

INITIAL LIMITED
ENVIRONMENTAL and
SOCIAL IMPACT
ASSESSMENT

Project " Category B +"

**Construction of new
kindergarten in the
Municipality of Bitola**



November 2020

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Abbreviations

CP	Cadastral Parcel
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standard
EIA	Environmental Impact Assessment
FP	Fire Protection
IBA	Important bird area
IPA	Important plant area
MOSHA	Macedonian Occupational Safety and Health Association
MK	Mercalli
MoEPP	Ministry of Environment and Physical Planning
MLSP	Ministry of Labor and Social Policy
NP	National Park
OH&S	Occupational Health and Safety
OG	Official Gazette
PPE	Personal Protective Equipment
PIU	Project Implementation Unit
PE	Public Enterprise
RM	Republic of Macedonia
RNM	Republic of North Macedonia
SSIP	Social Standard Implementation Plan
WB	World Bank

INTRODUCTION

In Republic of North Macedonia, the overall situation presents that there are insufficient social facilities for childcare from preschool age. Bitola is one of the municipalities that are facing the problem of insufficient facilities for childcare. As a result of the development of the city of Bitola together with the increased employment, the problem of insufficient capacity for childcare in kindergartens has been significantly increased. In order to meet the needs of the population, the Municipality of Bitola plans to build a new kindergarten.

According to the legal requirements in the field of environment, when preparing projects of this type, it is necessary to submit a Notification Letter to the MoEPP, which starts the procedure for Environmental Impact Assessment on Environment and Social aspects of the project. The issued opinion of the MoEPP (n. 11-4419/2 on 28.08.2019) is positive and an EIA report needs to be prepared.

The prepared EIA Report is in accordance with Article 24 of the 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, 39/16 and 99/18) and the Rulebook on the form and content of the EIA Report according to the types of actions or activities for which an EIA is prepared, as well as in accordance with the providers of the activity and the scope of the actions and activities carried out by the legal entities and individuals, the procedure for their approval, as well as the manner of conducting registry for approved studies ("Official Gazette of the Republic of Macedonia" no.44/13, 111/14).

The project for construction of a kindergarten in the city of Bitola with its features is in the Annex to the Decree for the actions and activities for which preparation of Environmental Impact Assessment Report is compulsory, and for which the mayor of the municipality is competent (Official Gazette of the Republic of Macedonia No. 32/12) or the Mayor of Skopje or the mayor of the municipality, Chapter X - Infrastructure projects, point 5 Social protection buildings.

The EIA report for this project was prepared by PE for Urban planning, design and engineering - Bitola (July 2020) and the Approval (with n. UP 31-139 from 04.08.2020) is issued by the Mayor of the Municipality of Bitola and a copy of it together with the Decision for its approval will be sent to the Ministry of Labor and Social Policy.

Implementing the requirements of the World Bank, an Environmental and Social Management Framework (ESMF) was prepared as part of the project for "Improving Social Services" of the MLSP of RNM prepared in May 2018 by the consulting team of Environmental and Social Safeguards Specialist. ESMF is selected as the most appropriate tool for conducting an in-depth analysis of environmental and social aspects. ESMF is prepared in order to ensure that the proposed project is implemented in accordance with the World Bank Standards for environmental and social aspects, protection policies and local environmental legislation that should be used as a practical tool during the period used for design, implementation and monitoring of Project activities.

The new kindergarten is located in the south western part of the city of Bitola and will accommodate 147 children. According to the data from the Statistical Office of RNM in 2018 in the municipality only 28 % of the children are accommodated in the preschool institution. For heating of the kindergarten, it is planned to install a hot water boiler that runs on biomass (pellets), and for heating of sanitary water solar collectors will be installed.

Taking into consideration the nature, size, location, as well as the characteristics of potential environmental impacts from the construction of kindergarten in Bitola, the project is classified in B + category / project with significant risk and it is necessary to be prepared an **Initial Limited Environmental and Social Impact Assessment with Management Plan**.

1. LOCATION DESCRIPTION

Bitola Municipality is located in the southern part of North Macedonia. The municipality borders Demir Hisar Municipality to the north, Resen Municipality to the west, Novaci to southeast, Mogila Municipality to the northeast and Republic of Greece to the south. The municipality has a population of 105.644 inhabitants.

The new kindergarten will be constructed in Bitola on CP 15557 with an area of 4400 m², while the construction area is 1900 m².

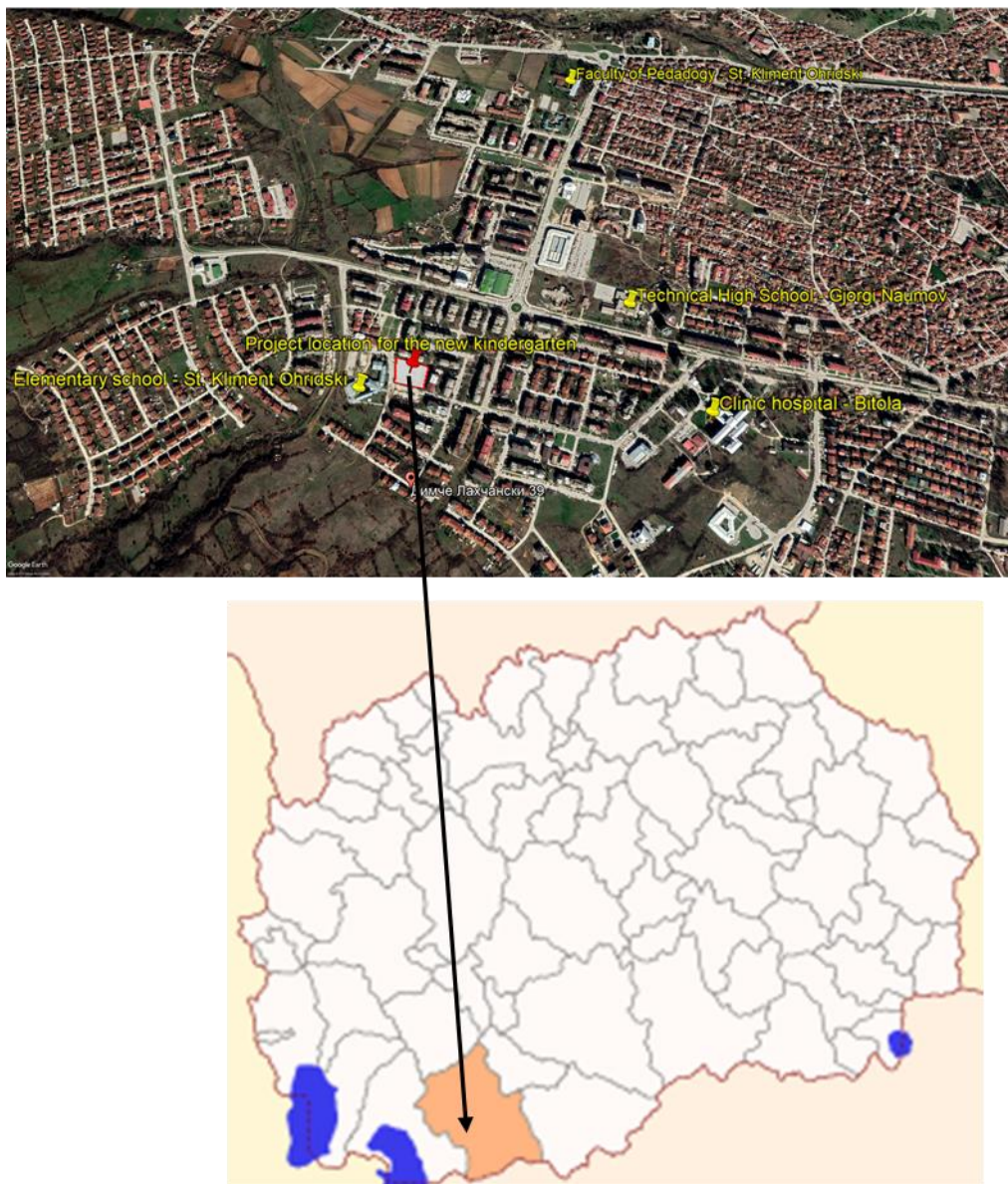


Figure 1 Location of the new kindergarten in relation to its immediate vicinity and Bitola Municipality

In the immediate vicinity of the project location, residential buildings are found, while to the west of the project location, across the street, the Elementary school St. Kliment Ohridski is located. In the wider surroundings, the Clinic hospital Bitola is located approximately 600 meters to the east, the

Technical high school Gjorgji Naumov 500 meters to the north-east and the Faculty of Pedagogy St. Kliment Ohridski, 900 meters to the north of the project location.



Figure 2 The project location and its surroundings

From the site visit and the pictures above it has been confirmed that no object has been built on the site, the whole area is covered with grassland, which means there will be no need for further site clearance during the preparatory phase. The project location is surrounded by residential buildings to the north and east, while Str. Dimche Lahchanski spreads to the west and the south, from which the project location is easily connected to the existing infrastructure.

2. PROJECT DESCRIPTION

The surface of the parcel where the kindergarten is built is 4.400 m², while the building consists of only a ground floor with a gross area of 810 m², a parking area of 400 m² (for 8 vehicles), which leaves 3.190 m² for children playground. The height of the building is 3,7 m.

The functional solution of the building is made in accordance with the Project program which includes a capacity of at least 147 children distributed in 8 groups. The kindergarten has one heterogenous group (from 10-12 children) for childcare in a heterogeneous group between the ages of 6 months and 2 years (nursery); one group (from 12-15 children) for childcare in homogeneous group at the age of 2 to 3 years (kindergarten), two groups (from 15-18 children) for childcare in homogeneous group at the age of 3 to 4 years (kindergarten), two groups (from 18-20 children) for childcare in homogeneous group at the age of 4 to 5 years (kindergarten), two groups (from 20-25 children) for childcare in homogeneous group at the age of 5 to 6 years (kindergarten).

The kindergarten is consisted of entrance for parents and children and administrative entrance, as well as a kitchen entrance for delivery of food. There are technical and utility rooms, electrical and mechanical room with pellet boiler and storage for pellets with different entrance. There is a small kitchen (for 100 – 200 meals) with utility room, storage area, toilet and changing room. In the kindergarten there are also sanitary facilities, 7 play rooms, a nursery room with separate toilets and administrative offices.

The main construction material for the building is the reinforced concrete.

An Elaborate for energy efficiency has been prepared for the facility and from it can be seen that according to energy consumption, will belong to the "C" class of energy efficiency with annual energy consumption per m² of 102,3 kWh / (m²a), which are slightly better than the minimum requirements stated in the Rulebook for the energy performance of buildings.

For heating of the kindergarten, it is planned to install a hot water boiler that runs on biomass (pellets), with a power of 150 kW and a reservoir for pellets with a volume of 350 l connected to expansion tank of 150 l and an 80/60 °C circulation pump. The amount of ash formed by the burning of pellets is only 0.8-1% minimum (8-10 kg ash per 1 ton pellets). To heat water for sanitary purposes in a boiler with a volume 8.744 l, four solar collectors with an efficiency of 82 % and are fixed on universal brackets with an adjustable slope 35 – 50° will be installed. In the periods with no sun the water is heated with a 9 kW electric heater.

With this project program is envisaged that sometime in the future the kindergarten will be connected to the gasification network and because of that an appropriate connection for gas will be made.

Air conditioning units (with indoor and outdoor units) are provided for cooling the premises. The provided inverter air conditioners are primarily for cooling the premises, but can also be used for transient heating when the heating system is not yet operational, and there is need for heating.

