

"TRADE CENTER PRISTINA PARK - GRACANICA".



REPORT  
OF ENVIRONMENTAL IMPACT ASSESSMENT  
"TRADE CENTER PRISTINA PARK - GRACANICA"

JULY, 2019

**Project name:** "TRADE CENTER PRISTINA PARK - GRACANICA"

**Location:** Highway - near the QMI roundabout

**Municipality:** GRACANICA

**Investor:** PRISHTINA PARK JSC

ENVIRONMENTAL IMPACT ASSESSMENT REPORT PREPARED BY

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## EXECUTIVE SUMMARY

Environmental impact assessment is an effective tool for managing the environment and protecting it from negative impacts which can be created by the development of various activities in the environment. It is acceptable for the project to be economically viable, socially acceptable, sound and without serious environmental threats. It is a prerequisite according to the government of the Republic of Kosovo and local environmental legislation, that project developers make Environmental Impact Assessment for various projects, projects which are within the annexes of EIA legislation, or in special cases even if the project is not part of any annex, but the MESP considers that the particular project constitutes serious concerns for the environment or the project in question lies within an area of special importance or area of high sensitivity.

The main objectives for the development of the proposed project in the documented plots (see the property certificate in the file), in the cadastral zone of Gracanica, is to build a large shopping center with all the necessary infrastructure and other services important for its operation under the name PRISHTINA PARK CENTER.

So far in the surrounding area there is no complex object of this size, but there are some of approximate size, but a certain number of activities take place on both sides of the highway.

The plots in question so far have no built facilities on them, and the whole surface is covered with grass and vegetation, for years it has been a wasteland.

The main components of the project include the following:

- Land clearing and preparation;
- Development of the project for the construction of the shopping center;
- Development of essential components such as: facilities for business, trade, and various gastronomic facilities and;
- Development of the whole area, such as access roads, parking lots and pedestrian roads;
- Creating new landscapes, including planting decorative trees and garden landscapes;

The need for such a project.

In general, globally, the issue of large shopping malls intended for shopping and other business activities are located in the peripheral parts of large malls or the capital.

The location in question provides perfect access to it from all destinations in Kosovo, as well as from Skopje through the Arben Xhaferi motorway.

The implementation of development activities has the potential to damage the natural resources on which the economy itself is based. Today, the main domestic and international challenge is how to achieve and maintain the

sustainable development, and the sustainable development cannot take place if the living environment is threatened or destroyed so continuously that regeneration is impossible.

In order to properly address the impacts arising from the implementation of the project for the construction and operation of the shopping center, with parking lots and other ancillary spaces, the company Geoenvironment Consulting LLC has taken care that environmental and social impacts are assessed, addressed and carefully considered in all stages of project implementation.

The overall scope of the study is mainly based on the impacts of the project on the environment and society in terms of quality and quantity, including the commitment of stakeholders during the project development and during the public debate, so that the executions of works are carried out taking into account environmental parameters and mitigation measures.

This can be achieved through detailed technical review, environmental analysis and data collection from various sources: frequent field visits, secondary data processing and the engineering-investment plan of the company in question.

Through the report on the determination of environmental impacts and social impacts, the following areas will be analyzed and addressed:

Description of the basic environmental condition of the area;

In order to review as realistically as possible the environmental impacts from the implementation of the project in question, a number of visits carried out to and around the location provided for the implementation of the proposed project, trends and development trends in this area, as well as detailed analysis all findings and proper addressing of all environmental impacts, including mitigation measures and residual impacts.

Furthermore, the remarks and concerns of existing businesses in and around the location in question will be carefully considered, and all stakeholders are encouraged to be part of the public debate, so that before the decision-making process there is an opportunity for eventual design changes of the project.

Furthermore, the concerns and perceptions of the main stakeholders for the project will be taken into account and; Preparation of Environmental and social plan, which in itself will include: mitigation and monitoring plan.

**CHAPTER I: INTRODUCTION** - This chapter will briefly describe the nature of the project, the goals and objectives, the study of which areas will be most focused and the paths that will be followed to conclude this study.

**CHAPTER II:** This chapter will describe the legal framework as a necessary basis for a more professional drafting of this report so that the impacts are harmonious and within the applicable legislation in the respective areas.

**CHAPTER III:** In this chapter we will focus on basic information about the location of the project,

**CHAPTER IV:** In this chapter we will describe **project design, implementation activities**, project inputs, raw materials that enter the process, workforce engaged for the smooth running of the work, equipment and machinery used.

**CHAPTER V:** In this chapter we will examine in detail all the environmental impacts during the operation of the plant, analyze them and their effects on soil, water, air, flora and fauna, biodiversity, traffic, noise and solid and liquid waste.

**CHAPTER VI:** In this chapter we will review the environmental management plan and its monitoring.

**CHAPTER VII:** In this chapter we will explain the measures and forms of reporting;

**CHAPTER VIII:** IN this chapter we will present a detailed summary and recommendations for various aspects elaborated in this report.

## 1.0. INTRODUCTION

The main purpose of the Environmental and Social Impact Assessment Report is that in the early stages of project development (preferably in the project design phase) any potentially significant environmental and social barriers that may impede project implementation, or that can be a source of major impacts on the environment and society to be identified and addressed.

The principle measure of sustainable development is that all activities that are carried out, to achieve development must take into account the needs of environmental protection. Ecosystem sustainability requires the balance between the development of settlements and commercial and business, human and natural ecosystems, which is a symbiotic relationship.

This can be achieved through careful planning and the creation of appropriate management systems. In modern times, the need to plan activities has become an essential component of the development process. Consequently, a number of planning mechanisms have been put in place to ensure that minimal damage is caused to the environment.

Currently in the world as well as in our country, the rates of urbanization and population growth around the world are increasing rapidly and with it comes the need for improvement in the provision of services, especially in our urban areas and around them. Our country is rapidly urbanizing and with this the percentage of the population which is largely moving to cities is changing, mainly in the capital and its suburbs. Population growth due to rural-urban migration in search of employment opportunities and/or higher education in the capital has increased the need for business and commercial facilities, and thus the increase of parking spaces and recreation.

The project in question is expected to be implemented in the municipality of Gracanica and thus will contribute to the discharge of the capital from the large number of vehicles, at least during the supply and recreation.

It is a project which in terms of the size of its extension can be ranked in one of the projects with a wide area with a number of plots which are integrated in a total area of 164509,00m<sup>2</sup>.

As part of the EIA process, it is necessary to design alternatives to avoid undesirable impacts. In addition to alternatives, identifying impacts can lead to the development of mitigation measures, i.e. tools for reducing impacts.

The proposed project has been designed and will be implemented on a considerable number of plots. Prishtina Park Center is a mixed project which is designed by specialized companies and which aims to be completed in several phases.

The first phase will be construction which will have a shopping center complex with all the necessary accompanying infrastructure, which mainly includes a shopping center with a significant number of different businesses and representations with a global presence, restaurants, shops, parking spaces, playgrounds and storage space for collection of the generated waste.

Through the plan designed by the engineering bureau, all phases of project implementation are prepared in detail, including various views of the situation plans and systematization of all companies interested in being located within Prishtina Park center.

The situation plan will be attached to this study file as a hard copy, while some other detailed situation plans in different directions as well as the situation of the first level, basement, floors I and II and the situation of the elevator will be available on C.D.

The construction of the new shopping center PRISHTINA PARK in the suburbs will have a significant impact on the economic and social development of the area and the capital.

Environmental and Social Impact Assessment Report for the proposed project, the new shopping center, "Prishtina PARK" has been prepared by the company Geoenvironment Consulting LLC, in the time interval June - July 2019.

This document has been prepared based on domestic legislation regarding projects which are subject to EIA based on **LAW no. 03/L-024 - ON ENVIRONMENTAL IMPACT ASSESSMENT, ANNEX 2.**

## **10. Infrastructure projects**

10.2. urban development projects, including the construction of shopping malls and car parks;

So, we are dealing with the project which according to the legislation is categorized in appendix 2, partial report of the Environmental Impact Assessment No. 03/L-024.

Once the location has been determined, the facility is adapted to the construction site. All terrain and infrastructure measurements have been made around the location of the new construction.

The report has been prepared in accordance with the requirements of the environmental legislation of Kosovo, especially according to the Law on Environmental Impact Assessment no. 03/L-214 - Law on Environmental Protection No. 03/L-025 and administrative instructions related to this issue.

Materials, resources and literature for drafting the report are of different natures, such as from the Internet, detailed technical and investment project of the company, frequent visits to the proposed location for construction, various reports from relevant environmental institutions, case studies of the same nature, direct conversations with the investment company and the company which deals with the aspects of design and future monitoring of constructions and all subsequent processes.

