ENVIRONMENTAL IMPACT ASSESSMENT REPORT

OBJECT: "REVIEW OF THE EXISTING PROJECT FOR THE RECONSTRUCTION OF THE ROAD SEGMENT PERLAT - KURBNESH - KREJ LURE AND DESIGN FOR THE RECONSTRUCTION OF THE ROAD SEGMENT KREJ LURE - FUSHE LURE "

INVESTOR: ALBANIAN DEVELOPMENT FUND

DRAFTED ENVIRONMENTAL IMPACT ASSESSMENT REPORT

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1. INTRODUCTION

The Law on Environmental Impact Assessment no.10 440 dated 07.07.2011 on "Environmental Impact Assessment" amended in Albania states the preparation of environmental assessments of any development project that may cause impacts on the environment of the country.
This EIA report has been prepared in accordance with the national environmental protection and conservation requirements mentioned below as well as in accordance with EU legislation taken as a reference.The National Legislation of Albania defines the rules and ways for conducting an EIA for this kind of type, which has been confirmed by the consultants.The law has emphasized the protection and preservation of the natural environment and its resources, considering it as part of the national heritage which must be preserved and protected for the benefit of future generations.The protection of the environment and its resources is a key precursor to the sustainable development of the country.
This EIA report will identify the potential environmental impacts of the proposed works for the object "Review of the existing project for the reconstruction of the road segment Perlat - Kurbnesh - Krej Lure and Design for the reconstruction of the road segment Krej Lure - Fushe Lure", with special emphasis on the recommendations on mitigation and take the necessary measures to minimize the impacts that may arise during the project implementation period and after its completion.The EIA report will also discuss project justifiability, project component placement alternatives such as project plans and environmental considerations.The report will further provide a relief plan and a monitoring program which can be implemented during and after the completion of the proposed works.
The environmental impact report will present on the one hand the importance of the implementation of the project "Review of the existing project for the reconstruction of the road segment Perlat - Kurbnesh - Krej Lure and Design for the reconstruction of the road segment Krej Lure - Fushe Lure ", the description of this project and on the other hand the main negative impacts on the environment, mitigation measures to minimize as much as possible these negative impacts, calculating how the balance between them stands to achieve sustainable development.
To present the realization of this project and the economic development that benefits from its implementation, but always protecting the environment, taking into account the principle of "sustainable development". This document also introduces the parties that participate, benefit or are affected by its implementation.
The EIA was drafted based on qualitative and quantitative data collected by contracted experts, during on-site inspections and assessments performed. However, assessments made by various consultants in previous years have been utilized during the preparation of the report.
Long-term data on some aspects such as meteorology, area seismicity, geomorphological data and climate have been collected from calculations and studies conducted by design engineering, as well as from secondary sources through previously published reports and global databases.
Also are used web sites such as: akm.gov.al; geoportal.asig.gov.al; etc. The object of this study is also to determine the characteristics of the structure and materials such as the quality of concrete (grades and granulometric compositions), reinforcement and constructive typologies of plinths, walls and foundations, sewerage network, signage, etc.The same studio also conducted geological surveys to determine the stratigraphic characteristics of the terrain where the project will take place.

2. INFORMATION ABOUT THE PURPOSE OF THE EIA & METHODOLOGY APPLIED

The environmental situation and taking care of it, are among the greatest problems and challenges of humanity today. Economic development which is accompanied by a continuous increase number of operating enterprises, as a result has an increasing impact on the environment. This development cannot be sustainable if it does not provide space for environmental protection. Depending on the activity, the impact of economic operators is expressed in all components of the environment, such as air, water and soil.

Environmental protection as a dynamic system that changes from time to time physically and biologically, should be analyzed not only natural factors, but also human activity which is related to them. Studies and constructions when not managed in accordance with the laws and rules of nature, they can disturb the balance of nature around.

Urban planning as a complex, natural, engineering, climatic, biological, social and legislative activity of civilized human society, relies primarily on the geological environment and ecosystems related to it.

It has two aspects of activities:

- First, the changes that man makes to the geoenvironment and ecosystems to adapt them to his life requirements, according to the philosophy "man changes nature" to improve his life.
- Second, the impacts of these changes on the geological environment itself as well as on human life.

In order to carry out urban planning and to assess the impacts on the geosystem, knowledge on the geo-environment and the changes it undergoes over time are necessary. This knowledge is derived from complex geological, geophysical, geochemical and hydrogeological observations.

2.1 Description of the purpose and objectives of the EIA

Preliminary Environmental Impact Assessment Report for the project "Review of the existing project for the reconstruction of the road segment Perlat - Kurbnesh - Krej Lure and Design for the reconstruction of the road segment Krej Lure - Fushe Lure" has been drafted according to the requirements of applicable law.

The purpose of this EIA report is to assess the potential social and environmental impacts from the implementation of this project, to recommend mitigation measures to minimize the potential impacts assessed, both during the project implementation phase and in the operation phase, aiming at the ultimate goal of protection of environmental quality.

Based on the design task and the requirements of the Investor, we as a design company have prepared the necessary technical material for the project preliminary idea for the facility "Review of the existing project for the reconstruction of the road segment Perlat - Kurbnesh - Krej Lure and Design for the reconstruction of the segment road Krej Lure - Fushë Lure ".

The main objective of the project: "Review of the existing project for the reconstruction of the road segment Perlat - Kurbnesh - Krej Lure and Design for the reconstruction of the road segment Krej Lure - Fushë Lure" is to improve regional connectivity and facilitate regional access to potential Lura, bringing the expansion of the region's tourism offer and increasing the opportunity

for sustainable regional economic development. The reconstruction project will aim to improve the quality and safety of traffic while preserving the existing road trail.

Overall, the proposed interventions in the project will be:

- Construction of asphalt layers of the road
- Construction of substrates (in layers with major damage);
- Road drainage solution;
- Construction of bearing and retaining walls;
- Construction of culverts and minor structures;
- Vertical and horizontal signage;
- Engineering protection measures, etc .

- **Placement Plan of Perlat - Kurbnesh - Krej Lurë - Fushë Lurë road**

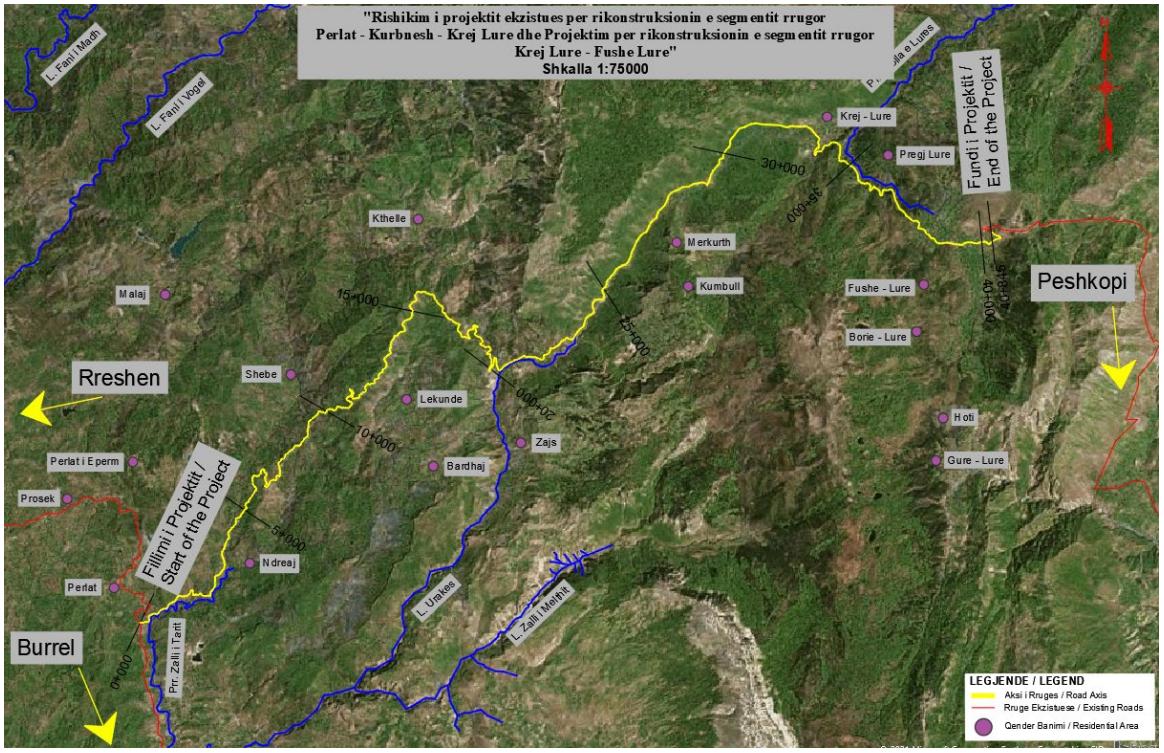


Figure 1: Project Horography, Scale 1: 75,000

The coordinates of the road that will be developed according to the **GAUS KRUGE ZONE 4 System** are as follows:

Project	**Coordinates according to the coordinate system GAUS KRUGE ZONE 4**		**Coordinates according to the coordinate system KRGJSH**	
	X	**Y**	**X**	**Y**
Road segment starting coordinates	4414785.34666634	4621291.70571728	497866.671226883	4620652.06475237
Road segment ending coordinates	4436450.07244471	4631211.36106817	519412.982835224	4630822.15862798

	Length L= 40.9 Km Road body width = 3.5 – 5.0 m

Table 1:Geographical coordinates of the road segment

2.2 EIA Objectives

- To provide information on the location of the project and analyze environmental features;
- To provide information on the technical project for the preparatory phase, implementation, receipt of project results, works and tools to be used, completion and its final phase;
- To assess the potential impacts on the surrounding environment and the inhabitants of the area for the development of the project "Review of the existing project for the reconstruction of the road segment Perlat - Kurbnesh - Krej Lure and Design for the reconstruction of the road segment Krej Lure - Fushe Lure";
- To describe measures to reduce or avoid the impacts analyzed;
- To develop plans for managing the environment and accidents at the workplace;
- To develop an environmental monitoring plan to keep impacts under control;
- To inform local institutions, the community and other stakeholders about the development of the project;
- To draw conclusions and recommendations on the importance of the project in relation to its negative and positive impacts as well as its social significance.
- The objectives of the Environmental Impact Assessment include identifying, describing and assessing the expected direct and indirect environmental impacts during the implementation or non-implementation of the project.
- To minimize direct impacts on the environment and primarily on priority elements such as soil conservation, noise control, and water and air quality conservation.
- To preserve or rehabilitate the natural environment through new elements of positive intervention, special works within the project or in parallel with it, which ensure the sustainable continuity of the biological environment including fauna and flora in the environments around the area under consideration.

The environmental impacts of the project will be assessed in relation to the state of the existing environment in the territory of implementation of this project.

2.3 Description of the environmental and institutional legal framework related to the project

The legal framework for Environmental Protection in the Republic of Albania is in line with EU standards.During the last ten years the government has realized the development of environmental legal acts, as a result of the environmental degradation of the country during the industrial development that took place in the 50s. The policies developed for the environment today are reflected in the Laws and Bylaws of the Environment during 2000 - 2009, as well as in some laws and DCM adopted later than these years.

Project classification: According to law no. 10440 dated 07.07.2011 "On Environmental Impact Assessment" (amended), Annex II point 10 "Infrastructure products", letter b) Urban development projects, including the construction of shopping malls and car parks; and letter d) Construction of

roads, ports and installations for ports, including fishing ports (projects not included in Annex I), is subject to the Preliminary Environmental Impact Assessment Procedure.

The Preliminary EIA Decision is the document prepared by the National Environmental Agency (KTA) and signed by the General Director of the KTA, based on Law No. 10 440, dated 7.7.2011 "On Environmental Impact Assessment" (amended) and DCM no. 686, dated 29.7.2015 "On the approval of rules, responsibilities and deadlines for the development of the procedure of environmental impact assessment (EIA) and the procedure of transfer of the decision of the environmental statement" (amended).

The EIA drafting methodology has been drafted in accordance with the requirements of the relevant environmental legislation expressed in Instruction No. 3, dated 19.11.2009 "On the Environmental Impact Assessment Report Assessment Methodology". Environmental impact assessment from the project "Review of the existing project for the reconstruction of the road segment Perlat - Kurbnesh - Krej Lure and Design for the reconstruction of the road segment Krej Lure - Fushe Lure" in the project area takes into account how these processes during the implementation of the project affect the existing state of the environment in the area and later.

Accumulative impacts that may occur may appear immediately when an environmental intervention occurs or appear indirectly and they may present various degrees of importance.These impacts can be different in duration of impact (Short-term, Medium-term and Long-term) and different in their character (temporary and permanent impact).

The drafting of this EIA report was done in accordance with law no. 10 440, dated 7.7. 2011, "On Environmental Impact Assessment" amended. Also, the drafting of this preliminary environmental impact assessment report was done in accordance with Law No. 10 431, dated 9.6.2011 "On Environmental Protection" (amended), which is fully aligned with Directive 2004/35 / EC of the European Parliament and of the Council, 21 April 2004 "On environmental liability, prevention and repair of damage to the environment".

The steps followed for the preparation of the report by the environmental expert are based on DCM no. 686, dated 29.7.2015 "On the approval of rules, responsibilities and deadlines for the development of the procedure of environmental impact assessment (EIA) and the procedure of transfer of the decision of the environmental statement" (amended).

2.4 Main Albanian legislation for drafting and classifying the EIA report:

Law no. 10440 dated 07.07.2011 "On Environmental Impact Assessment" (amended). This law aims to provide:

a) A high level of environmental protection, through the prevention, minimization and compensation of environmental damage, from projects proposed before their approval and development;
b) Ensuring an open decision-making process, during the identification, description and assessment of negative impacts on the environment, in the right way and time, as well as the involvement of all stakeholders in it.

The projects that are subject to the preliminary procedure of Environmental Impact Assessment according to Chapter II, article 8 of this law, cite:

1. The following procedure for Environmental Impact Assessment are subject to:

a) The projects listed in Annex II;

In following of Law No. 10440 "On Environmental Impact Assessment" (amended) Article 10, points "a" and "b" we cite: Application for Environmental Impact Assessment by the developer.

For Annex II projects:

1. Preliminary EIA report
2. Technical project of the activity
3. The invoice for the payment of the service fee

Referring to Decision no. 686, dated 29.7.2015 "On the approval of the rules, responsibilities and deadlines for the development of the procedure of Environmental Impact Assessment (EIA) and the procedure of transfer of the Decision of the Environmental Declaration" (amended), Chapter I, Development of Preliminary procedure for Environmental Impact Assessment ”amended, we cite:

1. The developer who intends to implement a project, which is subject to the requirements of Article 8 of Law no. 10440, dated 7.7.2011, "On environmental impact assessment", amended, in the initial stages of project planning (project idea), submits through the e-albania portal the following documentation:

Documents provided by administration officials	**Documents uploaded by the applicant**
1. Copy of ownership document 2. Copy of permits, authorizations and licenses available to the developer for the project 3. License III 2.A of environmental expert 4. Application form for approval in principle for the concession of the use of the underground water source 5. Document certifying the distance from the forest fund 6. Cadastral reference 7. General Local Plan	1.Plan of the project location 2. Photos of water sources 3. Vegetation photos 4. Current photos 5. Topographic map 6. Copy of the technical report 7. Copy of the fee payment invoice 8. Agreements with third parties 9. Agreement with the landowner 10. Power of attorney for the authorization of the applicant when it is not the same as the developer (natural person) 11. Preliminary EIA report electronically signed by the expert 12. Certificate 13. Sketches / planimeters of project facilities and structures 14. Photos on residential centers 15. Orthophoto 16. Statement of the licensed designer, for the compliance of the project with the planning

	documents and the legislation in force, according to the online system 17. Authorization of the applicant when he is a legal entity 18. Map

Table 2:Documentation required for application

Application for the provision of Preliminary EIA and Environmental Statement pursuant to the Prime Minister's Order no. 153, dated 25.11.2019 "On taking measures and regulating legal provisions for the application of services only on-line from 1.1.2020" is carried out through the portal e-albania.

Law no. 10431 dated 10.03.2011 "On Environmental Protection" amended.

This law aims protecting the environment at a high level, preserving and improving it, preventing and reducing the risks to human life and health, ensuring and improving the quality of life, for the benefit of present and future generations, as well as providing conditions for the sustainable development of the country.

Based on this law, its article 3, cite the objectives of environmental protection:

a. prevention, control and reduction of water, air, soil and other pollution of any kind;
b. conservation, protection and improvement of nature and biodiversity;
c. preserving, protecting and improving environmental sustainability with public participation;
d. prudent and rational use of nature and its resources;
e. preservation and rehabilitation of cultural and aesthetic values of the natural landscape;
f. protection and improvement of environmental conditions.

Principles based on Chapter II of law no. 10431, dated 09.06.2011 "On environmental protection":

- the principle of sustainable development
- the principle of care
- the principle of prevention
- "polluter pays" principle
- the principle of repairing environmental damage, renewal and rehabilitation of the damaged environment
- the principle of legal responsibility
- the principle of high-level protection
- the principle of integrating environmental protection into sectoral policies
- the principle of public awareness and participation in environmental decision-making
- the principle of transparency in environmental decision-making.

"Sustainable development" which is the development that meets the needs of the present and the future without tightening or touching the opportunities and capacities for future generations to meet their needs.

"Sustainable use" of natural and mineral resources which ensures the fulfillment of today's needs, without compromising the needs of future generations for these resources.

The *"best possible techniques*" represent the most advanced and high-level stage of environmental protection, of the development of an activity and which are fully applicable from a practical and economic point of view.

The *"principle of prevention"* is the selection and approval of the best option, from the initial stage of decision-making, to avoid harmful impacts of an activity on the environment.

The *"principle of rehabilitation*" is the necessity to repair the environmental damage caused by physical and legal persons themselves and to renew and rehabilitate the damaged environment.

