. -Monitoring; =once a year	According to the price list of the contractor

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 short-term impacts on best construction activities. More specifically, as an integral and critical part of the EMP, the environmental monitoring program should include the following objectives:

- Determine the real extent of the impacts;
- Control of the impacts generated by the construction process and the operational phase;
- Checking the environmental pollution standards applicable to the project during the construction;
- Checking and monitoring the process of implementation of environmental protection solutions during construction;
- Propose mitigation measures in the event of unexpected impacts;
- Assessment of the impact of mitigation measures in the construction 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 (ii) assess the actual environmental impacts of the project in the years after the completion of the project. The main components of the monitoring plan are:

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

The supervising engineer, hired by the municipality, has an obligation to monitor and evaluate the implementation of the proposed measures within the monitoring plan and to inform the developer and the office of the project LRCP (Local and Regional Competitiveness Project) and the Municipality of Prilep. The municipality will report on the state of the environment and the application of the mitigation and monitoring measures in the regular progress reports of the subproject and in the separate EMP Implementation Report every three months (unless otherwise specified by the environmental expert, approved by the Environmental Specialist from WB) to the environmental expert.

Table 9 Monitoring plan

Table 9 Monitoring plan					
Construction phase					
Which *Parameter should be monitored?*	**Where** *Should You Follow This Parameter?*	**How** *Should this parameter be monitored (what should be measured and how)?*	**When** *Should this parameter be monitored (time and frequency)?*	**From whom** *Should this parameter be monitored (responsibility)?*	**How much** *Is the cost associated with conducting the monitoring*
Preconstruction phase					
1. Verification of the necessary documentation: - Building permit - approved Environmental protection elaborate - approved Environmental and social management plan (permits, EIA Report, etc.)	Offices of the Municipality of Prilep	Visual inspection of the required documentation	Before the start of construction activities	Supervision engineer, municipality representative, LRCP EE,	- Included in sub-project budget
2. Notification of public and relevant institutions	Premises of contractor	Visual inspection of the required documentation	Before the start of construction activities	Supervision engineer, municipality representative, LRCP EE,	- Included in sub-project budget
3. Traffic plan is in place	- Office of Municiplality	Documentation inspection	Before the start of construction activities	Supervision engineer, municipality representative,	- Included in sub-project budget

				LRCP EE,	
Construction phase					
4. Occupational safety and health measures for workers and Safety measures for locals and other visitors to the construction site.	All works	Verification of documentation and visual checks during the execution of the reconstruction works	During preparatory work and constantly in the course of construction work	Supervision engineer, LRCP EE, Municipality inspection	- Included in sub-project budget
5. Occurrence of fugitive dust during construction activities; Exhaust gases from transport machinery for delivery of building materials.	All works	Visual inspection of the presence of dust and exhaust gases; measuring in the case of complaints or negative inspection findings	Constantly during the performance of construction work	Supervision engineer, LRCP EE, Municipality inspection	- Included in sub-project budget
6. Spills of fuel or motor oils and fats; Discharge of waste water from workers; Damage of construction mechanization; Increased water turbidity due to the input of building material or waste.	All works	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	Constantly during the performance of construction work	Supervision engineer, LRCP EE, Municipality inspection	- Included in sub-project budget
7. Leakage of fuels and oils from construction mechanization, a process that can cause impacts on groundwater, as its filtration	All works	Visual inspection of the presence of oil stains on the soil; sampling and laboratory testing in the case of larger	Constantly during the performance of construction work	Supervision engineer, LRCP EE, Municipality inspection	- Included in sub-project budget

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.		spills			
8. Generation of mixed communal waste Construction waste from construction activities Earth material; waste management and adequate collection, transport and disposal	All works	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	Constantly during the performance of construction work	Contractor, Supervision engineer, LRCP EE, Municipality inspection	- Included in sub-project budget
9. Occurrence and generation of hazardous waste from construction activities	- All works	Visual inspection of the presence of hazardous waste; check waste records; Control of documentation for handed over waste to licensed companies;	Constantly during the performance of construction work	Contractor, Supervision engineer, LRCP EE, Municipality inspection	- Included in sub-project budget

