Republic of North Macedonia
Municipality Zelino

PROJECT APPRAISAL DOCUMENT – GRANT APPLICATION

ZELINO
CONSTRUCTION OF ELEMENTARY SCHOOL IN SETTLEMENT OF CEROVO

MAY 2020

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1. PROJECT DESCRIPTION

A. BACKGROUND

The municipality Zelino is located in the north pedestal of the mountain Suva Gora, right of river Vardar, approximately 500m altitude in the Polog region in the north-western part of the Republic of Macedonia. Through the municipality cross the highway M-4 that connect the municipality in the west with the city of Tetovo and in the east with the city of Skopje. The location of the municipality is marked with an orange colour on the figure below.

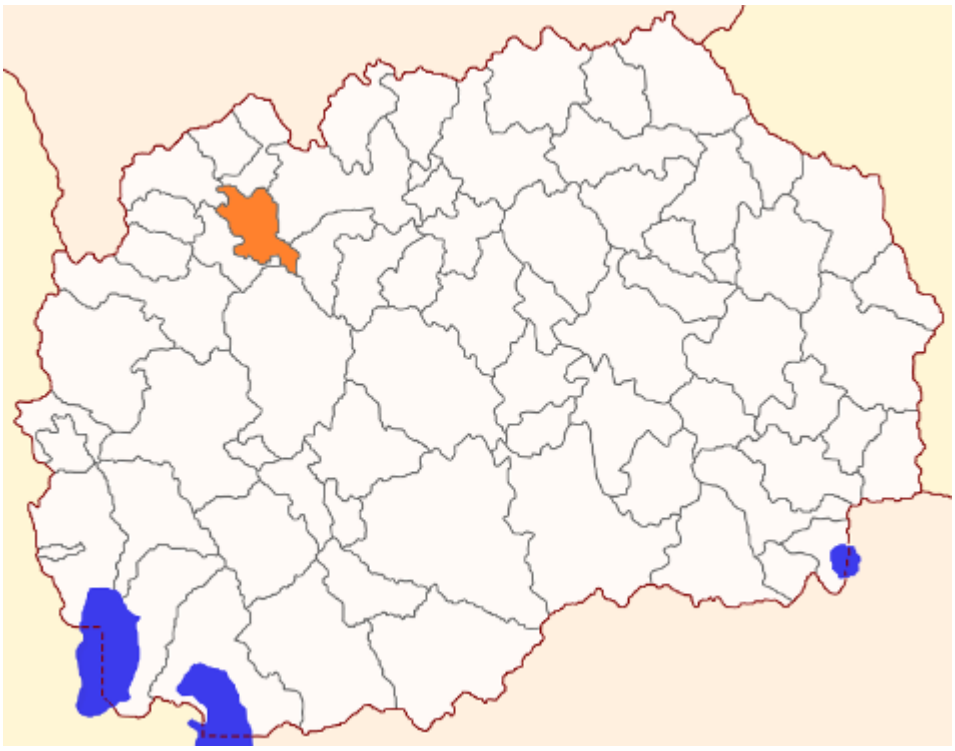

Figure 1 Location of the municipality Zelino
Source: State statistical office

Figure 2 Settlements within the municipality Zelino
Source: State Statistical Office

According to the morphological structure, the territory of the municipality comprises 18 local communities: Zelino, Strimnica, Dolna Leshnica, Gorna Leshnica, Trebosh, Palatica, Ozormishte, Debarce, Grupcin, Ciflik, Larce, Kopacin Dol, Novo Selo, Rogle, Merovo, Lukovica, Sedlarevo and Cerovo. The total number of populations that lives in the municipality Zelino is 27,329 from which most of them are Albanian, with more than 99% share, while less than 1% of the population is from Macedonian and other nationality (last revised Census of population and households, 2005).

After the successful implementation of the project: **"Reconstruction of local roads in settlements of Grupcin and Novo Selo and reconstruction of elementary school in settlement of Palatica"** with basic contract with the contractor in amount of **24.622.057 MKD**, the municipality obtained the right to received grant of **MKD 6,647,955** (27% of the final sub-project value).

According to the urban audit prepared and adopted for the Municipality of Zelino, settlements Lukovica, A.Leshnica, Novo Selo, Rogle and Cerovo, are the lowest ranked according to the ISPU table and are most deprived with quality of life given the underserved public services. The decision to allocate poverty social inclusion grant available funds to the village Cerovo is based on the actual situation with needed educational infrastructure for this settlement. The settlement of Cerovo, despite being the best ranked among the five worst ranked according to the ISPU table, the municipality decided to allocate the funds from the grant in this settlement for the following reasons:

- The results of the urban audit showed that the education sector is the least developed in the municipality of Zelino
- most of the proposed projects by stakeholders were in the education sector,
- in the settlement of Lukovica, according to the 2002 census, there are a total of 47 inhabitants, but the real situation shows that the village is completely displaced, and no one lives there anymore,
- Settlement of Novo Selo, is excluded from financing because it was included in MSIP 2 where the reconstruction of the local road was financed, and on the other hand in 2013 the construction of a new school building was financed,

- the needs for the settlements Gorna Leshnica and Rogle are in the part of the communal infrastructure (local roads, water supply network and sewage systems) and the municipality cannot afford to finance these projects due to the need for the large participation of the municipality with its budget funds.