Furthermore, GPS measurements were made, where the coordinates were determined and a number of photos were taken.

The consulting company that compiles this Environmental Impact Assessment report has continuously consulted the company which made the measurements and technical study of the project.

After the visit to the location through which the shopping center will be built with all the necessary infrastructure for its functioning, the investment company has committed to build a modern center and at the same time will take care that the project is within acceptable environmental parameters and social as well as compliance with applicable laws and regulations.

This document presents an environmental impact assessment report for the three phases of development: construction, functionalization and decommissioning.

During the construction phase and its operation, a very large number of human resources will be involved and revenues will be generated which will directly affect the economy of the capital and the country.

The contractor will use heavy machinery for the performance of works, such as: excavators and other equipment for excavation and delivery of construction materials and other equipment important for the construction and operation of the Prishtina Park center.

Projects of this nature also cause significant environmental and social impacts which can be of local character and mainly occur during the construction and operation phase of the center. Preventing such impacts is a priority, but if they cannot be achieved, then mitigation measures should be taken in order to reduce environmental damage.

Based on the legal requirements as mentioned above in this document, the environmental impact assessment report focuses on several key areas:

Description of the existing situation, location and technical description of the equipment and engaged machinery installations;

Identification of major environmental impacts;

Defining measures for environmental protection, health protection and risk management measures; Economic-Social Assessment and,

Conclusions

For the preparation of this report, the drafters have taken into account all existing data on the location, technical features of the site and equipment, consultations and interviews with responsible persons, existing documents, direct interviews, frequent site visits so that the report be as qualitative as possible.

The report describes the general situation in and around the project location, the existing environmental conditions, the technical description of the project and the works to be carried out, the potential impacts of the project on the environment, as well as measures to prevent or minimize environmental impacts.

Identification of potential environmental impacts, identification of measures to mitigate these impacts and taking appropriate measures to influence the avoidance or minimization of the impacts of this project on the environment, are the main components of this report.

Visits were also made to the project site, the necessary location measurements were made with GPS and spatial data were obtained for the location, the terrain condition was recorded and photographs were taken to facilitate the preparation of this report.

## 2.D. LEGAL BASIS FOR DRAFTING THE REPORT

Domestic legislation related to Social and Environmental Impact Assessment, which clearly specifies which projects are subject to the study of Environmental Impact Assessments.

### **LAW No. 03/L-024 - ON ENVIRONMENTAL IMPACT**

#### **ANNEX 2**

##### **10. Infrastructure projects**

10.6. Construction or modification of groundwater channels, channel projects and flow prevention;

10.7. Flood prevention projects including modification of river channels (projects not included in Annex 1);

Thus, according to the applicable legislation, the project of fixing the river bed and its flow from Hoqa e Madhe to its discharge in the course of Drini i Bardhe in Krusha e Madhe, is the subject of the study for Environmental Impact Assessment. This is also confirmed by the Sector for Environmental Impact Assessment in the Ministry of Environment and Spatial Planning, as we have previously requested professional opinion on whether it is necessary to conduct an EIA for projects of this nature.

So, since the project in question is part of annex 2, the project is therefore subject to partial EIA. The drafting of the Environmental Impact Assessment was carried out taking into account the documents and requirements of the legal infrastructure of Kosovo:

Law on Environmental Protection No. 03/L-025,

Law on EIA No. 03/L-214

Law on Spatial Planning No. 04/L-174,

Law on Construction No. 04/L-110

Law on Agricultural Land No. 02/L- 26

Law on Nature Protection No. 03/L-233 –

Law on Kosovo Water No. 04/L-147

Law No. 03/L-120 on amendment and supplementation of the Law on Roads No. 2003/11,

Law on Chemicals No. 04/L-197

Law on Air Protection No. 03/ L- 160,

Law on Waste No. 04/L-060

Law on Protection from Noise No. 02/L-102

Law on Fire Protection No. 04/L-012

Administrative Instruction No. 30/2014 on the conditions, ways, parameters and limiting values of wastewater discharge in the public sewerage network and in the water body.

Administrative Instruction No. 07/2015 on construction waste management and demolition of construction facilities.

According to the law of EIA in Kosovo, as well as according to the international principles of EIA, EIA is a process of forecasting, analysis and calculation of environmental impacts of certain projects. In addition to the EIA procedure and consent, the Law on EIA defines the obligations for the preparation of the EIA report and the content of the reports.

## **2.1. Technical documentation**

Business certificate;

Property certificate;

Copy of the plan as

well as, Situation plan

Given the fact that a large part of the environmental specifications are not included in the framework of the above-mentioned regulations for the needs of drafting this report, the relevant international regulations and relevant directives such as the EIA directive have been used (85/337/EEC).

## **2.2. General overview**

The general approach to preparing this report includes:

Taking into account that the geographical position of the foreseen location is extremely strategic for the development of the country's economy, for this reason work has been done in detail in the collection of basic environmental data, the roads for study are defined as follows:

- Basic environmental information was collected during field visits;
- Reviews of various EIA reports, case studies in the region and beyond;
- Consideration of applicable rules and laws, local and international;
- Definition of the area of the project;

- Various materials related to the location;
- Prior knowledge about area businesses and their real needs;
- Contacts with the Institute for the protection of nature and the sensitivity of any area potentially to put under protection;
- The information was gathered through a combination of literature research, thematic maps, field visits and consultations with project technical experts.

During the site visits in June - July 2019, the project team consulted with businesses that operate in and around the locality in question, and which may be directly affected by the project in question.

Data/information and location, as well as the status of protected areas as well as the distance from the proposed Prishtina Park center, are taken from

([http://www.ammrks.net/repository/docs/Harta\\_e\\_zonave\\_te\\_Mbrojtura\\_2015.jpg](http://www.ammrks.net/repository/docs/Harta_e_zonave_te_Mbrojtura_2015.jpg)) and the list of cultural heritage monuments from the cultural heritage database (<https://dtk.rks-gov.net/>)

The identification of environmental and social impacts must comply with the provisions of the Submission Report and must take into account the technical parameters related to the environmental and social barriers to the expansion and paving of the project in question.

Suggestions/recommendations are based on the main findings of this report. It is suggested that these recommendations be taken into account during the next phase, that of project execution.

### **2.3. Evaluation methodology**

During the visits, all ecological aspects of the area were analyzed, as well as the area as a whole was analyzed earlier in the projects implemented for the company Elnor, Birrra Prishtina, and Kos Recycle. Thus, all existing environmental conditions of the proposed project have been analyzed in order to review the baseline data.

The assessment of the significance of the impacts should also be based on the criteria set out in the law on Environmental Impact Assessment for infrastructure projects, respectively point 10 of annex 2, and taking into account: The size and spatial extent of the impact (e.g, geographical area and size of the population that may be affected);

The nature of the impact; Intensity and complexity of impact; Impact probability; Onset, duration, frequency and reversibility of impact and, Possibility of effective impact reduction;

Once assessed, potential impacts should be considered in the impact minimization strategy, which will aim to avoid and/or minimize them and, whenever possible, improve the positive environmental effects of the project. The principles of impact mitigation, including their hierarchical structure, will follow three steps;

- a. Preference for avoidance and prevention;
- b. Reduction; and
- c. Compensation.

### 3.0. DESCRIPTION OF LOCATION AND ENVIRONMENT

#### 3.1. Geographical position of the location

The proposed project is located on the highway (M2) Skopje - Prishtina at 13km from the central area of the city of Prishtina, cadastral zone Livagja, Municipality of Gracanica. The entrance to the location is from the M2 highway ring road.

The cadastral parcels in which the location is situated are 47-56,47-59,47-62,47-74,47-26,47-76,6016-2,47-56,1307- 0,1157-0,48-0,1221-0,1222-0,1223-0,1224-0,1227-0,1228-01308-0,47-58,47-75,6016-1.

Based on the regulatory and development plans of the municipality of Gracanica, the area in question is marked as an industrial and commercial area. For this reason it is known as an industrial area because on both sides of the highway for a long time hundreds of businesses of different fields and profiles conduct their activity.

The parcels in question are approximately in the following coordinates: 42°33'52.3 4" North, 21° 7'56.17" east, on a flat surface at an altitude of about 605 m.