Independent ventilation systems shall be installed for (suction) ventilation of the sanitary installations, changing facilities. For the kitchen the installed ventilation has a mass flow of 800 m³/h.

The facility will be equipped with fire protection appliances and a hydrant network for the same purpose. Fireproof construction coatings will be used, and fireproof FP doors will also be installed. In

case of fire, an automatic detection and fire alarm system will be activated. The nearest fire brigade is 2,6 km away (or 5min).

The building will be connected to an existing street water supply network and for the drainage of the waste and fecal water from the building is projected to be connected to the city sewerage network.

The connection to the water supply system is from the existing street water supply network. The outdoor installation is provided by PE material water pipes. The kindergarten is connected to the water supply network with a 150 mm diameter pipe.

The dimensioning of the plug from the street water supply network was carried out according to the required quantity of water for extinguishing the fire, i.e. simultaneous operation of 2 hydrants 5 l/s.

The drainage of the fecal water will be constructively executed with four manholes with 1000 mm diameter and a pipe diameter of 150 mm. The drainage of the storm water will be executed with 150 and 200 mm diameter and six manholes with 1000 mm diameter.

For general lighting on the premises are planned to be installed LED. At the entrances, terraces, toilets and machine room waterproof LED lights will be installed. For the fire alarm system panic lights with batteries will be installed. The kindergarten has a lightning installation.

The graphical plans of the floors are presented in the following photos.

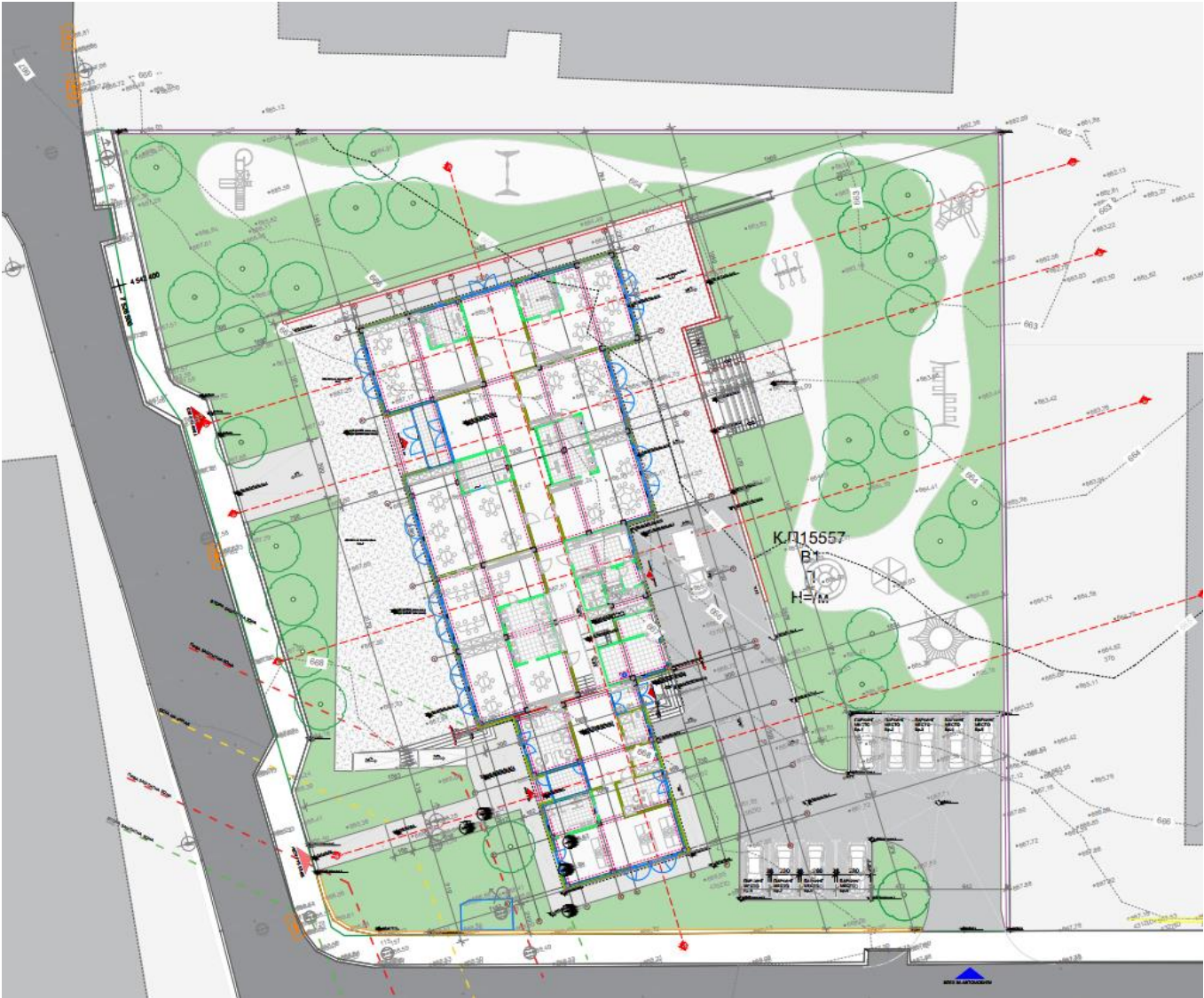


Figure 3 Plan for the ground floor with the playground area and the parking

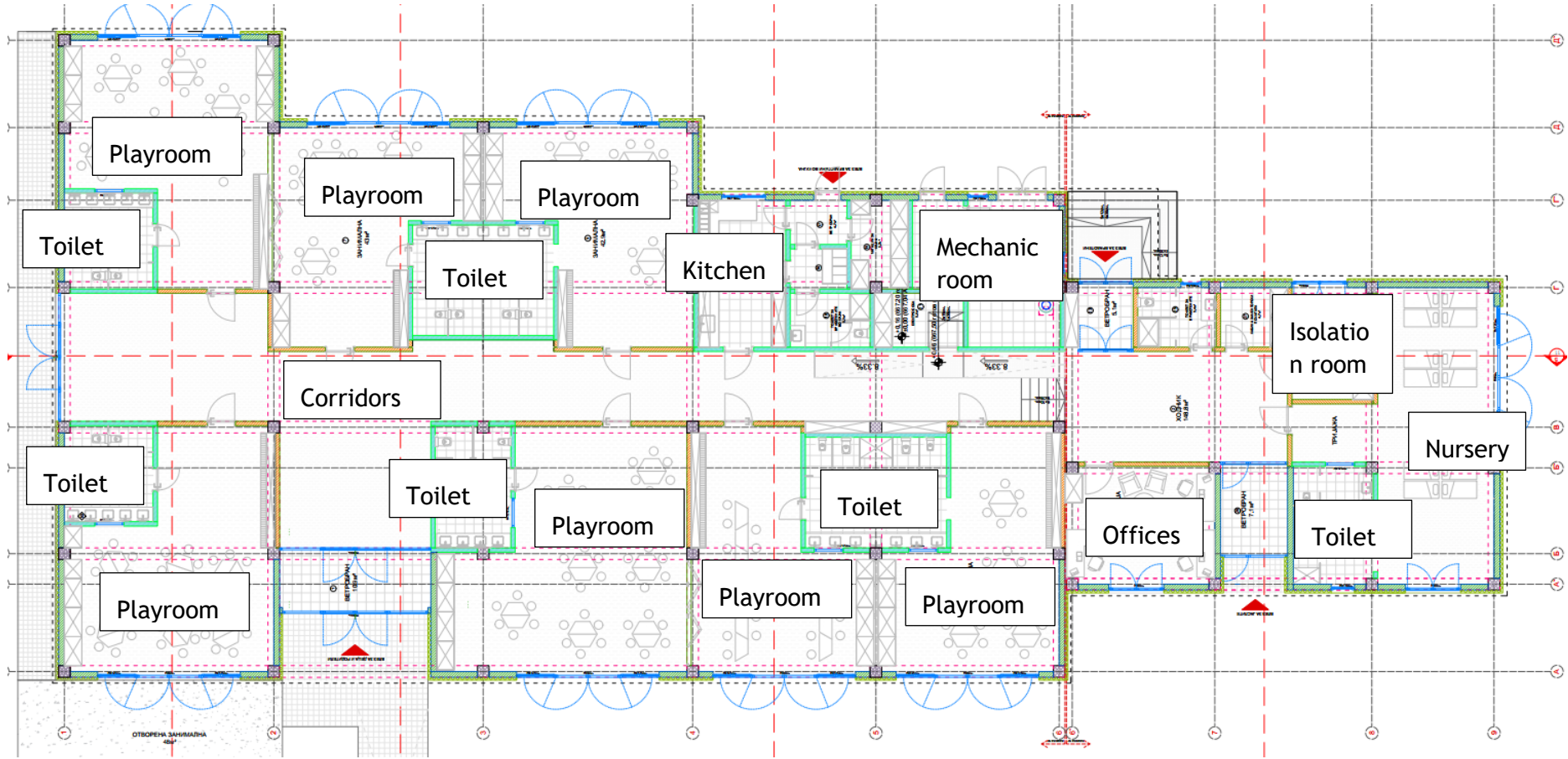


Figure 4 Plan for the ground floor

2.1 Project activities

The project activities can be divided into two phases: preparatory (geodetic marking of the project location and preparation of the terrain for the construction of the building) and the construction of the kindergarten and activities related to the construction of the kindergarten.

The main project activities that will be implemented during the construction of the kindergarten in the city of Bitola, Municipality of Bitola, which could potentially have an impact on the environment, are given in Table 1.

It is important to note that the use of asbestos-containing materials is prohibited in the construction of the new kindergarten.

Table 1 Planned activities in the construction phase

Project activities
<p>I Preparatory works: geodetic marking of the project location and preparation of the terrain for the construction of the building and clearing from low vegetation, branches or waste (1.285 m²) will be transported to the landfill Meglenci;</p> <p>II Activities related to the construction of the kindergarten</p> <ul style="list-style-type: none"> - Placing a protective fence on the construction site and signaling to ensure safe traffic on the access road; - Earth works: Combined mechanical and manual excavation of humus (440,6 m³) and transportation to a nearby landfill Meglenci; - Combined mechanical and manual excavation of soil (648 m³) and reuse as tampon layer; - Procurement, transport, straightening, cutting, bending and fitting of reinforcing steel bars according to static calculation, structural details and reinforcement plans; - Concrete works: making of walls, pillars, gravel walls, stairs with Lean Concrete 30 and foundations with Lean Concrete 20; - Construction of partition and facade walls with different thicknesses from hollow ceramic blocks; plastering of the interior walls; placing ceramic tiles in the toilets; - Sanding and painting the interior surfaces of the vertical walls and columns; - Building of a roof construction with a protective fireproof layer with a degree of protection according to Elaborate for Fire Protection; locksmith works and metalwork; - Isolation works, supply and installation of isolation materials; placing of hydro isolation in the object; - Facade works, making of a thermal insulation facade with extruded polystyrene 10 + 10 cm; - Purchase and installation of ordinary and FP doors (fire resistance up to 90 min) as well as energy efficient windows; - Water and sewage installation: supply, transport and placement of pipes and other elements that are part of the water and sewage network in the building and external connection with the existing street sewage (Φ150 mm) and water supply network (Φ150 mm); - Electrical installation works: installation of low voltage installations (alarm installations (alarm siren) and automatic detection and fire alarm system, installation of panic lights, intercom, video surveillance, lightening installation, placing of lightning rod;

Project activities
<ul style="list-style-type: none">- Thermomechanical works: installation of pellet boiler with a $Q = 150$ kW with an expansion tank, installation of hot water circulation pump with $Q = 5,3$ m³/h, installation of 4 solar collectors 2079 mm X 1240 mm with a conversion factor 0,82, a buffer tank with $V = 744$ l, and an expansion tank with $V = 50$ l, installation of a ventilation systems in the toilets and dressing rooms with a total $Q = 1.280$ m³/h and in the kitchen with a $Q = 760$ m³/h equipped with a filter;- Urban landscaping around the garden by placing paver tiles and grass.