  According to the above, the Municipal Council decided to invest in the construction elementary school in settlement of Cerovo with Decision number 08-1324/3 dated 25.11.2019.

  The settlement of Cerovo is 15 km away from the central seat of the municipality and is 550 m above sea level. It has a total population of 511 inhabitants.

  The school building in Cerovo was built in 1962. The facility does not meet the minimum requirements for attending classes, neither hygienic nor safety conditions. In this school building, 73 students, 18 teachers and one technical staff are teaching. Since it is a vital and young population and due to the urgency for intervention in this facility, the municipality proposes that the funds from the grant be used in the construction of a new school building in the settlement of Cerovo. Investments in settlements such as Cerovo and other hilly and mountainous settlements are also in the measures of the municipality determined in the strategy for local economic development to prevent the internal emigration of the population within the municipality of Zelino. We appreciate that the investments in the educational sphere in this settlement will contribute to the reduction of migration within the municipality itself, providing the population with quality educational services. In addition to the above, the construction of a new school building in this settlement has economic justification, because in such conditions as they are now, the municipality may face the need to organize transportation of students to attend classes in school buildings in other settlements and this is a big expense for the municipality given that the nearest settlements to the village. Cerovo is 7 km or 15 km from the central seat of the municipality v. Zelino.

General description of project

Settlement of Cerovo is one of the settlements in the municipality that need development in some spheres. According to the Urban Audit, the settlements that are ranked from 4.5 to 11.5 are settlements with the lowest values or living conditions of the citizens in terms of density, housing, roads, environment sanitation services and settlements that are ranked from 12.5 to 132 are in a better position. The settlement of Cerovo according is ranked with 11.5, which means that is undeveloped in all living conditions. The settlement of Cerovo is a mountainous settlement at 550 meters above sea level. The villagers from the village are mostly migrating to western European countries but a lot of them come to visit the country and their birthplace and every time they come, they expect the living conditions of the village to be better for them and for the villagers who are permanent residents that are approximately 511.

Despite the need for interventions in sectors such as local roads and communal infrastructure, the education sector in this settlement is most affected. The school building in Cerovo was built in 1962. The facility does not meet the minimum requirements for attending classes, neither hygienic nor safety conditions. In this school building, 73 students, 18 teachers and one technical staff are teaching. Since it is a vital and young population and due to the urgency for intervention in this facility, the municipality proposes that the funds from the grant be used in the construction of a new school building in the settlement of Cerovo. Investments in settlements such as Cerovo and other hilly and mountainous settlements are also in the measures of the municipality determined in the strategy for local economic development to prevent the internal emigration of the population within the municipality of Zelino. We appreciate that the investments in the educational sphere in this settlement will contribute to the reduction of migration within the municipality itself, providing the population with quality educational services. In addition to the above, the construction of a new school building in this settlement has economic justification, because in such conditions as they are now, the municipality may face the need to organize transportation of students to attend classes in school buildings in other settlements and this is a big expense for the municipality given that the nearest settlements to the village. Cerovo is 7 km or 15 km from the central seat of the municipality v. Zelino.

Figure 1. Pictures from the current situation of elementary school in the settlement of Cerovo

With this, grant funds the municipality plans to finance the project “Construction of the elementary school in the settlement of Cerovo”. The project has no negative environmental impact.

2. TECHNICAL SOLUTION

The educational facility that is planned to be constructed is the dimensions of 14,00 x 24,00 m. The school building is planned to be constructed only as a ground floor where the following spaces are planned to be built: main entrance with windshield, porter, hall, 5 classrooms, boiler room, toilets for teachers, teacher's office and 2 toilets divided male and female. In functional terms, the building meets modern living requirements: the living rooms are naturally ventilated and lit by windows.

Construction

In a constructive sense, the building is solved as a skeletal system of reinforced concrete pillars and beams that form reinforced concrete frames in both directions, with reinforced concrete construction with d=15 cm

The dimensions of the columns are predicted to be 25/40 cm. the beams have dimensions of 25/50 cm. The building is based with strips with a cross section of 60/60 cm. At the entrance there are two circular loops with diameter of 30 cm.

Under the reinforced concrete slab is placed concrete with waterproofing d=5 cm, aerated concrete with d=7 cm and a buffer with d=25 cm.

The roof is wooden lattice construction, and the cover is made of a plastic sheet strips with E=0.55 mm.

Walls

A) **Exterior walls** - Exterior walls are thick d = 25 cm, and for masonry blocks are used with dimensions: 16/40/25, grooved with extended plaster 1: 3: 9

B) **Interior walls -** The inner walls are d = 25cm thick, d = 16cm and d = 12cm, and for masonry blocks are used with dimensions: 16/40/25, grooved with extended plaster 1: 3: 9

Internal processing

A) **Walls -** All walls will be plastered with extended mortar (1: 3: 9). Before plastering, the joints of the walls should be cleaned and the walls should be sprayed with cement milk, and the concrete surfaces should be rinsed with a degreasing agent. The joints of different materials are ribbed with a rabbit net, and the corners are covered with galvanized corner moldings. In all rooms, the plastering will be in two layers - rough and fine plastering. Fine plastering is finished. Finishing will be with an inner lining greasy paint. In the toilets and in the kitchen with its auxiliary rooms, the walls will be plastered with a single layer of extended mortar and coated with ceramic tiles on glue, grooved with a gray pug-mass.