10. Increased noise level as a result of construction activities	All works	Noise level assessment; measuring in the case of complaints or negative inspection findings.	Constantly during the performance of construction work	Contractor, Supervision engineer, LRCP EE, Municipality inspection	- /
Operational Phase					
Waste management					
Generating communal waste from visitors	Functioning of the foreseen objects in the subproject.	Contracts and waste records, visual	According to the dynamics of the Public Utility Company	Public Utility Company	- /

Table 9 Monitoring plan

9. Roles and responsibilities for implementation of the Environmental and Social Management Plan

During construction, mitigation and monitoring activities will be carried out in parallel with the construction activities. They will start at the same time as employees, equipment and / or materials will be submitted to the site and will end when all employees, equipment and / or materials are removed from the site, that is, after the completion of the reconstruction process.

It is necessary that the monitoring activities will continue after the end of the activities.

A detailed monitoring plan, including what will be monitored, where, the type of instruments and their precision, the frequency of the measurements etc., should be prepared by the Contractor for the realization of the projected activities for the sub-project "Lake Prilep - New adventures, new opportunities".

The contractor of the construction activities should provide regular reports to the Municipality of Prilep. The same applies to monitoring, supervision and maintenance. The Contractors should implement their own mitigation measures, as well as to regularly monitor the activities. If some sort of accident or endangering the environment occurs, the notification will be immediate and without any delay.

The applicant is obliged to submit quarterly reports on the implementation and monitoring of mitigation measures in the form of a tabular overview (mitigation plan and monitoring plan) with an additional column giving the status of the measure and monitoring of the measure (implemented / not implemented, when, by which entity, etc.).

10. ANNEX:

ANNEX 1: Decision on approval for environmental protection elaborate on an infrastructure project for bicycle path from "Markova Cesma" to the access road for the village Prisad cadastral municipality Oreovec and cadastral municipality Prisad, Municipality of Prilep.

ANNEX 2: Decision on approval for environmental protection elaborate on a project for access road with a parking space for light motor vehicles in accordance with the Urban Plan for cadastral municipality Dabnica, Municipality of Prilep.

ANNEX 3: Decision on approval for environmental protection elaborate for a tower electrical substation and 10 (20) KV transmission line connected to the sports recreation center cadastral municipality Dabnica, Municipality of Prilep.

ANNEX 1:

ОПШТИНА ПРИЛЕП
ЛОКАЛНА САМОУПРАВА
Бр. **10 – 127/2** од 09.05. 2019година

Врз основа на член 24 став 7 од Законот за животна средина (Службен весник на РМ бр.53/05,81/05,24/07,159/08 , 83/09 ,48/10, 124/2010, 51/2011, 123/2012, 93/2013, 187/2013, 42/2014, 42/2014, 44/2015,129/2015, 39/2016), а по барање бр. 10-127/1 од 09.05. 2019година од страна на **Одделение за ЛЕР при Општина-ЕЛС Прилеп,** во врска со одобрување на Елаборат за заштита на животната средина, Градоначалникот на општина Прилеп издава :

Р Е Ш Е Н И Е

за ОДОБРУВАЊЕ НА ЕЛАБОРАТ ЗА ЗАШТИТА НА ЖИВОТНАТА СРЕДИНА

1. Со ова решение се одобрува Елаборатот за заштита на животната средина (изработен од ЈП ЗА ПУП Прилеп,под бр. 052-1/18) за градежните активности на сообраќајна градба третирана во Проект за инфраструктура (со тех. бр. 052/18), а насловена како **ВЕЛОСИПЕДСКА ПАТЕКА ОД м.в. МАРКОВА ЧЕШМА до ПРИСТАПЕН ПАТ за С.ПРИСАД- КО Оревоец и КО Присад, Општина Прилеп**, а која се проектира со цел развивање авантуристички туризам –крајна цел до туристичко-рекреативен центар планиран во Урбанистички план вон населено место.

2. Од доставената документација е констатирано дека со активностите при изградбата, како и активностите при функционирање-експлоатација на самата сообраќајна градба, кои според Уредба за дејности (Сл. вес. бр. 32/2012) припаѓаат на категорија на дејност третирана во глава **X - ИНФРАСТРУКТУРНИ ПРОЕКТИ точка „1„- Локални патишта и улици**, нема да има значителни влијанија врз животната средина.