3. BASIC DATA

- **Demography**

According to the data from the Statistical Office of RNM, in the municipality in 2018 there are 5.211 children aged 0-6 years. According to the data from the municipality, there are 1.278 children on the waiting list in the existing preschool institutions. The coverage of children in preschool institutions is 28 %.

- **Climate characteristic**

The municipality of Bitola is characterized with continental climate, with dynamic and unstable climate, very hot summer and short, cold and dry winter. The average annual temperature is 11,1 °C. July is the hottest month of the year, with an average temperature of 22,2 °C and highest temperature of 41,2 °C. The coldest month of the year is January, with an average temperature of 0,6 °C, and lowest temperature of -30,4 °C.

- **Seismology**

The territory of the Municipality of Bitola, where the project is located, belongs to areas subject to frequent and strong earthquakes, caused by local and distant epicenter hotspots. In this area, shocks are possible with a magnitude of VIII° per MK scale.

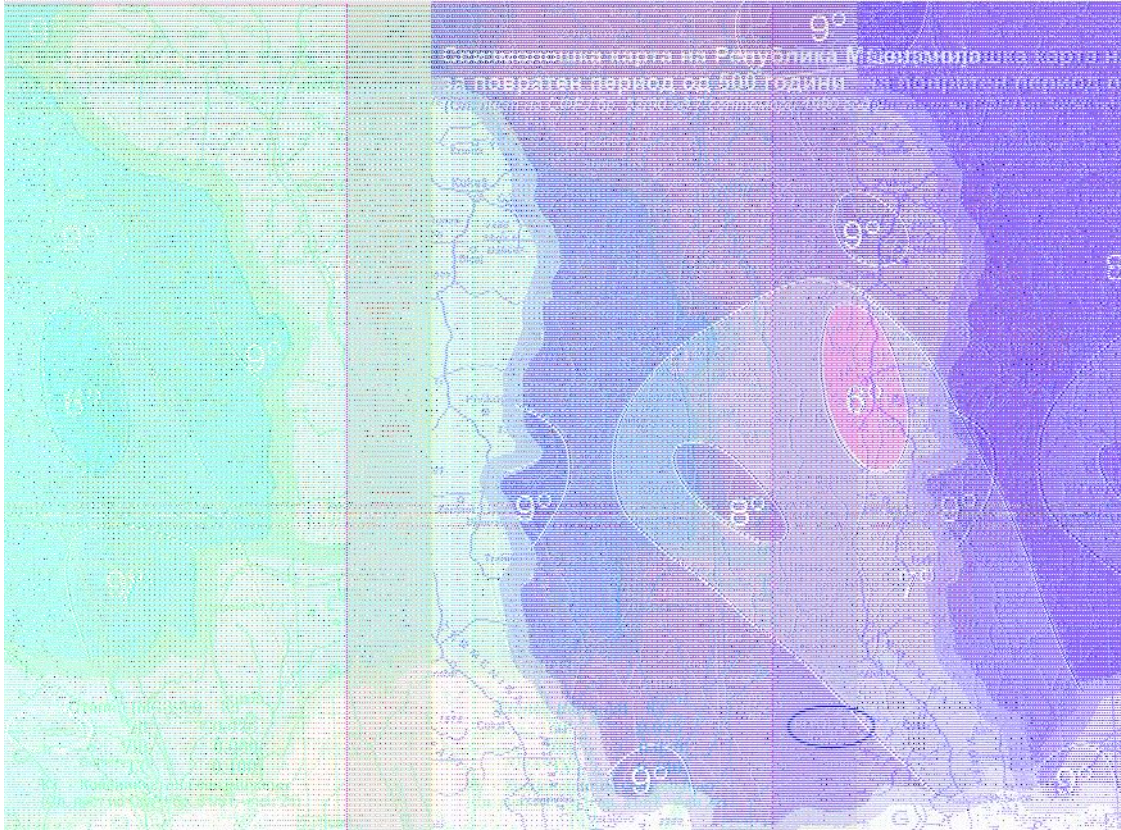


Figure 5 Seismology map RNM

- **Water**

The nearest surface water body, located in the vicinity of the project site, is a small tributary of Dragor river flowing at approximately 120 m to the east and Dragor river flowing approximately 1 km north of the project location. Dragor river is a right tributary of the Crna river and its spring is located on the Baba Mountain.

The water used for drinking comes from the public water network. There is a sewage network in the Municipality of Bitola on which the new kindergarten will be connected.

- **Air quality**

There are two automatic monitoring stations for air quality in Bitola, from which the closest one is located approximately 2 km to the north-east of the project location. The local traffic, heating of domestic and commercial buildings during the winter period are the main sources of air pollution in the municipality.

Six parameters are being measured with these automatic monitoring stations for air quality: SO₂, PM₁₀, PM_{2,5}, CO, O₃ and NO₂.

According to the data from these monitoring stations, the allowed SO₂ concentrations in the air were not exceeded throughout the last year. During 85 days of 2019, the daily concentrations of PM₁₀ particles in the air were exceeded. The CO concentrations were exceeded 2 times during 2019, while the allowed O₃ concentrations were not exceeded throughout 2019, as well as NO₂ concentrations.

- **Waste**

In the Municipality of Bitola, PE Komunalec collects, transports and disposes the generated waste. The collection and transportation of the waste is divided into 13 regions. There are over 1.500 waste containers and over 1.600 waste bins throughout the city of Bitola. The collection and transportation of the waste is done by 16 specialized vehicles.

The waste mostly generated is communal waste (28.300 t/year), paper waste (230 t/year) and plastic waste (4 t/year).

The waste disposal is done on Meglenci landfill, located 13 km from Bitola.

• Soil and geology

The wider region of the Municipality of Bitola belongs to a bigger geotectonical unit – Western Macedonian zone. The oldest rocks in this zone belong to the Precambrian period, and are visible in the magmatic complex, composed of granodiorites, shale granodiorites, syenites and granite.

• Noise

The environmental noise intensity for the core indicators L_{day} and $L_{evening}$. The indicator shows the environmental noise intensity for the core indicators L_{day} and $L_{evening}$, in Bitola, Kichevo, Kumanovo and Skopje. In Bitola there are a total of 8 measuring points and they are presented graphically on the Figure 6.

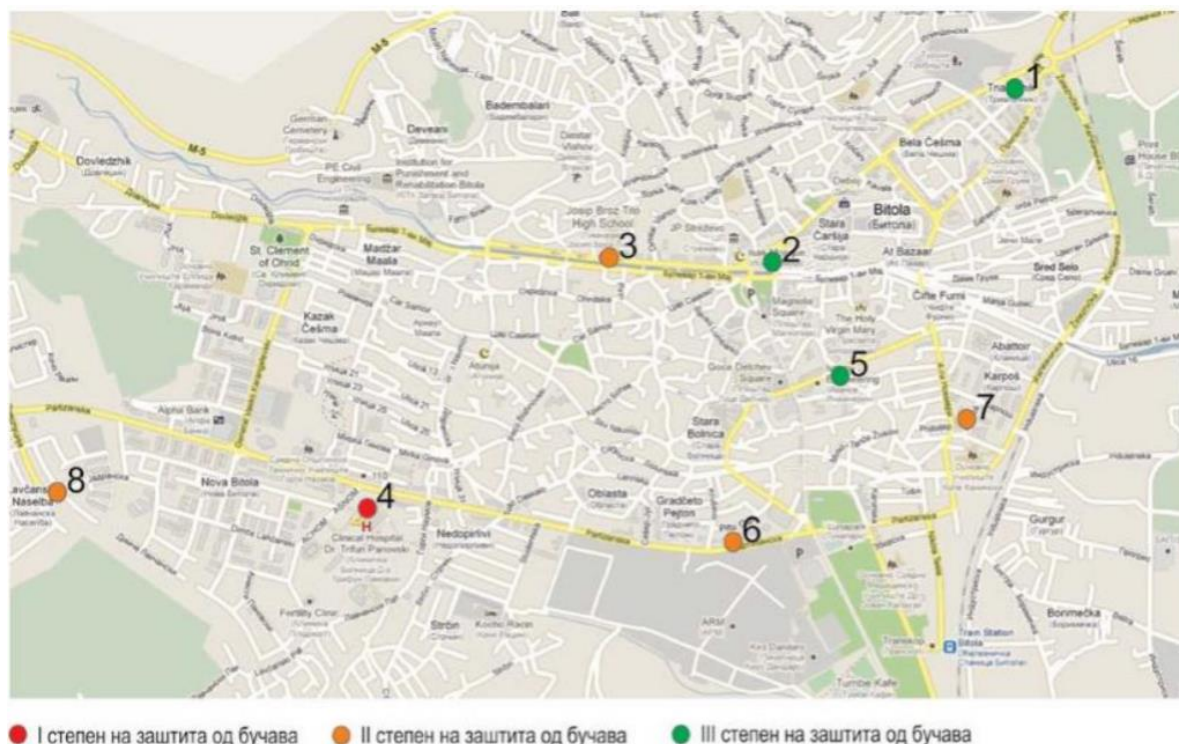


Figure 6 Location of the measuring points

Table 2(left) shows that the intensity of community environmental noise in Bitola for the indicator L_{day} at six measuring points has a slight downward trend for the considered period, and a constant trend at the other three measuring points. Data indicate that the level of noise does not exceed the Limit Value at 6 measuring points in all years, while at the remaining measuring points the level of noise exceeds the Limit Value for that measuring point in several years by 0,24 to 5,62 dB(A) for the indicator L_{day} . As regards the $L_{evening}$ indicator, Table 2 (right)Table 1 indicates that the level of

noise does not exceed Limit Value at 6 measuring points. At the remaining measuring points, the level of noise exceeds the Limit Value by 0,24 to 5,42 dB(A).

As regards the Le indicator, Table 1 indicates that the level of noise does not exceed Limit Value at 6 measuring points. At the remaining measuring points, the level of noise exceeds the Limit Value by 0,24 to 5.42 dB(A).