B) **Ceilings** - All ceilings will be plastered with extended mortar (1: 3: 9) in two layers - rough and fine (finish with a view). Previously, the ceilings will be covered with degreasing agent. Finishing will be with an inner lining oil paint.

C) **Floors -** At the main entrance of the building from the outside, it is planned to place marble slabs on glue, fudged with milk-colored pug-mass. The tiles should be 60/30 cm in size and resistant to external influences.

Floors in the toilets and kitchen are designed to be with ceramic tile floors with dimensions of 60/60 cm, fudged with gray joints.

All floors are placed on a previously placed cement screed with d = 5-7 cm, well dried and cleaned.

Facade processing

Facade treatment is planned to be a facade with Styrofoam with d = 10 cm and finishing with a paint determined by the investor and the designer.

Coverage

The roof construction is planned to be a wooden lattice construction of wooden poles and beams with dimensions of 14 / 14cm. It is planned to be placed stone wool with dimension of 5 cm.

The cover of the building will be with plastic ribbed sheet metal in gray color with a thickness of 0.55 mm.

Insulating works

A) **Vertical waterproofing** - In the sanitary facilities and the kitchen, all the walls will be insulated with three layers of hydro-flex. In the external reinforced concrete walls of the basement, which are in contact with the ground, from the outside, vertical waterproofing will be performed with two cold bituminous coatings, condor tape 4mm, thermal insulation with 5cm Styrofoam and TEFLON geo-membrane. In the sanitary facilities, all walls will be insulated with two layers of hydromal flex.

B) **Horizontal waterproofing - h**orizontal waterproofing will be performed on the floors of the sanitary facilities and the kitchen in three layers with hydromal flex hydraulic flex. Horizontal waterproofing will be performed in the basement with two cold coatings of bitumen and a 4 mm condor tape. Horizontal waterproofing will be performed in the sanitary facilities, the kitchen and the balconies in two layers with hydromal flex.

C) **Thermal insulation** - in order to meet the conditions for energy efficiency in the building, it is planned to perform thermal insulation, as follows:

-In the floors with the installation of polystyrene of 8 cm.

- At the basement walls on the outside by installing a 5 cm styrofoam;

-Over the finishing plate with the placement of 15 cm stone wool.

-In the roof covering with laying of stone wool of 5 cm and

- By placing a facade with styrofoam with d = 10 cm

D) **Acoustic insulation -** It is planned to place acoustic plasterboard tiles from Knauf or an equivalent on the walls between the classrooms.

Carpentry

The doors will be double-sided with dimension 70/210, 80/210 and 90/210.

The windows will be PVC glazed with Thermopane glass package 6 + 20 + 6mm (Outer glass Stopsol Supersilver Gray tempered-6mm + 90% Argon-20mm + Low-E-6mm), with solar factor (SF) 26 and thermal conductivity (U) which is U = 1.1W / m2 * k.

The front door will be double-glazed, made of PVC glazed with Thermopane glass package 6 + 20 + 6mm (Outer glass Stopsol Supersilver Gray tempered-6mm + 90% Argon-20mm + Low-E-6mm), with solar factor (SF) 26 and coefficient of thermal conductivity (U) which is U = 1.1W / m2 * k.

Sheet metal works

Vertical and horizontal gutters should be made of galvanized sheet metal with a sheet thickness of d =0.55 mm

Facility installations

All standard installations will be performed in the facility, which for this facility include electrical installations, plumbing and sewerage installations and thermotechnical installations and they are subject to special design.

- Water supply will be provided from the local water supply network, while the wastewater will be connected to the sewerage network. The performance of these installations includes internal water supply, connection of rural and external water supply network, internal sewerage, external sewerage and connection to the rural sewerage network, firefighting installation, sanitary equipment and storm water network.

-The supply of the facility with electricity will be done through the existing electricity network in agreement with EVN-Macedonia. The performance of these installations includes switchboards, lighting, switches, sockets, fire installation, telephone installations, lightning installations, yard lighting, etc.

-The heating will be central through a boiler room with a 40 KW boiler, with pipelines and radiators, distribution pumps and complete coupling material.

-Ventilation part will be natural, and part where it is needed (kitchen) will be solved with ventilation ducts.

3. ENVIRONMENTAL IMPACT

The project main aim is to improve the educational and social conditions and energy efficiency in the municipality Zelino through *construction of the elementary school in the settlement of Cerovo.* Currently, this old school is in very poor condition without proper energy efficiency management. The construction of the new school will contribute to the improvement of general well-being of students and staff working in the schools, better educational condition and will improve the energy efficiency of the new school building.