"Polluter pays" principle means the cost that a polluter pays to improve a polluted environment and return it to an acceptable condition. This is reflected in the cost of production, consumption of goods and services that cause pollution.

2.5 Summary of legal and institutional framework

Legjislacioni mjedisor është ndërtuar për të mbrojtur dhe parandaluar komponentë të veçantë dhe të rëndësishëm të mjedisit. Kështu, ndër më specifiket përmendim:

Legal framework	
Law No.10 431 dated 9.6.2011	On Environmental Protection, (amended)
Law no. 10440, dated 07.07.2011	For environmental impact assessment (amended)
Law no. 10448, dated 14.07.2011	For environmental permits (amended)
Law No. 9362, dated 24.03.2005	For plant protection service
Law No.162 / 2014	To protect air quality in the environment
Law No.41 / 2020	For some changes and additions to the law no.9587, dated 20.7.2006, "on the protection of biodiversity", (amended)
Law no. 57/2020	For forests
Law No.81 / 2017	For protected areas
Law no. 9115, dated 24.7.2003	For environmental treatment of wastewater
Law No. 10081, dated 23.02.2009	Licenses, authorizations and permits in the Republic of Albania amended
Law No. 7875, dated 23.11.1994	For the protection of wild fauna and hunting ”Amended by: Law no. 9219 dated 08.04.2004
Law No. 9385, dated 04.05.2005	For forests and forest service ”, Amended by: Law no. 9791 dated 23.07.2007
Law no. 8770, dated. 19.04.2001	Updated security and physical security service
Law no. 9774, dated 12.07.2007	For environmental noise management
Law no. 152/2015, dated 21.12.2015	"On fire and explosion protection service"
Law no. 111/2012	"On integrated water resources management"
Law no. 8756, dated 26.03.2001	For civil emergencies
Law no. 7643, 09.12.1999	For the State Sanitary Inspectorate as amended

Law No. 9379, dated 28.04.2005	For energy efficiency
Law no. 9010 dated 13.02.2003	For environmental management of solid waste
Law no. 10 463, dated 22.9.2011	For integrated waste management (amended)
In the Parliament of the Republic of Albania, several laws have been approved in the framework of the inclusion of our country in various Protocols and Agreements. Among them we mention:	
Law no. 9672, dated 26.10.2000	On the ratification of the Aarhus Convention "On the right of the public to have information and involvement in decision-making, as well as to go to court for environmental issues ".
Law no. 9334, dated 16.12.2004	On the accession of the Republic of Albania to the Kyoto Protocol to the Convention on Climate Change (UNFC).
Decisions of the Council of Ministers	
DCM no. 395, dated 21.6.2006	"On the approval of the strategy and action plan for the development of cultural and environmental tourism"
DCM no. 123, dated 17.2.2011	On the approval of the national action plan for noise management in environment.
DCM no. 587, dated 7.07.2010	For monitoring and controlling the noise level in urban and tourist centers.
DCM no. 676, dated 20.12.2002	For the declaration of protected areas natural monument
DCM no. 804, dated 4.11.2003	For the approval of the list of species of Albanian flora that are put under protection.
DCM no. 177, dated 31.3.2005	For permitted liquid discharge rates and zoning criteria of receiving aquatic environments.
DCM no. 435, dated 12.09.2002	On the approval of air emission norms in the Republic of Albania.
DCM no. 803, dated 4.12.2003	For air quality standards.
DCM no. 247, dated 30.04.2014	For the determination of rules, requirements and procedures for informing and involving the public in environmental decision making
DCM no. 452, dated 11.7.2012	On Waste Landfills
DCM no. 389, dated 27.6.2018	For some changes and additions to Decision no. 452, dated 11.7.2012 of the Council of Ministers "On Waste Landfills"
DCM no. 575, dated 24.6.2015	For approval of inert waste management requirements
DCM no. 99, dated 18.2.2005	For the approval of the Albanian catalog of waste classification
DCM no. 798, dated 29.09.2010	On the approval of the regulation "On hospital waste management"

DCM no. 114, dated 27.01.2009	For taking emergency measures, improving the safety situation and activities in installations, which serve for storage, transportation and trade of oil, gas and their by-products.
DCM no. 686, dated 29.7.2015	For the approval of the rules, responsibilities and deadlines for the development of the environmental impact assessment (EIA) procedure and the decision transfer procedure of the environmental statement (amended)
Instructions and Regulations	
Instruction no. 1037/1, dated 12.04.2011	For environmental noise assessment and management
Instruction no. 8, dated 27.11.2007	For noise limit levels in certain environments
Instruction no. 6527, dated 24.12.2004	On the allowable values of air pollutants in the environment from the emissions of gases and noises caused by road vehicles and ways to control them.
Order of the Council of Ministers no. 153, dated 25.11.2019	For taking measures and regulating legal provisions for the application of services only on-line from 1.1.2020
Regulations	
Hygienic-Sanitary Regulation dated 17.11.1997	For cleaning in urban and rural areas, waste management and treatment
Regulation, No. 1, dated 30.03.2007	For the treatment of construction waste from their creation, transportation to their disposal

Table 3: Environmental legislation

International Legal Framework

Albania is a country which is already a signatory to many environmental conventions and agreements and this has helped promote the drafting of national environmental laws in line with international practices. This report should be adapted to laws and regulations at local and national level and below summarizes the main stages of European environmental policy development.

- Kiev Protocol: On strategic environmental assessment. Ratified in 2005
- Cartagena Protocol: On biosafety. Paired in 2005
- Stockholm Convention: On Persistent Organic Pollutants. Law no. 9263, dated 29.07.2004
- Cartagena Protocol: For biological safety. Ratified in 2004.
- Law no. 9279, dated 23.09.2004 On the accession of the Republic of Albania to the Cartagena Protocol on Biosafety of the Convention on Biological Diversity
- Washington Convention: On International Trade in Endangered Species of Wild Flora and Fauna. Law no. 9021, dated 06.03.2003.

Legal Framework

The EIA report for the project , considers and tries to align part of it with EU legislation on environmental issues and beyond. Main directives:

- EC Directive 1999/30 / EC (22 April) on limit values for sulfur dioxide, nitrogen dioxide and nitrous oxide, PM and lead.
- Directive 2000/60 / CEe of the Parliament and of the Council of Europe, Legal framework for community action in the field of water policy.
- EC Directive 42/2001 (of the Council of Europe), on EIA and SEA.
- Directive 2008/50, CE, of the Parliament and of the Council of Europe (21 May 2008) "On ambient air quality, for a cleaner air for Europe".
- Council Directive 75/442 / CEE on 14 July 1975, On waste.
- Council Directive 91/689 / CEE on 12 December 1991, On Hazardous Waste.
- Directive 2001/42 / EC of the Council and of the European Parliament on 27 June 2001, On the assessment of the effects of certain plans and programs on the environment.
- Council Directive 85/337 / CEE on 27 June 1985, On the Impact Assessment of Certain Public and Private Environmental Projects.
- Council Directive 96/62 / EC On the assessment and management of ambient air quality.
- Directive 1999/30 / CE, Regarding limit values for NO2, NOx, SO2, particulate matter and Pb in air.
- European Commission Directive CEE / CEEA / CE 78/659 on freshwater quality
- Directive 99/61 / CE On waste pits.
- Directive 91/689 / CE On Hazardous Waste.

References at the community level in the field of waste management are numerous and for our purposes it is useful to select the most important ones.

2.6 Description of the methodology applied for preparing the EIA report

The EIA methodology refers to the environmental issues suggested by the objectives set out in the Terms of Reference. The Environmental Report is prepared as detailed in the relevant law. Furthermore, the report respects EU and of course Albanian legislation, as required.

The report has been prepared on the basis of widely established and accepted scientific methods used to prepare such assessments.

Data collection methods are described in the following chapters of this report. The data were collected mainly from field inspections in the project development area by a team of inspectors and environmental studios in collaboration with the design engineer. However, previously published data and available literature from similar projects were referenced during the preparation of this EIA report.

The Environmental Impact Assessment Study was guided by the special importance of the project "Review of the existing project for the reconstruction of the road segment Perlat - Kurbnesh - Krej Lure and Design for the reconstruction of the road segment Krej Lure - Fushe Lure", in order to consolidate the structure and its realization with a strong functional connection, also took into account natural resources and human resources of the area, as well as their special values,

identification of negative and positive impacts, taking mitigation measures, taking into account the protection of the economic interests of the investor and orientation measures for a sustainable development.

In this report, positive and negative impacts in nature and human environments are identified, and the risk assessment is taken into account. The reduction of negative impacts is combined with significant positive impacts which are structured in four main phases:

1. Establishing the orientation objectives of the EIA report;
2. Collection of existing basic material and completion of the relevant form for this report as well as their selection for use;
3. Field verification of existing data and collection of possible data;
4. Drafting the EIA report as additional documentation and submission for obtaining the Construction Permit at the Local Government Unit.

The following monitoring can be performed by specialized institutions:

i. Noise monitoring by specialists in this field at the relevant Inspectorates;
ii. Monitoring the works, from the point of view of physical, chemical characteristics of the potential polluter, everything in the international norms and standards in order for it to really serve for the high performance of public health;
iii. Monitoring the management of inert waste generated by the activity during the development of works;
iv. Monitoring on biodiversity will begin after the start of rehabilitation measures and in time the focus and areas of their development will be established.

The construction company under the supervision of the supervisors will welcome, assist and facilitate any environmental monitoring initiative, which will be advised in the "Construction Permit", in the service of which this report has been carried out. Also, inspections by authorized public health and environmental specialists will be supported at all times by this company, for conducting environmental and health audits.

The EIA report includes the following data in accordance with the Albanian EIA guidance:

- Description of the project area accompanied by a map and photos of the territory
- Description of construction and constructive processes
- Type, volume, consumption and production of raw materials
- Detailed information regarding discharges into the environment
- Information regarding air and surface water quality in the project area where the discharge to the environment will take place.
- Information about the locations where the discharges will take place
- Potential risks to the environment and the need to avoid and minimize their impact on the environment
- Mitigation measures for capturing and treating discharges into the environment and pollution

- An environmental discharge monitoring program
- An inert waste management plan.

2.7 Methodologies applied and the way of providing information

The methodology applied for compiling the structure of the EIA report is based on the requirements of Environmental and Social Policy: Approved by the Board of Directors, at its meeting of May 7, 2014.

The European Bank for Reconstruction and Development (EBRD) is committed to promoting "sustainable and environmentally friendly development" throughout its range of investment and technical cooperation activities, pursuant to the EBRD Founding Agreement.
The Bank believes that environmental and social sustainability is a fundamental aspect of achieving results in line with its transition mandate and confirms that projects promoting environmental and social sustainability enjoy the highest priority in its activities.
Performance requirements (PR):
The projects are expected to meet good international practice regarding environmental and social sustainability. Specific performance criteria for the areas of environmental and social sustainability are as follows:

- PR 1 Assessment and Management of Environmental and Social Risks and Impacts
- PR 2 Labour and Working Conditions
- PR 3 Resource Efficiency and Pollution Prevention and Control
- PR 4 Health, Safety and Security
- PR 5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement
- PR 6 Biodiversity Conservation and Sustainable Management of Living Natural Resources
- PR 7 Indigenous Peoples
- PR 8 Cultural Heritage
- PR 9 Financial Intermediaries
- PR 10 Information Disclosure and Stakeholder Engagement

As per EBRD standard the projects are classified in project of category A,B or C.
Category A projects could result in potentially significant adverse future environmental and/or social impacts which cannot readily be identified or assessed and will require the client to carry out a comprehensive Environmental and Social Impact Assessment (ESIA). The ESIA process will include a scoping stage to identify the potential future environmental and social impacts associated with the project. The ESIA will include an examination of technically and financially feasible alternatives to the source of such impacts, including the non-project alternative, and document the rationale for selecting the particular course of action proposed. It will also identify potential improvement opportunities and recommend any measures needed to avoid, or where avoidance is not possible, minimize and mitigate adverse impacts.

The ESIA may need to be carried out or verified by independent experts. The ESIA process will also include a public disclosure and consultation process as specified in PR 10.

For Category B projects, where potential adverse future environmental and social impacts are typically site specific and/or readily identified and addressed through mitigation measures, the client will undertake an environmental and social assessment that is proportionate to the project's nature, size and location, as well as the characteristics of the potential impacts and risks. The assessment will characterize potential future adverse impacts associated with the project, identify potential improvement opportunities, and recommend any measures needed to avoid, or where

avoidance is not possible, minimize and mitigate adverse impacts.

For Category A and B projects which involve existing facilities, an assessment of the environmental and social issues of past and current operations will be required. The purpose of this assessment is to identify potential risks, liabilities and opportunities associated with the existing facilities and operations, to confirm the current status of regulatory compliance and to assess the client's existing management systems and overall performance against the PRs. Any investigations of existing facilities must be carried out by experts that are independent from the facility that is being investigated.

For Category C projects, which are likely to have minimal or no adverse future environmental and social impacts and that are readily identified and addressed through mitigation measures, the client will implement an ESMS proportionate to the impacts and risks in accordance with paragraphs 14-22 of this PR and monitor and report on the project's compliance with the PRs as per paragraphs 23-28 of PR 1.

This project is not in the list categorized as type A projects.
Based on the technical project that will be implemented on the footprint of the existing road already built years ago, based on this project, the asphalt layer will be laid and the signage of the existing road will be installed, based on the environmental and social impacts that will have during the construction phase (of about 12 months) which are estimated to be minimal and easily addressed through mitigation measures.

3. PROJECT DESCRIPTION

3.1 General project data

The main objective of the project "Review of the existing project for the reconstruction of the road segment Perlat - Kurbnesh - Krej Lure and Design for the reconstruction of the road segment Krej Lure - Fushë Lure" is to improve regional connectivity and facilitate access to the potential of the region, bringing the expansion of the region's tourism offer and increasing the opportunity for sustainable regional economic development. The reconstruction project will aim to improve the quality and safety of traffic while maintaining the existing road trail.

Overall, the proposed interventions in the project will be:

- Construction of asphalt layers of the road
- Construction of substrates (in layers with major damage);
- Road drainage solution;
- Construction of bearing and retaining walls;
- Construction of culverts and minor structures;
- Vertical and horizontal signage;
- Engineering protection measures, etc;

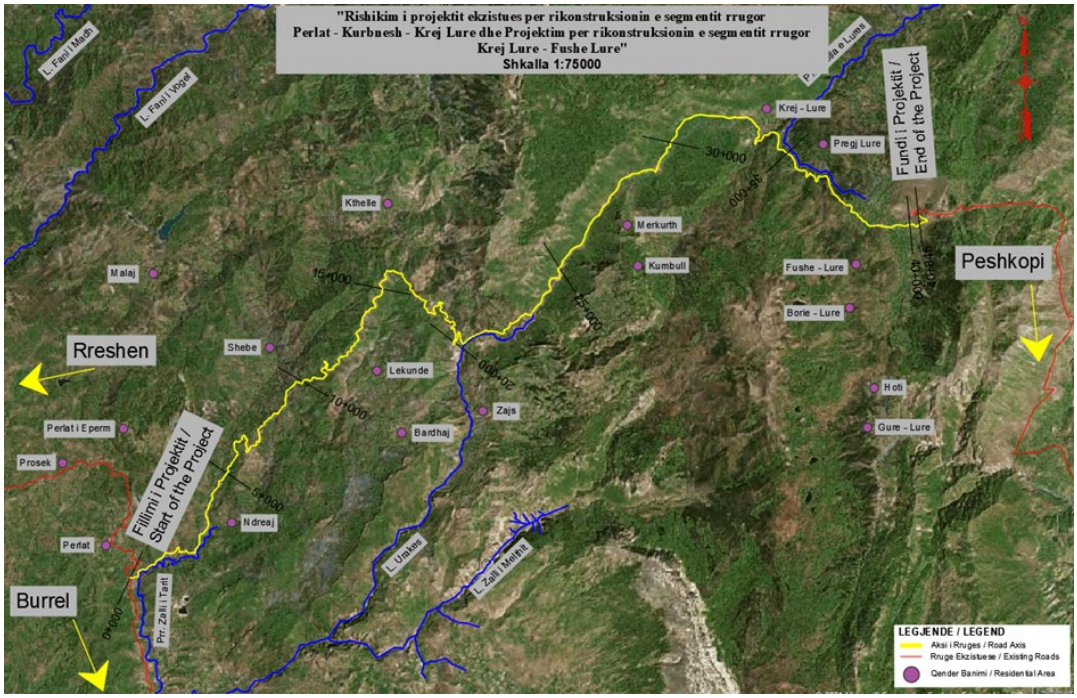


Figure 2: Project Horography, Scale 1: 75,000

3.2 Existing Condition

The road starts in the village of Perlat, Municipality of Mirdita and ends in the village of Fushë Lurë, Municipality of Dibër. The starting point of this segment is at the intersection with the road Perlat-Urakë and ends at the exit of the village Fushë Lurë. The road has a length of about 40.9 km and is presented with strong and smooth curves along its entire length.

3.2.1 Planimetric and altimetric development of the road

The width of the road body varies from 3.5-5.0 m. The road develops in a hilly-mountainous terrain with relatively large slopes ranging from 3-12% and develops in strong and stable rock formations. The road segment is accompanied along its entire length by small and medium structures (culverts, walls, bridges, etc.), with partial damage.

3.2.2 Road Layers

The road is unpaved, with layers of broken quarry material and cobblestone. From the field observations made by the group of engineers and from the measurements of the group of topographers, damages of different degrees have been noticed in this segment.

3.2.3 Bearing and retaining walls

Bearing and retaining walls are mainly stone walls, most of which are totally damaged. These walls need to be replaced with new walls along their entire length or in those areas where the existing wall is out of order. From the field observations, it has been noticed that some of these walls require repair, in order not to continue their further damage and to preserve their original function.