Table 2 Intensity of environmental noise for the core indicator L_{day} (left) and L_{evening} (right) in Bitola

2012	2013	2014	2015	2016	2017	2018	FB L _d dB(A) LV L _d dB(A)	Address	2012	2013	2014	2015	2016	2017	2018	FB L _e dB(A) LV L _e dB(A)	Address
57.61	56.42	57.63	59.06	59.23	57.17	58.48	60	"Ivan Milutinovic" - "Prilepska"	54.28	55.60	54.95	57.46	57.74	56.42	58.00	60	"Ivan Milutinovic" - "Prilepska"
62.84	55.39	55.68	60.75	62.44	58.90	60.24	60	"Ivan Milutinovic" - "Stolarska" (Health Institute yard)	61.11	53.03	56.90	58.79	59.67	59.04	64.00	60	"Ivan Milutinovic" - "Stolarska" (Health Institute yard)
58.87	53.55	58.18	56.71	56.21	52.70	57.89	55	"1 May" - "Mirche Acev", (Gymnasium J.B. Tito yard)	56.65	52.85	57.55	55.50	54.12	55.87	61.00	55	"1 May" - "Mirche Acev", (Gymnasium J.B. Tito yard)
52.69	52.53	52.55	54.34	53.43	52.37	54.03	55	"Partizanska" - "ASNOM", (Clinical Hospital yard)	51.32	50.66	51.10	51.43	51.07	50.59	55.00	55	"Partizanska" - "ASNOM", (Clinical Hospital yard)"
58.23	54.50	57.44	57.15	57.36	57.37	58.05	60	"Boris Kidrich" - "Nikola Tesla"	58.32	52.75	55.20	56.42	55.47	56.74	56.75	60	"Boris Kidrich" - "Nikola Tesla"
57.81	53.92	53.30	55.81	52.22	52.12	53.93	55	"Partizanska" - "Pitu Guli"	55.25	53.31	53.45	51.14	53.86	51.20	50.50	55	"Partizanska" - "Pitu Guli"
51.77	51.59	49.28	51.88	51.68	53.27	55.45	55	"Karposh" - "4 November" (kindergarten "Vangel Majorot")	50.85	50.60	51.30	49.18	52.33	52.63	56.25	55	"Karposh" - "4 November" (kindergarten "Vangel Majorot")
41.32	38.85	36.93	41.48	39.46	43.21	42.76	55	"Jadranska" - "Borivoje Radisavljevic"	41.45	39.98	37.05	41.87	34.42	47.13	45.50	55	"Jadranska" - "Borivoje Radisavljevic"
52.30	52.23	-	-	-	-	-	55	"Partizanska" - "Marshal Tito", Sports hall "Mladost"	52.76	52.81	-	-	-	-	-	55	"Partizanska" - "Marshal Tito", Sports hall "Mladost"

• Biodiversity

Because the project site is located in the urban area in Municipality of Bitola, no endangered, significant or endemic flora and fauna species are recorded near the project site. As nearest protected area, relevant for the project location, is National Park (NP) "Pelister" (located about 4,5 km northwest from the project site).

NP "Pelister" is first national park on the territory of Republic of N. Macedonia, declared on 30 December 1948 (with 17,150 ha protected area). This protected area is located on Baba Mountain and abounds with rich flora and fauna. National Park "Pelister" abounds with various types of relief shapes that are formed through a long and very complex natural processes. The wild life is characterized with high endemism. Special attraction of NP "Pelister" represents two glacial lakes - Big and Small Lake on Pelister called "Pelister Eyes" and relief shapes so-called stone rivers (the slope of the terrain filled with crushed material, composed of granite blocks). Typical representative for the status of the NP "Pelister" is endemic autochthonous pine species *Pinus peuce* (Macedonian pine known as 'molika'). This Tertiary relict plant is the five needle leafed pine which forms the great compact forest vegetation in Pelister. A large number of invertebrate animals are endemic, tertial, glacial and relict fauna but no less is the number of vertebrate animals whose characteristics are distinctive only for Pelister and Baba Mountain. Their number is quite large and comprises microorganisms, algae, protozoa, worms, mollusks, limbed animals and vertebrate animals. Some of the typical representatives of the NP "Pelister" are presented in Figure 7.



big glacial lake "Pelister Eyes"

Salmo trutta peristericus (Pelister trout)

Pinus peuce (Macedonian pine known as 'molika')

Source: <http://park-pelister.com/en/>

Figure 7 Some of the typical representatives of NP "Pelister"

In the wider surrounding of the project location in Municipality of Bitola, following protected areas are registered: 1) Important Plant Area (IPA) "Pelister" (located about 5 km northwest from the project site); 2) Important Bird Area (IBA) "Pelagonija" (located about 6,9 km southwest from the project site); and 3) Emerald site "Pelister" (located about 4,4 km northwest from the project site. In **Annex I** are presented locations of the protected areas, regards the project location.

• Cultural heritage

In the wider surrounding of the project site are located numerous religious objects (mosques and churches) that are located for more than 500 m around the construction site in the city Bitola.

Cultural heritage of special importance is the Heraclea Lyncestis a city settlement from Hellenistic times to the Middle Ages. It was founded in the middle of the IV century BC. It is located 4 km to the south east of the project location.



Figure 8 The city settlement Heraclea Lyncestis

Bitola has a large number of churches and monasteries. The church of St. Dimitrija is located in the center of the city built in 1830. The church of St. Mother Mary, which historical sources testify to, began its construction in the year of 1870.



Figure 9 The church of St. Dimitrija (to the left), the church of St. Mother Mary (to the right)
Notable cultural heritage is the Clock Tower.



Figure 10 The Clock Tower

3.1 Sensitive receptors

The construction of the new kindergarten will be performed in an urban settlement, in the southern part of the city Bitola in the Municipality of Bitola.

The main sensitive receptors in the environment will be residents who live in individual housing facilities in the immediate vicinity, as well as the students and teachers attending the school in front of the kindergarten. As a result of the foregoing, it means that the main measures should be applied to them.

4. POTENTIAL IMPACTS AND RISKS ON THE ENVIRONMENT AND IMPACT ASSESSMENT AND RISK ASSESSMENT

Increased level of noise, air emissions, possible improper waste management, OH&S risk and risk on local community safety are main identified adverse environmental impacts and risks. Adverse impact on cultural heritage sites are not expected. Detailed analyses of each possible impact and risk is shown below.

The implementation of the project activities will be performed into two phases: preparatory (geodetic marking of the location of the building and preparation of the terrain for the construction of the building) and activities related to the construction of the kindergarten.

For this sub – project land acquisition is not envisaged as the property of the land where the kindergarten is located is state owned.

The presentation of the possible impacts is presented in Table 2.

Table 3 Potential impacts and risks

<i>Phase</i>	<i>Environmental aspects</i>	<i>Overall environmental risk assessment</i>
Preparation phase	Health and safety at work and the population (especially residents in the closest environment)	Local, optimal, large intensity
Construction phase	Health and safety at work and the population (especially residents in the closest environment)	Local, optimal, large intensity
	Air quality	Regional, short-term, medium intensity
	Noise	Local, long-term, medium intensity
	Different waste types	Local, optimal, medium intensity
	Impacts on the water quality	Local, short-term, medium intensity
	Impacts on the biodiversity	None
	Impacts on the cultural heritage	None
Operational phase	Different waste types	Local, long-term, large intensity
	Health and safety at work and the population (especially residents in the closest environment)	Local, long-term, large intensity

The Contractor should take into account and fulfill all the measures envisaged in the detailed Environmental mitigation plan and the Plan for monitoring of the implementation of mitigation measures (shown in next sub-chapter). The monitoring of the implementation of the proposed measures for environmental protection should be done by the Supervisor. Good communication between: Contractor, Supervisor, Environmental Inspector, Communal Inspector and other relevant persons from the Municipality of Bitola (Consultant engineer, Mayor) is essential for the good and timely implementation of the project.

Potential impacts on the health and safety at work and the population (especially residents in the closest environment)

The Contractor needs to have a prepared and implemented an **Occupational Safety and Health Plan (including Labor Management Procedures)** where a good construction practice is presented and the **Community safety Plan** (with proper preventive measures which should be part of the project design documentation). The OHS Plan requires that workers at the construction site be informed and the measures presented in this document should be regularly implemented. Before beginning of the construction, it is necessary to inform the local population (through the official web site of the Municipality of Bitola (<http://www.bitola.gov.mk/>) and the municipal information board) about the type of project activities, the start date of the activities, the dynamics of their progress and the duration of the project activities. If during the implementation of the project activities the population is unsatisfied by the project realization, they could submit their complaints by using the Grievance mechanism.

Preparation of **Traffic Management Plan** before the start of the construction activities should be provided with the alternative traffic routes. Fences, tape and warning signs should be installed in order to increase the safety of the people passing by the construction site. Particular attention should be given to wastewater and electricity installations, and to not leave open manholes and unsafe electrical cables in order to avoid an accident.

PPE should be provided for workers. They also must be informed on Grievance Redress Mechanism, as well as the right to organize in workers organization, by their employer the Contractor/Sub-contractor. All engaged workers must have regulated full employment status during their assignment on this project, and all their health and pension insurance must be covered in full for the engaged period by their employer. The grievance forms could be post in the mobile containers for the workers.

Considering the current situation with COVID 19, in addition to the measures for safety and protection at work, the plan also includes measures for prevention of COVID 19. The COVID 19 prevention measures contain recommendations from the World Bank / WHO, as well as recommendations from the Macedonian Occupational Safety and Health Association in the form of a Guide that the Contractor of the construction works needs to implement. The Contractor is required to follow/update and implement the measures that are currently in force and adopted by the Government as binding at national level. Official site for information related to COVID 19 on national level is www.koronavirus.gov.mk.

Detailed description of the measures and recommendations from the World Bank/WHO and MOSHA are presented in Annex II.

Potential impacts on air quality

Construction machinery (vehicles) and construction equipment should be properly maintained and should comply and in accordance with the relevant emission standards. Their speed needs to be adjusted accordingly at the construction site. During the excavation and transport of the excavated soil, dust is expected to be reduced or completely avoided by spraying water at the project site. Building materials should be stored in appropriate locations to reduce dust dispersion in the environment. Regular maintenance of vehicles (washing of wheels of the construction machinery) and construction machines in order to reduce emissions and increase the pollution. It is necessary to adequately cover

the material transported by vehicles that can cause dust emissions to minimize and eliminate adverse impacts on the local population around the construction site.

Potential impacts because of noise and vibration

As a result of the operation of construction machinery and equipment at the construction site during the project activities, the increased level of noise and vibration will be generated. According to the national legislation for protection of noise (Official Gazette of RM no. 79/07, 124/10, 47/11 and 163/13 and 146/15), the project location is in a residential area belongs to an area of II degree of protection against noise (the limit values for this area are 45dB (A) for the night period and 55dB(A) during the day). The Contractor is obliged to respect the proposed preventive measures in the Plan for mitigation of the negative environmental impacts as well as the requirements in accordance with the national legislation for protection against noise.

Potential impacts because of the different waste types

The main waste fractions that will be created during the project activities are small amount of municipal waste from workers (food, drinks, plastic / glass bottles, etc.), contaminated soil from eventual leakage of engine oil from the use of construction machinery and mixed waste from soil removal from the project site.

The Contractor is obliged to comply with the national requirements for waste management and perform its categorization according to the List of Wastes (OG of the RM, No. 100/05), In order to ensure proper waste management of the generated waste streams. Also, the Contractor is obliged to sign a Contract with an authorized legal entity for handling the generated waste fractions. The final disposal of municipal and inert waste will be carried out by PE "Komunalec" from Bitola, and the waste will be disposed at the landfill "Meglenci" located 13 km east of the city of Bitola. According to the Main Design, the amount of the generated waste streams from: excavation of soil is 440,6 m² and from vegetation and branches from the clearing the construction site – area of 1.285 m³.

Potential impacts on the water bodies and soils

Around 120 m west from the project site is located a very small tributary to the river Dragor which is located 1 km to the north from the kindergarten. According to the Decree for categorization of watercourses, lakes, accumulations and groundwater (OG of the Republic of Macedonia No. 18/99), the river Dragor is categorized as III class. According to the legislation, the Contractor is obliged to prevent the disposal of generated waste (e.g. soil contaminated with leakage of engine oil from construction machinery, existing asphalt, etc.) near the two rivers during the project activities, in order to prevent additional water pollution. The mobile toilets and waste bins should be handled appropriately, leakage of liquid and solid waste into groundwater may occur.