За тој факт зборува самиот вид на градбата, одн. урбанизирано регулирање на површини од јавен интерес, преку сообраќајна патека со завршница до планиран туристички центар, кој факт сам по себе значи придонес кон животната средина, а од друга страна заштита на истата се обезбедува преку имплементација на наведените програмски мерки.

3. Инвеститорот на градбата, се задолжува целосно и без исклучоци да се придржува кон пропишаниот режим и мерки за заштита предвидени во елаборатот за заштита на животната средина, како и кон дополнителни технички решенија, во колку низ периодот на експлоатација на градбата се покаже потреба од некаков вид на превенција кон заштитата.

О Б Р А З Л О Ж Е Н И Е

Одделение за ЛЕР при Општина-ЕЛС Прилеп, до Градоначалникот на општината поднесе барање бр.10-127/1 од 09.05. 2019година во врска со одобрување на Елаборат за заштита на животната средина, за градбата ВЕЛОСИПЕДСКА ПАТЕКА ОД м.в. МАРКОВА ЧЕШМА до ПРИСТАПЕН ПАТ за С.ПРИСАД- КО Оревоец и КО Присад - Општина Прилеп.

Предметниот елаборат е изготвен од страна на ЈП ЗА ПУП Прилеп,и е составен од текстуален дел и графички прилог- извадок од предметниот Проект за инфраструктура за сообраќајната градба; анализирани се неопходните компоненти, извори и видови на можни деградации и загадување, врз основа на што се дефинирани мерките за заштита на основните медиуми, одн. се елиминирани ризиците од деградација на поширокатa локација.

Според погоре изнесеното, проектираните заштитни мерки во целост се апликативни.

Од горе изнесеното, а согласно чл. 24 став 3, 6 и 7 од Законот за животна средина се донесе решение како во диспозитивот.

УПАТСТВО ЗА ПРАВНО СРЕДСТВО: Против ова решение може да се поднесе жалба во рок од 15 дена од денот на приемот на решението до Министерот кој раководи со органот на државната управа надлежен за работите од областа на животната средина.
Жалбата се таксира со 250,00 денари административна такса.
Сметка:100000000063095 Уплатна сметка: 84015606691 Приходна шифра:718127

Овластено лице за изработка на актот
Цветанка Магдеска

Одговорно лице
Раководител на Одделение за урбанизам и заштита на животната средина
Марија Јовческа

ГРАДОНАЧАЛНИК
ИЛИЈА ЈОВАНОСКИ

Доставено до:
-Архива
-Одделение за ЛЕР Општина Прилеп
-Овластен инспектор за животна средина

ANNEX 2:

РЕПУБЛИКА МАКЕДОНИЈА

ОПШТИНА ПРИЛЕП
ЛОКАЛНА САМОУПРАВА
Бр. **10 – 78/2** од 12.03. 2019година

Врз основа на член 24 став 7 од Законот за животна средина (Службен весник на РМ бр.53/05,81/05,24/07,159/08 , 83/09 ,48/10, 124/2010, 51/2011, 123/2012, 93/2013, 187/2013, 42/2014, 42/2014, 44/2015,129/2015, 39/2016), а по барање бр. 10-78/2 од 07.03. 2019година од страна на **Одделение за ЛЕР при Општина-ЕЛС Прилеп,** во врска со одобрување на Елаборат за заштита на животната средина, Градоначалникот на општина Прилеп издава :

Р Е Ш Е Н И Е

за ОДОБРУВАЊЕ НА ЕЛАБОРАТ ЗА ЗАШТИТА НА ЖИВОТНАТА СРЕДИНА

1. Со ова решение се одобрува Елаборатот за заштита на животната средина (изработен од ЈП ЗА ПУП Прилеп,под бр. 009/19) за градежните активности на сообраќајна градба третирана во Основниот проект со тех. бр. 073/1, насловена како **ПРИСТАПНА УЛИЦА СО ПАРКИНГ ПРОСТОР ЗА ЛЕСНИ МОТОРНИ ВОЗИЛА во КО Дабница,** од февруари 2019година, а која се проектира со цел реализација на етапа од туристичко-рекреативен центар планиран со Урбанистички план вон населено место-УПВНМ одобрен со одлука бр. 09-362/2 од 30.01. 2019год.