3.2.4 Culverts and Existing bridges

There are several bridges in this road segment. Some are in good condition, except some minor damage to the handrail, some need basement repair or replacement of soletons, and some will be replaced with culverts boxes. The culverts located in this segment are concrete culverts. They have different dimensions and most of them are in good condition. It is necessary for some of them to be built new, as they are extremely damaged. From the field observations it has been noticed that some new culverts should be added.

3.2.5 Existing Signage

Vertical Signage

In this road segment there is observed lack of signs and other elements of vertical signage such as delineators, curve delineation, etc. So, referring to the code and the signaling manual, there are vertical signaling shortcomings in the whole segment "Perlat - Krej Lurë - Fushë Lurë".

Horizontal Signage and Existing Guardrails

Referring to the road code and the signaling manual we have a lack of horizontal signage throughout the road segment. During the design, the horizontal signage was made according to the technical conditions of the Republic of Albania (in the thickness, type and step of the horizontal line). As for horizontal signage, we also have length gaps for the guardrail. In many areas where deployment is necessary, guardrails have not been deployed.

Figure 3: Existing condition of the road

3.3 Description of the implementation project

The road starts at the intersection Perlat-Urakë and ends at the exit of the village Fushë Lurë. The reconstruction project will aim to improve the quality and safety of traffic by preserving the existing trail on most of the road. As a result, it will expand the region's tourism offer and increase the opportunity for sustainable regional economic development. The length of the road axis is 40,845 m. The width of the road asphalt is 4.75 m. The cross section of the road is sloping in 1 direction and ditches/ shoulder on the asphalt side. The width of the shoulder is 0.5m while the width of ditches the is 0.75m.

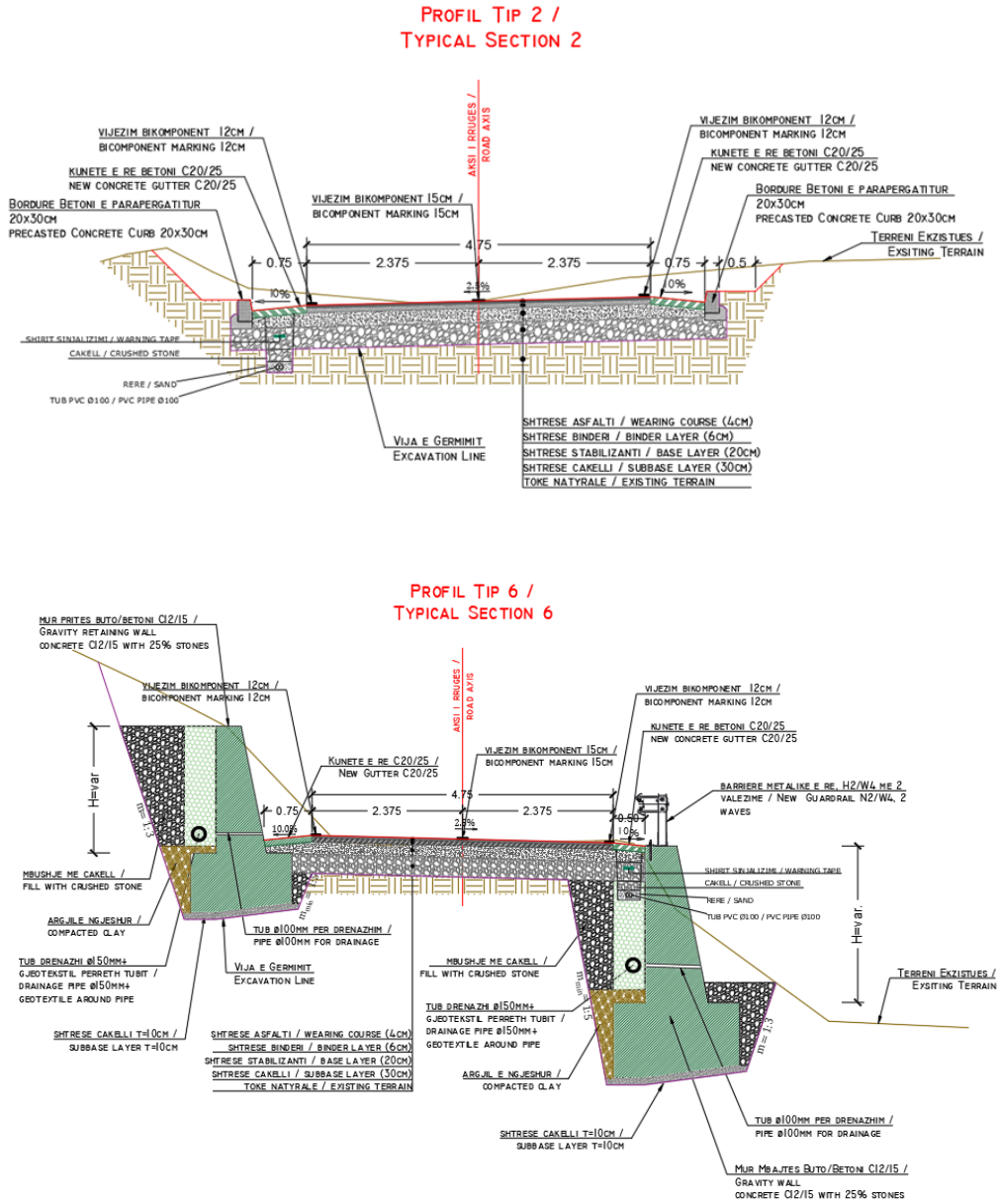


Figure 4: Road Typical Profiles

3.3.1 New Road Layers

The main part of the reconstruction project of the road "Perlat - Krej Lure - Fushë Lure" consists of interventions in the road layers.

The type of layers used is as follows:

- Asphalt 4cm
- Binder 6cm
- Stabilizer 20cm
- Crushed stone 30cm

In the segments Km 8 + 610 - 8 + 810, Km 16 + 875 - 1 + 905, Km 17 + 055 - 17 + 295, Km 17 + 605 - 17 + 725, Km 17 + 965 - 21 + 220, we have a weakening of basement due to the presence of water andis usedthe following package:

- Asphalt 4cm
- Binder 6cm
- Stabilizer 20cm
- Crushed stone 30cm
- Crushed stone 40cm

3.3.2 Bearing and retaining walls

Since the road trail is built in a relatively rugged relief, there is a large length of bearing and retaining walls. The existing walls on the road are mostly stone walls. Some of these walls are damaged. In cases where the damage is minor and does not affect the bearing capacity of the structure, the measure taken is simply repairing the existing wall. In other cases we have designed new walls. The new gravitational walls are C12 / 15 concrete concrete walls.

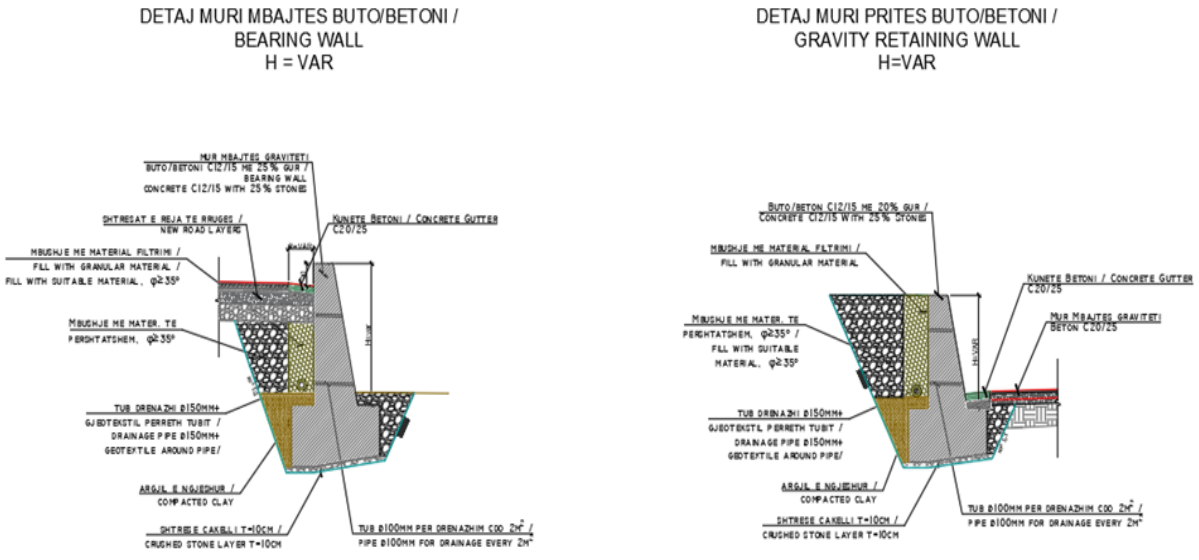


Figure 5: Bearing and Retaining Wall Detail

In cases where we have a higher risk of slipping, we have designed gabion walls. It is intended to design gabion walls in these areas and not concrete walls, because the gabion wall is more elastic and works better than the concrete wall in the sliding area.

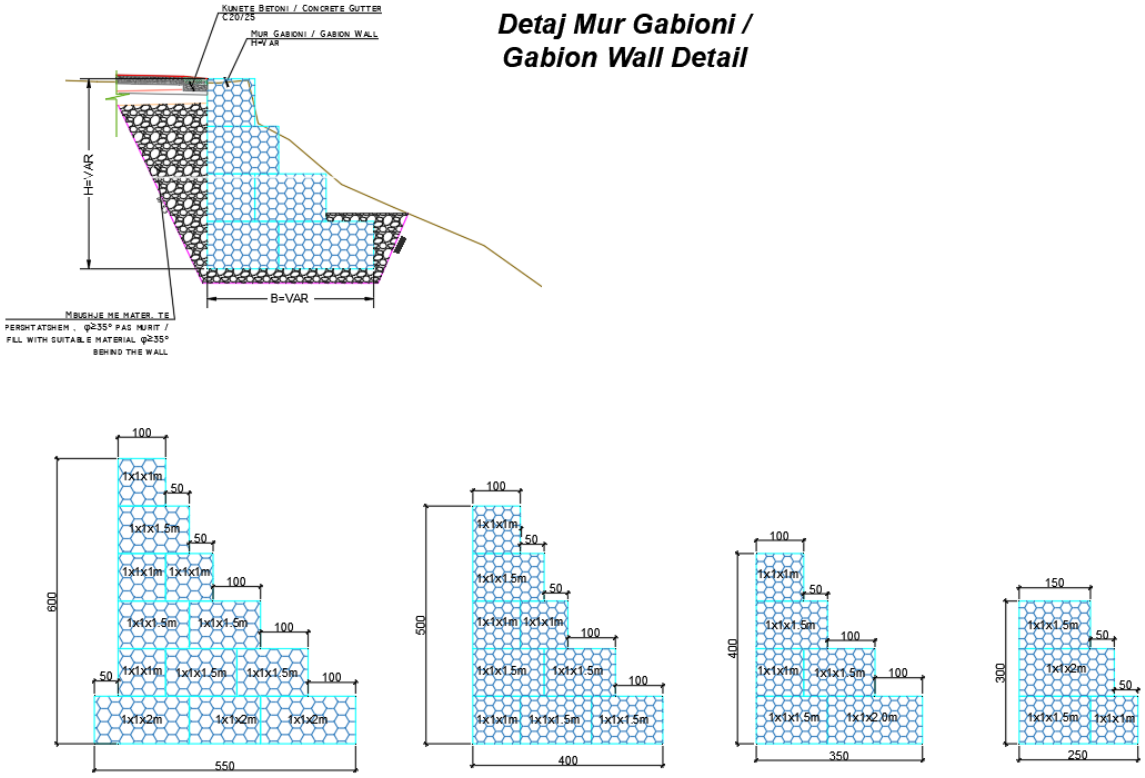


Figure 6: Gabion Wall Detail

In the general planimetry are placed the walls with the respective height in the proper progression. Attached to the report we have the technical drawings showing all the walls used with cross sections of walls. Also, in the final project, are presentedthe calculation reports of the walls.

3.3.3 Minor structures

Minor structures are bridges and culverts.

Bridges

There are several bridges in this road segment. The bridges are of small light space. Some of the bridges are in good condition, with the exception of some minor damage mainly to the handrails. In the project, for the damaged bridges, the repair of the damaged areas, the replacement of the soletons, as well as the installation of new handrails is foreseen. Some bridges have been replaced with culvert boxes. The exact positioning of all bridges is shown in the planimetry drawings.

Culverts

Since the footprint of this road axis is all in rugged terrain, the culverts play the main role in water drainage. Culvert is the last point of discharge in the drainage system of this road. The water comes to the culvert by means of ditches, soil channels or concrete. The culvert located in this segment are concrete culvert. They have different dimensions and most of them are in good condition.

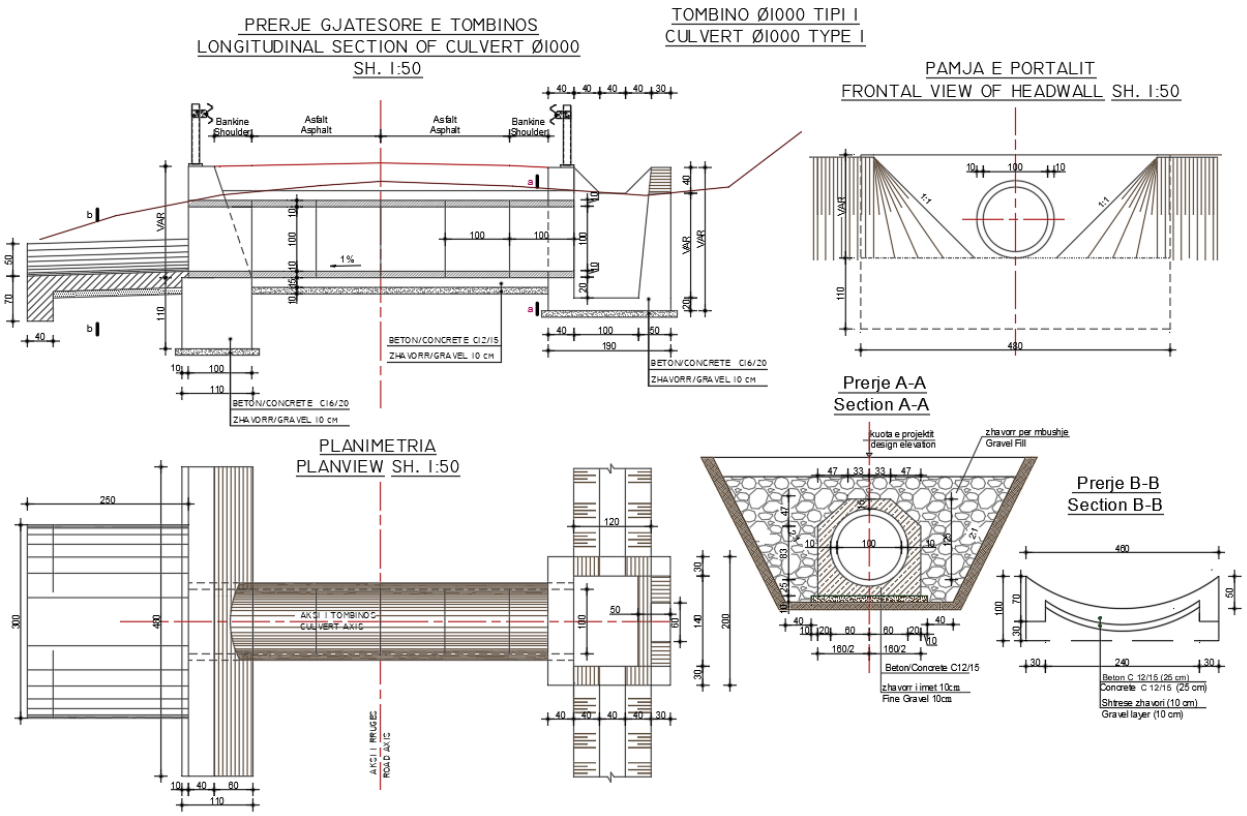


Figure 7: Detail of a new culvert

The culverts that are easily damaged and have not lost their functional side will simply be repaired. In cases where the handrail is missing, a new handrail of a certain length will be installed. It is necessary to build new ones in some of them, as they are extremely damaged. From the field observations and from the design of the catchment areas, it has been noticed that some new culverts should be added as a result of the drainage system that we talked about above. Due to the displacement of the road axis in order to improve road geometry, some existing culvert need to be lengthened or rebuilt. For each new culvert, in the drawings is made the plan of the new culvert, its longitudinal cut and the transverse cut.

3.3.4 Drainage System

In addition to the culverts, the drainage system consists of trapezoidal concrete channels, U shaped R/C channels, concrete ditches and shoulders. All of these works interact to move surface water to the road.

Concrete ditches

The ditches are generally located in areas where there are retaining walls, sidewalks and curbs. The slope of the ditches is 10% and for the most part, their width is 0.75m. In cases where the existing wall is farther than 0.75m from the end of the asphalt, the length of the ditch also increases, to meet the existing wall. Their concrete class is C20 / 25.

Curbs

In the project, along the length of the axis, have been placed prefabricated 20x30cm concrete curbs with C 20/25 concrete.

Concrete channels

Concrete channels are of 2 types. Trapezoidal concrete channels and U-shaped reinforced/concrete channels.