Potential impacts on the biodiversity

Because of the wide distance between protected areas (mentioned in sub-chapter Biodiversity and Annex I) and the project site, the implementation of the project activities shall not cause any adverse impact on the existing flora and fauna because it is located in an urban part of the City of Bitola.

Potential impacts on the cultural heritage

In the wider surrounding of the project site are located numerous religious objects (mosques and churches) that are located for more than 500 m around the construction site in the city Bitola. And the archeological site Heraclea is located at 4 km to the south east of the project location.

The implementation of the project will not cause negative impacts on the cultural heritage in Bitola.

Implementation of ESMP

A detailed description of the appropriate measures for each medium is individually given in the Plan for measures for prevention and mitigation of the negative impacts on the environment and social aspects of the project activities, as well as in the Plan for monitoring of the implementation of the measures.

All preventive/mitigation measures should be applied before and during the construction activities by the responsible institutions, the Contractor and all involved in the Environmental Mitigation Plan. The monitoring should be carried out regularly by the Contractor / Project Manager and Supervisor.

The main responsibility lies to the Contractor who should consider and apply on daily basis all proposed preventive and mitigation measures. Supervision should oversee the implementation of mitigation measures by the subcontractor.

The main inspection responsibility is done by the municipal employees (Head of the Construction Project, Environmental Inspector and Communal Inspector), which should control the implementation of the mitigation measures and the proposed monitoring plan.

The municipal employees should coordinate the work plan and the proposed measures with the representatives of the kindergarten (director, kindergarten staff) and sub-contractor for the smooth implementation of the project and minimizing the risks to the environment, health and safety.

It is necessary to have regular meetings before the start of the project activities, as well as during the construction activities in order to discuss the time, the status of the prepared documentation, the status / progress in the implementation of the project activities in order to provide good construction practice and safety of the workers and the surrounding population, as well as minimal environmental impacts. The Regular Reports should be prepared two weekly period by the Project Manager from the Municipality of Bitola and submitted to the PIU from MLSP.

Grievance mechanism

Before starting with construction activities Contractor should inform the workers about the Grievance Form and the opportunity to express their compliances regarding the operation on the construction site. Local population will be introduced with this possibility by the Information posted on the Informative board within the Local Community, Municipal web site, and via local radio or local TV station.

During the implementation of the project activities if the population is unsatisfied by the project realization, they could submit their complaints through the Grievance mechanism, by using the form which can be found on the website of the MLSP for the SSI Project <http://ssip.mtsp.gov.mk/>.

The complainant will be informed about the proposed corrective action and follow-up of corrective action within 25 calendar days upon the acknowledgement of grievance. In situation when the PIU is not able to address the particular issue verified through the grievance mechanism or if action is not required, it will provide a detailed explanation/ justification on why the issue was not addressed. The response will also contain an explanation on how the person/ organization that raised the complaint can proceed with the grievance in case the outcome is not satisfactory. At all times,

complainants may seek other legal remedies in accordance with the legal framework of Republic of North Macedonia, including formal judicial appeal.

Public disclosure and citizen engagement

The Municipality of Bitola will submit the draft version of this Initial Limited ESIA document for review and approval of the PIU Environmental and Social Experts, who then (when confident that the document meets WB quality and content requirements) will submit the draft document for the review and clearance by the World Bank. After the clearance is obtained, the draft document will be publicly disclosed.

The draft version of Initial Limited ESIA document will be available for the public on web site of the Municipality of Bitola (<http://www.bitola.gov.mk/>) and the web site of the MLSP PIU (<http://www.mtsp.gov.mk>). The social Media channel of the Municipality of Bitola that will be used for the purpose of raising awareness about the Project implementation and identified E&S risks, impacts and mitigation measures is the facebook page (<https://www.facebook.com/OpstinaBitola/>).

During the 14 days after the disclosure of the prepared draft Initial Limited ESIA document, the Municipality of Bitola will conduct public hearing / video consultation event in order to inform the public on the proposed sub-project activities, anticipated impacts and the ways of their mitigation.

Public announcement will be developed with brief description about the purpose of the project, project activities and duration of the activities, environmental and social impacts, proposed measures, availability of the Initial Limited ESIA on the MLSP web site and Municipality web site, Informative board within the Local Community. Announcement will also contain information about the possibility for citizens to raise opinion/ suggestion/comments on the prepared Initial Limited ESIA by accessing the link for the SSI Project on the MLSP web page (<http://ssip.mtsp.gov.mk/>). The responsible persons from MLSP are Mrs. Marija Maliminovska (e-mail: marija.maliminovska@mtsp.gov.mk) and Mrs. Maja Daskalovska (e-mail: MDaskalovska@mtsp.gov.mk).

Information about the date and time for conducting the public hearing / video consultation, and how the stakeholder can take part on the video public consultation will also be a part of the announcement.

Public announcement will be launched on the local radio or TV station and on the Informative board within the Local Community.

Public consultation for ESMP

Considering the situation with COVID 19 and there is a chance for organizing a video public consultation instead of an ordinary public hearing event in the premises of the Municipality where the project will be implemented. The MLSP PIU in cooperation with the municipality will define the date for the public hearing / video consultation.

Municipalities will need to inform all relevant stakeholders on its territory about the timing of the public hearing / video consultation (and to ask them for their e-mail address if they like to join the event), so that all from their homes/offices can follow the event and be active participants. If the stakeholders do not have the technical capabilities, the municipality will ensure an appropriate solution in order to be able to follow the event. The mailing list for participants will be prepared taking into account all relevant stakeholders and Invitation will be sent to those with brief explanation for the:

- Purpose of the public hearing / video consultation;
- Registration link and instructions for connection;
- Exact time and date for the event;
- Availability of the disclosed draft Initial Limited ESIA for comments and
- Possibility for submitting comments on the prepared Initial Limited ESIA by visiting the link on the SSI Project on the MTSP web page.

During the public hearing / video consultation event after the presentation of the main project activities and main findings from the Initial Limited ESIA, attending stakeholders can raise their comments/questions/suggestions and any concern about the project.

After maintaining the public hearing / video consultation and the 14-day period for submitting comments, the final version of the Initial Limited ESIA will be prepared and will include the public consultation report (including announcement of the event (media or personal) detailed description of the event, list of participants, minutes of meeting , the expressed comments)and the appropriate corrections in the document according to the received comments and remarks.

Approved Final version of Initial Limited ESIA document should be included in the Grant Agreement with sub-project proponent, and then into the respective bidding documents and construction contracts.

The final version of the Initial Limited ESIA will be available on the MLSP web site and Municipality web site for the whole period of the sub project implementation.

Contact person for project awareness and public consultation from MLSP:

Mrs. Marija Maliminovska, Responsible for public relations for the project

(e-mail: marija.maliminovska@mtsp.gov.mk)

Mrs. Maja Daskalovska, Responsible for public relations for the project

(e-mail: MDaskalovska@mtsp.gov.mk).

Contact person for project awareness and public consultation from Municipality of Bitola:

Mrs. Zora Simjanovska, Head of Department for economy development,

e-mail: zkomunalno@bitola.gov.mk

mob.tel: +389 70 303 316

5. ENVIRONMENTAL AND SOCIAL MITIGATION PLAN

Potential impact	Impact scale	Proposed mitigation measures	Implementation Cost	Responsibility
Project activity: Marking of the construction site for kindergarten in Municipality of Bitola				
<p><u>Aspect: OH&S (Labor Management Procedures) and local community safety</u></p> <p>Possible adverse health impacts to the workers, facility users and general population in the community due to:</p> <ul style="list-style-type: none"> - Non - compliance with national requirements for health and safety at workplaces - Lack of ensured safety measures at the start of construction work - Injury passing nearby the project site and open trench and water manholes - Not compliance with strict OHS standards and work procedure - inadequate public access to the kindergarten 	<p>Local / within the construction site in Bitola</p> <p>Short term during the construction of the kindergarten</p> <p>Significance - major</p>	<p>Activities during marking the construction site:</p> <ul style="list-style-type: none"> ➤ Preparation, approval and implementation of Occupational Safety and Health Plan (or Labor Management Procedures), Community safety Plan and Waste Management Plan before the start of the construction activities; ➤ Preparation of Traffic Management Plan before the start of the construction activities; ➤ Set up information to local population about the type and time duration on project activities on the municipal information board and the municipal web site of Municipality of Bitola: http://www.bitola.gov.mk/; ➤ Set up for the local population safe pathways to have a safe access to move around the construction site; ➤ Implementation of good construction practice: <ul style="list-style-type: none"> ➤ Fencing and placing adequate warning tapes and signs around the construction site, ➤ Set the Information panel on project site with general information of the project, the Contractor and Supervisor; ➤ Forbid entry for unemployed people within the project sites; ➤ Provision of the information via TV, radio and municipality web site (http://www.bitola.gov.mk/) about the construction activities – start and finish of work for each day; ➤ Organize 24-hour guard watch of the site; ➤ Setting up mobile toilets and their regular cleaning, ➤ Full construction machinery and equipment should be handled only by experienced and trained staff in order to reduce the risk of accidents; ➤ Obligatory application of good construction practice and application of safety measures such as: a) use of proper protective clothing and equipment by worker (PPE); b) Maintain a good level of personal hygiene; c) Health protection-first aid kits and medical service on sites need to be provided during the works; ➤ It is mandatory a constant presence of firefighting devices in case of fire or other damage; ➤ All workers must be aware of the dangers of fire and must implement measures for fire protection and should be able to operate fire extinguishers, hydrants and other devices used for extinguishing fires; 	<ul style="list-style-type: none"> • 150 Euro • 200 Euro • 700 Euro/monthly for safeguard • 500 Euro/monthly maintenance – 100 Euro per emptying 	<ul style="list-style-type: none"> • Contractor • Supervisor • Municipal staff from Municipality of Bitola (Communal Inspector and Environmental Inspector) • PIU of MLSP

Potential impact	Impact scale	Proposed mitigation measures	Implementation Cost	Responsibility
		<ul style="list-style-type: none"> ➤ Larger quantities of flammable liquids should not be kept on the site along the project site. 		
Project activity: Construction of Kindergarten in Municipality of Bitola				
<p><u>Aspect: Air quality</u></p> <p>Air quality impact as result of emissions caused by transport vehicles and construction machinery within the construction site and local roads as result of:</p> <p>-exhaust and dust emissions from mobile sources (CO₂, NO_x, PAH, SO₂ and suspended particulates (PM₁₀, PM_{2,5}))</p>	<p>Local / within the construction site in Bitola</p> <p>Short-term / Significance – major</p>	<ul style="list-style-type: none"> ➤ Vehicles and construction machinery should be well maintained and comply with relevant standards on emissions; ➤ Limit the speed of vehicles on the locations where construction activities are performed; ➤ Construction site, transport routes and locations where materials are handled should be sprinkled with water on dry and windy days; ➤ Construction materials should be kept covered at appropriate locations to reduce the distribution of dust; ➤ Regular maintenance of vehicles (washing of wheels) and construction machinery in order to reduce leakage of engine oil, emissions and the expansion of pollution; ➤ Material transported by vehicles which emits dust should be covered; ➤ In the event of dust emissions from the operation of construction machinery workers must use protective masks; ➤ <ul style="list-style-type: none"> • Burning of debris from ground clearance not permitted. 		<ul style="list-style-type: none"> • Contractor • Supervisor
<p><u>Aspect: Noise</u></p> <p>Increase in noise level and vibration as a result of use of construction machinery and equipment on the construction site in village Bitola</p> <p>- II Level of noise protection</p>	<p>Local / near the construction site in Bitola</p> <p>Short-term / Significance – minor</p>	<ul style="list-style-type: none"> ➤ The location for construction of kindergarten, according national legislation of noise protection belongs to the area of II degree of protection against noise limit values range from 45dBA for evening period night to 55dBA for day; ➤ The noise level should not exceed the limit values under the existing legislation; ➤ It is prohibited to execute construction activities at night; ➤ Project activities to be conducted from 7:00 am to 7:00 pm; ➤ Workers need to be equipped with protective devices for the ears (earplugs); ➤ Avoiding simultaneous operation of several equipment that emit an increased level of noise. 	<ul style="list-style-type: none"> • The workers are going to wear regular noise protective devices 	<ul style="list-style-type: none"> • Contractor • Supervisor
<p><u>Aspect: Waste</u></p> <p>Potential adverse impact to environment and</p>	<p>Local / within the project location in Bitola</p>	<ul style="list-style-type: none"> ➤ Identification of different types of waste at the construction site (excavated soil, municipal waste, metal, plastic, packaging waste etc.); ➤ Waste classification according to the national list of waste (Official Gazette No.100 / 05) and waste selection on the site; 		<ul style="list-style-type: none"> • Contractor • Supervisor