Cadastral parcels form a single construction parcel with an area of 164509.00m<sup>2</sup> in which a shopping center and commercial and service facilities are planned to be constructed. This part will represent the introduction of a larger idea, the idea that the investor has for this part of the city, this will represent only the first phase of a larger plan which is divided into several parts. In the first phase of the plan, the facility in the center that is planned in this location is a large shopping center, which according to the shape follows the shape of the given location. There are 4 levels, the basement floor which is partially excavated underground and is intended for parking and service spaces, and three levels above and which are intended for trade. There is also a commercial building at the entrance, an energy facility and a petrol station. All gravitate around the peripheral boulevard located which from the entrance of the regional road ring will extend along the entire location and is planned to continue in the following phases with connections to the service road Laplje sello, Livagjë.

The entrance to the location is from the circular ring of the highway Prishtina - Skopje, directly connected to the boulevard which passes through the location, surrounds the eastern side of the building to the end of the location where there is a connection for the next phase, while to the west on a one-way service road which will serve for the supply of goods and materials for the needs of the shopping center. This service road extends south to west along the entire facility and again connects to the main road. Along the north side of the boulevard there are several connections one towards the open parking space in front of the main entrance of the building, a ramp entrance-exit towards the parking space in the basement and an exit ramp. While on the east side there are also

two connections to the basement parking space of which one is the entrance and the other is the exit ramp. Unloading of goods and materials is possible in several positions, on the south side the unloading is carried out through the ramp with a small slope directly to the space provided for the supermarket. For other tenants of this shopping center, the supply is made through the central service yard in which eight parking spaces for trucks are provided, available up to the unloading dock from where the supply of goods and materials can be done directly through the service corridors in each store in the shopping center. Such supply points also exist in other positions along the service road which leads to the west. There are several parking spaces in which goods and materials can be unloaded and through the ramp to be sent to the service corridors at the basement level or on the ground floor then to the shops.

Pedestrian paths are provided around the whole building, even those roads rich in horticulture on the east, west and north side, up to only service roads on the south side. On the east side the entrance for pedestrians is direct from the parking lot to the entrance pavilion which is at the same level in quota -4.20 (601.9).

While at the western entrance the entrance is at ground level in the quota 0.00 (606.1), this way of entry with leveling is enabled by the natural slope of the terrain which from east to west increases approximately 4m. Roads and footpaths, as well as the facility itself follow this slope of the terrain.

The design of the proposed project will be executed taking into account the specifics of the area, and will take into account that environmental issues are carefully addressed and for this the best available techniques will be used and work will be done in continuity for staff to be trained on environmental protection.

The proposed project will have a number of facilities, warehouses, parking lots, shopping malls and a number of restaurants.

*More comprehensive details of the proposed project and design are attached to the construction plan.*

Prishtina Park JSC lies on a considerable number of integrated plots in a single plot, with an area of 164509,00m<sup>2</sup>.

Full details on the property certificate, the owners and a copy of the plan can be found in the appendix to this study.

The location in which the various activities of the entity Prishtina Park JSC are planned to take place are in the industrial zone, which means that we are not dealing with a residential area, and as such it does not affect the surrounding residents.

For more information see the photo and image below taken from the air recordings.

Photo 1. View of the proposed construction site

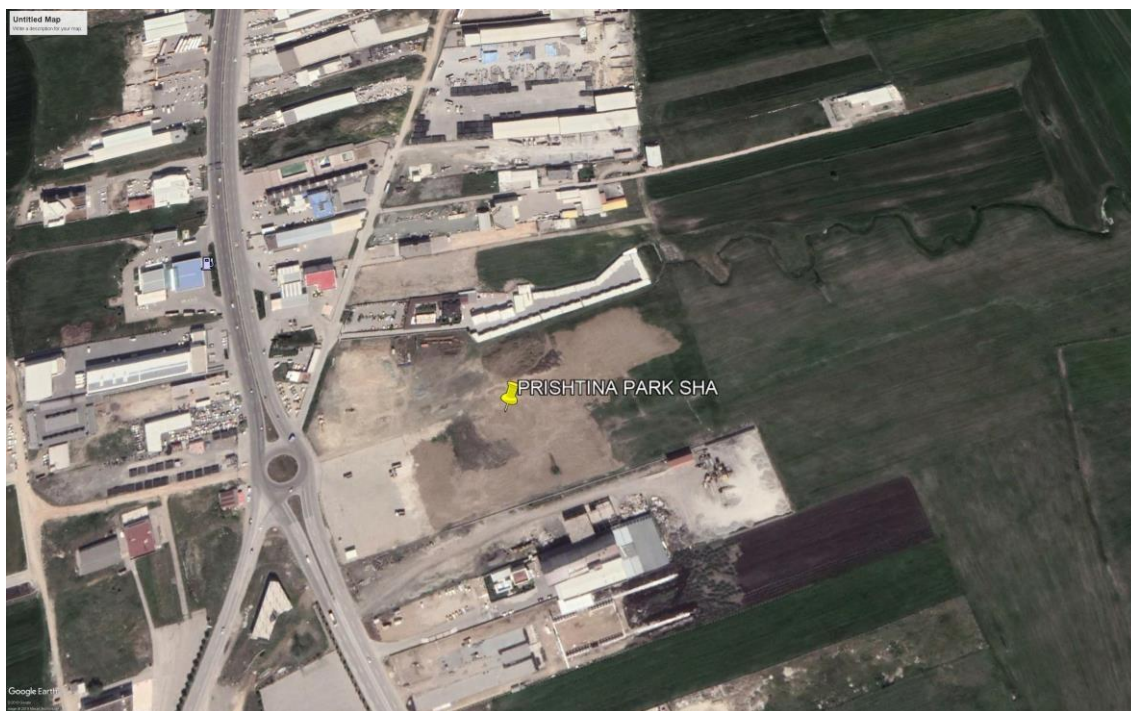


Photo 2. View of the proposed location for construction - aerial image of the area.

### 3.2. Population

One of the essential features of the analyzed space, in terms of determining the possible impacts on the environment, is its population and demographics. These facts have their full meaning in the detailed research of possible negative impacts on residents living in the analyzed space.

In the vicinity of the proposed location for construction of the park, residential facilities are located, so from a social point of view during the construction phase the project in question will not have a significant impact on the population, in addition to material benefits through engagement in carrying out works and providing services for employees.

### 3.3. Existing infrastructure

Regarding the existing infrastructure, the road infrastructure is built, the highway Prishtina - Ferizaj passes near the location, which enables connection with the entire road network of Kosovo, water supply and sewerage infrastructure is not fully completed and occasionally presents limitations, the electricity supply will be done from the public supply, and the company transformer will be installed in the park area.

as well as a company generator that could supply power to the center in the event of power cuts.

### **3.4. Hydrological condition**

The area as a whole is an industrial area where hundreds of businesses of different natures and profiles operate.

So far, water sources and their surface runoff are not known, but surface water occurs only during heavy atmospheric precipitation which can flood the entire area of the industrial area.

As for groundwater, the area in question is very rich in groundwater both in quantity and quality

Surface water during atmospheric precipitation is drained into the river Graqanka which passes (flows) through this location, and then from this river the water is drained into the river Sitnica. Sitnica flows through flat terrain with an average slope of 0.7 m/km. Sitnica is the main branch of the Iber. This river is distinguished not only by the size of the basin (2,861 sq km), but also by annual inflow (16, 6 m<sup>3</sup> per sec.). Sitnica is formed by the Matica stream with Sazlia and the Shtime river. These streams near the village of Rubovc join, forming the river Sitnica, from here to the discharge into the river Iber, near Mitrovica passing the length of 90 km. The feature of this river is the small slope, so it is characterized as a plain river.

### **3.5. Flora and Fauna**

What distinguishes the flora and fauna of this region are the intense changes as a result of human activity, and in the location where the proposed project will take place, as well as in the close circle of the location flora and fauna does not exist, because due to the construction of commercial and industrial facilities around the location the flora has been destroyed while the fauna has moved to the suburbs.

In the surfaces in the district of the area where the project is conducted, there are areas of agricultural land where wheat, corn, sunflower, soybean, potato, etc. are cultivated. The forests of this region are mainly deciduous forests and constitute a large number of low and medium growing species. According to the official data of the Institute for Nature Protection, there is no data that in this field we are dealing with an area protected by law, in terms of biodiversity and nature in general, but neither is there any area/territory that is potential to come under protection. The problem of the existing state of animal species has not been studied sufficiently to draw meritorious conclusions in this domain. Based on the existing flora and climatic conditions of

wider region, and taking into account the data from the locals, in the farthest area from the location live mammals, various insects, wild rabbit, fox, wolf, wild boar, hedgehog, etc. While from the birds are characteristic: nightingale, quails of the field, crows, eagles.