The location of the project site is presented in Figures 2 and 3 below, on the plot KP 820, KO Cerovo which is a public property at the end of the village. The new building is expected to be built in the southern part of the plot opposite the old building. In the closer and wider surrounding of the project site are located residential houses for the local population, 1 religious facility, markets. Cerovo village is an isolated village with 511 inhabitants, surrounded by mountains and the nearest village to the village of Cerovo is 7 km away. Near the village of Cerovo there are no cultural facilities, public institutions and natural resources such as rivers and proclaimed natural parks.

Figure 2: Closer view of the project location in the village Cerovo

Figure 3: View of the entire village of

3.1 PROJECT ACTIVITIES WITH ENVIROMENTAL IMPACTS

The project activities with environmental impacts could be divided in 3 phases: preparatory work, construction phase and operational phase.

The preparatory phase includes short-term activity such as: clearing the ground and removal of existing vegetation and stones and mechanical excavation of soil, marking of construction sites and ensuring the implementation of OH&S standards.

The construction phase will include activities for construction of elementary school in settlement Cerovo and clearing of the project site from construction works.

The operational phase includes operation of the elementary school. The main sub-project activities with environmental impacts are given in the table below:

Project	***Preparatory work***	***Construction phase***	***Operational phase***
Construction of Elementary School in settlement of Cerovo	- Securing the reconstruction sites in settlement of Cerovo - for the duration of the construction works, the students will hold classes in the old facility ***Environmental impact:*** ***O&H risk for the workers and students, and waste generation***	Construction of the facility in dimension of 14x24 m or in total area of 336 m2, Construction of facade (356.92 m2), Roof construction (433,34 m2), Insulation works, Carpentry, Sheet metal works and Facility installation works (electrical installations, plumbing and sewerage installations and thermo-technical installations ***Environmental impact:*** ***Waste generation, O&H risk for the workers, air quality and noise***	Clearing after the completion of the project activities, Everyday usage of the building ***Environmental impact:*** ***Waste generation:*** *from students, school staff and regular maintenance of the school building*

3.2 MAIN ENVIRONMENTAL IMPACT AND SENSITIVE RECEPTORS

Project activities will take place in the rural village Cerovo in the Municipality of Zelino.

The main sensitive receptors in the vicinity of the project location is the population living in the nearby residential houses and the surrounding rural landscape.

Before the start of the construction activities, the Municipality of Zelino needs to put information notice to the local population about the start of the construction activities, duration in days and working hours on site. Through the municipal web site (http://www.zhelina.gov.mk/) and other radio and TV stations, the municipality should inform the general public by producing and updating this Information / Communication. A publicly available **Complaints Dropbox** shall be placed at a suitable location in the village Cerovo; effective follow-up mechanism for prompt response shall be established by the municipal administration.

The Contractor needs to prepare **Health and Safety Plan** on work place in which the main good construction practices need to be presented (fencing, marking, and implementation of national OH&S regulations, use of PPE, safe and proper management of construction materials and equipment, waste management on site and etc.). The Contractor shall also design site-specific **Community Safety Measures**: the construction site should be well fenced and warning signs should be posted. The condition of the fence should be regularly checked, special attention needs to be paid to sewage and electricity installations, not to leave open manholes of bear unprotected electricity cables as possible risks to people and workers. Proposed measures should be regularly implemented by all workers. The Contractor must **provide portable toilets** and garbage bins for small quantities of solid waste from employees (food packaging, plastic bottles, etc.), thus ensuring that entire environment will be kept clean.

Considering the current situation with COVID-19 in the country and proclaimed State of Emergency, in addition to the measures for safety and protection at work, the OH&S plan should also include measures for prevention of COVID -19. 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

and guidelines provided by the MSIP PIU. Official site for information related to COVID 19 on national level is www.koronavirus.gov.mk.

Construction machinery used for soil and asphalt excavation, and their transportation to disposal sites, as well as painting of interior walls of the schools, can cause air emission of **fugitive- dusty character and exhaust emissions** that have low, local and short-term impact. Therefore, the Contractor should provide covered storage place for the construction materials, regular maintenance of the vehicles, use of protective equipment – face masks, helmets, gloves, etc.) in order to minimize and eventually eliminate adverse impacts to human health and environment especially considering the proximity of the local population very close to the construction site.

According the *Rulebook for the locations of measuring stations and measuring points for noise emissions (Official Gazette no. 120/08)*, both project locations belong to the **II level of noise protection areas** (residential area, an area in the vicinity of buildings intended for educational and educational activities, facilities for social protection designed to accommodate children and elderly and primary health care area of playgrounds and public parks, public green areas and recreational areas and areas of local parks). Construction activities should take place only during day time, between 7.00 AM to 19.00PM. In case of use of outdoor equipment and machinery, the Contractor shall comply with the requirements and standards set forth in the *Rulebook on the specific types of specific noise sources as well as the requirements to be met by installations, equipment, installations and devices which are used outdoors in terms of noise emission and noise protection standards* (*Official Journal of RM no.142 / 13*) and will not exceed level of generated noise higher than 85dB and 102dB respectively.

The national noise exposure limit values are in line with the World Health Organization Guideline values for public noise in specific environments as well as with IFC noise level guidelines provided in the General EHS Guidelines: Noise Management.

