TIRANA RING ROAD SEGMENT II
FEASIBILITY STUDY

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Executive Summary

The municipality of Tirana considers the construction of an interior ring road, a major element of its long-term vision to reduce traffic congestion and improve the city’s overall transport infrastructure, as expressed in the General Local Territorial Plan, adopted in 2017. The route of the ring road will follow existing city streets over the city, which will be widened, with the exception of the current local detailed planning (LDP) area, where a new road segment need to be constructed. The LDP area is densely built, and the construction of the ring road segment will require acquisition of multiple private properties, especially residential ones.

The LDP area includes 5 structural units: 274, 277, 278, 459, and 460. The area is bordered by Rruga e Kavajës in the north, Rruga Shqyri Bërxolli, Rruga Myslym Shyri in the south, and Rruga Him Koli. Main interior streets are Rruga Islam Alla, Rruga Hajdar Hidri, and Rruga Besim Imami. The proposed ring road essentially bisects the LDP area.

Planning and development of such vital infrastructure as the ring road segment is being made under the constraints of scarce public resources for infrastructure investments. The municipality views construction of the ring road segment as an opportunity to achieve urban land intensification for over 12 hectares of land, as designated in the GLTP. This means that higher-intensity development will take place, next to infrastructure construction, and engagement of property owners and developers as proportionally equal partners in the development of the project is foreseen.

The purpose of this feasibility study is to present viable options for developing the LDP area in association with the new roadway, and to provide a strategy for assisting the municipality with land acquisition for the new ring-road segment through land readjustment. The feasibility study will ensure the financial and economic feasibility of the draft LDP, and therefore its implementability. The study includes four primary components:

1. A financial analysis, which addresses public and private development cost assumptions, revenue assumptions, financial modeling, and a financial viability assessment.
2. A proposal for land acquisition strategy, which provides a mechanism for reorganizing the size and number of private parcels, so that they are suitable for the proposed development, respect the principles of equity and proportionality in land development, and make sure that some land for public infrastructure can be compensated from the profits generated in the private developments.
3. Conceptual site designs to guide future development, including the configuration of development parcels/blocks, general building envelopes and floor area ratio, streets layout and connections, green space and open space.
4. A process for implementing financial instruments for land development as economic incentives for land acquisition and infrastructure construction and maintenance.

The four components are highly interrelated. Given the limited resources available to the municipality, it is critical that land acquisition be managed to minimize the exposure of the municipal budget, while at the same time creating financially viable design concepts and an attractive mix of economic incentives for property owners and interested developers to embrace and invest in the long term transport and development vision for the LDP area.
The findings and recommendations of the study are intended to provide the municipality of Tirana with a clear decision-making direction with respect to the future commitment to, and investment in, redevelopment of the LDP area.
Summary of Findings

Conceptual Design

As specified by the municipality, the baseline conceptual design takes a starting point from the established road system of the LDP area. Between organizing traffic efficiently and making use of the existing road network on one side and constructing a new ring road segment that goes through the area, the municipality has chosen the latter option. This decision is made in the General Local Territory Plan of Tirana. For the sake of this LDP, the municipality provided road profiles (as defined in the GLTP) for new and to-be-expanded roads, as well as for the ring road segment. Existing parcels were then readjusted to create plots that are suitably-sized for development, comply with the development conditions defined by the municipality in the GLTP regulation, and ensure new public green space added to the area.

The layout of the road network is the main organizational strategy for the designation of the different subunits and the formation of blocks of development parcels.

Financial Analysis of Private Development

The proposed floor area ratio of private development parcels is defined per parcel/block (in compliance with the GLTP) to maximize that amount of value that goes to the public, while simultaneously ensuring
the financial feasibility of development. Owners of existing properties will be compensated for their land through a portion of new development and/or in cash from the developers. The municipality, being a landowner, is also a shareholder in development and receives its share through different means, such as direct compensation, social housing, land for public infrastructure, or investment in public infrastructure by the developer.

This means that the residual value of new development is extremely important. The residual value is what is left over after all construction costs are paid for and the developer receives the expected profit. The residual value is used to pay existing property/land owners for their land as part of an agreement between them and the developers and encompasses also the ‘added value’. The latter is the value that can be captured by the municipality to fund land acquisition for public uses, or to fund public investments.