2. Од доставената документација е констатирано дека со активностите при изградбата, како и активностите при функционирање-експлоатација на самата сообраќајна градба, кои според Уредба за дејности (Сл. вес. бр. 32/2012) припаѓаат на категорија на дејност третирана во глава **X - ИНФРАСТРУКТУРНИ ПРОЕКТИ точка „1„- Локални патишта и улици**, нема да има значителни влијанија врз животната средина.

За тој факт зборува самиот вид на градбата, одн. урбанизирано регулирање на јавните површини- во пристапна патека која завршува со паркиралиште (предвидени на делови од КП 1565/1,1565/3, 1566, 1567/1, 1567/3 и 1583/1), кое само по себе значи придонес кон животната средина, а од друга страна заштита на истата се обезбедува преку имплементација на наведените програмски мерки.

3. Инвеститорот на градбата, се задолжува целосно и без исклучоци да се придржува кон пропишаниот режим и мерки за заштита предвидени во елаборатот за заштита на животната средина, како и кон дополнителни

технички решенија, во колку низ периодот на експлоатација на градбата се покаже потреба од некаков вид на превенција кон заштитата.

ОБРАЗЛОЖЕНИЕ

Одделение за ЛЕР при Општина-ЕЛС Прилеп, до Градоначалникот на општината поднесе барање бр.10-78/1 од 07.03. 2019година во врска со одобрување на Елаборат за заштита на животната средина, за градбата **ПРИСТАПНА УЛИЦА СО ПАРКИНГ ПРОСТОР во КО Дабница-** Општина Прилеп.

Предметниот елаборат е изготвен од страна на ЈП ЗА ПУП Прилеп,и е составен од текстуален дел и графички прилози кои се извадок од предметниот Основен проект за сообраќајната градба; анализирани се неопходните компоненти, извори и видови на можни деградации и загадување, врз основа на што се дефинирани мерките за заштита на основните медиуми, одн. се елиминирани ризиците од деградација на поширокатa локација.

Според погоре изнесеното, проектираните заштитни мерки во целост се апликативни.

Од горе изнесеното, а согласно чл. 24 став 3, 6 и 7 од Законот за животна средина се донесе решение како во диспозитивот.

УПАТСТВО ЗА ПРАВНО СРЕДСТВО: Против ова решение може да се поднесе жалба во рок од 15 дена од денот на приемот на решението до Министерот кој раководи со органот на државната управа надлежен за работите од областа на животната средина.
Жалбата се таксира со 250,00 денари административна такса.
Сметка:100000000063095 Уплатна сметка: 84015606691 Приходна шифра:718127

Овластено лице за изработка на актот
Цветанка Магдеска
Одговорно лице
Раководител на Одделение за урбанизам и заштита на животната средина
Марија Јовческа

ГРАДОНАЧАЛНИК

ИЛИЈА ЈОВАНОСКИ

Доставено до:
-Архива
-Одделение за ЛЕР Општина Прилеп
-Овластен инспектор за животна средина

ANNEX 3:

Република Северна Македонија
Министерство за животна средина и просторно планирање

Republika e Maqedonisë së Veriut
Ministria e Mjedisit Jetësor dhe Planifikimit Hapësinor

УПРАВА ЗА ЖИВОТНА СРЕДИНА
DREJTORIA PËR MJEDIS JETËSOR

Арх.бр.УП1-11/4 655/2019
Дата: 31. 05. 2019

ДО: "ОПШТИНА ПРИЛЕП"
ул. "Прилепски Бранители" бр.1
Прилеп

ПРЕДМЕТ: Доставување на Решение

ВРСКА: Ваш број 03-1476/1 од 30.04.2019 година

Почитувани,

Во прилог на овој допис Ви доставуваме Решение со број УП1-11/4 655/2019, за одобрување на Елаборатот за заштита на животната средина за објект – Столбна трафостаница и приклучен 10(20)/ KV Далековод во Туристичко-рекреативен центар во општина Прилеп, за потребите на општина Прилеп.