During the construction phase, identified **type of waste** is expected to be generated: excavated waste soil (National list of waste code: 17 05 06) in the quantities of 67m^3. The transport and final disposal of this generated inert waste will be carried out at the entry of the village, road sections that need fulfilment of earthen material.

According to the *Decree on the categorization of watercourses, lakes, reservoirs and groundwater ("Official Journal of the Republic of Macedonia" No. 18/99)*, the ***river Vardar*** (located in the northern part of the village at a distance of 5 km e) is categorized with a water quality of Class II at the given location. The categorization indicates rivers with moderate eutrophic status, with higher organic load and increased primary production (this river is not suitable for fish stock cultivation and use for recreational activities without its prior treatment: filtering, coagulation, etc.). In order to prevent possible further deterioration in the quality and status of this water recipient, the disposal of waste generated in or near the riverbed of Vardar river during the project activities is prohibited.

In terms of ***biodiversity conservation***, nature protected areas (reserves, habitats or national parks) endemic, endangered or relict plant and animal species are not recorded in the immediate vicinity of the project site in the municipality of Zelino. The immediate vicinity of the project site is rural landscape, with mainly agricultural land and forests. Any activities for temporary / permanent disposal of construction waste in the natural surrounding area are prohibited.

The Contractor should implement the measures specified in the Mitigation and Monitoring Plans in order to prevent, avoid or mitigate the possible adverse impact on the environment, while the Supervisor Engineer has an obligation to monitor and evaluate the implementation of the proposed measures and regularly submit reports to the Municipality of Zelino and MSIP office.

It is very important to ensure the good communication between all stakeholders (Contractor, Supervisor Engineer, Communal and Environmental Inspectors, etc.) in order to provide proper and easy implementation of all proposed construction activities.

A. MITIGATION PLAN

Potential impact	Impact scale	Proposed mitigation measures	Responsibility
Project activity: Preparatory activities for Construction of elementary school in settlement of Cerovo			
Potential impacts on OH&S and social and health aspect The possibility of adverse impacts on local population and workers will occur as result of: Lack of ensured safety measures at the start of construction phase of the project: – Possible injuries due to passing near the unsafe project site. – Not compliance with OH&S requirements and not application of good construction practice. – Possible injury to citizens due to ongoing works; – Non - compliance with national occupational health	Local impact/ within the project location in Municipality of Zelino Short term during the construction activities of the project Significance - major	➢ Preparation, approval and implementation of **OH&S Plan** including section for **Community H&S** and measures for prevention of **COVID -19** prior start up activities by the Contractor. ➢ Announcement of information related to project activities through preparation of **Note/Press** and announce via local radio/TV and municipal web page: (http://www.zhelina.gov.mk/) in order to inform general public of Municipality of Zelino; • Placement of a publicly available Complaints Dropbox within the village Cerovo; effective follow-up mechanism for prompt response shall be established by the municipal administration ➢ Application of **good construction practice** for marking out the construction location including: • The access road to the project location should be kept clean and safe; • Installation of Notice board with general information about the project, Contractor and Supervisor; • Warning tapes and signage need to be provided along the project location; • Entrance of unemployed persons is forbidden within the warning tapes and fence of the construction site; • Community and Worker's OH&S measures should be applied (first aid, protective clothes for the workers, appropriate machines and tools, training for proper usage of fire extinguishers, hydrants and other devices used for extinguishing fires, etc.); • The mobile toilet and other hygiene products should be placed on the project location; • Machines should be handled only by experienced and trained personnel, thus reducing the risk of accidents; • Constant presence of firefighting devices should be ensured in case of fire or other damage; • Separation of work areas with the help of physical barriers; • Restriction of traffic in the area where the construction works will be performed	• Contractor, Supervision • Municipality staff (construction inspector / environmental inspector / traffic engineer)

Potential impact	Impact scale	Proposed mitigation measures	Responsibility
and safety at work; – Non - compliance with local community safety regulations.		• The cleaning schedule of the building should be increased to address the extra dust and dirt created by the reconstruction/replacement works.	
Project activity: Construction of elementary school in settlement of Cerovo			
Potential impacts on air quality Possible air emissions (gases emissions and dust-suspended particulates) by usage of construction machinery within the project locations in the Municipality of Zelino	Local impact/ within the project location in Municipality of Zelino Short term/major	• Project location, transportation routes and materials handling site should be water-sprayed on dry and windy days; • Construction materials should be stored in appropriate places covered to minimize dust; • Vehicle loads likely to emit dust need to be covered; • Usage of protective masks for the workers if the dust appears; • Restriction of the vehicle speed within the construction locations; • Perform regular maintenance of the vehicles and construction machinery in order to reduce the leakages of motor oils, emissions and dispersion of pollution; • Burning of debris from ground clearance not permitted	Contractor Supervisor Municipality staff (environmental inspector)
Potential impacts from improper Waste management As a result of inappropriate handling, collection and transportation of the generated waste, negative impacts on the	Local impact/ within the project location in Municipality of Zelino Short term / Significance - Large	• The main waste will be classified according to Chapter 17 "Waste during construction and demolition (including excavated soil)" where the identified type of waste is: 17 05 06 - excavated soil mentioned in 17 05 05 in the amount of 67m^3; • The transport and final disposal of this generated inert waste will be carried out at the entry of the village, road sections that need fulfilment of earthen material; • Potential hazardous waste (motor oils, vehicle fuels) should be collected separately and an agreement should be made with an authorized company with a License for collection and transportation of hazardous waste and the final disposal of the same; • The transported material should be covered in order to avoid waste disposal, • The burning of construction waste is prohibited within the project location (and beyond);	Contractor Supervisor Mayor of the Municipality of Zelino PCE "Saraj" from Zelino Municipal staff (Communal and Environmental