### **3.6. Climate**

The municipality of Gracanica is dominated by a medium continental climate, with hot summers and cold winters. The average temperature in January is - 0.9 degrees, while that of July + 21.5 degrees. In terms of rainfall and temperatures, Spring and Autumn are characterized by approximately the same climate. The precipitation is of low level or of local character. The average temperature ranges from 9.9°C to 10.5°C and the average temperature is 10.3°C.

The highest temperatures in the researched years (2002-2008) are in June 35.6°C, while in July 32.4°C and in August 31.1°C. The lowest temperatures were in December, January and February. The maximum average annual temperatures for the researched years are 22.5°C, while the minimum average temperatures range from (-1.7) - (- 3.4°C).

All these records, for minimum and maximum temperatures, are taken from the regional meteorological station in Prishtina. The precipitation regime in the municipality of Gracanica has the character of an arid climate. The total amount of precipitation ranges from 499 mm to 675 mm (for the years researched).

The average annual value of relative humidity is 76.8. The driest month is August 66.2, while the wettest months are November and December 84.2.

### **3.7. Seismic characteristics**

The micro-regional seismology of this location is distinguished by the possibility of earthquakes of intensity of 7-8 degrees Mercalli. According to seismic maps of the region, the vast space studied does not belong to the same intensity of vibrations because it depends on the geological characteristics of the soil, the depth of groundwater, etc.

### **3.8. Visual effects (landscape)**

The landscape characteristics of the spatially analyzed whole represent one of the elements to perceive the whole relationship in the relation Prishtina Park - environment. In this case, however, it should be taken into account that it is a psychological affective category which is manifested through the overall synergistic action of the environment in the viewer, where necessarily cultural, sociological and subjective implications are present.

The planned location is located on a flat and convenient terrain. Visual effects (landscapes) are important criteria in preserving the environment and if not resolved properly are considered as environmental degradation.

According to the planned project, there is no negative impact on the demolition of the landscape in the analyzed

location, because this location has been turned into an industrial area and the human eye is accustomed to this condition of commercial and industrial facilities.

### **3.9. Air Quality**

Regarding the air quality of the industrial zone, there is no data which would show the real state of air quality of this area.

Thus, the lack of an air pollution cadastre throughout Kosovo and especially in this industrial area make it impossible for us to examine in detail the current situation of all emitters in the area and the cumulative effect that comes from emissions coming from the operation of industrial facilities. built in this location, as well as the effects that Prishtina Park could produce in the construction phase and the operation phase. From the terrain configuration and the operation of industrial activities, from the existing industrial facilities in the district and also the industrial facilities that have been built and are being built along the highway affect air pollution, the high frequency of vehicles on the highway Prishtina-Ferizaj have an impact on air pollution as well as air pollution is influenced by agro-technical equipment which is needed to carry out agricultural work, we can conclude that air pollution in this region is considerable.

### **3.11. Water**

Water pollution is caused by other industrial facilities that are built in this area and the existing earlier industrial facilities, especially the Gracanka river, is polluted by the Kishnica flotation and the earlier waste left by the Kishnica complex, water pollution is also caused by petrol stations which are located on both sides of the main roads. Water pollution is also caused by sewage which is discharged from the community into untreated river. Water pollution is partly caused by the traffic that takes place on the highway Prishtina-Ferizaj, and by the flooding of the road with atmospheric precipitation.

### **3.12. Noise**

In the analyzed location and beyond we do not have any noise measurements, but we consider that the location is away from the city, there is also no large industrial facility nearby that generates noise except for vehicles circulating on highways located near this location. We can conclude that in the location where the factory for processing timber was built, there is no permanent noise that would affect the human psyche and concentration at work and the environment.

#### 4.0. PROJECT, DESCRIPTION, OBJECTIVES AND RATIONALE.

The main motive for the construction of the project in question is the extremely high demand for a center of this nature and character.

The project in question will be developed - implemented in a place with an extremely large area, in total the area is over 25ha, in which the construction and operation activities of the park will take place.

The design of the Prishtina Park center is carried out by the well-known company from the United States of America, LAGUARDA LOW ARCHITECHTS based in New York.

Based on the notes in the situation plans and in the description of the objects, functionality and materials which will be used to finalize all the facilities, it is specified that these are only preliminary plans, and it is the responsibility of the local architects to analyze the studies made in connection with the building code and verify and approve on the basis of the local register of architects regarding the compliance with the security of the buildings.

Based on the regulatory and development plans of the municipality of Gracanica, the area in question is marked as an industrial and commercial area. For this reason it is known as an industrial area because on both sides of the highway for a long time hundreds of businesses of different fields and profiles conduct their activity.

The parcels in question are approximately in the following coordinates: 42°33'52.3 4" North, 21° 7'56.17" east, on a flat surface at an altitude of about 605 m.

The design of the proposed project will be executed taking into account the specifics of the area, and will take into account that environmental issues are carefully addressed and for this the best available techniques will be used and work will be done in continuity for staff to be trained on environmental protection.

However, all impacts have been identified, analyzed and summarized in the following table and the necessary mitigation measures for significant impacts have been proposed.

	Preparation/construction phase
Air	x
Noise	x
Air quality	x
Waste management	x
Soil contamination	x
Life-threatening substances	x
Cultural heritage	x
Visual impact	x

**Table 1. Summary of environmental impacts.**

- ↵ The basis for the assessment of air quality and its impacts is the Law on Air Protection from Pollution (03/L-160), respectively Articles 3 and 4 regarding the indicators and the definition of basic standards in the definition of quality standards so that the impacts in air quality to be within the maximum allowed values for sulfur oxides, nitrogen oxides, carbon monoxide, photochemical oxidants such as ozone.
- ↵ Noise should be evaluated and be in full compliance with the Law on Noise Protection (02/L-102), and its values should not exceed the permitted limits, possibly its source generation should be lower so that it does not affect citizens. Machinery engaged during the excavation and opening of foundations must adhere to working hours 07.00-17.00, after this time must be passive, while noise values in dB should not exceed the limits of 75dB on the walls of the closest buildings.
- ↵ In and around the space in which the preparatory activities for construction will be carried out as well as during the construction and operation phase of the Prishtina Park center, care must be taken in the water management of the area.
- ↵ During the preparatory phase and construction, care must be taken that the works are carried out in accordance with the law on land conservation, so there is no way to allow leakage of fuels and lubricants from machinery engaged in and around the project area.
- ↵ If during the construction, any specific object is encountered, then it should be treated according to the law in force on cultural heritage.
- ↵ During the preparation of the construction site and during the time in which the constructions are carried out, the space provided for construction should not be visually disturbing/visually unacceptable for the citizens.

The proposed project will have a number of facilities, warehouses, parking lots, shopping malls and a number of restaurants.

Project planning phase - this phase includes the following activities:

- Environment Impact Assessment;
- Project design/plan approval by responsible authorities; and,
- Performing various measurements and identifying contractors.

This phase will serve the investor to complete all the necessary permits from the responsible authorities.

At this stage the engineering company is working on finalizing the design details and preparing execution plans.

Ownership of the area - the entire area is the property of the investment company Prishtina Park JSC, and with this the investor will apply certain conditions in relation to the land:

- The investor/applicant will provide appropriate environmental protection measures, which will be elaborated in more detail in the following chapters.

Based on the case/property certificate, the ownership registered in the name of the entity Prishtina Park JSC in a surface of 164509,00m<sup>2</sup> is proven, and this whole area lies in the cadastral zone of Gracanica.

### **LEVELING CONDITIONS**

The characteristic leveling of the new building derives from the urban plan, technical conditions and the level of the building, and the heights are as follows:

- Entrance quota (west) at basement level -4.20 (601.9m), while entrance point at east entrance is  $\pm 0.00$  (606.1) m
- Ground floor quota is  $\pm 0.00$  (606.1) m
- The quota of the first floor is +6.00 (612.1), the quota of the second floor is +12.00 (618.1) m;
- The crown quota of the building varies and depends directly on the silhouette, i.e. on the roof surfaces which are at different levels from +18.00m, +25.50m to +29.00 in the parts covered with glass lanterns.
- The highest part of the whole complex belongs to the tower which is positioned in the northwestern part of the building and the constructive height ends in quota +44.30, i.e. the total height measured from the basement is 48.5m.

The function of the tower is marketing, it represents the totem-symbol of the complex in which three platforms for visitors are located.

Entrance to the ground floor ( $\pm 0.00$ ) is possible with stairs and ramps at the main entrances, respectively stairs and ramps at the auxiliary and service entrances

## **FUNCTIONS**

The facility is composed as a Civic Shopping Center, which should be a destination for visitors not only from Prishtina and surrounding neighborhoods, but also from the entire region, with many different contents.