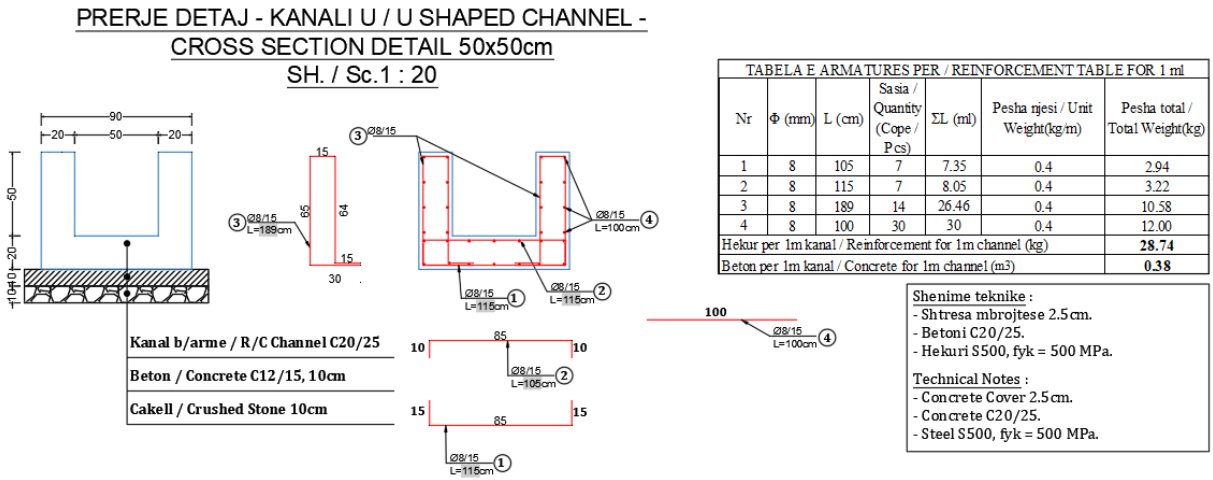


TABELA E ARMATURES PER / REINFORCEMENT TABLE FOR 1 ml

Nr	Φ (mm)	L (cm)	Sasia / Quantity (Cope / Pcs)	ΣL (ml)	Pesha njesi / Unit Weight(kg/m)	Pesha total / Total Weight(kg)
1	8	105	7	7.35	0.4	2.94
2	8	115	7	8.05	0.4	3.22
3	8	189	14	26.46	0.4	10.58
4	8	100	30	30	0.4	12.00
Hekur per 1m kanal / Reinforcement for 1m channel (kg)						**28.74**
Beton per 1m kanal / Concrete for 1m channel (m3)						**0.38**

Figure 8: U-shaped R/C channel detail

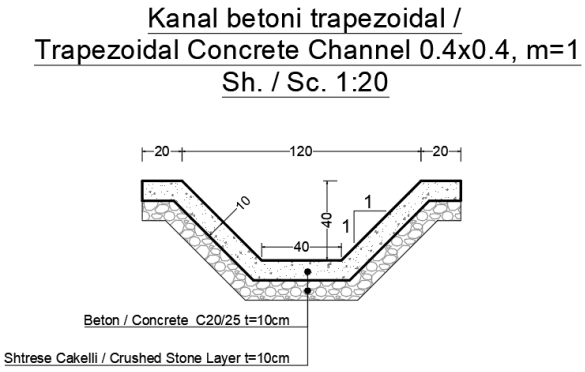


Figure 9: Trapezoidal concrete channel detail

3.3.5 Sidewalks

In the area from Km 38 + 950 to Km 39 + 465, in the village of Fushë Lurë, on both sides of the road there is an existing sidewalk, which is planned to be reconstructed. The width of the sidewalk is 2.0 m. The layers on the sidewalk are:

- New concrete slab t = 6cm
- Sand layer t = 4cm
- Concrete layer + grateØ8 / 25cm t = 10cm
- Crushed stone layer t = 30cm

3.3.6 Signage

Vertical Signage

In many parts of the road, where, according to the road code of the Republic of Albania signs are needed, they are missing. So, referring to the code and the signaling manual, there are vertical signaling shortcomings in almost the entire segment Perlat - Fushë Lurë ". In this project, the completion of the road with vertical signage and the completion of the road with chevrons is foreseen. In cases where we have a retaining wall on the side of the road, it is designed to place a reflector every 9 meters on the wall.

Horizontal Signage + Guardrail

Referring to the road code and the signaling manual we have a lack of horizontal signage throughout the road segment. In this project, along the entire length, on both sides and in the axis of the road is placed a horizontal bicomponent line, the thickness of the line 12 cm, while in the axis of the road is placed a line with a thickness of 15 cm. The marking is continuous or intermittent, as shown in the signage plan. As with horizontal signage, guardrails have shortcomings all the way. In the project, the new guardrail that will be placed on the walls is of type H2 / W4 with 2 waves, while the type of guardrail that will be placed on the sidewalk is H1 / W3 with 2 waves. At the beginning and end of the guardail will be placed terminals.

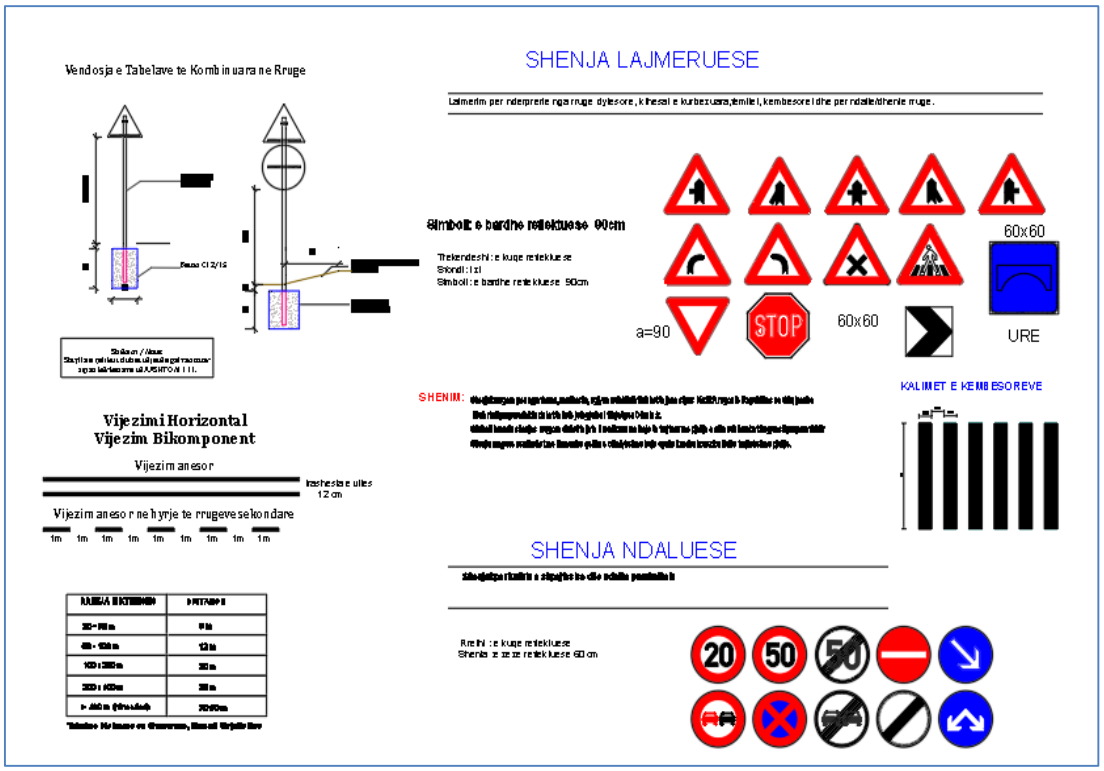


Figure 10: Details of Vertical and Horizontal Signage

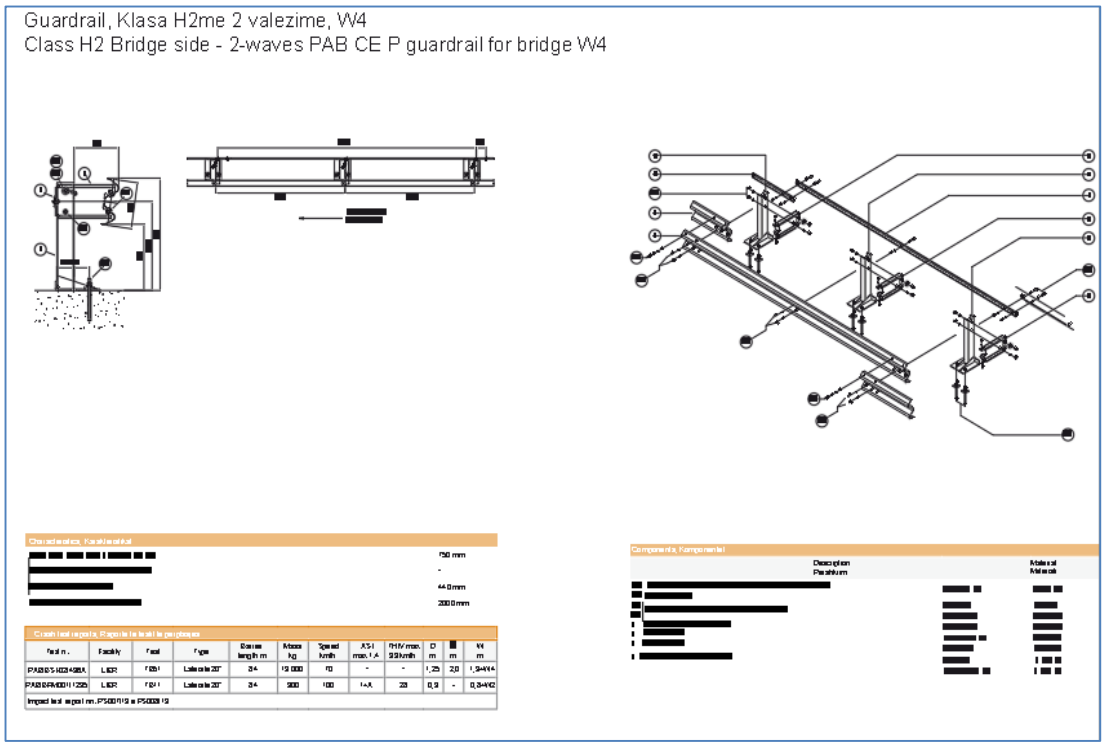
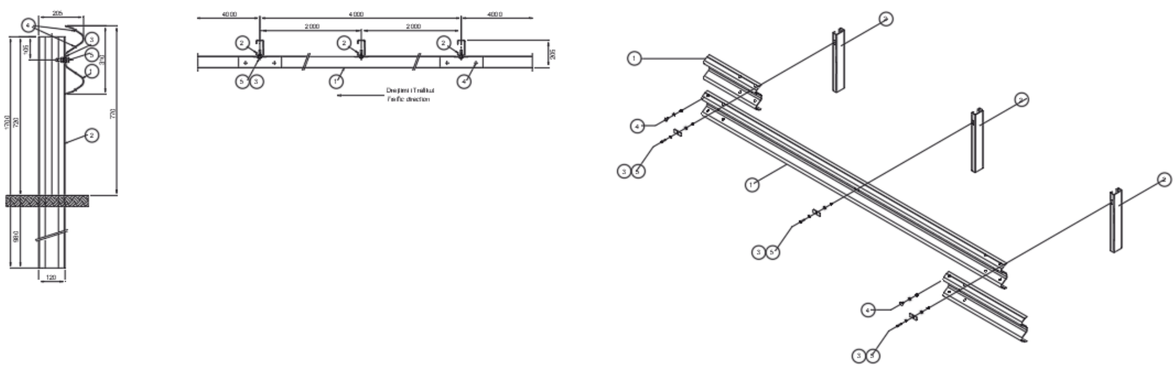


Figure 11: Details of the H2 / W4 guadrail with 2 waves

Class H1 Roadside - 2-waves single sided guardrail W3



Characteristics, Karakteristikat	
Height above ground level, Lartesia nga toka	770 ± 30 mm
Depth of penetration, Thellesia e penetrimit	980 mm
Overall width, Gjeresia Totale	205 mm
Post spacing, Hapesira e Mbeshtetjeve	2000 mm

Components, Pjeset Perberese			
	Description - central part Pershkrimi - pjesa qendrore		Material Materialet
5	*Bolt with nut and washer, Bulloni me rondele dhe dado*	M12x50 mm	Classe 8.8
4	*Bouton complet, Komplet Bulon*	M16x30 mm	Classe 8.8
3	*Slot covering plate, Pllakaza*	100x40x4 mm	S 275 JR
2	*C-post, Posti C*	120x55x30 Th=4 H=1700mm	S 275 JR
1	*2-waves beam, Brinu me 2-valetime*	L=4316 Th=2 mm	S 355 JR

Figure 12: Details of the H1 / W3 guadrail with 2 waves on the sidewalks

3.3.7 Storm water drainage and sewage networks

In this project is foreseen the construction of the storm water drainage network only in the area from Km 38 + 950 to Km 39 + 465, as this road segment affects very few inhabited areas. Mostly part of the white water drainage network is solved by means of culverts and ditches or canals which discharge into nearby streams. Sewage networks are not foreseen in this project.

3.3.8 Electrical works and lighting

Regarding the lighting network, in this project it is foreseen to be built only in the area with sidewalk from Km 38 + 950 to Km 39 + 465.

3.3.9 Green spaces

In this project there are not foreseen green spaces.

4. DESCRIPTION OF THE ENVIRONMENT OF THE REGION

4.1 Description of the Physical Environment

4.1.1 Basic data on the geographical position and location of the project

The road starts in the village of Perlat, Municipality of Mirdita and ends in the village of Fushë Lurë, Municipality of Dibër. The starting point of this segment is at the intersection with the road Perlat-Urakë and ends at the exit of the village Fushë Lurë. The Administrative Units where the road passes are: Kthellë and Selitë in the Municipality of Mirditë and Lurë in the Municipality of Dibër.

Municipality of Mirdita

The Municipality of Mirdita is located between the geographical coordinates 41 ° 43 'and 41 ° 59' north latitude and 19 ° 43 'and 20 ° e 12' east longitude, bordering on the north with the Municipalities of Fushë Arrës and Puka, on the west with Lezha and east of the Municipality of Kukes and Dibra. In the south-east it borders with the municipality of Dibër, in the south with the municipality of Mat and Kurbin, while in the south-west with the municipality of Kurbin. The center of the municipality is the city of Rrëshen. The municipality includes 4 cities and 81 villages, distributed in its 7 administrative units: Rrësheni, Rubiku, Selita, Kthella, Fani, Oroshi and Kaçinari. The municipality is part of the Lezha region.

Municipality of Dibra

The Municipality of Dibra is located in the north-east of Albania, in the geographical coordinates 41º and 53 'and 20º and 34', in a territory with a surface of 1,001 km². Peshkopia is the administrative and urban center of the municipality and is located at a distance of 44 km from Lura, 36 km from Doda Castle and 18 km from the border point of Bllata. The territory is rural in more than 91% of its area. The Municipality of Dibra consists of a city (Peshkopia) and 141 villages, which are part of 14 administrative units such as: Lura, Zall-Reçi, Zall-Dardha, Selishta, Luzni, Muhurri, Arrasi, Fushë-Çidhna, Sllova, Kalaja of Doda, Kastrioti, Tomini, Melani and Maqellara.

Figure 13: Administrative Units of Mirdita Municipality and Dibra Municipality

Region	Center of Municipality	Administrative units	Cities and villages under the jurisdiction of the municipality	Population as per Census 2011	Population as per civil register	Surface KM²
Lezhë	**City Rrëshen**	**Rrëshen**	City Rrëshen, Villages; Ndërfushas ,Ndërfan, Gëziq, Tarazh,Jezull, Kodër Rrëshen, Sheshaj, Fushë-Lumth, Malaj, MalajEpërm,Tenë, Lurth, Bukmirë, Kulmë	22,103	37,384	870
		Rubik	City Rubik, Villages; Fierzë, Bulshizë, Fang, Rasfik, Katund iVjetër, Munaz, Rreja e Zezë, Rreja e Veles, Vau Shkezë, Rrethi iSipërm,Livadhëz,Bulger			
		Selitë	City Kurbnesh, Villages; Lufaj, Bardhaj, Lëkundë, Zajs,KthellëeSipërme,Kurbnesh-fshat,Mërkurth,Kumbull			
		Kthellë	Villages; Perlat Qendër, Perlat i Sipërm, Shebe, Tharr, Trojë,Prosek,Rrushkull, Ujë, Shtrezë			
		Fan	Villages; Klos, Shtrungaj, Bisakë, Fan, Zall-Xhuxhë, Katundi iRi, Konaj, Shëngjin, Petoq, Xhuxhë, Dardhëz, Thirrë, Sang,Hebe,Domgjon,Gjakëz, Munellë			
		Orosh	City Reps, Villages; Kullaxhi, Blinisht, Pshqesh, Mashtërkor,Shëmri, Grykë Orosh, Lgjin, Bulshar, Planet, Ndërshen,Nënshejt,Kodër-Spaç, Gurth-Spaç,Lajthizë			
		Kaçinar	Villages; Kaçinar, Arrëz, Kuzhnen, Simon, Shëngjergj, Shtuf,Shpërdhezë			

Table 4: Administrative units part of the Municipality of Mirdita, cities and villages

Region	Center of Municipality	Administrative units	Cities and villages under the jurisdiction of the municipality	Population as per Census 2011	Population as per civil register	Surface KM²
Dibër	**City Peshkopi**	**Peshkopi**	City Peshkopi	61,619	78,940	937.88
		Tomin	Villages; Tomin, Brezhdan, Cetush, Dohoshisht, Pilafe,Pollozhan, Rrashnapojë, Selane, Ushtelenxë, Bahute, Staravec,Shimçan,Zimur, Zdojan			
		Melan	Villages; Melan, Cerjan, Rabdisht, Zagrad, Begjunec, Trepçë,Grevë, Ilnicë,Bellovë,Pejkë,Pjeçë, Trenë			
		Kastriot	Villages; Kastriot, Brest i Sipërm, Brest i Poshtëm, Kishavec,Kandër, Kukaj,Vakuf, Fushë-Kastriot, Borovjan, Deshat, Limjan,Sohodoll,Sohodolli Vogël,Vrenjt,Përgjegje			
		Lurë	Villages; Fushë-Lurë, Borie-Lurë, Arth, Gurë-Lurë, Lurë eVjetër,Arrëmollë,Krej-Lurë,Pregj-Lure,Sumej,Vlashej			
		Maqellarë	Villages; Maqellarë, Bllatë e Poshtme, Bllatë e Sipërme,Burim, Çernen, Fushë e Vogël, Katund i Vogël, Kërçisht iSipërm, Kërçisht i Poshtëm, Kllobçisht, Kovashicë, Majtarë,Pocest, Pesjak, Podgorc, Vojnik, Dovolan, Erebarë, Grezhdan,Herbel,Popinar,Gradec			
		Muhurr	Villages; Muhurr, Bulaç, Fushë-Muhurr, Hurdhë-Muhurr,Rreth-Kale, Shqath, Vajmëdhej			

Table 5: Administrative units part of the Municipality of Mirdita, cities and villages

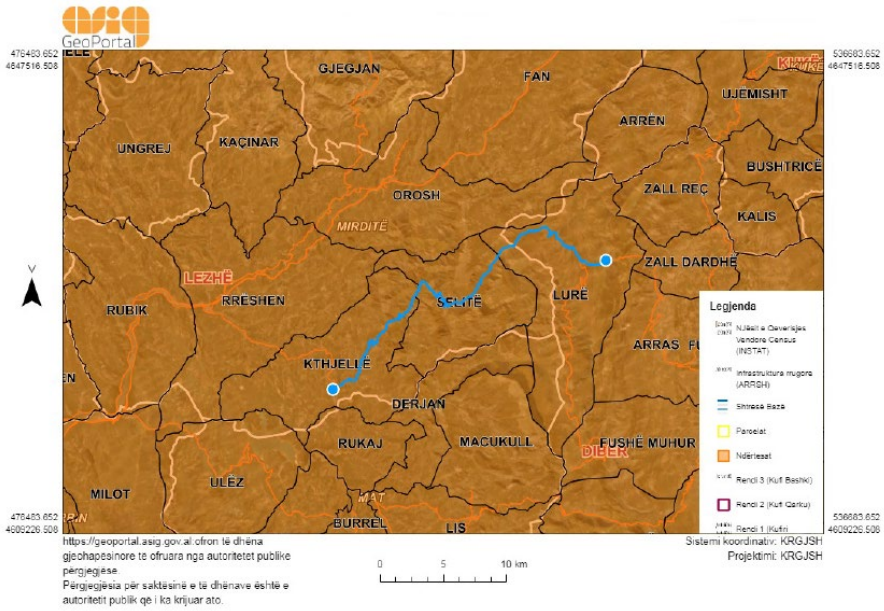


Figure 14: Project Affected Administrative Units

4.1.2 Relief

In the area where the project footprint passes meet almost all types of morphogenetic classification of relief. The predominant is the hilly-mountainous relief.