Со почит,

МИНИСТЕР
Sadulla Duraki

Изработил: Исмет Садику
Контролирале: Дејана Тодоровска
Александар Петковски
Согласен: Билјана Петкоска
Одобрил: Директор на Управа за животна средина
Xhezmi Salifi

Министерство за животна средина и просторно планирање на Република Северна Македонија
Ministria e Mjedisit Jetësor dhe Planifikimit hapësinor e Republikës së Maqedonisë së Veriut
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Република Северна Македонија
Министерство за животна средина и просторно планирање

Republika e Maqedonisë së Veriut
Ministria e Mjedisit Jetësor dhe Planifikimit Hapësinor

УПРАВА ЗА ЖИВОТНА СРЕДИНА
DREJTORIA PËR MJEDIS JETËSOR

УП1-11/4-655/2019
31. 05. 2019

Врз основа на член 24 став 7 од Законот за животна средина (Службен весник на Република Македонија бр.53/2005, 81/2005, 24/2007, 159/2008, 83/2009, 48/2010, 124/2010, 51/2011, 123/2012, 93/2013, 42/2014, 44/2015, 129/2015 и 39/2016), постапувајќи по барањето на "Општина Прилеп", за одобрување на Елаборатот за заштита на животна средина број УП1-11/4 655/2019 од 30.04.2019 година, Директорот на Управата за животна средина при Министерството за животна средина и просторно планирање го издава следното

РЕШЕНИЕ

За одобрување на Елаборат за заштита на животна средина

1. Со ова Решение се одобрува Елаборатот за заштита на животната средина, од Април 2019 година, изготвен од страна на "ЕКО КОНТРОЛ" ДОО од Охрид, за проект: Столбна трафостаница и приклучен 10(20)/ KV Далековод во Туристичко-рекреативен центар во општина Прилеп, за потребите на општина Прилеп.
2. Од доставената документација констатирано е дека со изведбата и работата на Столбна трафостаница и приклучен 10(20)/ KV Далековод во општина Прилеп, нема да има значителни влијанија врз животната средина.
3. Инвеститорот се задолжува целосно и без исклучоци да се придржува кон пропишаниот режим и мерки за заштита предвидени во Елаборатот за заштита на животна средина, како и кон дополнителни решенија доколку низ изведбата и работењето на објектот се покаже потреба од зголемен обем и вид на превенција.
4. Ова Решение влегува во сила со денот на донесувањето.

Министерство за животна средина и просторно планирање на Република Северна Македонија
Плоштад „Пресвета Богородица" бр. 3, Скопје
Република Северна Македонија

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Република Северна Македонија
Министерство за животна средина и просторно планирање

Republika e Maqedonisë së Veriut
Ministria e Mjedisit Jetësor dhe Planifikimit Hapësinor

УПРАВА ЗА ЖИВОТНА СРЕДИНА
DREJTORIA PËR MJEDIS JETËSOR

Образложение

Од Ваша страна беше доставен Елаборат за заштита на животната средина за проект: Столбна трафостаница и приклучен 10(20)/ KV Далековод во Туристичко-рекреативен центар во општина Прилеп, за потребите на општина Прилеп.

Локацијата на која е предвидена изведбата на Столбна трафостаница и приклучен 10(20)/ KV Далековод ќе се врши во Туристичко-рекреативен центар на КП број 1583/1 КО Дабница во општина Прилеп.

Предметниот Елаборат за заштита на животната средина е изготвен согласно Правилникот за формата и содржината на Елаборатот за заштита на животната средина согласно со видовите на дејностите или активностите за кои се изработува елаборат, како и согласно со вршителите на дејноста и обемот на дејностите и активностите кои ги вршат правните и физичките лица, постапката за нивно одобрување како и начинот на водење на регистарот за одобрени Елаборати (Службен весник на Република Македонија бр. 44/2013 и 111/2014), од страна на "ЕКО КОНТРОЛ" ДОО од Охрид.

Правна поука: Против ова Решение може да се поднесе жалба во рок од 15 дена од денот на приемот на решението до Државна Комисија за одлучување во управна постапка и постапка од работен однос во втор степен.

Директор на
Управа за животна средина
Xhezmi Saliu

Изработил: Исмет Садику
Контролирале: Дејана Тодоровска
Александар Петковски
Согласен: Билјана Петкоска

Министерство за животна средина и просторно планирање
на Република Северна Македонија
Плоштад „Пресвета Богородица" бр. 3, Скопје
Република Северна Македонија

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