Potential impact	Impact scale	Proposed mitigation measures	Implementation Cost	Responsibility
<p>human health as a result of waste generation to different waste streams -Improper waste management, collection, transport and final disposal</p>	<p>Short-term during the construction/ Significance – major</p>	<ul style="list-style-type: none"> ➤ Preparation of the Waste Management Plan before the start of the construction activities; ➤ The largest waste quantity will be classified under Chapter 17 Waste "Waste in construction and demolition (including excavated soil)" with the code 17 05 06- excavated soil not mentioned in 17 05 05; ➤ The recycle and re-use of some waste materials is obligatory (not to dispose them as a waste); ➤ Transport and final disposal of inert and non-hazardous waste should be performed at the Meglenci landfill, located 13 km east of Bitola; ➤ The possible hazardous waste (motor oils, vehicle fuels) should be collected separately as well and authorized collector and transporter should be sub-contracted to transport and finally dispose the hazardous waste; ➤ Covering the waste during transport to avoid unintentional discharge of waste on the roads. ➤ Burning of construction waste should be prohibited. 	<ul style="list-style-type: none"> • 500-700 Euro 	<ul style="list-style-type: none"> • Major of Municipality of Bitola and • PE "Komunalec", Bitola
<p><u>Aspect: Water</u> Potential adverse impact to surface water bodies (a small tributary to the river Dragor as well as river Dragor) near the project site</p>	<p>Local / around 120 m west and 1 km to the north from the project site in Bitola Short-term during the construction/ Significance – medium</p>	<ul style="list-style-type: none"> ➤ It is forbidden to perform waste disposal near the surface water bodies (a small tributary to the river Dragor as well as river Dragor) which are located around 120 m west and 1 km north from the project site; ➤ According to the Decree for categorization of watercourses, lakes, accumulations and groundwater (OG of the Republic of Macedonia No. 18/99), the Dragor river is categorized as III class. According to the legislation, the Contractor is obliged to prevent the disposal of generated waste (e.g. soil contaminated with leakage of engine oil from construction machinery, existing asphalt, etc.) near the two rivers during the project activities, in order to prevent additional water pollution. 		<ul style="list-style-type: none"> • Contractor • Supervisor • Major of Municipality of Bitola and • PE "Komunalec", Bitola
<p>Project activity: Operational phase of the kindergarten in Bitola</p>				

INITIAL LIMITED ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT
Project "Category B+" Construction of new kindergarten in Municipality of Bitola

Potential impact	Impact scale	Proposed mitigation measures	Implementation Cost	Responsibility
<p><u>Aspect: Waste management</u></p> <p>Potential adverse impact to environment and human health as a result of waste generation to different waste streams -Improper waste management, collection, transport and final disposal</p>	<p>Local / in the kindergarten in Bitola</p> <p>Long-term</p> <p>Significance – major</p>	<ul style="list-style-type: none"> ➤ Signing of a Contract with Public Enterprise "Komunalec", Bitola for the collection, transportation and disposal of municipal waste to the landfill "Meglenci" (according to the List of waste with waste code 20); ➤ Waste classification according to the national list of waste (Official Gazette No.100 / 05); ➤ Selection of waste (paper, plastic and organic(from the kitchen)) and signing a Contract with a Licensed handler for collecting and managing with the different waste streams 	<ul style="list-style-type: none"> ➤ Included in the municipal budget for maintenance of kindergarten; 	<ul style="list-style-type: none"> • Kindergarten employees • Environmental Inspector
<p><u>Aspect: OH&S (Labor Management Procedures)</u></p> <p>Potentially negative impact on the safety of employees, children and parents when entering and leaving the kindergarten yard - Inadequate traffic signalization in the surrounding of the kindergarten and the entrance to the yard</p>	<p>Local / in the kindergarten in Bitola</p> <p>Long-term</p> <p>Significance – major</p>	<ul style="list-style-type: none"> ➤ Setting up appropriate traffic signalization in the surrounding of the new kindergarten; 	<ul style="list-style-type: none"> • Included in the municipal budget for maintenance of kindergarten 	<ul style="list-style-type: none"> • Mayor of the Municipality of Bitola
<p><u>Aspect: OH&S (Labor Management Procedures)</u></p> <p>Preparation of the OHS management Plan for the new kindergarten</p>	<p>In order to deal with and identify the risks of fires and sources of fires, as well as the measures necessary to limit the rapid development of fires and smoke. The expected timeframe is before the opening the kindergarten.</p>		<ul style="list-style-type: none"> • Included in the municipal budget for maintenance of kindergarten 	<ul style="list-style-type: none"> • Kindergarten director • Authorized OHS Company

Potential impact	Impact scale	Proposed mitigation measures	Implementation Cost	Responsibility
<p><u>Aspect: OH&S (Labor Management Procedures)</u></p> <p>Preparation of the Plan for regular and preventive maintenance</p>	<p>To ensure proper operation of all infrastructure components of the kindergarten (sewer system, storm-water system, water supply system, heating devices, etc.) and to ensure keep records on all technical documentation for the new kindergarten building. The expected timeframe is before the opening the kindergarten (at least 1 month period is needed).</p>		<ul style="list-style-type: none"> Regular kindergarten maintenance 	<ul style="list-style-type: none"> Kindergarten director Kindergarten housekeeper

6. ENVIRONMENTAL AND SOCIAL MONITORING PLAN

What <i>Parameter is to be monitored?</i>	Where <i>is the parameter to be monitored?</i>	How <i>is the parameter to be monitored?</i>	When <i>is the parameter to be monitored (frequency of measurement)?</i>	Why <i>is the parameter to be monitored?</i>	Cost		Responsibility	
					Construct ion	Operations	Construction of new kindergarten	Operation of new kindergarten
Project activity: Preparatory works / clearance and mark up of the terrain for the construction of kindergarten In Municipality of Bitola								
The implementation of safety measures for workers at the construction site and the local population	On the construction site in Bitola	By visual inspection and notification of responsible persons from the Municipality of Bitola	Upon commencement of construction activities (the first day) with a focus on preliminary measures	To prevent risks to the health and safety of children, local population and workers	Included in the project budget implementation		Contractor - Bidder Supervisor Environmental inspector	
Time for beginning and end of construction work	Within the project location in Municipality of Bitola	By doing visual checks and documents (time schedule) review	Daily, during the project implementation	To avoid the environmental, health and safety risks	Included in the project budget implementation		Contractor - Bidder /Supervisor/ Municipal staff (Communal and Environmental Inspector)/ SSIP stuff	
The overall work of the Investor	On the project site and its surrounding in settlement Bitola	By doing visual checks at the project site	Before the start of the construction activities	Determining the condition of project implementation	Included in the project budget implementation		SSIP stuff	
Project activity: Construction of kindergarten in Municipality of Bitola								
Identification and separation of hazardous from non-hazardous waste	Near the project location in the Municipality of Bitola	By visual inspection and notification of responsible persons from	During the construction phase	Avoid deposition of hazardous waste at the landfill "Meglenci" located 13 km east of the city of Bitola			Contractor - Bidder Supervisor	

What <i>Parameter is to be monitored?</i>	Where <i>is the parameter to be monitored?</i>	How <i>is the parameter to be monitored?</i>	When <i>is the parameter to be monitored (frequency of measurement)?</i>	Why <i>is the parameter to be monitored?</i>	Cost		Responsibility	
					Construct ion	Operations	Construction of new kindergarten	Operation of new kindergarten
		the Municipality of Bitola					Municipal communal and Environmental inspector	
Possible waste disposal (solid and liquid) near or in the river bed of the river Dragor and its small tributary	Near the project site	Visual check if the waste is disposed near relevant water recipient	During the project activities (once per week)	To ensure good status of water quality To prevent possible water pollution of the river bed of the river Dragor and its small tributary	Included in the project budget		Contractor - Bidder Supervisor	
Completed Annual Report for the collection, transport and disposal of waste from the implementation of the project activities	Local government administration	Review of documentation - List of waste identification	Upon completion of the collection, transportation and temporary and final disposal of waste	To improve waste handling at the local and state level. To comply with national legal requirements			Mayor of Municipality of Bitola Director of the PE "Komunalec", Bitola	
Dust emission and exhaust gasses from the work of construction equipment	Around the construction site and transport routes in the Municipality of Bitola	Monitoring of dust emissions and exhaust gas emissions with calibrated equipment for measuring dust and exhaust fumes	The frequency of measurements will be conducted in the manner proposed by national legislation	To determine whether the level of air emissions is in accordance with the proposed national limit values			Contractor - Bidder Measurements of air emissions should be conducted by accredited laboratory engaged by the Contractor	

INITIAL LIMITED ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT
Project "Category B+" Construction of new kindergarten in Municipality of Bitola

What <i>Parameter is to be monitored?</i>	Where <i>is the parameter to be monitored?</i>	How <i>is the parameter to be monitored?</i>	When <i>is the parameter to be monitored (frequency of measurement)?</i>	Why <i>is the parameter to be monitored?</i>	Cost		Responsibility	
					Construct ion	Operations	Construction of new kindergarten	Operation of new kindergarten
Noise level for the equipment and construction machinery	Around the construction site in Municipality of Bitola	By reviewing the technical documentation	Regularly during construction activities, through visits to project site in accordance with national legislation	To determine whether the noise level is above / below permissible sound level for the measurement site			Contractor - Bidder Company authorized to conduct measurements of noise levels engaged by the Contractor	
Noise level in the environment	Within the construction site	By direct noise measurements with suitable instruments	Upon compliant or by regular check	To determine whether the noise level is above / below permissible sound level for the measurement site			Municipal Environmental Inspector	
The overall work of the Investor	On the project site and its surrounding	Visual checks	During the construction activities	Determining the condition			SSIP stuff and ESS Specialist	
Project activity: Operational phase of the Kindergarten facility in the Municipality of Bitola								
Drinking water quality	Before the distribution through the new water supply system, the water sample should be analyzed by the Authorized	Laboratory equipment for physical-chemical and microbiological water quality analysis	Before the start with kindergarten operation	To ensure the distribution of high-quality drinking water to the kids minimizing the health risks of waterborne diseases		Included in the municipal budget for maintenance of kindergarten		Municipal staff Kindergarten officials Authorized laboratories/ Accredited laboratories