Due to the variety of functions that the center should include, a functional and vertical separation has been made, with clear differentiation of contents, the entrances to some functions are treated according to the projected number of visitors.

The ground floor is the initial entrance to the center. The two "main" pedestrian entrances are located to receive all visitors from the two most awaited directions, East and West, joining them in a fascinating entrance with gallery corridors up to 4 floors with roof lighting. At the ground floor level of the shopping center are listed functions which are expected to unite more visitors. The other contents are of a commercial character, shops of different sizes which cross the two fascinating corridors and form a continuous circular movement, with which the visitor in the center is not static but the space and the trajectory simply push the visitor to move.

Service/service areas, service traffic and stairs are located peripherally, special attention has been paid to meeting the conditions against fire, exit for remote evacuation according to the standards and norms for this type of facility. As well as quality supply of the center with goods, and at the same time not to hinder the visitor. For this purpose, a special road has been used, the purpose of which is only to supply the center, so that the unloading vehicles do not mix at all with the automobiles.

The second floor is entirely for trade. Stores are formed peripherally around the horizontal traffic. The toilets are located in the center of the "row" in several positions on each floor which are available to every visitor. The service spaces are peripheral and communicate with special vertical communications. The second floor is the floor which connects more content and functions. In addition to the part for trade and shops, here is located/on the east side / part / line / cafe bar, food court, which has a common dining area. This part is conceived as a standard part for food in shopping malls.

The center of the mall provides the part for entertainment, restaurant, bowling club, children's playground and at the end is the part with 14 cinema halls which have a total of 2000 seats.

The primary function of the basement part in the center is intentionally for parking, technical space as well as the atrium parts that represent the passage for visitors from the basement to the ground floor part. There are about 1600 parking spaces, technical spaces, substations, energy spaces, etc.

## **CONSTRUCTION**

The construction of the building is a system with vertical and horizontal elements of reinforced concrete in a constructive network with a distance of 8.85 x 8.85 m.

The skeletal structure is made of columns and beams from reinforced concrete and slabs. The skeletal structure is to be a combination of prefabricated structural elements, and monolithic concrete elements formed on site.

Reinforced concrete walls are envisaged around the core of the stairs, as well as in the parts around the elevators. These parts are completely monolithic in the whole module of their construction, the pillar-beam and the mezzanine structure.

The construction of the mezzanine is foreseen to be made of prefabricated concrete slabs with dimension of 30 cm, and after they are installed they should be monolithized with 6 cm reinforced concrete. The pillars have a dimension of 80x80 cm and are mainly prefabricated, made in the factory. In positions which are occupied by monolithic way of construction, the columns with dimensions 80x80, 80x120 are also concreted at site, with quadrangular and circular shape with diameter 80cm, 120cm ...

The beams are also in most cases prefabricated, and are with dimensions 80x80 and in the cases of bridges they are 80x120 – structures which go further distances. Monolithic beams are also with dimensions 80x80, except in the parts which are console loaded, where the dimension of the beam is 120x80.

The extension of the building is at an optimal distance of 40m-56m. Depending on how many constructive areas are occupied, in general the division with extensions (dilatations) divides the building into 40 different sectors which represent a special constructive element.

The height of floors is 6m, which provides for a quality height and space for moving installations.

We have planned to have sloping ceilings, made of plain and acoustic plasterboards, whereas in toilets waterproof plasterboards through which installations will pass, and constructive height of the basement garage is 4 meters.

The structural network module of the constructive system is 8.85m x 8.85m.

The selected module is one that provides quality parking space in the basement, quality space to perform the function for which the building is dedicated, as well as a module that enables stable and economical structure of the building.

#### Earthworks and foundation:

An extensive mechanical excavation in humus with thickness  $d = 100$  cm is planned and wide mechanical excavation up to the foundation pit, up to a depth of 2.5 below the terrain quota, in the eastern part up to 6.5m, with mechanical ground excavation from category 4 and 5 with loading and transport of the same. Filling up soil around the walls in the basement, by pressing it in layers of 30cm with vibrio plate to reach the adequate pressure, as well as filling up with gravel of  $d = 30$  cm under the foundation.

The foundations have been planned with “legs” under it, depending on the load and dimension of the foundation. The maximum contact voltage of the soil-foundation must be defined based on the geo mechanical study, which will clearly determine the type and manner of foundation, based on the physical-mechanical characteristics of the bearing strength of the soil.

The hydro isolation is under the three-layer foundation slab, protected by wet concrete of MB 15, in two layers. An adequate lightning rod for the building is envisaged, and which will be placed under the foundation.

## **INSTALLATIONS**

Various systems have been foreseen for the complete operation of the building, heating-cooling systems, fire protection systems, and different monitoring systems. To support these systems, an energy facility is built in the vicinity of the facility on the northern part, in which the boiler room on liquid fuel, tank for liquid fuel, water tank, pump station, are all located.

The building is entirely air conditioned. The electricity supply for heating is coming from the boiler room itself, where two boilers of liquid fuel are located, and next to it an external diesel tank dug into the ground.

The ventilation system is generally divided into two parts: part that deals with the ventilation of common spaces in the corridors, the atrium is based on chillers, and air conditioning rooms which are located on the roof, whereas in the commercial area, indoor “ĚSHP” units are located, which are connected to the cooling towers located in the separate building, the energetic block on the roof of this building.

A sprinkler system for fire extinguishing in the building, fully functional in all its parts is planned to be constructed in the building. In the basement area where a parking barrier gate system is planned, a dry system has been foreseen, whereas in all other parts a standard water system has been foreseen. Electro rooms and some specific spaces shall be extinguished with a special gas extinguishing system. As much as it concerns the fire protection, building anti-fumigation installations, which work on natural and mechanical ventilation in parts which are treated against fumigation, have been envisaged.

Electro technical systems are generally divided into high voltage and low voltage installations. The placement of 12 transformers is foreseen to take place in 7 different places. In addition to electric wiring installations for all stores, systems for lighting, hearing, public calls as well as protective systems for demolition, entrance control, fire alarm, gas detection, etc have been included. All electro technical installation systems which serve for evacuation and fire alarm purposes, are also connected to the backup system of aggregate assistance.

The sewerage and water supply system treats the supply of water, wastewater from the Centre, as well as atmospheric water. All wastewater is treated through the treatment plant before being discharged into the public sewerage network. Part of this water which is treated with additional biological and chemical agents, is used for service purposes, cleaning, irrigation of greenery, etc.

## **THE ROOF**

The structure for the biggest part of the roof is flat, the under layers are PVC waterproofing sheets, whereas under it there is a thermal insulation and levelling layers. On top of the last slab of reinforced concrete, a concrete slope with  $d = 6-10\text{cm}$  has been foreseen, on top of the steam protection sheet it is foreseen a XPS of at least 15cm. The hydro isolation is addressed in the expansion parts, with a wall made of reinforced concrete and with metal foil that wraps the expansion joint.

The rest of the roof is made of a roof panel of waterproof PVC membrane, thermally insulated with a thickness of 10cm. Atmospheric water removal is chosen by combining horizontal partitions with a slope of 0.5% up to 2%, based on the rules of the respective system / Pluvija System / and vertical ditches.

Attic is displayed throughout the building, while on the part above the pavilion entrances as well as on the central corridor above the galleries, there will be coverings with structural elements of glass, enabling natural light throughout the building.

Roof glass is a semi-structural system in steel and aluminium profiles and with low energy emission as glass package.

### **The Construction phase – this phase provides for the following activities:**

- Erosion of basements for the purpose of laying foundations;
- Performing construction works (mechanical, engineering, electrical, hydraulics, roofs and other similar works in and around buildings of different materials.

Most activities should be monitored during this stage in order to verify if they are in accordance with architectural standards. The generation of waste materials during the construction, including solid materials during the erosion and opening of foundations, should be monitored as well, and see if it is disposed of in landfills designated by the Contractor.

environmental parameters.

During the operating phase, the necessary number of containers must be installed to collect all the waste generated in the Centre and kept safe until they are delivered to a designated landfill. All liquid waste generated within the building and by the facilities, should be diverted to a wastewater collection and treatment plant, and then diverted to the area sewer flow.

Facilities must be continuously maintained and professional staff engaged in order to be competent in rapid emergency response and in the implementation of various environmental mitigation measures.

### **Project decommissioning phase**

In case the entire project fails, all equipment should be decommissioned and at this stage various demolition activities will take place and include all necessary materials which need to be removed.

Activities in this phase should be carried out carefully in order to create as little environmental pollution as possible and as few concerns as possible for businesses in the area and neighbouring facilities. Excavations should also be made to restore the original landscape of the area as soon as possible.