environment and the health of the surrounding population are possible.		• Fully clean-up of the construction site immediately after accomplishment of construction activities;	Inspector)
Potential impacts to Watercourses Disposal of different fractions of hazardous and non-hazardous waste at or near the riverbed of the river Vardar will lead to possible negative impacts on the quality of the water recipient	Local / about 5km north of the project site in the municipality of Zelino Short term / Significance - Large	• Temporary or final disposal of various waste fractions at or near the riverbed of the Vardar River located approximately 5 km north. • The construction site should be kept in a clean state in order to prevent possible / eventual spillage of engine oil or dust which, in heavy rains, may drain into the water recipient located in the immediate vicinity of the construction site.	- Contractor - Supervisor - Municipality staff (Construction Inspector and Environmental Inspector)
Possible noise disturbance as a result of outdoor equipment usage and transportation vehicles driving around the construction site	Local impact/ along the site in settlement of Cerovo Short term /minor	• As it is a mixed area the level of noise should not exceed more than 55dB during the day and evening and below 45dB during the night; • The construction work should be not permitted during the nights, the operations on site shall be restricted to the hours 7.00 -19.00; • The workers should be provided with ear protective devices (ear muffs and/or ear plugs); - Use of appropriate and technically functional equipment and mechanization. In order to avoid and reduce side effects on workers and local population during the implementation period of the project activities, the Contractor shall be obliged to work in accordance with the Rulebook on the specific types of specific noise sources as well as the requirements to complete, equipment, installation and devices used in open space in terms of emitted noise, and noise protection standards and provide appropriate *Statement of Compliance* for the used equipment (Official Gazette of the RM no.142 / 13). • The equipment should be fitted with appropriate noise devices that will reduce sound level;	Constructor Supervisor Municipality staff (environmental inspector)

		The vehicles that are excessively noisy shall not be operated until corrective measures have been taken.	
Project activity: Operational phase of elementary school in settlement of Cerovo			
		No negative environmental impacts are expected during the operational phase of the project in the municipality of Zelino. After the implementation of the project activities, only positive impacts are expected – new building with high energy efficiency performance and significantly improved conditions for primary education.	

B. MONITORING PLAN

What *parameter is to be monitored?*	**Where** *is the parameter to be monitored?*	**How** *is the parameter to be monitored?*	**When** *is the parameter to be monitored (frequency of measurement)?*	**Why** *is the parameter to be monitored?*	**Cost**		**Responsibility**	
					Construction	Operations	Construction phase	Operation phase
Project activity: Preparatory activities for Construction of elementary school in settlement of Cerovo								
Application of protection measures for workers, local population in order to minimize possible injuries at project location in	Along the project site in settlement of Cerovo	Through regular visual checks and reporting to the responsible persons in the municipality	Before start of the project activities and each of working day	To avoid occupational and safety risks of workers and possible injuries of local population during project activities			Contractor /Supervisor/ Communal, Construction Inspector at Municipality of Zelino	

What *parameter is to be monitored?*	Where *is the parameter to be monitored?*	How *is the parameter to be monitored?*	When *is the parameter to be monitored (frequency of measurement)?*	Why *is the parameter to be monitored?*	Cost		Responsibility	
					Construction	Operations	Construction phase	Operation phase
settlement of Cerovo								
Project activity: Construction of elementary school in settlement of Cerovo								
The safety protection measures applied for the workers, including prevention from COVID-19 obligatory measures	On the construction site	Visual checks	During the construction activities At the beginning of each working day during the project activities	To ensure minimization of health and safety risks – mechanical injuries. To be in compliance with national communal health regulation and OH&S standards			Contractor Supervisor Communal Inspector at the municipality Zelino School officials	The safety protection measures applied for the workers
Dust and exhaust air emissions from construction machinery operation	Along the construction site in the municipality of Zelino	Monitoring of dust and exhaust emissions with calibrated measuring equipment for this purpose / Visual observation	On sunny and dry days (once a week during the most intense working hours) Measuring with equipment only in case of public	To determine whether air emission levels are in accordance with national prescribed limit values as well as to reduce the risk to workers' health and surrounding population			Contractor Measurements of air emissions should be performed by an accredited laboratory contracted by the Contractor, in case of public	