The relief configuration in Dibra district is diverse. Territories with altitudes of 300-600 meters occupy 13.7% of the area of the district, altitudes of 600-1000 meters occupy 30% of the area, altitudes of 1000-2000 meters occupy 53.5%, while the rest of 2.8% is occupied by the territory that lies at altitudes above 2000 meter. So the mountainous area of Dibra occupies 56.3% of the territory, while the plain and hilly area 43.7% of it.

Figure 15: Physical map of the area where the road footprint passes

Mountain ranges of Lura are located between the Drini i Zi valley in the east, the Mati basin in the west, the Sërriqe valley in the north and the Zall i Bulqiza valley in the south. They have a north-south direction at a length of about 75 kilometers and a width ranging from 20 kilometers south to 30 kilometers in the center. They are formed by two parallel mountain ranges between them, which in the northern part turn towards the northeast. Their highest heights are reached in the central part with Deja mountain (2246 meters) and Kunora e Lura (2121 meters).

4.1.3 Geological characteristics

The area in which the road footprint passes is included in the Korab Area and the Mirdita Area. The Mirdita Geological Area is known as the Magmatic Rock Area or the Ophiolite Area. The main geological deposits are of the Middle Triassic, inseparable that have been isolated in the areas around Lake Ulza. The igneous rocks form two more massive belts, an East and a West, are mostly of the Jurassic age. The main part is located on gabbro rocks, of the Jurassic ophiolitic unit, which define the Western boundary of a wide depression filled with Tertiary molasses sediments (sandstones, conglomerates, clays) and Quaternary river deposits.
In these areas have been encountered the following deposits:

Deposition of the upper-Titonian- Valanzhinianit (J3t-Cr1v)
These deposits are represented by the early flysch, which is also called the Firza flysch. They are placed on ophiolites and carbonate formations of the Triassic and Jurassic. These deposits are represented by thin and thick combinations of radiolaritic marl limestones, with tintinides, aleurolite clays and breccias, the fragmentary material is ophiolitic, and siliceous and limestone materials are also encountered. The thickness of these deposits is 300-400 m.

Deposition of Titonian-Cenomanianit (J3t-Cr1cm)
These deposits are represented by a combination of marls, marl limestones, biomicritic limestones, radiolars, siltstones, sandstones and conglomerates of ophiolitic material. Thickness 400-600 m.

Deposition of Paleocene (Pg1)
These deposits are normally deposited on the Upper Maastrichtian deposits. In the lower part of them, intertwining of flysch packages of thin sandy-silt rhythm have been encountered, with rare layers of sandstones and conglomerates, their thickness reaches up to 850m.

Deposition of Eocene (Pg2)
These deposits consist of two lithological packages. The lower package is represented by the flysch thin allele-sandy and sand-alveolithic rhythm flysch, while the upper package is represented by holistolithic horizons. The thickness reaches up to 500-600m.

Ophiolithic Rocks

A good part of the studied region is occupied by the area of Mirdita, which is represented by ophiolites. Middle Jurassic ophiolites are mainly characterized by a harzburgite mantle, dominated by asthenospheric deformations. These formations are rich in chromite deposits.

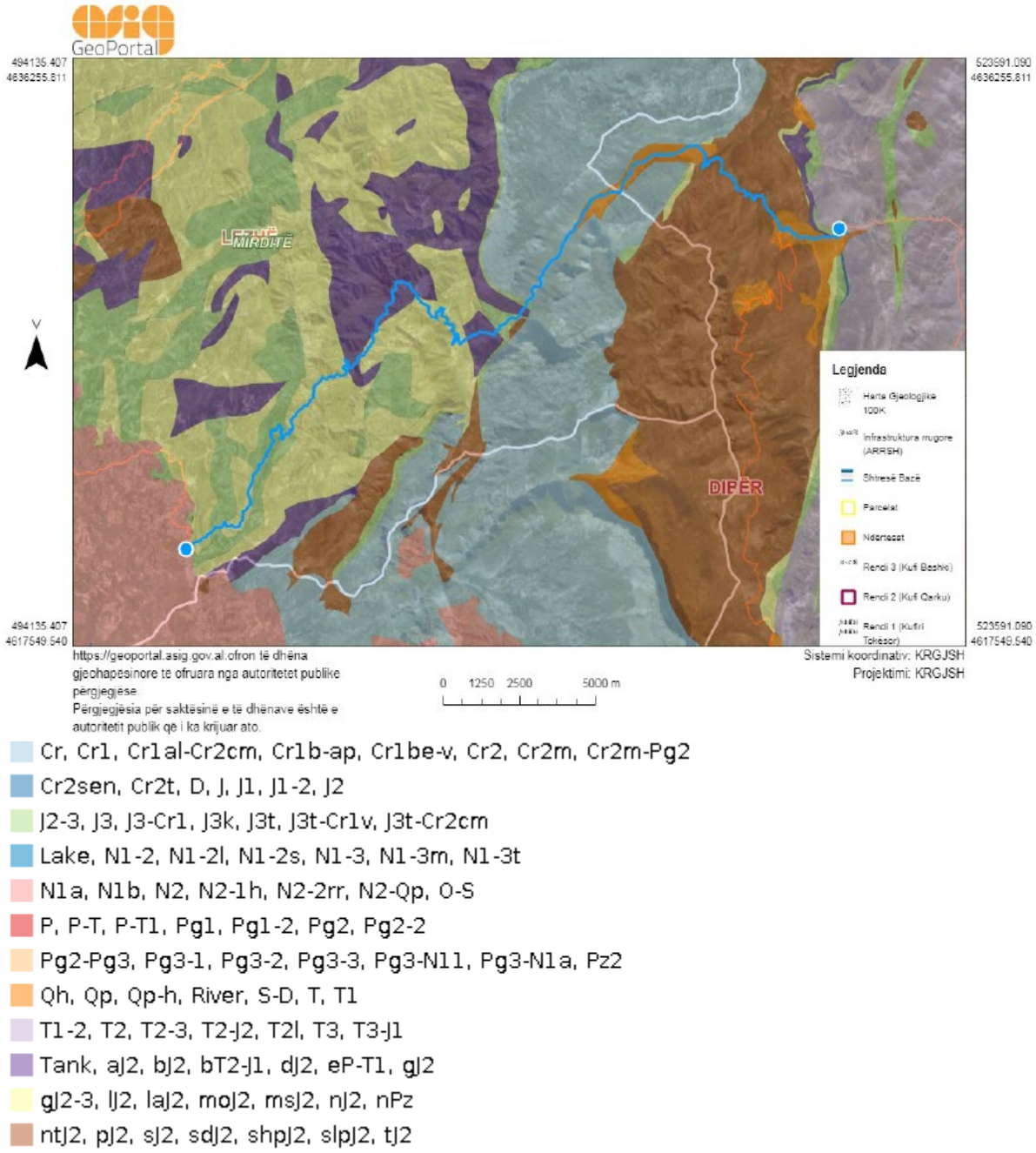


Figure 16: Geological map of the area where the road footprint passes

4.1.4 Hydrological and hydrogeological characteristics

The Lura area from a hydrological point of view is characterized as an elongated form of ultrabasic formations with limited to moderate water reserves, which is surrounded by a karstic aquifer often flattened with relatively small water resources.
The water sources near the project footprint are:

- Uraka River
- Zall Melthit River
- Zall Tari stream
- Ndreaj stream
- Shehu Stream
- Lake Ulza
- Small Reservoirs

Figure 17: Water resources in the project area

The Uraka River originates in the northwestern region of Dibra District, at the top of the Kunora e Lura mountain (2,119 m m.n.d) at a quota of 1380 m m.n.d. After traversing a short initial area in a north-easterly direction, the water flow develops its course in a south-westerly direction passing through the inhabited centers of Kurbnesh (760 mm.n.d) and Bardhaj (637 m m.n.d). The hydrographic basin of the Uraka River is developed entirely in mountainous terrain and presents a total area of 258 km2.
Zall Melthi River originates in the northwestern region of Dibra District, at the top of Mount Deja (2,245 m above sea level), and develops its course along the east / south east direction for a length of about 16.6 km to the point of connection with the river Uraka.

Figure 18: Distances from Lake Ulza and reservoirs in the project area

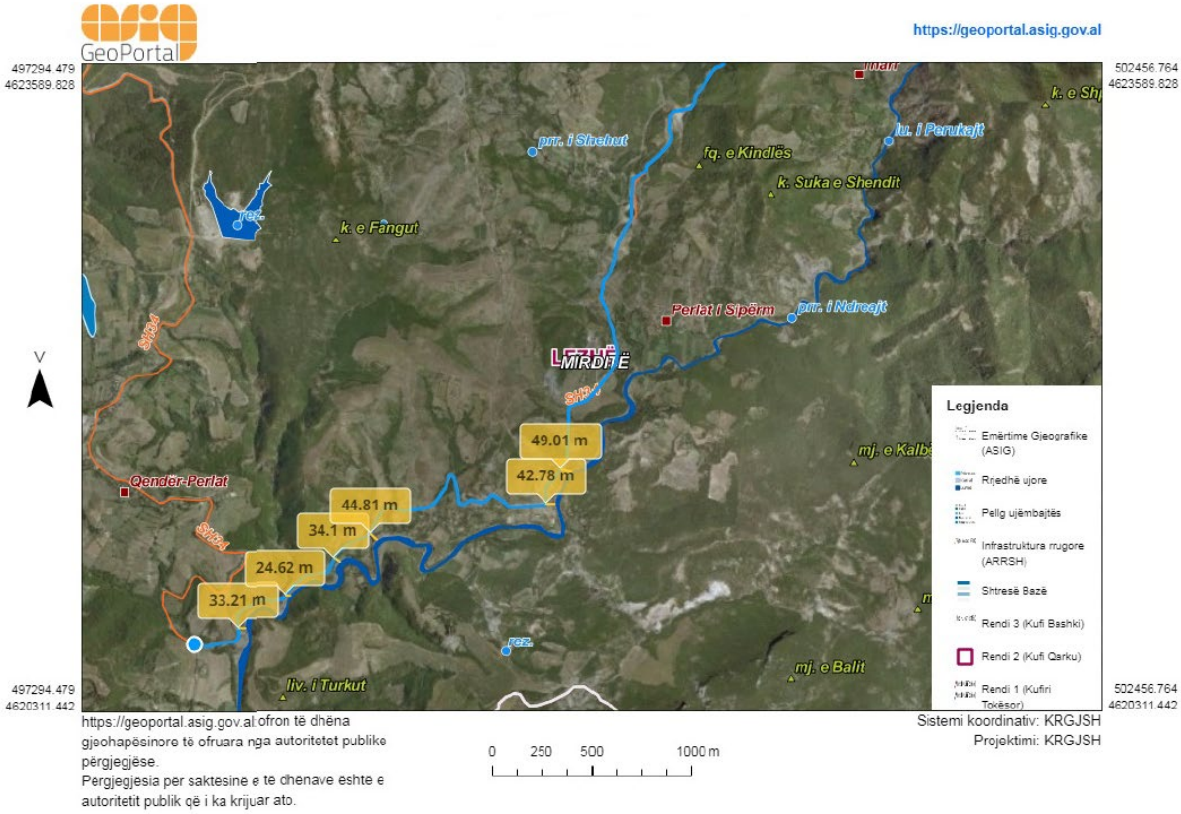


Figure 19: Distances from Zall Tari Stream

4.1.5 Climatic characteristics

The climatic conditions of the area where the road passes according to the climatic regionalization of our country are part of the Mediterranean hilly, Pre-mountain and Mountain climatic zones. The road route passes through the climatic sub-zones:

- Northern Hilly Mediterranean
- Southern Pre-mountain Mediterranean
- Eastern Mountain Mediterranean

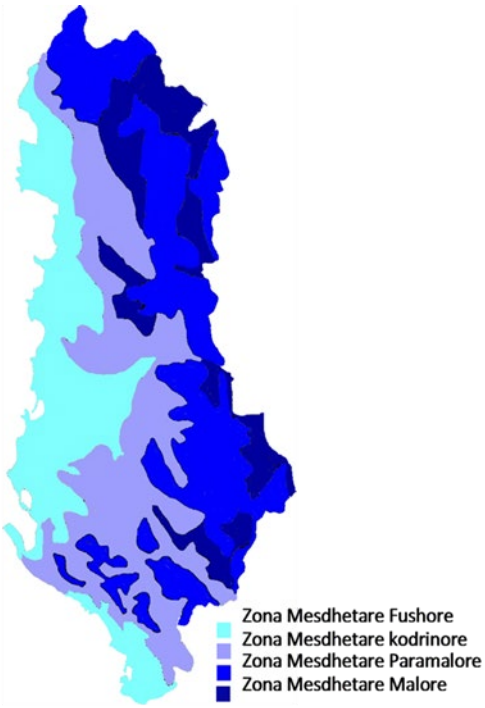
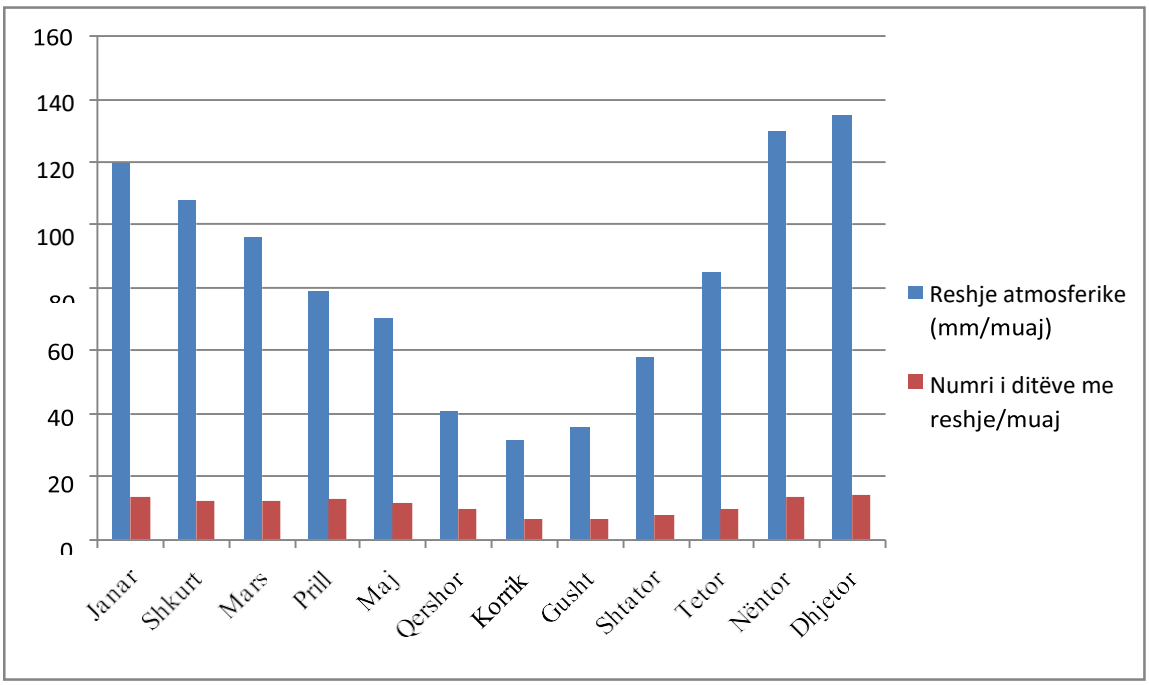


Figure 20: Map of climatic zones of Albania

Air temperature is one of the main elements in determining the climatic features, with its average regime, with its annual and daily performance, as well as with extreme values. From the climatic point of view, the area of the Mediterranean pre-mountainous climate has distinctive features , accompanied by low temperatures, relatively dry and somewhat longer. The summer is dry and often hot.