### **Description of the building structure**

During the design, the Investor in cooperation with the Design Office had in mind that Prishtina Park Centre responds to the needs and contemporary trends of doing business by taking into account the environmental, social and general conditions factors, relevant norms, standards and laws in force, for facilities intended for public use.

At first, a considerable amount of soil will be excavated and removed, to prepare the foundation on which the buildings presented in the situation plan will be built:

- **Constructive system**, the bottom of the building is worked on reinforced concrete slab based on the results of geometric research of the land and the proposal that results from this study, the way of which is presented in abundant designs for execution. The building will be built on a skeletal system with walls made of "giter" blocks and partly of "porenbeton" blocks, reinforced with concrete slabs and a protective layer of concrete.
- **Ceilings** –sloped ceilings with plain and acoustic cardboard, and in toilets, waterproof plasterboards, have been envisaged. By "sloped ceiling" is meant gypsum ceiling with plasterboard without visible connection with aluminium substructure in height/hanging. All layers are taped and rounded. Waterproof gypsum board (CC-waterproof) are foreseen for the sanitary facilities. Plasterboard acoustic plaques appear in certain parts, in the main corridors of the building, where there are more people. On the top floor, where the restaurants will be, it is envisaged a combination of a sloped ceiling with plasterboard and coloured composite panels, with hidden interior light. Between the reinforced concrete slab and the sloped ceiling in the area where the service facilities are located, installations of electrical, mechanical and sprinkler system pass through. Therefore, proper openings are enabled in the ceiling, with location marked according to the project.
- **Interior processing – walls**. Exterior walls are intended to be built of YTONG lightweight concrete blocks, inside rounded with gypsum mortar, and in the outside there is an insulated and ventilated facade in a substructure with a final layer of composite panels (metal and stone). Also the interior walls, which limit the fire sector, are foreseen to be made of YTONG lightweight concrete blocks rounded on both sides with gypsum mortar to achieve proper fire resistance. In sanitary spaces, dressing rooms, kitchens, walls are covered with ceramic tiles from floor to ceiling.

Stair walls are constructed of walls made of mortar-reinforced concrete on both sides with  $d = 25\text{cm}$ .

The interior walls between the shops are envisaged to be made of cardboard plaster, double covered on both sides with the “KNAUF 112” system.

Finally, all walls are rounded and painted with “polycolor” / except in positions where gluing with ceramic tiles is provided.

- **Exterior processing**, will be a modern system in terms of visibility – a mixed facade system from materials of the highest quality types and structures in the European market, for a stable and highly efficient facility in terms of energy consumption during the summer and winter, and it will have a very attractive appearance in the visual aspect and a roof compactness in terms of the protection from water..
- The exterior walls are walls made of giter blocks or “porenbeton” of 25cm thickness, only a part of it, while most of it will be of skeletal structure and different facades from various materials as follows:
  - o Steel skeletal structure;
  - o Exterior marble structural panels;
  - o Various glass structures;
  - o Various wood and steel structures, as well as combined;
  - o Various metal structures.
- Floors are to be made of several types of materials. The outside area is intended as a quality space paved with natural-granite stones of several shades, which also enters the ground floor in the part of the entrance corridors. Quality ceramic tiles of  $d = 1\text{cm}$  in the part of toilets, service spaces, warehouses, etc. The parking lot and basement are covered with tool-processed “iberbuk” and are painted.

The bottom layer of “iberbuk” is made of 5-8 cm thermal insulation from extruded polystyrene with  $d = 2\text{cm}$ , and it is foreseen for the entire building, as well as the proper hydro insulation of the floor. Under the ground floor in contact with the basement, thermal insulation boards with  $d = 5\text{cm}$  from the bottom of the floor will be installed. In the terraces of the second floor, concrete slope with  $d = 4-7\text{cm}$  and HPS thermal insulation of 5cm, is foreseen as well as instalation of thermal insulation slabs at the bottom layer of the floor.

- The removal of atmospheric water is made through horizontal gutters and verticals of galvanized metal sheets.
- It is worth mentioning that special importance has been paid to the lighting of buildings, both natural and artificial lightning. The windows allow sufficient penetration of natural light, which is done from the side to the facades. Artificial lighting is made using economical lighting and very efficient in the use of electricity.
- All materials used are environmentally friendly materials and very efficient in terms of energy conservation during summer and winter.
- So, all exterior investments are closely related to energy efficiency and reduction of energy consumed during the summer for space cooling and for heating during winter.
- **Space around the building** - the space around the building will be organised in compliance with the architectural plan. Grass and new decorative trees will be planted in many spaces, and a number of parks within the complex.

We are talking about a gigantic Centre, in which a considerable number of large business and global names will be located.

1. The basement will be used for all companies represented in the Centre, where they will have their warehouses in order to maintain their optimal stock, and the rest of it will be used for parking.  
(This is presented in details in the situation plan for the parking level).
2. The ground floor is planned as a level for dozens of businesses of different sizes and profiles.
3. The first floor is planned as a location for a considerable number of businesses of different types and sizes;
4. The second floor will be used to organize cafes, bars and restaurants (for more details please see the Situation Plan);

Note: All names presented at situation plans are provided only as a plan and may change depending on the agreements with companies interested in being located in the Prishtina Park center.

### Urban-architectural data

Cadastral parcels:..... 47-56,47-59,47-62,47-74,47-26,47-76,6016-2,47-56,1307-0,1157-0,48-0,1221-0,1222-0,1223-0,1224-0,1227-0,1228-01308-0,47-58,47-75,6016-1.

- Surface of the location:.....164509,00m<sup>2</sup>
- Utilization Percentage:..... 70 %
- Construction Coefficient..... 2.1

Surface Balance:

		Net surface (m <sup>2</sup> )
<b>LEVEL B01 (- 4.20) - Parking Level</b>		
<b>TOTAL; B01</b>		<b>82,609.93</b>
<b>LEVEL L00 (± 0.00) -- Ground Level</b>		
<b>TOTAL; L00</b>		<b>67,968.65</b>
<b>LEVEL L01 (+ 6.00) -- First Floor Level</b>		
<b>TOTAL; L01</b>		<b>65,216.95</b>
<b>LEVEL L02 (+ 12.00) -- Second Floor Level</b>		
<b>TOTAL; L02</b>		<b>37,552.34</b>
<b>TOTAL</b>		<b>253,347.87</b>

## **5.0. IDENTIFICATION, DESCRIPTION AND ASSESSMENT OF ENVIRONMENTAL IMPACTS**

The project of construction and operationalisation of the Shopping Centre Prishtina Park JSC along the highway Prishtina - Ferizaj - Skopje, like any other activity developed in the environment, is closely related to the consequences and the positive and negative impacts that may follow the implementation of the project in all stages.

This assessment of the potential environmental impacts of the proposed project is carried out on the basis of factors related to the nature of the activity, technical equipment and machinery involved, form of work performed, materials used to finalize the works, materials used and generation of waste, all this in the socio-economic and environmental context.

Impacts on the environment can emerge at any stage of the project development, therefore all possible negative impacts on the environment are classified into two basic periods: Assessment and Description of Environmental Impacts, and Identification and Description of measures to be taken for the elimination or reduction of these impacts, which should be done for the construction phase and during the operational period.

This report identifies and analyzes the potential impacts that may arise during the implementation of the proposed project on the construction of facilities and accompanying infrastructure in the above-mentioned plots.

The purpose of this AEI is to ensure that decision makers have sufficient information about the project and the impacts it may have on the environment during its implementation and operationalisation.

The International Association on Impact Assessment (IAIA) defines environmental impact assessment as "the process of identifying, forecasting, assessing and facilitating, biophysical, social, and other relevant impacts of the proposed project, before a decision is made on it."

### **5.1. Positive impacts - Construction Phase,**

During the construction phase, new jobs will be created, so we have increased employment opportunities, ordinary workers from the local community in particular or beyond, depending on the contracting company engaged to carry out the construction process.

For the work to progress, a considerable number of professional profiles are needed, including architects, labour safety and health managers, etc.

Land use – lands on which the construction is planned to take place, for a long time have not been used for agriculture, and they have simply remained uncultivated and were turned into wasteland.

With the realization of the stated project, the lands will be used more rationally and the value of the surrounding lands will increase.

Aesthetic values - with the realization of the respective project, the area as a whole will take a very attractive aesthetic-visual appearance and will enrich the aesthetic values.

Impact on the local economy - The project will require supplies of large quantities of construction materials, gravel and other materials to be extracted from local quarries. This will increase the need for delivery of various materials from local companies.