What *parameter is to be monitored?*	**Where** *is the parameter to be monitored?*	**How** *is the parameter to be monitored?*	**When** *is the parameter to be monitored (frequency of measurement)?*	**Why** *is the parameter to be monitored?*	**Cost**		**Responsibility**	
					Construction	Operations	Construction phase	Operation phase
			complaints				complaints	
Noise measurements	On the construction site	Monitoring of the noise levels dB (A) with appropriate monitoring devices, in case of public complaints; Checking of the Statement of Conformity of the used equipment	During the work peaks Regularly, during construction activities, through regular site visits to the project site	To ensure noise level limits according to regulation as well as noise exposure limits			Contractor Supervisor Environmental Inspector Company authorized to measure the level of noise engaged by the Contractor	
Initial waste selection at the construction site	At the construction site	Documentation review - determination of waste streams according to the Waste List	At the beginning of the working activities	To separate hazardous waste (if any) from non-hazardous waste in order to prevent adverse effects on health and the environment			Contractor Supervision Municipal staff (communal and environmental inspector)	
Collection, transport and final disposal ofconstruction waste	On and around the construction site	Visual inspection Review/inspection of transport and disposal documentation	After collecting and transporting waste	To minimize the health and safety risks of the surrounding population and workers			Contractor - Bidder Municipal staff (communal and environmental	

What *parameter is to be monitored?*	**Where** *is the parameter to be monitored?*	**How** *is the parameter to be monitored?*	**When** *is the parameter to be monitored (frequency of measurement)?*	**Why** *is the parameter to be monitored?*	**Cost**		**Responsibility**	
					Construction	Operations	Construction phase	Operation phase
							inspector)	
Completed Annual report on waste transportation and storage	Local government administration	Documentation Review - Waste List Determination	After fulfilling the task of collecting, transporting, temporary storage and final storage of various types of waste	Improve waste and hazardous waste management at local and national level			Mayorof the municipality Zelino	
Disposal of generated waste in or adjacent to the riverbed of Vardar	About 5km northwest of the project site	Visual checks near the water recipient's of the construction site	During construction activities (once a week)	To prevent further contamination of surface water and to ensure proper waste management			Contractor Supervision Municipal staff (communal and environmental inspector)	

3. SOCIAL IMPACT

3.1. SOCIOLOGICAL STUDY

This study is based upon the methodological concept of World Bank summarized as Five Entry Points, One Result. This concept requires exploration of five components: social diversity and gender, institutions, rules and behaviour, stakeholders, participation and social risk. The assessment anticipated desk and onside research, holding interview and focus group and constant communication with municipal representatives to get available information on interest and attitudes of stakeholders.

The research was based on meeting with a focus group and face to face interviews with the municipality representatives in order to give a social assessment about the project proposals. In the process of preparing the Urban Audit, a field visit was made by the Mayor of the Municipality of Zelino and the municipal representatives with all local communities within the municipality. from the field visit the municipal representatives got acquainted with the needs of the citizens in the settlements themselves.

In the process of preparing the document Urban Audit, a significant share in data collection, especially in terms of recording, proposing and determining priorities, took into account the proposals of citizens that arose from the project Budget Forum under the program "Community Forums ", Supported by the Swiss Agency for Development and Cooperation and coordinated by the Forum Coordination Unit, which was implemented in the period from 2016-2017, as well as the project implemented in 2018-2019," Strengthening Municipal Councils ", financed by UNDP.

The mayor of the municipality of Zelino held a meeting separately with each local community from the settlements located in the hilly mountainous part of the municipality. The meetings with the local communities were announced on the website of the municipality and with a letter submitted to the local community on the day and time of the meeting. The meeting with the locals from the settlement Cerovo was held on 09.08.2019 in the premises of the school building. The meeting was attended by a total of 25 representatives from the village, including representatives of parents, teachers, the school board and others. From the attendees in the meeting there were 5 women, of which 2 teachers and 3 parents.

All participants in the meeting unanimously expressed the need to build a new school building in the village, and it was the only proposal by the population in the settlement of Cerovo

All data were eventually collected by the project manager and selected and sublimated in the draft Urban Review of the Municipality of Zelino. During the whole process of preparation of this document, the Mayor of the municipality was continuously informed about the course of the implemented activities for preparation of the draft document.

3.2. SOCIAL DIVERSITY AND GENDER

In the municipality Zelino, in the settlement which is a subject of this appraisal there are residents from different social groups (minorities, gender, language, people who work outside the country, etc.) By age groups are mainly young but also old people, some of them are people with a special needs and help.

The prevailing nationality in the municipality Zelino is the Albanian with 99%. The representative of the other ethnicities in the municipality speaks its own language in the informal communication. Some of the young people are leaving the municipality, moving into the bigger cities or in other country, but most of them stay in the municipality creating their own families. Residents who live at the settlement subject to this project are nearly equal considering male and female population. In general, the municipality is rural area and all population is considered rural.

The main priorities of the municipality Zelino is improving the quality of life of the residents, improving the infrastructure, reconstruction of the roads, new facilities for water supply, modern educational conditions, communal services, etc. According to the female population, the most important issues are construction of kindergarten (since there is no kindergarten in the municipality) and improving educational conditions. During the sessions held within the project for "Strengthening Municipal Councils" funded by UNDP, almost all proposals given by women representatives were in the field of education and social protection (kindergartens, nursing homes, etc.).