What <i>Parameter is to be monitored?</i>	Where <i>is the parameter to be monitored?</i>	How <i>is the parameter to be monitored?</i>	When <i>is the parameter to be monitored (frequency of measurement)?</i>	Why <i>is the parameter to be monitored?</i>	Cost		Responsibility	
					Construct ion	Operations	Construction of new kindergarten	Operation of new kindergarten
	laboratories – Public Health institute Skopje/Accredited laboratories							
Fire Protection Plan	Before the start of kindergarten operation	Review of the Plan	At the beginning of kindergarten operation	To ensure that all fire protection measures are implemented		Included in the municipal budget for maintenance of kindergarten		Municipal staff (Communal and Environmental Inspector) Kindergarten staff
Plan for regular and preventive maintenance of the kindergarten	Before the start of kindergarten operation	Review of the Plan	At the beginning of kindergarten operation	To ensure proper implementation of actions refer to just on time preventive and regular maintenance, procurement of spare parts, replacements of worn parts reducing unplanned failures, extend equipment lifetime and to ensure proper and safety kindergarten operation		Included in the municipal budget for maintenance of kindergarten		Municipal staff (Communal and Environmental Inspector) Kindergarten staff

Annex I Map of sensitive areas in the wider and close surrounding of the project site in Municipality of Bitola

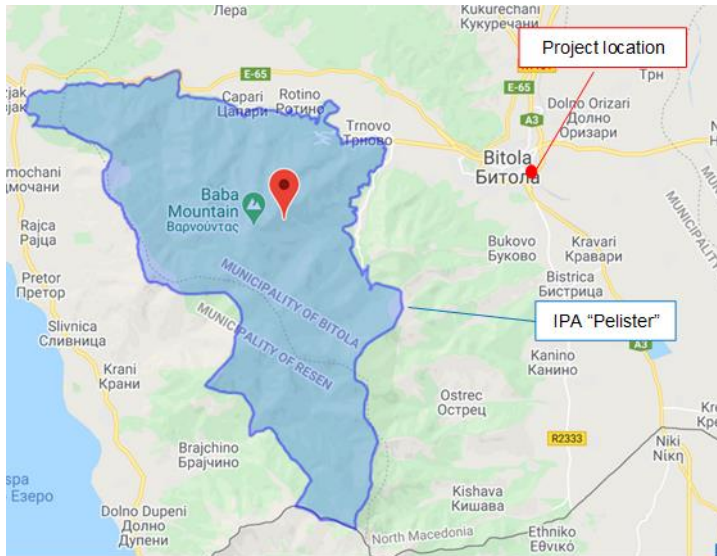


Figure 11 Location of IPA "Pelister" related to project location

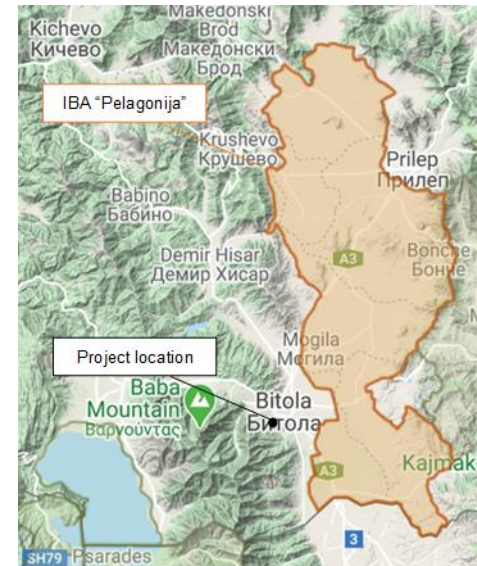


Figure 12 Location of IBA "Pelagonija" related to project location

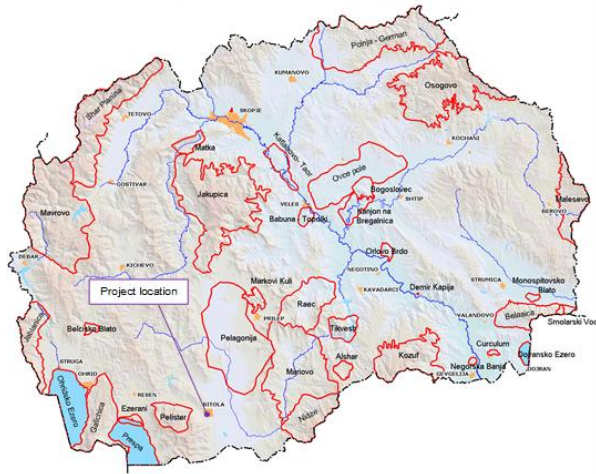


Figure 13 Location of Emerald site "Pelister" related to project location

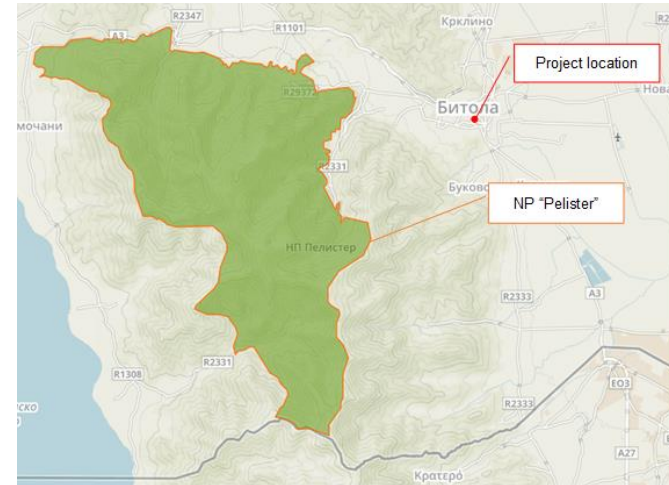


Figure 14 Location of National Park "Pelister" related to project location

Annex II COVID-19 considerations in construction/civil works projects

Taking into account the new situation with the appearance of the virus COVID 19, besides the standard measures for safety and protection at work it is necessary to implement measures for protection from COVID 19.

Undoubtedly, the Contractors will face many challenges in the new situation, such as:

- Inability to purchase protective equipment and disinfectants due to lack on the market,
- Lack of labour due to limited movement and absences from work,
- Inability to provide materials and work equipment due to congestion in all segments of life in the country,
- Employees' concerns about their livelihoods due to reduced workload, etc.

First, it is necessary to implement the measures for protection from COVID 19 adopted by the Government of the Republic of Northern Macedonia at the proposal of the Commission for Infectious Diseases and the Ministry of Health. **These measures should be constantly updated in accordance with the latest provisions introduced by the Government.** The Contractor is required to nominate a responsible person who will follow the measures adopted by the Government and will apply them in the operation of the construction site at the project location.

Links of the national institutions responsible for COVID 19 where the Contractor could find updated information and recommendations:

- Government of the Republic of North Macedonia - <https://vlada.mk/node/20488?ln=en-gb>
- Ministry of Health - <http://zdravstvo.gov.mk/korona-virus/>
- Ministry of Labour and Social Policy - <http://mtsp.gov.mk/covid-19.nspx>
- Ministry of transport and communications - <http://mtc.gov.mk/Preporaki%20od%20Vlada>
- Official site for COVID – 19 - <https://koronavirus.gov.mk/en>

On national level in addition to the measures introduced by the Government for protection from COVID 19, the Macedonian Occupational Safety and Health Association developed a Guide to Safety and Health at Work in Construction Prevention from the Corona virus. The Guide contains measures that the Contractor is required to implement in order to eliminate the possible ways of obtaining and transmitting COVID 19 among the workers on construction site.

In more detail in several chapters, the Guide contains:

- Challenges in construction;
- Obligations for the Contractor;
- Obligations for workers;
- Liabilities for Investors;
- Ways of proceeding in cases of suspected case or cases infected with COVID 19;
- Contact phones of national institutions responsible for contacting the occurrence of the event infected with COVID 19.

The text of the Guide to Safety and Health at Work in Construction Prevention from the Corona virus on the Macedonian language is given on the following link <http://mzzpr.org.mk/>.

The Contractor also needs to implement the requirements introduced by the World Bank related to the protection of COVID 19. Regarding the COVID-19 considerations in construction/civil works projects given by the World Bank, they are divided in several segments/issues and in details are shown on Table 4.

Table 4 COVID-19 considerations in construction/civil works projects recommended by WB

COVID-19 considerations in construction/civil works projects	
Covid-19 issues	Type of activities
	<p>The Contractor should identify measures to address the COVID-19 situation taking into account the location, existing project resources, availability of supplies, capacity of local emergency/health services, the extent to which the virus already exist in the area.</p> <p>PIU and Contractor should establish specific procedures for addressing COVID 19 issues on the construction site. Procedures should be implemented, documented and updated in accordance with the latest changes introduced by the Government and the conditions on the construction site.</p>
Assessing workforce characteristics	<ul style="list-style-type: none"> • The Contractor should prepare a detailed profile of the project work force, key work activities, schedule for carrying out such activities, different durations of contract and rotations; • This should include a breakdown of workers who reside at home (i.e. workers from the community), workers who lodge within the local community and workers in on-site accommodation (i.e. workers camp). Where possible, it should also identify workers that may be more at risk from COVID-19, those with underlying health issues or who may be otherwise at risk; • Consideration should be given to ways in which to minimize movement in and out of site. This could include lengthening the term of existing contracts, to avoid workers returning home to affected areas, or returning to site from affected areas.
Entry/exit to the work site and checks on commencement of work	<ul style="list-style-type: none"> • Establishing a system for controlling entry/exit to the site, securing the boundaries of the site, and establishing designating entry/exit points (if they do not already exist). Entry/exit to the site should be documented; • Training security staff on the (enhanced) system that has been put in place for securing the site and controlling entry and exit, the behaviors required of them in enforcing such system and any COVID -19 specific considerations; • Training staff who will be monitoring entry to the site, providing them with the resources they need to document entry of workers, conducting temperature checks and recording details of any worker that is denied entry; • Confirming that workers are fit for work before they enter the site or start work. While procedures should already be in place for this, special attention should be paid to workers with underlying health issues or who may be otherwise at risk. Consideration should be given to demobilization of staff with underlying health issues; • Checking and recording temperatures of workers and other people entering the site or requiring self-reporting prior to or on entering the site; • Providing daily briefings to workers prior to commencing work, focusing on COVID-19 specific considerations including cough etiquette, hand hygiene and distancing measures, using demonstrations and participatory methods;