Also, the implementation of the project in question will be a strong impetus for small businesses around the locality where it is built through food supplies - restaurants, and various shops.

Infrastructural development - the area in question has a halved and not fully functional infrastructure, the project in question will enable the infrastructure of the area to be further developed through road improvements, new energy installations, water supply network improvement, more system advanced waste management, the possibility of installing a functional sewerage system for the whole area.

Due to its convenient position and proximity to the Arbër Xhaferi highway, it can also become a stopping point for passengers and transporters of goods and services.

The local market of goods and services: with the construction and operationalisation of the Prishtina Park Centre, the need for goods and services will increase. Various restaurants and shops will look for products from the local community such as eggs, milk, fruits and vegetables as well as various products and services.

## **5.2. Negative impacts - impacts during the Construction Phase,**

### **5.2.1. Impacts from leaks / drainage**

During this phase, there may come to the loss or eventual soil pollution from excavations. It is also very important to be careful regarding the water which can flow into the foundations of open buildings because this can lead to contamination of soil and groundwater in the plots designed for construction and around them.

So, rainwater should flow to the sewer and not create stagnant water because it can be a source of mosquito breeding. Necessary measure - It must be ensured that the drainage system of water flow during construction is well managed.

Any excess land or soil from the construction site must be disposed of at an approved site approved by the competent institutions.

A functional water drainage system should be designed to ensure that the space is well drained during construction. If we have poor drainage, opportunities for development of new habitats could be created, and among them possibly various mosquitoes and parasites.

### **5.2.2. Air pollution**

Dust and particles emanating from the entire construction process can cause significant impacts on the environment, health and safety. Exhaust pipe gases emitted by trucks, cars that grind and move the earth, concrete mixers and generator pumps will also pollute the local environment. Expected sources of air pollution include:

- Emissions of gases from the emissions of vehicles engaged in carrying out works;
- Construction dust generated from soil particles and various materials;
- Cement powder and other binder materials;
- Fragrances from different materials;

Although most of the abovementioned impacts will be localized, adequate measures are still needed to minimize them. For example, if dust generated from the ground can spread to the surrounding environment and in atmospheric wind conditions it can reduce the visibility of vehicles at the construction site and on highways, and can lead to accidents.

In addition, the project will be implemented in phases, meaning that some of the facilities will be operational, while others are still under construction, and this will necessitate strict measures to protect the public in operational areas.

#### **Necessary mitigation measures**

The following are the recommended measures:

- Regular spraying of dusty surfaces;
- Ensure that all employees are equipped with protective masks and use them whenever needed;
- Ensure that all cars engaged in the performance of works are well maintained and make complete fuel combustion;
- Drafting a plan for the protection of health and safety of workers, in order to minimize the likelihood of exposure to air pollutants;

### **5.2.3. Impacts on the ground**

Due to excavation, the soil structure may be disturbed by various impacts. Leveling the terrain, arranging access roads,  
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digging and opening of terrains connected to the foundations of buildings can affect soil disturbance. The overall effect will be the alteration and destruction of soil microorganisms and habitats. The total area on which the construction activities of the facilities and the general infrastructure will be carried out will create a completely new reality, because the whole location will change in terms of visual, soil chemistry and its physical stability.

#### **Necessary mitigation measures**

- The project developer is recommended to deposit the top layer rich in humus in a part of the location in order to later use it to create green belts and

spaces around Prishtina Park.

- In order to minimize soil pollution, only the necessary spaces for construction should be excavated.

#### **5.2.4. Noise and vibration**

The construction process will also produce a level of noise and vibration and may cause effects / health problems for the employees at the construction site and others around it.

Noise will be generated by the machines used (e.g. trucks, land builders e.t.c) and general construction work. In addition, construction activities will generate vibration. The Contractor must ensure strict observance of Noise and Vibration guidelines in accordance with the legislation on noise and vibration, respectively the observance of the maximum allowed levels.

The noise level for residential areas according to international standards is set at 50 dB for time during the day, while at night the noise level should be max. 45 dB.

The following table presents noise level depending on distance.

Noise	Distance (m)			
	10	50	100	500
90db-level for modern equipment	59	45	39	25

Based on the values presented in the table above, and given the distance of residential buildings as well as equipment and machinery that can be installed, and the number of transport vehicles needed to carry out construction works, we can conclude that this construction site in terms of the noise produced there, will have no major negative impacts on people residing in the area. In advance, the Investor shall inform the employees about the harmful effects that come from the noise and the measures that will be taken if the employees do not adhere to the instructions regarding the installation of noise insulators.

### **Necessary mitigation measures**

- In order to preserve the public interest, construction activities should take place between 08:00 and 17:00;
- Do not use a powerful vibrator;
- Regularly service the machines and equipment engaged in the construction site;
- Maintain and lubricate the engaged machines and equipment;
- All activities must comply with the law on noise and vibration.

#### **5.2.5. Flora and fauna**

The impact of Prishtina Park centre on flora and fauna is a phenomenon which has been carefully considered both in the space within the surface in which the activities of the centre will take place, and in its surroundings.

However, according to the factual situation in the field, respectively in the given location, we do not have a large extinction of vegetation and different habitats.

During the construction phase, and during the development phase of the activities in the centre, the plant world will be regenerated with species other than the current ones.

In light of the above, the construction and operation of the centre with accompanying infrastructure in this location will not have significant impacts on the plant world. Free plot areas around the Centre and parks will be planted with ornamental plants and trees.

The fauna will not be physically harmed because they will leave the area in question, and will develop in the rough terrain that suits the fauna.

So, we are talking about common species of flora and fauna rather than any endemic species or any species that are in the red book.

These types are common.

Therefore, we can conclude that the construction and functionality of this Centre does not pose a risk to the flora and fauna found in and around it.

#### **5.2.6. Impacts on traffic flow**

The proposed site for the project is close to the roundabout of the highway Prishtina - Ferizaj, and the road leading to the entrance of the highway. Transportation of machinery and materials may affect the flow of traffic along the road.

The impact may not be significant due to the fact that the issue of entry-exit from the highway to the construction site will be regulated.

Additionally, the site is a very large space, which can affect the systematization of inflows and outflows, and the storage of stocks of necessary materials.

### **Necessary mitigation measures**

- Bringing materials to the construction site and removing of construction waste materials from construction site should be done during off-peak hours.
- Proper surface planning for accessing the roundabout.

#### **5.2.7. Waste management**

During the construction and operationalisation phase, it will come to the generation of different types and quantities of waste which must be collected in containers intended for certain types.

### **Necessary mitigation measures**

- Waste should be disposed of in a designated regional landfill;
- A company licensed to collect different types of waste should be contracted.

### **5.2.8. Infrastructure Impacts**

Currently the proposed project site does not have a proper connection to the sewerage, the only sewerage is the one that channels the water generated by the highway. However, until a new sewerage network is created, the project developer will utilize the current sewerage network used by the entire industrial area, even though during heavy rainfall it is insufficient.

Also, the water issue is not completely resolved and for this the project developer should create his own reserves by opening the well in the space in which he will operate.

Based on the size of the proposed project, the demand for basic infrastructure such as water, sewerage services, waste collection and electricity will increase significantly and it remains for the municipality to make appropriate solutions.

Moreover, the increase in traffic inside and outside the Prishtina Park complex, may cause some difficulties in the flow of traffic along the highway. This impact will, however, be of moderate proportions with a tendency towards a small one, because of the sufficient space for entry-exit in the roundabout and on the highway.

### **Necessary mitigation measures**

Nevertheless, we recommend to include the following mitigation measures in order to reduce the impact on infrastructure:

- Contact and obtain approvals from relevant authorities before connecting water / electricity;
- The use of construction materials with high energy conservation coefficient, as well as the use of environmentally friendly technology; installation of solar panels and partly photovoltaic system;
- Drafting and approval of permits for proper access to access roads inside and outside the complex;
- Use of solar energy for heating and lighting of spaces around the Center.

### **5.2.9. Impact Matrix**

The table below is a summary of the environmental impact matrix by the proposed project.

A score of 1 to 5 is assigned to each impact depending on its significance.

Significance depends on the scale, size and time. Positive signs indicate beneficial impacts, while negative signs indicate harmful impacts.