The average annual temperature is 11˚C-11.8˚C, January 0.3˚C-0.1˚C, and July 20˚C-22˚C. The absolute minimum has reached -21˚C, while the absolute maximum up to 40˚C. Precipitation is generally low, where snow during the winter is a common occurrence with a thickness of over 1 meter. The average amount of precipitation in the Drini i Zi valley is 931 mm.



Graph 1: Atmospheric precipitation at Peshkopia station

For the climatic conditions of Lura Ranges can not say any exact thing while missing observations in their height. The average annual values of temperatures in Fushë Lurë are 7.7˚C, January -2.5˚C and July 16.6˚C. Absolute minimum temperature was observed -22˚C. The number of snowy days recorded is 117.6 days. In Fushë Lurë, the average annual rainfall is 1482 mm, in Selishte 1146 mm. In the ranges of Lura falls a large amount of snow, which on the highest peaks (over 2000 meters) stays until the middle of summer. The height of the snow layer reaches 100-150 centimeters, and in special cases up to 200 centimeters.

4.2 Description of the Biological Environment

4.2.1 Characteristics of flora

Vegetation in the district of Dibra is quite rich in terms of diversity of plant species. Forests and pastures occupy 50% of the territory. They have a great economic, ecological, stabilizing value of the terrain from erosion and landslides, tourism, etc. The total fund of forests is 35,475 ha and of pastures 15,090 ha. The upper limit of vegetation reaches 2000 m. The most widespread are oak, beech, black pine, chestnut, ash, poplar, etc. Most of the forests are used for construction materials and firewood. In the area of Lura there is a vegetation rich in quantity and species represented by beech and oak, while in the area of Korab there is a plant poverty especially in forests. In the years of transition, indiscriminate logging and fires are one of the risks that has put Lura National Park in question, as well as the forests in the Korab area. The planting of medicinal and aromatic plants is gaining great economic importance, constituting a good income for the population of this area.

4.2.2 Characteristics of fauna

The diversity and wealth that this area has in terms of climate, that of soils, flora, etc., has created very favorable conditions for the development of a very diverse animal world. This is evidenced by the existence of many special species according to the character of the habitat. We would distinguish the wildlife of shrubs, beech and oak forests in the highlands, as well as the fascinating world of alpine pastures and aquatic habitats. In the habitats of shrubs that are less developed and less widespread and degraded by human hand we find: Wild rabbit, jackal, partridge, and a series of other birds. In the oak habitats that this floor is also damaged rarely encountered: wolf, fox, squirrel, mole, etc. In the habitats of beech and pine forests that are denser and less affected by human hands, special species are found: bear, eagle, lynx, little mouse, mole, etc.

In water habitats of rivers meet some wild trout and other fish species makes this area distinctive from other areas of the country. All this wealth of wildlife and with special values offers conditions for the development of several types of tourism such as: sports, ecological.

4.2.3 Areas of the national ecological network

The Network of Protected Areas in Albania contains several categories, which can be defined as follows:

- Category I: Reserve Only for Natural Purposes / Reserve for Scientific Purposes
- Category II: National Park
- Category III: Natural Monument
- Category IV: Managed Natural Resources / Administered Area of Species and Habitats
- Category V: Protected Landscape Area
- Category VI: Protected Area of Managed Resources/ Protected Area with Multiple Use

Referring to the Map of Protected Areas on the ASIG/Geoportal, it results that the project area crosses the border of the protected area **"Lura-Deja Mountain"** and a part of the road footprint passes within this protected area.
According to the conservation and administration sub-zones of the National Park, the road footprint that crosses in the border of the Protected Area passes into the sub-zone of traditional use and sustainable development.In this sub-zone are not allowed constructions and activities that cause the change of the natural state of the ecosystem.
The construction of infrastructure in the sub-zone is carried out according to the definitions of the management plan and planning documents, urban development and tourism plans, approved by the National Council of the Territory, which do not affect the ecological integrity of the ecosystem and respect the functions of the area protected, ecological values and those of natural and cultural landscape;

A part of the road footprint located within the National Park Protected Area crosses in the border of Central Zone. The length of the road that crosses in the border of the Central Zone of the National Park "Lura - Mali i Dejës" is 2.8 km. As this sub-area is defined as an area with high values for natural heritage and biodiversity, in which is applied the first level of protection, specific measures will be taken to protect the environment and biodiversity.

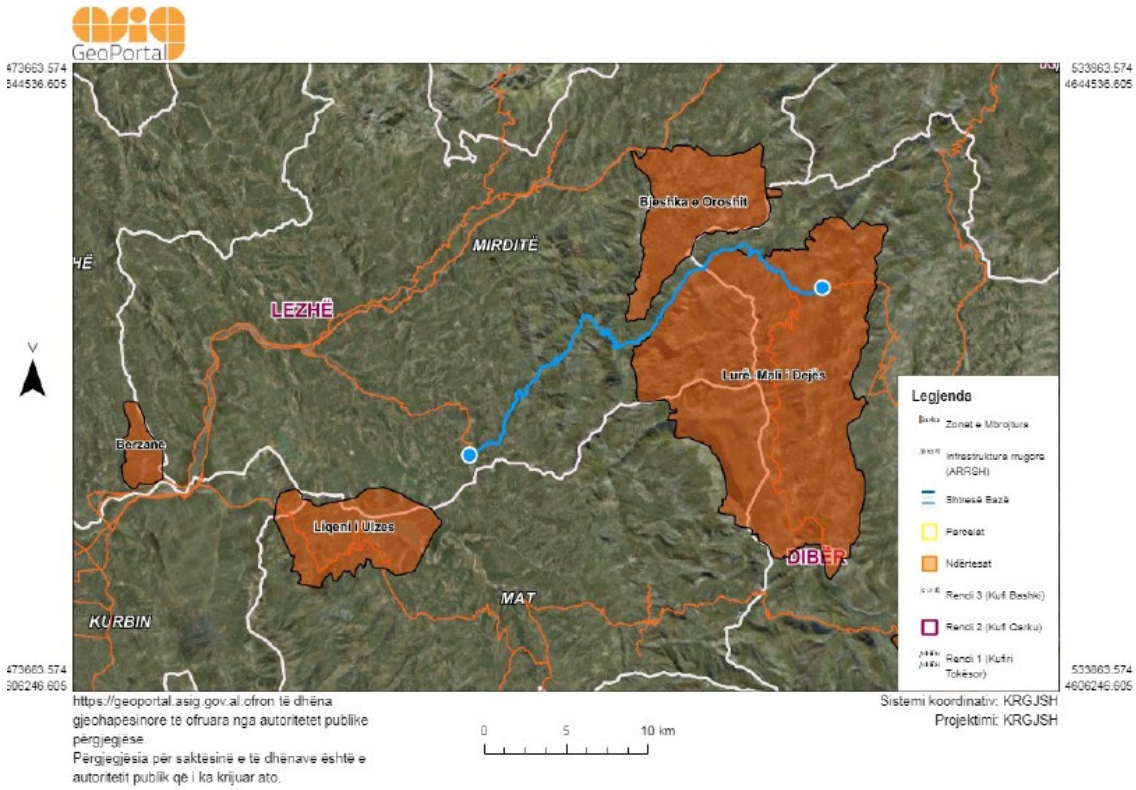


Figure 21: Protected areas related to the project area

LURA- DEJA MOUNTAIN

- Located in the Region of Dibra and Lezha
- Category II
- Surface 20,242.8ha
- With DCM no. 661, dated 31.10.2018, the extension of the surface of the National Park "Lura" (surface 1,280ha, approved by DCM no. 96, dated 21.11.1966) and the merger with the National Park "Zall Gjoçaj" (surface 140ha, approved by DCM) No. 102, dated 15.01.1996), creating the National Park "Lura-Mountain of Deja";

The surface of the park includes:

Nr.	Category	Surface.Ha
1.	Agriculture	467.87
2.	Pastures	2,106.81
3.	Sclerophilous vegetation	339.06

4.	Bush	5,281.33
5.	Surface with little vegetation	1,062.76
6.	Forest	10,984.94
	TOTAL	**20,242.78**

Table 6: Use of the national park area, according to the DCM

The National Park "Lura- Deja Mountain" is divided into three sub-zone of conservation and administration:

Nr.	Sub - zone	Surface.Ha
a.	Central Subzone (ZQ)	2,861.62
b.	Sub-zone of Traditional Use and Sustainable Development (ZPTZhQ)	16,898.40
c.	Recreation Subzone (ZR)	482.76
	TOTAL	**20,242.78**

Table 7: Zoning of the national park area, according to the DCM

- **Central Sub-zone,** includes the main habitats with shrub forests and is defined as an area with high values for natural heritage and biodiversity in which the first level of protection is applied, which ensures an undisturbed territory. In this sub-area are allowed scientific research and development of free ecotourism activities in nature;

- **Sub-zone of Traditional Use and Sustainable Development**, includes agricultural lands and pastures, as well as water territories, in which it is possible to continue traditional activities, such as: agriculture, grazing, collection of medicinal and aromatic plants, with their balanced use . Constructions and activities that cause changes in the natural state of the ecosystem are not allowed in this area. In the sub-zone of traditional use, the second level of protection is applied, which provides a territory with low impact and control of economic, social, agribusiness, entertainment, sports and ecotourism activities.

- **Recreation sub-zone,** includes parts of forest and aquatic habitats, which are created by the reservoir dam. It applies the third level of protection, which provides a territory with low impact and control of tourist activities such as outdoor hiking opportunities, such tourist services, which respect the functions of the protected area, its ecological values and those of the natural landscape, in accordance with the protected area management plan and planning documents, approved by National Council of the Territory.

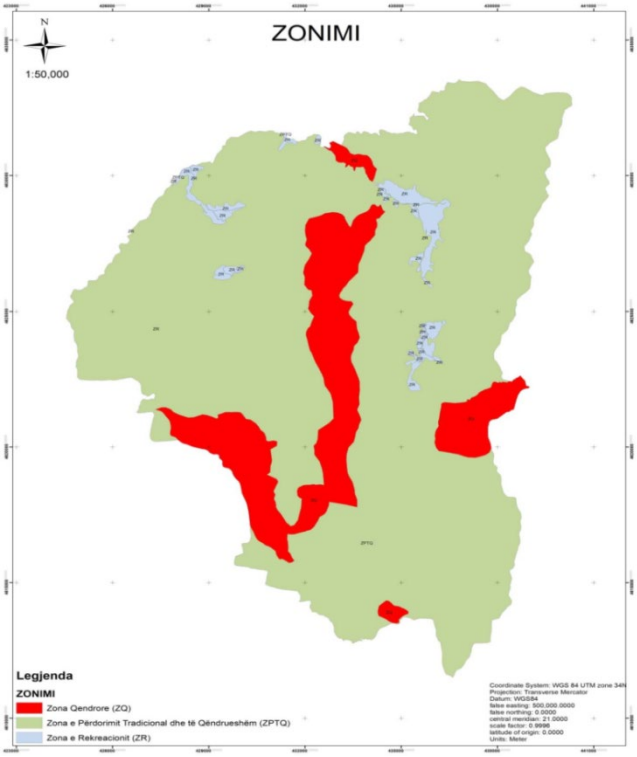


Figure 22: Zoning of Lura-Deja Mountain National Park

Also, close to the project area are located the protected area **Bjeshka e Oroshit** and the protected area of **Ulza Lake.**

BJESHKA E OROSHIT

- Located in the Region of Lezha
- Managed Natural Resources Protected Area
- Category VI (IUCN)
- Area 4,745.00ha
- Approved by DCM no. 102, dated 15.01.1996
- The closest distance to the road footprint is 800 m

Consists of: Forests and Shrubs (3,407.7ha); Pastures and Meadows (1,095.3ha); Water (0.5ha) Non-productive area (96.5ha); Mixed urban (145ha).
Digitized boundaries include:
North: Fani Vogël River Meeting Point (4424857.04L-4639589.28V) and (4432702.19L4640071.57V);
East: Point with coordinates (4432702.19L-4640071.57V) and (4433124.95L4635401.72V);
South: Point with coordinates (4433124.95L / 4635401.72V) and (4424325.03L / 4629761.27V);
West: Point with coordinates (4424325.03L-4629761.27V) and (4424857.04L4639589.28V).

ULZA LAKE

- Located in the District of Dibra, Municipality of Mat
- Managed Nature Reserves / Nature Park
- Category IV (IUCN)
- Total surface: 4,206.00 ha
- The distance from the starting point of the road segment is 4.1 km

The region represents a complex aquatic and mountain ecosystem, which includes Lake Ulza, Lake Shkopet and the surrounding mountains and hills.
Represents a unique unit in terms of ecological systems it carries. The presence of two lakes, Ulza and Shkopet has created completely separate aquatic habitats and of great importance for biodiversity in the country.
There are species of national and international importance of flora and fauna, of humid and terrestrial environments, where the following main species are found: Black spruce forests; Thermophilic beech forests; Mountain and sub-alpine beech forests; Oak and hornbeam forests; Habitats of rivers and streams; Aquatic habitats in the lakes of Ulza and Shkopet; Thermophilic pastures; Rocky habitats of temperate zone.

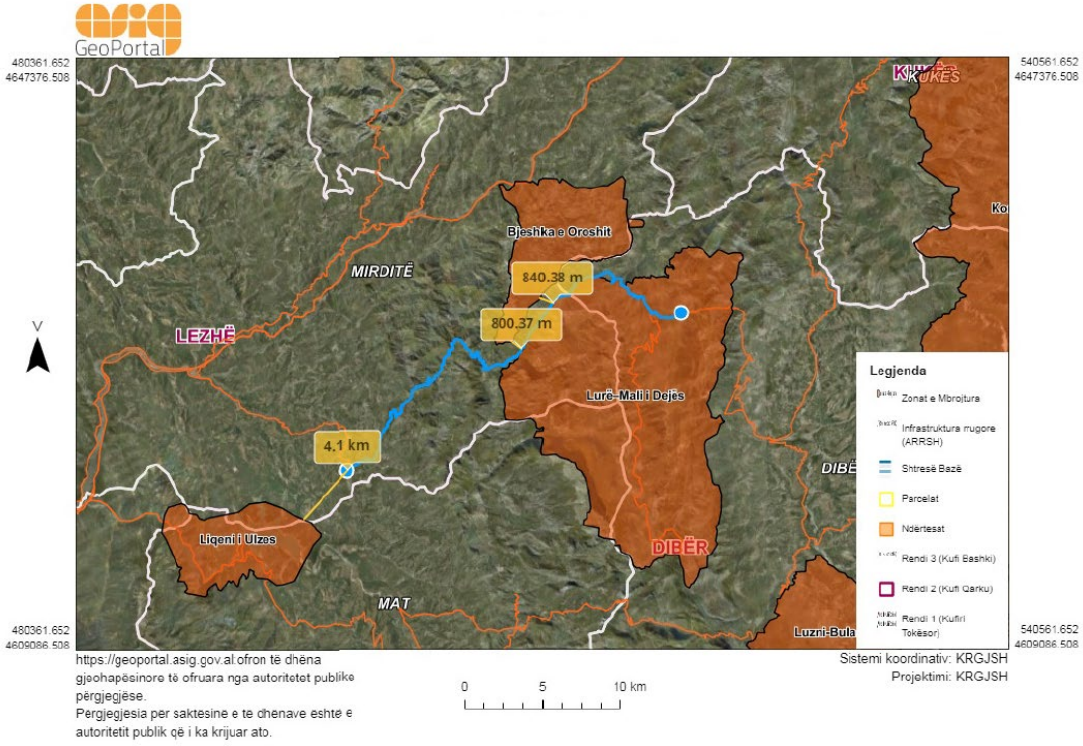


Figure 23: Distance of Protected Areas from road footprint

Natural monuments

The project footprint does not intersect any natural monument. The data are collected based on the ASIG / Geoportal portal. The following maps show the measured distances from natural monuments located near the road footprint.

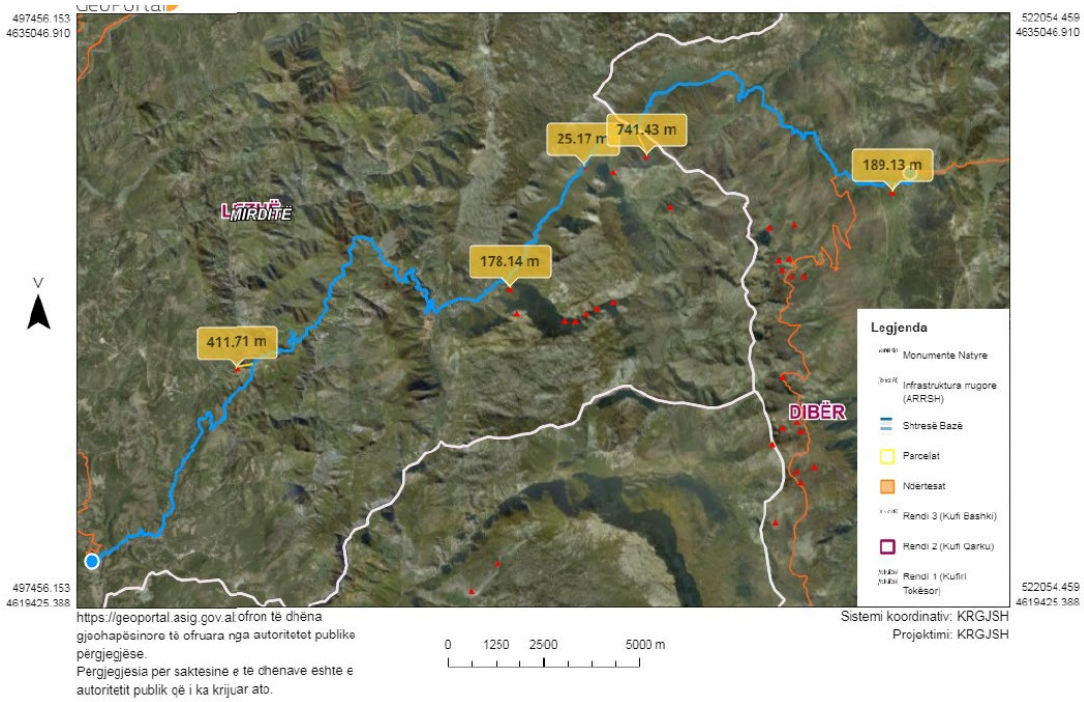


Figure 24: Natural monuments in the project area

Figure 25: Distance of natural monuments from the project footprint

4.3 Description of the Socio-Economic Environment

4.3.1 Population

Municipality of Mirdita

According to the civil registry, Mirdita has a population of 37,384 inhabitants. The administrative units in the municipality of Mirdita are located at a favorable distance from the center of the Municipality of Rrëshen, with the exception of the units of Selitë and Kaçinar. The population structure is dominated by the rural one, but this ratio follows the national trend, constantly changing in favor of the urban population.