COVID-19 considerations in construction/civil works projects	
Covid-19 issues	Type of activities
	<ul style="list-style-type: none"> • During the daily briefings, reminding workers to self-monitor for possible symptoms (fever, cough, and other respiratory symptoms) and to report to their supervisor or the COVID-19 focal point if they have symptoms or are feeling unwell; • Preventing a worker from an affected area or who has been in contact with an infected person from returning to the site for 14 days or (if that is not possible) isolating such worker for 14 days; • Preventing a sick worker from entering the site, referring them to local health facilities if necessary or requiring them to isolate at home for 14 days.
General hygiene	<ul style="list-style-type: none"> • Placing posters and signs around the site, with images and text in local languages (MK/ALB); • Ensuring handwashing facilities supplied with soap, disposable paper towels and closed waste bins exist at key places throughout site, including at entrances/exits to work areas; where there is a toilet, canteen or food distribution, or provision of drinking water; in worker accommodation; at waste stations; at stores; and in common spaces. Where handwashing facilities do not exist or are not adequate, arrangements should be made to set them up. Alcohol based sanitizer (if available, 60-95% alcohol) can also be used; • Training workers and staff on site on the signs and symptoms of COVID-19, how it is spread, how to protect themselves (including regular handwashing and social distancing) and what to do if they or other people have symptoms; • Setting aside part of worker accommodation for precautionary self-quarantine as well as more formal isolation of staff who may be infected.
Cleaning and waste disposal	<ul style="list-style-type: none"> • Providing cleaning staff with adequate cleaning equipment, materials and disinfectant; • Training cleaning staff on appropriate cleaning procedures and appropriate frequency in high use or high-risk areas; • Where it is anticipated that cleaners will be required to clean areas that have been or are suspected to have been contaminated with COVID-19, providing them with appropriate PPE: gowns or aprons, gloves, eye protection (masks, goggles or face screens) and boots or closed work shoes. If appropriate PPE is not available, cleaners should be provided with best available alternatives; • Training cleaners in proper hygiene (including handwashing) prior to, during and after conducting cleaning activities; how to safely use PPE (where required); in waste control (including for used PPE and cleaning materials); • Any medical waste produced during the care of ill workers should be collected safely in designated containers or bags and treated and disposed of following relevant requirements (e.g., national - http://www.moepp.gov.mk/?nastani=%d0%bf%d1%80%d0%b5%d0%bf%d0%be%d1%80%d0%b0%d0%ba%d0%b8-%d0%b7%d0%b0-%d1%83%d0%bf%d1%80%d0%b0%d0%b2%d1%83%d0%b2%d0%b0%d1%9a%d0%b5-

COVID-19 considerations in construction/civil works projects	
Covid-19 issues	Type of activities
	<p>%d1%81%d0%be-%d0%be%d1%82%d0%bf%d0%b0%d0%b4-%d0%b7%d0%b0-%d0%b3%d1%80,</p> <p>WHO). If open burning and incineration of medical wastes is necessary, this should be for as limited a duration as possible. Waste should be reduced and segregated, so that only the smallest amount of waste is incinerated.</p>
Adjusting work practices	<ul style="list-style-type: none"> • Decreasing the size of work teams; • Limiting the number of workers on site at any one time; • Changing to a 24-hour work rotation; • Adapting or redesigning work processes for specific work activities and tasks to enable social distancing, and training workers on these processes; • Continuing with the usual safety trainings, adding COVID-19 specific considerations. Training should include proper use of normal PPE. While as of the date of this note, general advice is that construction workers do not require COVID-19 specific PPE, this should be kept under review; • Arranging (where possible) for work breaks to be taken in outdoor areas within the site; • Consider changing canteen layouts and phasing meal times to allow for social distancing and phasing access to and/or temporarily restricting access to leisure facilities that may exist on site, including gyms; • At some point, it may be necessary to review the overall project schedule, to assess the extent to which it needs to be adjusted (or work stopped completely) to reflect prudent work practices, potential exposure of both workers and the community and availability of supplies, taking into account Government advice and instructions.
Project medical services	<ul style="list-style-type: none"> • Expanding medical infrastructure and preparing areas where patients can be isolated. Isolation facilities should be located away from worker accommodation and ongoing work activities. Where possible, workers should be provided with a single well-ventilated room (open windows and door). Where this is not possible, isolation facilities should allow at least 1 meter between workers in the same room, separating workers with curtains, if possible. Sick workers should limit their movements, avoiding common areas and facilities and not be allowed visitors until they have been clear of symptoms for 14 days. If they need to use common areas and facilities (e.g. kitchens or canteens), they should only do so when unaffected workers are not present and the area/facilities should be cleaned prior to and after such use. • Training medical staff, which should include current WHO advice on COVID-19 and recommendations on the specifics of COVID-19. Where COVID-19 infection is suspected, medical providers on site should follow WHO interim guidance on infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected;

COVID-19 considerations in construction/civil works projects	
Covid-19 issues	Type of activities
	<ul style="list-style-type: none"> Assessing the current stock of equipment, supplies and medicines on site, and obtaining additional stock, where required and possible. This could include medical PPE, such as gowns, aprons, medical masks, gloves, eye protection, etc.; Review existing methods for dealing with medical waste, including systems for storage and disposal.
Local medical and other services	<ul style="list-style-type: none"> Conducting preliminary discussions with specific medical facilities, to agree what should be done in the event of ill workers needing to be referred; Obtaining information as to the resources and capacity of local medical services (e.g. number of beds, availability of trained staff and essential supplies); Clarifying the way in which an ill worker will be transported to the medical facility, and checking availability of such transportation; Agreeing with the local medical services/specific medical facilities the scope of services to be provided, the procedure for in-take of patients and (where relevant) any costs or payments that may be involved; A procedure should also be prepared so that project management knows what to do in the unfortunate event that a worker ill with COVID-19 dies. While normal project procedures will continue to apply, COVID-19 may raise other issues because of the infectious nature of the disease. The project should liaise with the relevant local authorities to coordinate what should be done, including any reporting or other requirements under national law;
Instances or spread of the virus	<ul style="list-style-type: none"> If a worker has symptoms of COVID-19 (e.g. fever, dry cough, fatigue) the worker should be removed immediately from work activities and isolated on site; The worker should be transported to the local health facilities to be tested (if testing is available and permitted under national legislation); If the test is positive for COVID-19 or no testing is available, the worker should continue to be isolated. This will either be at the work site or at home. If at home, the worker should be transported to their home in transportation provided by the project; Extensive cleaning procedures with high-alcohol content disinfectant should be undertaken in the area where the worker was present, prior to any further work being undertaken in that area. Tools used by the worker should be cleaned using disinfectant and PPE disposed of; Co-workers (i.e. workers with whom the sick worker was in close contact) should be required to stop work, and be required to quarantine themselves for 14 days, even if they have no symptoms; Family and other close contacts of the worker should be required to quarantine themselves for 14 days, even if they have no symptoms; If a case of COVID-19 is confirmed in a worker on the site, visitors should be restricted from entering the site and worker groups should be isolated from each other as much as possible;

COVID-19 considerations in construction/civil works projects	
Covid-19 issues	Type of activities
	<ul style="list-style-type: none"> • If workers live at home and has a family member who has a confirmed or suspected case of COVID-19, the worker should quarantine themselves and not be allowed on the project site for 14 days, even if they have no symptoms; • Workers should continue to be paid throughout periods of illness, isolation or quarantine, or if they are required to stop work, in accordance with national law; • Medical care (whether on site or in a local hospital or clinic) required by a worker should be paid for by the employer.
Continuity of supplies and project activities	<ul style="list-style-type: none"> • Identify back-up individuals, in case key people within the project management team (PIU, Supervising Engineer, Contractor, sub-contractors) become ill, and communicate who these are so that people are aware of the arrangements that have been put in place; • Document procedures, so that people know what they are, and are not reliant on one person's knowledge; • Understand the supply chain for necessary supplies of energy, water, food, medical supplies and cleaning equipment, consider how it could be impacted, and what alternatives are available. Early pro-active review of international, regional and national supply chains, especially for those supplies that are critical for the project, is important (e.g. fuel, food, medical, cleaning and other essential supplies). Planning for a 1-2 month interruption of critical goods may be appropriate for projects in more remote areas; • Place orders for/procure critical supplies. If not available, consider alternatives (where feasible); • Consider existing security arrangements, and whether these will be adequate in the event of interruption to normal project operations; • Consider at what point it may become necessary for the project to significantly reduce activities or to stop work completely, and what should be done to prepare for this, and to re-start work when it becomes possible or feasible.
Contingency planning for an outbreak	<p>The contingency plan to be developed at each site should set out what procedures will be put in place in the event of COVID-19 reaching the site. The contingency plan should be developed in consultation with national and local healthcare facilities and follow state guidance for COVID-19 response, to ensure that arrangements are in place for the effective containment, care and treatment of workers who have contracted COVID-19. The contingency plan should also consider the response if a significant number of the workforce become ill, when it is likely that access to and from a site will be restricted to avoid spread.</p> <p>Contingencies should be developed and communicated to the workforce for:</p> <ul style="list-style-type: none"> • Isolation and testing procedures for workers (and those they have been in contact with) that display symptoms; • Care and treatment of workers, including where and how this will be provided;

COVID-19 considerations in construction/civil works projects	
Covid-19 issues	Type of activities
	<ul style="list-style-type: none"> Getting adequate supplies of water, food, medical supplies and cleaning equipment in the event of an outbreak on site, especially should access to the site become restricted or movements of supplies limited. <p>Specifically, the plan should set out what will be done if someone may become ill with COVID-19 at a worksite. The plan should:</p> <ul style="list-style-type: none"> Set out arrangements for putting the person in a room or area where they are isolated from others in the workplace, limiting the number of people who have contact with the person and contacting the local health authorities; Consider how to identify persons who may be at risk (e.g. due to a pre-existing condition such as diabetes, heart and lung disease, or as a result of older age), and support them, without inviting stigma and discrimination into your workplace; and Consider contingency and business continuity arrangements if there is an outbreak in a neighboring community. <p>Contingency plans should consider arrangements for the storage and disposal arrangements for medical waste, which may increase in volume and which can remain infectious for several days (depending upon the material). The support that site medical staff may need, as well as arrangements for transporting (without risk of cross infection) sick workers to intensive care facilities or into the care of national healthcare facilities should be discussed and agreed.</p> <p>Contingency plans should also consider how to maintain worker and community safety on site should sites closed to comply with national or corporate policies, should work be suspended or should illness affect significant numbers of the workforce. It is important that worksite safety measures are reviewed by a safety specialist and implemented prior to work areas being stopped.</p>
Training and communication with workers	<ul style="list-style-type: none"> Regular information and engagement with workers (e.g. through training, town halls, tool boxes) that emphasizes what management is doing to deal with the risks of COVID-19. Workers should be given an opportunity to ask questions, express their concerns, and make suggestions; Training should address issues of discrimination or prejudice if a worker becomes ill and provide an understanding of the trajectory of the virus, where workers return to work; Training should cover all issues that would normally be required on the work site, including use of safety procedures, use of construction PPE, occupational health and safety issues, and code of conduct, taking into account that work practices may have been adjusted; Communications should be clear, based on fact and designed to be easily understood by workers, for example by displaying posters on handwashing and social distancing, and what to do if a worker displays symptoms.
Communication and contact with	<ul style="list-style-type: none"> Communications should be clear, regular, based on fact and designed to be easily understood by community members;

COVID-19 considerations in construction/civil works projects	
Covid-19 issues	Type of activities
the community	<ul style="list-style-type: none"> • Communications should utilize available means. In most cases, face-to-face meetings with the community or community representatives will not be possible. Other forms of communication should be used; online platforms, social media, posters, pamphlets, radio, text messages, virtual meetings. The means used should take into account the ability of different members of the community to access them, to make sure that communication reaches these groups; • The community should be made aware of procedures put in place at site to address issues related to COVID-19. This should include all measures being implemented to limit or prohibit contact between workers and the community. The community should be made aware of the procedure for entry/exit to the site, the training being given to workers and the procedure that will be followed by the project if a worker becomes sick.
Covid-19 reporting	The contractor should report a work stoppage as a consequence of reported sick workers from COVID 19. The Contractor should keep the Borrower informed of any concerns or problems associated with providing care to infected workers on project sites, particularly if infection rate is approaching 50% of the workforce.