	<i><b>Project Phases</b></i>
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Survey Report on the Assessment of the Environmental Impact of the Trade Centre „PRISHTINA  
PARK J.S.C.“, Municipality of Gračanica

<b>IMPACTS</b>	<i>Planning and</i>	<i>Construction</i>	<i>Operation</i>	<i>Decommissioning</i>
Change in land use	0	-2	+3	-2
Surface water quality	0	-2	-1	-2
Groundwater quality	0	0	-1	0
Air quality	0	-1	-1	-1
Landscape demolition and modification	0	-2	+2	-2
Pollution (soil, water and air).	0	-2	-1	-2
Risks from leakage of oils and lubricants and possibility of penetration into the nearest river flow.	0	0	-3	-2
Job generation.	1	+2	+4	-3
Change in land value	0	+2	+3	+1
Increased risk of explosions or accidental fires	0	-1	-3	-1
Obstruction in the normal flow of traffic	0	-1	-1	0
Noise pollution	0	-2	-2	0
Solid waste generation	0	-3	-2	-4
Occupational risks	0	-3	-2	-3
Possibility of conflict with surrounding businesses or the local community	0	0	0	0
Impacts on public health and safety	0	-2	-1	-1

## 6.D. ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN

The Environmental Management Plan provides for the risk management strategy to be undertaken by the Project Proposal and Project Manager, to mitigate and minimize environmental degeneration.

Those measures should be accessible in such a way as to enable controlled monitoring, in order to restore the environment back to an acceptable condition. The environmental management plan for the stated project ensures that the identified issues of environmental concern in and around the proposed development area, can be mitigated, monitored and evaluated.

Environmental monitoring involves measuring the relevant parameters, at a high level of accuracy, to detect expected changes. Monitoring aims to determine the effectiveness of actions taken in order to improve the quality of the environment.

The Environmental Management and Monitoring Plan has been developed and described to present the main findings of the project's Environmental Impact Assessment, recommending necessary mitigation actions, defining roles and monitoring indicators.

The Environmental Management Plan is presented in tabular form, addressing potential adverse impacts and mitigation measures, as well as roles, and monitoring indicators, to help determine the effectiveness of actions to improve the quality of the environment, in relation to the proposed project.

The Environmental Management Plan has considered all phases: construction, operation / operationalisation phase and decommissioning / dismantling phase.

### 6.1. Management Plan in all its stages

Environmental Component	Mitigation measures to be undertaken	Responsibility falls under:	Duration
AIR	<p>Machinery maintenance and fuel combustion quality control;</p> <p>Spray the construction site with water as often as necessary so as not to emit dust, and fly into the environment around it;</p> <p>Ensure the equipment and machinery engaged will be in good technical condition in order to burn the fuel as best as possible. - reduce pollution at the source.</p>	Contractor	During constructions

<p><b>WATER</b></p>	<p>A septic tank with a separator will be built and the whole space will have such a relief that the wastewater flow will be sent to septic tank.</p> <p>High-standard, insulated septic tanks, and impervious to dirty water from cleaning the operating space at the construction site, will be constructed.</p> <p>Then these waters will leave through the autotankers with pumping system and will be released into the area sewer, while sedimentary materials will be extracted from the septic tank and will be dumped to the regional landfill intended for these types of waste.</p> <p>The entire operating space should have such relief that all discharges of polluted water and those from atmospheric precipitation are poured into the septic tank.</p>	<p>Contractor</p>	<p>During constructions</p>
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<p><b>LAND –SOIL</b></p> <p><b>Cleaning tires of trucks and other machinery involved in the process</b></p>	<p>In order to avoid the extraction of dirt through the wheels of machinery engaged in the construction site into the city streets, the Investor will install a car wash in order to clean the wheels of the machinery before they leave the construction site.</p> <p>Erosion and opening of the terrain should be done only in spaces planned for construction rather than in other spaces; The space in which the tires of the transport vehicles are cleaned every time they leave the construction site, and in cases when the whole truck is cleaned, there must be a canal so that the polluted water is poured into the septic tank.</p> <p>It is an inalienable measure that all engaged machinery and trucks have their wheels cleaned, or thoroughly cleaned if they are dusty and if there is a risk of dust flying in public spaces.</p>		
<p><b>Visual image of the zone</b></p>	<p>In order to keep the area at a visually acceptable level, the Investor should make the fencing of the working space as tasteful as possible and not allow visible access to the construction site, except for the entrance/exits.</p>	<p>Contractor</p>	<p>During construction</p>

<p><b>WASTE</b></p>	<p>Placement of special containers for organic waste and special containers for inert waste as well as their transportation from licensed companies to landfill dedicated to the nature of this waste in compliance with the legislation in force: Law on Waste (02 / L -30), Administrative Instruction No. 07/2015 for Construction Waste Management and Demolition of Construction Facilities.</p>	<p>Investor</p>	<p>During operation</p>
<p><b>NOISE</b></p>	<p>The Investor should fence the whole construction area and preferably make the fence with the highest possible height and keep the noise level within the accepted parameters for residential areas. In case there will be an increase in the noise in the operating area by the machines or generators, then it is suggested that employees use noise insulator. It is also necessary for the Investor, in cooperation with the Contractor, to be strict in working hours: from 7.00 -17.00.</p>	<p>Contractor/Investor</p>	<p>Construction/Operation</p>

<p><b>Health of employees and residents around the plant.</b></p>	<p>Employees will be provided with proper working tools based on the standing rules and provisions for the protection of health and risk at work.</p> <p>Sprinkling with water spray so that the dust created during the demolition does not affect the residents around the project.</p>	<p>Investor/Contractor</p>	<p>During construction and operation</p>
<p><b>Fire and other hazards</b></p>	<p>Fire risk management plan in accordance with the law on emergencies.</p> <p>Implementation of professional criteria and equipment for work.</p>	<p>Investor</p>	<p>Operation</p>
<p><b>Accidents</b></p>	<p>Make distinctive markings at entry points</p> <p>Signs should be placed about 100 meters on either side.</p> <p>The Kosovo Highway Authority should be consulted on this.</p> <p>Must provide a parking lot for every 4m<sup>2</sup> of shop space / restaurant.</p> <p>Displays road safety signs inside the Complex.</p> <p>Installation of the first aid facility.</p> <p>Formation of the Emergency Response Team.</p>	<p>Contractor/Investor</p>	

## 7.0. REPORTING

Once the feasibility study has been completed, including the Environmental Impact Assessment, should this project be implemented, then the need arises that during the completion of works until the finalization of the river bed with basins and other reinforcing materials, a representative of the Contractor informs the municipal authorities on the environmental aspects.

However, it remains for the MESP to assess in more detail what reporting needs to be done.

## **8.0. CONCLUSION**

### **8.1. SUMMARY OF PROJECT IMPACTS**

The design of the proposed project should integrate mitigation measures in order to ensure compliance with all applicable laws and procedures.

As for the proposed mitigation measures that will be included during the project implementation, the project is economically / environmentally reliable/sound. We think that the proposed development will have significant socio-economic benefits for the local community.

In addition, Shopping Centre “PRISHTINA PARK” will present multiple opportunities by creating employment possibilities by increasing the turnover of material goods and services, which is also part of the agenda and the vision for the development of our country.

The Environmental and Social Impact Assessment - based on the findings of the survey and consultation phase - focusing on the current assessment of the impact and identification of proposed environmental and social measures for mitigation of this impact, and monitoring to inform the development of specific management plans in the future.

Positive impacts

- The project will result in socio - economic development of the area and the whole country.
- Positive changes in the increase of the value of the real estate around the Centre;
- Pouring all sewage into the collectors and diversion to the sewerage of the area or to the sewerage which should be built;
- Opportunity for rapid economic growth and social improvement;
- Improving access to these spaces;
- Increase of recreational spaces for Prishtina and all centres around it.

There will be minimal impacts on the landscape of the exploited area because of the measures foreseen to be undertaken, as provided in this report. This phenomenon, however, will be mitigated.

Nevertheless, the main concern should be to minimise the occurrence of impacts that would harm the overall environment. This will nonetheless be avoided through the implementation of the recommended Environmental Management and Monitoring Plans (EMP).

After considering all parameters of the work process in construction and operationalisation of the shopping centre Prishtina Park SH A, which have the potential to affect the living environment, and given the identification of potential environmental impacts during the construction and operation of the shopping centre, the implementation of this project will not have negative impacts on the environment and does not endanger human health, should all the recommended measures be implemented during the construction and utilisation phase.

In terms of environmental protection, we think that these data are sufficient and that they enable the Ministry of Environment and Spatial Planning to issue an opinion favouring an Environmental Consent in relation to the construction and functioning of the Shopping Centre Prishtina Park, in the area belonging to the Municipality of Gračanica, as per the request of the shareholders of the business entity Prishtina Park SH A.

## **9.0. ANNEXES**

### **1. Business Registration Certificate;**

2. Certificate of Ownership;
3. Copy of Plan, and,
4. Situation plans