Nr	Units	Number of population (2014)
1	Rrëshen	14209
2	Rubik	7989
3	Selitë	2047
4	Kthellë	3070
5	Fan	4726
6	Orosh	3216
7	Kaçinar	2124
	TOTAL	**37381**

Table 8: Population by administrative units, Municipality of Mirdita

Bashkia Dibër

According to the 2011 Census, the new municipality has a population of 61,619 inhabitants. While according to the Civil Registry, this municipality has 78,940 inhabitants. The average population density in the area of Dibra is 78.2 inhabitants / km², a figure much lower than the national level, 148 inhabitants / km². This figure varies from 270 inhabitants / km² for lowland areas to 50 inhabitants / km² for mountainous areas.

NR	Units	Number of population (2014)
1	Peshkopi	19179
2	Maqellarë	13730
3	Tomin	8519
4	Melan	4389
5	Kastriot	7348
6	Sllovë	3103
7	Muhurr	3466
8	Fushë-Cidhen	3554
9	Arras	3775
10	KalaeDodës	3025
11	Selishtë	1974
12	Luzni	3171
13	Zall-Reç	2401
15	Lurë	1463
	TOTAL	**79097**

Table 9: Population by administrative units, Municipality of Dibra

4.3.2 Economic profile

Municipality of Mirdita

The municipality has an economic profile mainly agricultural and livestock, while viticulture is becoming a very widespread activity, creating very good conditions for the development of agribusiness and agritourism.

Major structural changes have taken place in the economy, worsening the development of the area. Prior to the 1990s, the economic profile was related to the underground mining industry, mainly copper, pyrite, chromium, and the number of workers in the mining industry reached 12,000.

Regarding the distribution structure of active enterprises, according to Census data (2011), about 71% of businesses are located in the center of the municipality, in Rrëshen. In the type of business structure, the services sector dominates 44% of businesses, followed by trade (37%), industry (12%) and construction (6%). The units with the largest number of businesses per 1000 inhabitants are Rrësheni with 32 and Rubiku with 18. The units with the least number of businesses are Kthella with 2 and Selita with 3 businesses per 1000 inhabitants.

Units/ Municipality	Agriculture and Fishing	Industri	Construction	Trade	Services	Total	Businesses per 1000 inhabitants
Rrëshen	-	28	21	116	116	281	32
Rubik		10	4	32	32	78	18
Selitë		2		-	-	2	3
Orosh	-	5		-	7	12	6
Kaçinar	-				6	6	6
Kthelle	-	-			4	4	2
Fan		5	-	-	9	14	5
ZFMirditë	0	50	25	148	174	397	18

Table 10: Distribution of active enterprises by LGUs

Regarding the distribution of employees by economic activities, rural areas record the highest percentage of the population is engaged in agriculture, forestry and fishing. Here we mention the Fan unit with 74.2%, the Ktjellë unit with 71.1%, the Kaçinar unit with 64.5%, the Selitë unit with 72%, Oroshi 48.8%. While Rubik and Rrëshen mark respectively 33 and 15.7%.

Municipality of Dibra

Dibra is an agrarian area, with tourist potential. In terms of economic development, the Dibra area is positioned in the last areas (58%) compared to the national average GDP (indexed at 100). The GDP for the area of Dibra is 177,111 ALL per capita, while at the national level it is 305,229 ALL. The sectors that contribute the most are agriculture, forestry, tourism,

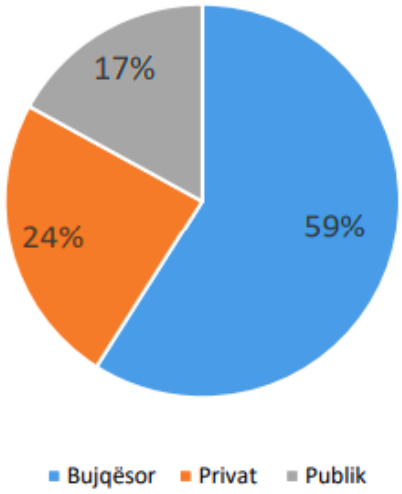
construction, mining and hydropower.

Dibra is an area where the economy of the rural area and the economy of the urban area are clearly distinguished. The economy of the urban area is mainly based on the services, trade, hotel and tourism, processing and construction sectors.

While the rural area has a clear agricultural character. It is based on the household economy of small agricultural and livestock farms, with a growing trend.

Macroeconomic indicators for Dibra are not very promising. It ranks last in terms of per capita income, level of employment, etc. As a negative indicator for economic development in the area of Dibra, may be the lack of foreign investment, which have been of interest only to the natural resources of gypsum, chromium and hydropower, but we still do not have any foreign investment in the area. Large investments in the Dibra area are mainly in the energy sector, with domestic and foreign investments. There are 4 HPPs built in Lura and 2 HPPs under construction in the municipalities of Selishte and Muhurr.

The employment structure is based on the agricultural sector, the private sector and the public sector. Agriculture and the private sector are the main sectors that have maintained the share of employment in recent years, still continuing to dominate. The data show that we have the highest number of employees in the agricultural sector (58.6%) and in the private non-agricultural sector (24%), while employment in the public sector is 17.4% in 2014. The gender structure of the labor force, e measured this in 2014, consists of 13% female and 87% male.



Graph 2: Employment sectors in the Municipality of Dibra

5. IDENTICATION OF NEGATIVE ENVIRONMENTAL IMPACTS

5.1 Methodology for identifying negative impacts on the environment

To predict the impacts on the environment, the design team is based on:

- Creation of a database with answers to questions related to environmental issues and their analysis
- Analysis of project implementation in the field
- Information and consultation with the community and other stakeholders

The topics of the questions that are formulated in order to identify the impacts and evaluation of this project on the environment are:

- Is the project fully compliant with the relevant laws and regulations?
- Will the project affect the socio-economic conditions of the host community and the health of the residents?
- Will they have any long-term or permanent impact on the ecological systems or natural resources of the locality or those of national or regional interest?
- Will the various components of the area ecosystem be affected?

Analysis of project implementation in the field:

This takes into account the equipment, machinery, auxiliary materials, the manner of implementation and realization of the project, the time, deadlines and the necessary team for its realization.

Factors and Criteria Applied to Potential Impact Assessment

To determine whether a negative impact on the environment, during the implementation and operation of the project, should be reduced or mitigated, will be based on one or more of the following factors:

- Comparison with accepted laws, regulations or standards (national and international guidelines and standards)
- Consultation with relevant decision makers and environmental agencies, etc.
- Preference of pre-set criteria, such as protected areas or areas with high environmental sensitivity
- Compliance with government policy objectives
- Acceptability of the implementation of the program by the local community and by the residents of the area where the program will be implemented.
- Gathering as much information and knowledge related to the project topic, the highest level and a better professional judgment of the team that drafts the environmental assessment.
- Better knowledge and assessment of ecosystem values.

5.2 Significant impacts during construction

5.2.1 Discharges to water

During the construction phase of the project we will not have significant impacts on surface and groundwater.
The proposed road will run almost the entire existing road and therefore will not have adverse effects on surface and groundwater. A negative impact can occur in small drainage networks. The following possible impacts may occur during the reconstruction of the road:
• In groundwater, as a result of accidental spills of fuel and oils from construction vehicles and machinery used during the reconstruction of the road;
• In surface waters as a result of temporary interruptions from drainage canals or indiscriminate pollution during the reconstruction of the roaad;

5.2.2 Impacts on air

Emissions to the atmosphere can come from a variety of sources. Dust from vehicles and transport vehicles will be present in the project area throughout the reconstruction works. Also the release of fuel gases, coming from vehicles and machinery, will affect air quality.
All machines that work on fossil fuels (oil) must be regularly maintained and checked in order to minimize emissions from vehicles and machinery. During the road reconstruction phase we will have dust discharges that may have a temporary effect on air quality throughout the area that includes the road to be reconstructed.
During the construction phase, dust emission is related with various activities such as removal of arable land, excavation of soil material and filling with excavation material.

5.2.3 Impacts on the land

Impacts on the ground will be minimal, because hazardous substances that can contaminate the soil will not be used. Also the impacts on the ground will be minimal, as the reconstruction of the road will be carried out on the existing road footprint. During the construction phase of the project, special attention will be paid to excavation waste management in order to minimize impacts on the soil.

5.2.4 Noises and vibrations

During the reconstruction works will be used different vehicles. However, given the nature of the works, the noise level will only be at the construction site.
The noise that will be generated will come mainly from road vehicles and the use of various transport vehicles, generators, vehicles that will be used for digging the road layers, noise created by personnel working in the area, etc.

Noise can be created by many construction actions and depends on factors such as: the type of equipment, the actions to be performed and the conditions of the machinery used. The predominant type of noise for most construction equipment is the engine, usually with diesel and without muffler. Noise generating machines will be calibrated and controlled according to EU standards in relation to noise caused in the environment.
Vibrations can be generated during the road layer excavation phase by used machinery.

5.2.5 Impacts on flora / fauna

Interventions that will be carried out for the reconstruction of the road will not affect the flora and fauna of the area. Since the road footprint will cross the existing road we will not have habitat fragmentation. Movements of working machinery on construction sites will cause disturbance to fauna habitats.
From kilometer 30 + 240 to kilometer 32 + 300 we have a deviation of the road from the existing footprint. The length of the road deviated is 2 km. As a result of the deviation of the road segment from the existing footprint, will be followed all procedures according to the forest legislation for the removal of this area from the forest fund. The procedure of removing the area from the forest fund will be performed in accordance with Law no. 57/2020 "On Forests" and DCM No. 1353, dated 10.10.2008 and DCM No. 1354, dated 10.10.2008 (amended by: DCM no. 434, dated 8.06.2016), (amended by: DCM No. 591, dated 9.10 .2018). The following table gives all the steps and timelines that will be followed for the removal of this area from the forest fund.

The procedure of removing the Forest Fund		
No.	**Steps**	**Clarification**
1	ADF makes a request to the "Ministry of Tourism and Environment " for the removal of an area from the forest and pasture fund, respectively in support of DCM no. 1353, dated 10.10.2008 and DCM no. 1354, dated 10.10.2008 (Updated with: DCM no. 434, dated 8.06.2016) (Updated with: DCM No. 591, dated 9.10.2018)	The request is accompanied by the following documents: a) The notification of the Ministry from the state body that has approved the activity where it is clarified that for the needs of exercising the activity approved by him, the requested surface should be removed from the forest fund; b) Notarized copy of the permit or the document with which the activity has been approved by the institution authorized by law; **c) The planimetry of the surface required in the digitized and georeferenced topographic map with a scale of 1: 10000, where the main elements such as natural borders, relief, eventual objects are identified, as well as any other planimetry in a more detailed scale;** d) Written approval for the continuation of the

		procedures of removal from the forest fund by the mayor, within whose administrative territory is the forest area, which will be subject to the procedures of removal from the forest fund.
2	The Ministry may return to the applicant the technical documentation submitted for additions and clarifications. The time for completing the documentation is not calculated in the deadline set for the review of the request, which is one month.	
3	The Ministry, after submitting the request, requests the structure responsible for forests and pastures in the municipality to identify the required parcels and sub-plots and draft a technical report for them, within 1 week from the date of receipt of the request. This report is forwarded to the ministry within 10 (ten) days from the date it requested.	After reviewing the above documentation: a) The Minister issues the order for removal from the forest fund for forests and land with forest vegetation with an area up to 1 ha; b) The Ministry prepares the draft decision for the removal from the forest fund for forests and land with forest vegetation with an area over 1 ha up to 100 ha and sends it for review and approval to the Council of Ministers. c) The Ministry prepares the draft law for the removal from the forest fund for forests and land with forest vegetation with an area over 100 ha and sends it for review to the Council of Ministers, which, when it finds it regular, forwards it to the Assembly for approval.The practices of the draft decision and the draft law are co-signed by the Minister of Environment and the Minister who has approved the activity.
4	After the approval of the removal of the surface from the forest fund: a. the relevant directorate of the forest service makes the update in the forest cadastre in area and in volume and forwards the data to the Ministry; b. the ministry updates the National Forest Cadastre; c. the relevant immovable property registration office deregisters it from the category of occupied land and registers it in the new category of use.	The surface that is removed from the public forest fund according to this decision, passes to another destination of use, but in any case remains in public ownership.

5	The value of the removed forest area and its infrastructure is paid by the applicant before the entry into force of the approval act, mentioned in letters "a", "b" and "c", of point 8, of this decision, and is paid in the bank account of the municipality, within whose administrative territory is the forest area which will be subject to the procedures of removal from the forest fund.	In the case of construction of linear infrastructures such as roads, overhead or underground transmission lines of electricity, oil, gas, telecommunications as well as cable cars, which, in accordance with the approved projects, require a route cleared of vegetation with a wider width less than 10 m, for cadastral effect, only a reduction in volume is made, but not in surface.
6	For the service performed by the Ministry according to this decision, the applicant pays a service fee in the amount of 20,000 Lek. The fee is paid to the bank account of the Ministry at the time of submitting the request and is non-refundable even if the request is not approved.	

5.2.6 Waste produced

The solid waste that will be produced from the construction in this area will be the inert waste from as a result of the excavation of the road layers.

Regarding the inert waste that will be generated during the excavations for the reconstruction of the road, they will be managed in cooperation with the Municipality of Mirdita and Dibra and with a licensed operator equipped with a license of category III.2.B “Collection and transportation of inert waste ”, referring to Law no. 9010 dated 13.02.2003 “On the environmental management of solid waste” amended by: Law No. 10 137, dated 11.05.2009 and DCM no. 575, dated 24.6.2015 "On the approval of requests for inert waste management".

The responsible municipalities will contract a licensed inert waste management operator to be generated during the excavations. We also emphasize that some of the inert waste that will be generated during the excavation phase, will be used as filler material.

Waste that will be generated during the reconstruction phase, referred to Decision no. 99, dated 18.02.2005 "On the approval of the Albanian Waste Catalog" are:

17 01 01 Concrete

17 01 07 Mixtures of concrete, brick, tile and ceramic, other than those mentioned in 17 01 06

17 05 04 soil and stones other than those mentioned in 17 05 03

17 09 04 Mixed construction and demolition waste, other than those mentioned in 17 09 01, 17 09 02 and 17 09 03.

We also emphasize that a part of the soil waste that will be generated during the excavation phase, will be used as filler material.

Earth works and demolition	Quantity
Excavation of soil with excavator on tires 0.25 m³	705,583 m^3
Excavation of rock material fragmented with excavator 0.5 m³, rock, in foundations width >2 m, unloading on vehicle	351,869 m^3
Demolition of stone structures + transport	6,306 m^3
Prishje struktura prej betoni + transport	1,570 m^3
Demolition of concrete and RC structures + transpor	433 m3
Total	**1,065,761 m^3**

Table 11: Volume of waste that will be generated

Nr.	Activity	Typology of used machinery
1.	**Construction site**	Vehicles for the transport of materials
		Working vehicles
		Excavators
		Mechanical Vehicles
		Vehicles
2.	**Foundations and supporting works for constructed buildings**	
		Concrete mixer with pumping system
		Various equipment (compressors, vibrators, saws, iron breakers, etc.)
		Vehicles
3.	**External systems**	Concrete mixer
		Stabilizer - leveler
		Compactor roller
4.	**Removal of the construction site**	Vehicles
		Mechanical Vehicles

Table 12: Use of machinery during site activity

5.3 Summary of potential negative impacts

For the environmental and social impact assessment, is used a 5-point rating scale (to assess the magnitude of the impact) as well as the combination with the duration of this 3-grade impact assessment (see rating scale below). For visual convenience the magnitude of the estimated impact varies according to the degree with the effect of the selected colors.