Asked about the number of project users, participants in field visits and participants in budget forum sessions expressed the opinion that all residents in the municipality will be beneficiaries of the project, especially residents of the settlement Cerovo and the Central school in Grupchin and the municipality itself. The central school in the settlement of Grupcin and the municipality will generally have financial benefits, because the realization of the project will reduce the operating costs of the central school and the municipality. However, direct users of the project will be students and employees of the school.

3.3. CITIZENS ENGAGEMENT

The municipality of Zelino officially communicates with the citizens in several ways. The most effective communication mechanism is the official website of the municipality of Zelino () and the official email addresses of the sectors and heads of the special units of the local administration, where citizens daily receive information, are being served, and post questions and receive answers. Additionally, the municipality uses Facebook social network, where the municipality mostly makes promotions, news releases, and shares information. Also, the Mayor has a practice of holding individual or group meetings with citizens. The meetings are held every day from 10:00 to 12:00 with citizens who had a schedule appointment with the mayor. Occasionally, the municipality issues an official newspaper where all important activities, projects, meeting and decisions are published. The municipality has a well-established practice of activities for involving the citizens in monitoring the process of proposal and implementation of projects. This practice is due to the projects implemented through SDC and UNDP program which aims to involve citizens in municipal decisions

4. FINANCIAL ANALYSIS

The estimated value of the project is MKD 10,040,867 (EUR 163,266). The investment value is more than eligible grant; therefore, the municipality provided a Decision from the Municipality Council for co-financing the project with Decision number 08-457/3 dated 18.05.2020

Table 2 Investment costs breakdown by source of financing

Source for financing	Amount	Share
MSIP2 Grant	6.647.955	67%
Municipal Contribution	3.392.912	33%
Total (Denar) including VAT	**10.040.867**	**100%**
Total (Euro) including VAT	**163.266**	

Table 3 Investment costs by construction activities

No.	Construction activities	Amount
1.	Preparatory works	64.952,00
2.	Earthworks	172.678,86
3.	Concrete works	1.348.524,94
4.	Reinforcement works	717.750,00
5.	Masonry works	666.840,91
6.	Covering works	783.468,40
7.	Plaster works	98.821,80
8.	Carpentry works	660.200,00
9.	Insulation works	309.640,19
10.	Floors	327.644,10
11.	Ceramic works	375.710,15
12	Painting and façade work	1.084.718,81
13.	Locksmith works	25.000,00
14.	Sheet metal works	116.750,00
15.	Water supply and sewage	609.250,00
16.	Electrical works	636.250,00
17.	Termotchnical installations	511.000,00
	TOTAL	**8.509.210,00**
	VAT	**1.531.657,80**
	TOTAL INCLUDING VAT	**10.040.867,80**

Table 3 Time frame

No.	Activitiy	Start	End
1.	Procurement procedure	01.06.2020	31.07.2020
2.	Construction activities	01.08.2020	31.12.2020
3.	Final administrative activities (reports, payment, etc)	01.01.2021	31.01.2021

The project leads to improvement of educational conditions in the Municipality of Zelino. The realization of this project will create significant savings in heating costs due to the energy efficiency component contained in the project. Additionally, if implemented the project will also omit future municipal costs for transportation of students from the settlement Carevo to the closest school located in the settlement Grupcin. Namely if the project is not implemented and due to the extremely depraved education conditions in the old school building in the settlement Carevo, the Municipality will be forced to close this school, starting from the next school year 2020/20201 and to shift all 73 student to the school in the neighboring settlement Grupcin. Thus, the central school in the settlement of Grupcin will be forced to conduct the classes for the students from the settlement of Cervovo as it is a nearest school, 5 km away from Cerovo. This replacement of students will create additional financial burden for the municipal budget since by the national law the Municipality is obliged to provide free transport from/to school for all students. Cost for transportation of students from Cerovo to Grupcin by Municipal own calculations are estimated to 305.000,00 annualy.

Besides the major quantifiable benefits, there are also some important immeasurable benefits that are expected to result from the implementation of the project and that need to be taken into consideration. Some of these immeasurable benefits refer to:

1) Improve educational services

Construction of primary school should work efficiently and deliver the optimum value for money as well as maximally increase the comfort stays of children and employees. With the proposed project, comfort will be improved. Aside from being a place of comfort, constructed new school building can help children and students achieve academic success as well as boost their drive to learn.

2) Environmental impacts

the application of the pellet heating system will reduce the emission of CO2 in the area of settlement of Cerovo, will also contribute to the preservation of natural resources (trees) that are so far been used as a raw material for heating system.

3) Public goodwill of the municipal administration.

In relation to the construction of the primary school it is worth mentioning that the municipality was faced with numerous compliances from the local population and other relevant stakeholders (teachers, administration and parents) regarding the overall situation of the school. They complained about the moisture, the flow of water from the roof and through the windows, damaged floors, poor equipment of the inventory, as well as regarding the maintenance and hygiene of the premises. Therefore, by the construction of the school the municipality will be able to address most of the issues listed in the complains and at the same time to raise the awareness of the management of the school and the employees for further better operation and maintenance of the facility.