+++++	The activity has a high positive impact
++++	The activity has a positive impact above average
+++	The activity has an average positive impact
++	The activity has a low positive impact
+	The activity has a very low positive impact
0	Activity has no impact (neutral)
-	The activity has a very low negative impact
--	The activity has a low negative impact
---	The activity has an average negative impact
----	The activity has a negative impact above average
-----	The activity has a high negative impact

Table 13: Impact rate

1	The impact is short term
2	The impact is medium-term
3	The impact is long-term

Table 14: Duration of impact

Impact Receiver	Source of Impact	Duration Physical extension, Size	Reversibility to the initial state	Impact scale	Needs for mitigation measures
Soil					
Soil contamination	No	1	+	-	Action plan
Negative impacts on the physical characteristics of the soil	Carpentry Concreting Asphalting Vibration	1	--	--	Rehabilitation Plan; Following the Standards of works;
Biodiversity					

Potential vegetation damage	Excavation of existing road layers; Leakage of oil from the working machinery;	1	--	--	Implementation of the regulation. Optimal technical conditions of vehicles. Pollution prevention
Fauna					
Disturbance of species, accidental damave of them	Emissions of gases and dusts Circulation of machinery needed to carry out interventions	1	---	--	Implementation of the regulation. Optimal technical conditions of vehicles. Pollution prevention.
Air quality					
Increase of CO2, CO, NOx, SO2, LN, HC (VOC) emissions	Increase in air emissions from diesel combustion used by machinery but also by other accompanying vehicles	1	--	--	Use of covers on trucks and storage site. Transportation to be performed at free traffic schedules. Fuel to be quality. Periodic inspection of working tools for discharges. Efficient use of vehicles. Wetting the object during construction works
Water quality					
Surface water	Interventions for road reconstruction	1	-	-	Cleaning the environment in any case of discharge of pollutants into the environment

Underground water	Interventions for road reconstruction	1	-	-	Cleaning the environment in any case of discharge of pollutants into the environment
Hydrology					
Drainage / discharge system, hydrological condition, decantation, erosion	Excavations for road reconstructio n; Oil leaks from working machinery;	1	--	--	Drainage system. Retaining walls.
Floods	NO	NO	NO	NO	The terrain has slopes and waters drain into the main drainage canal.
Waste					
Increase of urban waste	Increase of urban waste from the human activity of the employees who will operate in this project	1	-	-	Differentiated landfills.
Inert waste	Excavation of existing road layers;	1	--	--	Landfill inside the construction site. Transport to the landfill designated by the Local Administrative Unit Reuse
Landscape					
Landscape alteration	During the work phase and after the completion that takes the final landscape	1	-	++	Based on the project the final landscape will increase the values of the area.

Natural and cultural monuments / Protected areas	Road reconstruction works	1	-	-	Following the works according to the plans approved by the National Council of the Territory
Noises					
Increased noise level	Increased noise level from the movement of vehicles and trucks	1	--	--	Vehicles with optimal testing. Works during appropriate hours.
Traffic					
Traffic	Potential increase of traffic from the movement of trucks and vehicles during the implementation of the project	1	--	--	Transportation will be carried out during the hours that avoid the peak of traffic and in those areas that avoid as many inhabited places
Social Impact					
Social Impact	Potential negative impacts on the community related to the identified negative impacts	1	-	-	The understanding of all residents will be required for the optimal development of the project. Residents of the area will be involved in the project.

Table 15: Potential negative impacts without mitigation measures

Potential impact factors related to the construction site phase

		CONSTRUCTION	Construction site	Excavations and soil movements	External Regulation	Removal of the construction site	GENERAL PROCESS
High potential impact Average potential impact Low potential impact Negligible potential impact **SUMMARY IMPACT MATRIX (SITE PHASE)**							
ENVIRONMENTAL COMPONENTS							
Atmosphere	Emissions of gases						
	Dust						
Aquatic environment							
Land and subsoil							
Noises and vibrations	Noise						
	Vibrations						
Lighting							
Landscape							
Vehicle traffic							
	Fossil fuels						
Energy	Electrical energy						
	Other energy sources						
Waste	Recovered						
	Non-hazardous						
	Hazardous						

The table shows a more or less non-problematic framework in terms of impacts created by the construction site.

5.4 Impacts on the transboundary environment of the project

The project "Review of the existing project for the reconstruction of the road segment Perlat - Kurbnesh - Krej Lure and Design for the reconstruction of the road segment Krej Lure - Fushe Lure" will not have any impact on the cross-border environment.

5.5 Positive impacts on the environment of the project area

Positive impacts in the project area are evidenced both in the environment and in the social aspect.

Impact	Impact Scale
Full transparency on the implementation of this project, with stakeholders and developers of this project through a series of meetings and consultations and discussions open to all.	++++
Employment of employees in this project	++ +
Additional services provided by the community to help meet the requirements of employees and other subcontractors participating in the implementation of this program.	++++
Increasing the accessibility of the areas in which the Erseka- Leskovik road passes	+++++
Improving the landscape of the area	+++++

Table 16: Positive impacts in the project area

6. POSSIBLE DURATION OF IMPACTS

The following table presents the phases in which the project will be developed.

	Description	Time Schedule																	
No	**Works Category**	Month-1	Month-2	Month-3	Month-4	Month-5	Month-6	Month-7	Month-8	Month-9	Month-10	Month-11	Month-12	Month-13	Month-14	Month-15	Month-16	Month-17	Month-18
I	EARTH WORKS AND DEMOLITION																		
II	PAVEMENTS																		
III	MINOR STRUCTURES (Culverts, bearing and retaining walls, ditches, drainages)																		
IV	MAJOR STRUCTURES (Bridges)																		
V	TRAFFIC SIGN WORKS																		
VI	SIDEWALKS																		
VII	OPTIC FIBERS																		
VIII	WORKS FOR STORM WATER DRAINAGE																		
IX	ELECTRICAL WORKS																		

7. PROPOSED MEASURES FOR ENVIRONMENTAL PROTECTION

7.1 Main mitigation measures to be taken during construction

Environmental impact assessment should influence the provision of solutions to avoid pollution and protect the environment. Environmental protection is in itself a series of mitigation and preventive measures.

In general we will provide some of the measures that will be implemented by the contractors for the implementation of the project. Negative impacts on the environment during road reconstruction are at low levels. Some of the key measures to be taken are summarized as follows:

- Wetting the road during the reconstruction works, and washing the vehicles before leaving the construction site to minimize the rise of solid particles (dust) in the air.
- Municipal solid waste that will be produced in the facility to be deposited in the places determined by the Local Administrative Unit and to place sufficient bins for the number of employees that will be part of the project.
- To safely manage inert waste according to DCM no. 575 "On the approval of requirements for inert waste management".
- Surface water drainage system to be repaired from damage.
- Respect the hours of public tranquility and do not work during late hours.
- Transport vehicles will circulate at low speeds in residential areas.

Recommendations for mitigation of impacts	
Land	
Land Utilization	Performing the activity within the coordinates given in the report. Observance of technical requirements and standards.
Biodiversity	
Vegetation Potential damage of vegetation	Protection used while working inside the construction site, soil moisture.The border areasnot to be violated in any circumstances.
Fauna	
Disturbance of species, their accidental damage	The Technical Director of Works has the task of relocating any species living within the project area as well as their treatment to the veterinarian in case of accidents.
Air quality	

Increased emissions of CO2, SO2, NOx, PM, HC (VOC) from burning fuel of moving vehicles	Vehicle with optimal testing. Spare parts inside the construction site for emergencies. Action plan in case of leaks. Efficient use of motor vehicles. Use of quality fuel. Periodic cleaning of the construction site and work tools.
Drainage system	
Drainage system	Rehabilitation, systematization and discipline of the drainage system (surface water drainage)
Waste	
Increase of urban waste from the human activity of the employees who will operate on the construction site	Differentiated landfill. Transport to the landfill designated by the Local Administrative Unit.
Noise	
Increased noise level from vehicle movement	Use of work vehicles and transport during appropriate hours
Road traffic	
Road Traffic Increasing the flow of vehicles	Mobility will be studied to be performed at times when traffic peak is avoided.

Table 17: Recommendations for Environmental Impact Mitigation

7.2 Design phase

The following measures will be taken during the design phase:

All sub-project phases will be carefully selected to avoid or minimize the potential impact on the environment and surrounding communities.

Construction works will be located, designed and oriented to minimize potential soil displacements and diversion of potential water resources.

7.3 Construction phase

In view of the results of the impact assessments, the following measures will be taken to mitigate the potential impacts on the environment during the reconstruction of road:

- The existing road, where layer excavations will be carried out, will be sprayed with water periodically up to three times a day (dry days) and especially if these sites are near sensitive receptors, such as habitats.

- Tested vehicles and machinery will be used and their maintenance will be done in accordance with the standards of the respective emissions in the designated place inside the construction site.
- Operational work on the construction site will be carefully planned and coordinated to minimize potential noise from construction machinery and vehicles.
- The operation of the construction site will be carried out according to the Labor Code and the operation schedules will be posted at the entrance of the construction site.
- The use of noisy machinery, such as piledrivers and vibrators, will be prohibited at night.
- In cooperation with the relevant authority, a traffic management plan will be drafted before the start of the foreseen interventions.
- Soil masses and inert materials generated during the excavation phase will be collected and managed in order to rehabilitate the squares / green spaces, to reduce pollution and its possible transfer from their displacement.
- Construction materials will be stored in suitable and covered places to minimize the emission of dust particles PM10.
- In the construction sites will be installed 3 containers with a volume of 200 liters each, for integrated waste management. The containers will be equipped with the appropriate code and color for municipal solid waste. The amount of waste generated will be collected by the Local Unit and / or by the Recycling Companies.
- Vehicles for transport of inert materials will be covered and tires will be cleaned before their exit to the urban infrastructure, to avoid the scattering of dust particles in the air and possible pollution of road infrastructure.
- The area where the project will be implemented will be equipped with appropriate signage, informing about the possible safety risks of employees and the public, as well as its entire perimeter will be surrounded in order to prevent unauthorized access to the construction site.
- Sensitive Areas to potential erosion will be systematized and intervened by building the necessary infrastructure.
- Employees will be trained in the rules of operation at work and will be familiar with the terms of potential impacts on the environment of the area, as well as measures to be taken to minimize the negative impacts, in order to "Environmental Protection" and the application of " The Principle of Sustainable Development ".

Regarding the road segment that crosses the border of the Central Zone of the National Park, specific measures will be taken for the protection of the environment and biodiversity as follows:

- Implementation of legislation in force related to biodiversity and protected species
- The movement of vehicles which will be used during the road construction phase to be carried out at low speed in order to avoid the rise of dust.
- Covering loaded trucks will reduce dust build-up along the road axis and consequently impact on vegetation near the road trail.
- Along the road segment that crosses the border of the Protected Area and within it will be placed the appropriate signage which warns the presence of animals in order to avoid their damage by road users.
- Use of road signs to reduce the speed of vehicles in the protected area;
- The culverts and bridges that will be built will serve as access roads for animals, avoiding their accident / damage by road users.

8. ENVIRONMENTAL MANAGEMENT PLAN

The EMP for a Project component or subproject shall contain:

- Assessment of the environmental impacts predicted in different phases, especially during construction, operation (including maintenance) and decommissioning, the time periods during which the above phases will be performed, their scale, purpose and consequences (s).
- Determining the acceptable level of each impact, especially in relation to time period, duration over time, scale, consequence (s), cost (s), and legal permissible levels.
- Conditions and measures to be taken to mitigate these impacts, which have the potential to emerge at any stage, who will be responsible for them, if the technical design needs to be improved, or through safeguards during construction, or other methods, the costs of possible, implications for project outcomes, etc
- Resources and methods required for monitoring, measurement and implementation (what is to be measured, when and where, by whom and why); institutional responsibilities for each action; and the necessary capacity building requirements, and the respective costs of each element.
- The EMP will contain two separate documents: a Mitigation Plan, which deals with the aspects described above, and a Monitoring Plan, which deals with the aspects described above. They are expected to be prepared at the time of finalization of the technical project and must contain all the requirements specified in the Environmental Impact Assessment Report.
- The LGU or the proposers (if they are not the same) will be responsible for the preparation of the EMP. However the terms of reference of the project designer include the preparation of the EMP.

9. ENVIRONMENTAL IMPACT MONITORING PROGRAM DURING THE

PROJECT IMPLEMENTATION

9.1 Environmental monitoring purposes

The purpose of environmental monitoring for this project, is to provide data through which, to assess whether the development of the activity is in accordance with environmental laws and standards related to it, to assess the degree of impact (if any), as well as to assess the environmental performance of its management in the context of continuous improvement.Monitoring for the parameter we are interested in is done through repeated measurements, taken with a sufficient frequency, to make it possible to assess the state of the environment and its changes over time.

9.2 Monitoring Objectives

- To compare the quality and condition of the environment before the start of the activity with that during the construction of "Reconstruction of the road Erseka - Leskovik".
- Monitor emissions (if any) at all stages of project development in accordance with the legal norms and standards of Albania and the EU.
- Determine whether potential environmental changes are as a result of developments in activities carried out in the project region and whether there are cumulative links and impacts to the proposed project.
- To determine the effectiveness of remedial measures implemented by project development actors in the region.
- To determine long-term impacts (if any).
- To determine the duration of the return to normalcy of environmental quality in the project region, in cases where it is estimated that there are impacts and impacts on it.
- To create an environmental quality archive, a database that can be used in the future.

9.3 Legal Basis of Monitoring

Environmental monitoring is a legal obligation, the way, frequency and elements of monitoring are different for different activities.
Legal requirements for monitoring:
- Law no. 10431 dated 09.06.2013 "On environmental protection", chapter VI "monitoring of the state of the environment";
- The entity is obliged to conduct periodic monitoring according to the requirements set out in the terms of the Preliminary Decision of the EIA.

Legal framework of Monitoring

Law No. 10266 dated 15.4.2010	To protect the air from pollution
Law no. 9774 dated 12.07.2007	For environmental noise assessment and

	management
DCM No. 1189 dated 18.11.2009	On the Rules and Procedures for the Design and Implementation of the National Environmental Monitoring Program
DCM no.103 dated 31.03.2002	"On environmental monitoring in the Republic of Albania"
DCM No. 435, dated 12.09.2002	On the approval of air emission norms in the Republic of Albania
DCM No. 803 dated 04.12.2003	For the approval of air quality norms
Instruction No.8 dated 27.11.2007	For noise limit levels in certain environments
Instruction no. 6527 dated 24.12.2004	On the allowable values of air pollutants in the environment from the emissions of gases and noises emitted by road vehicles, and how to control them. Amended by: Instruction no. 12 dated 15.06.2010

Table 18: Legal framework of Monitoring

In accordance with the characteristics of the implementation and construction of the road and in accordance with the legal basis on monitoring, we recommend monitoring the following elements:

Monitoring of environmental parameters

Nr.	**Monitoring**	**Parameters to be monitored**	**Time period**	**Frequency**	**Liability**
1	**Air Quality**	PM_{10}, $PM_{2.5}$, SO_2, NOx, CO , CO_2	From the beginning of the project until its completion	Every 6 months	Environmental Expert
2	**Noise emission**	Noise level in dB	From the beginning of the project until its completion	Every 6 months	Environmental Expert
4	**Cases, possible incidents in the workplace**	Registration and reporting of treatment	From the beginning of the project until its completion	Every 3 months	Security Officer
5	**Malfunction or various possible defects during operation**	Are Registered, reported	From the beginning of the project until its completion	Every 3 months	Security Officer and Works Manager

6	**Damage to vegetation or crops**	Registered	From the beginning of the project until its completion	Every 6 months	Environmental Expert
7	**Monitoring the implementation of the conditions of the Preliminary EIA Decision**	Monitored, are registered, reported	From the beginning of the project until its completion	Every 6 months	Environmental Expert & Relevant Inspectorate

Table 19: Monitoring of environmental parameters

Monitoring of the natural resources, air, water, land, urban discharges, etc., is performed according to some scientific criteria in terms of monitoring, collection and analysis of samples. It aims at data collection to observe and predict the role of the human and natural factor in changes in the environment in which it is active. The main objectives of monitoring are:

- To detect changes and to quantify exactly the tendencies (trends) of resource development.
- To provide information on the relationship between the conditions (conditions) of resources and their causes.
- To identify the quality of the environments where people conduct their life activity, in order to take the necessary measures to improve them.
- To evaluate the effectiveness of natural resource management policies and actions.

Monitoring is the task of the investment company at the individual level for points Ç1, Ç2, Ç5, Ç6, Ç7, Ç8 of Decision No.1189. dated 18.11.2009 "On monitoring in the Republic of Albania"
The investor will monitor these indicators of environmental pressure only during the construction phase and specifically the following elements:

- For air must monitor Suspended Solid Matter (LNP) and noise (dB).
- For water, discharges during the construction of the facility from washing machines / equipment
- For land, no obligations apply

The frequency of monitoring is determined every 6 months to carry out measurements and every three months to submit a short periodic report to reflect the work done accompanied by photos.

10. CONCLUSIONS AND RECOMMENDATIONS

- Implement the reconstruction project and use quality materials and elements to create an aesthetic appearance integrated with elements of the area.
- Avoid using the generator to the maximum and reduce noise in the late hours.
- Carry out wetting of excavated and inert surfaces, as well as communication roads.
- Fence the construction site during the works and place warning signs for the dangers for passers-by and employees.
- Wash vehicles before leaving the paved roads of the area.
- Reduce traffic during peak hours, so as not to create heavy traffic in the area.
- Do not use vehicle horns in residential centers and traffic should be slow.
- To place containers for keeping the premises clean from urban waste.
- Put up awareness posters for employees and residents for a clean environment.
- The investor complies with the obligations set out in the Preliminary EIA Decision to be approved by the NEA.
- The entity to comply with all measures set out in this EIA report.
- The entity is aware of the legal framework for the environment and its changes.
- Carry out environmental monitoring according to applicable laws.
- As a result of the project implementation, significant environmental and social impacts on human health will not be absorbed. Consequently the predicted impacts can be minimized by implementing the measures mentioned above.
- The impact identification analysis shows that the impact will be direct, caused only by the reconstruction of the road.
- Impacts will be mostly temporary and not permanent.
- Appropriate measures have been proposed for the identified impacts in order to minimize and eliminate these impacts.
- It is the task of the project implementers to integrate the necessary elements proposed for the prevention, minimization and elimination of negative impacts on the environment, health and social aspect.
- It is the duty of the Local Administrative Unit to also strictly implement the obligations set out to guarantee the protection of the environment and health.
- It is the duty of all contractors and various subcontractors as during the construction phase to carefully implement the relevant obligations provided above.

Redi Struga

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