The following table summarizes the proposed build-out and estimated value of private parcels in the conceptual design:

Table 1- Summary of LDP Build-out and financial viability

| UNIT 274 | Subunit 274.1 | 2,364 | 5,730,775 | 57,308 | 288,539 | 573,078 | 1,121,552 | 262,800 |
|          | Subunit 274.2 | 13,856 | 29,792,160 | 297,922 | 1,489,608 | 2,979,216 | 5,992,319 | 1,422,644 |
|          | Subunit 274.3 | 28,643 | 61,584,900 | 615,849 | 3,079,245 | 6,158,490 | 10,940,017 | 2,940,834 |
|          | Subtotal Unit 274 | 44,863 | 97,107,835 | 971,078 | 4,853,392 | 9,710,784 | 17,753,888 | 4,626,278 |
| UNIT 277 | Subunit 277.1 | 42,177 | 90,671,460 | 906,715 | 4,533,573 | 9,067,146 | 16,106,648 | 3,716,763 |
|          | Subunit 277.2 | 18,994 | 42,206,600 | 422,066 | 2,110,330 | 4,220,660 | 7,713,763 | 1,992,049 |
|          | Subunit 277.3 | 9,155 | 20,337,455 | 203,375 | 1,016,873 | 2,033,746 | 3,716,763 | 960,221 |
| Subtotal Unit 277 | 70,626 | 153,215,515 | 1,532,155 | 7,660,776 | 15,321,552 | 27,537,174 | 7,282,688 |
| UNIT 459 | Subunit 459.1 | 8,990 | 19,975,940 | 199,759 | 998,797 | 1,997,594 | 3,650,831 | 942,344 |
|          | Subunit 459.2 | 4,218 | 9,747,000 | 97,470 | 487,350 | 974,700 | 1,839,294 | 454,069 |
|          | Subunit 459.3 | 3,565 | 8,522,250 | 85,223 | 426,113 | 852,225 | 1,612,410 | 383,758 |
|          | Subunit 459.4 | 1,820 | 5,067,500 | 50,675 | 253,375 | 506,750 | 996,893 | 202,363 |
| Subtotal Unit 459 | 16,893 | 43,312,690 | 433,127 | 2,165,635 | 4,331,269 | 8,099,428 | 1,983,034 |
| UNIT 460 | Subunit 460.1 | 25,409 | 52,229,250 | 522,293 | 2,611,463 | 5,222,925 | 8,154,593 | 2,457,131 |
|          | Subunit 460.2 | 7,824 | 17,386,105 | 173,861 | 869,305 | 1,738,611 | 3,177,505 | 820,616 |
| Subtotal Unit 460 | 33,234 | 69,615,355 | 696,154 | 3,480,768 | 6,960,784 | 11,332,488 | 2,777,767 |
| TOTAL 167,016 | 363,251,395 | 3,632,514 | 18,162,570 | 36,325,140 | 64,322,588 | 17,169,746 |

Financial Analysis of Public Development

The main aim of the feasibility study is to find solutions, which reduce the costs for the provision of main road infrastructure such as the Ring-Road and “Çamëria” Street. The following table summarizes public infrastructure costs, based on the average construction cost provided by the Municipality of Tiranë:

Table 2- Public Infrastructure Costs (€)

<table>
<thead>
<tr>
<th>Road</th>
<th>Width</th>
<th>Length</th>
<th>Cost/ ml</th>
<th>Cost in ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ring Road SII</td>
<td>19.5</td>
<td>212.2</td>
<td>320,999.23</td>
<td>68,116,036.61</td>
</tr>
<tr>
<td>Camera</td>
<td>19.5</td>
<td>143</td>
<td>320,999.23</td>
<td>45,902,889.89</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
<td>159,910,760.80</td>
</tr>
</tbody>
</table>

If the municipality were to apply expropriation for creating the space for the roads, the overall costs would increase considerably and entail a total cost of expropriation of 7,828,255 Euro. In addition, besides the financial costs, expropriation has a high social cost, as over 110 property owners will be expropriated at a value, which is considerably lower compared to the market one. Hence, this option
provides considerable financial losses for property owners. The difference between market value and expropriation values is almost 14,000,000 Euro.

However, if the municipality uses land readjustment as a tool for land compensation, the amount of development proposed in the area, can avoid expropriation and accommodate all property owners in the new development through market values.

Recommendations

The feasibility study demonstrates that the construction of the ring road segment and regeneration of the LDP area is economically viable, when undertaken by the municipality systematically. This includes the following steps:

- **Conduct a social assessment prior to initiating implementation.** Public meetings can identify property owners’ and residents’ positions towards the proposed ring road and adjacent redevelopment, as well as their willingness to participate in land readjustment.

- **Design and implement a program for communication and negotiations with citizens at the neighborhood and for carrying out transparency with the citizens at city level.** The process will be sensitive and not immediately accepted by the affected stakeholders. The municipality needs to build trust and be highly transparent in terms of procedures to follow in the short and medium term, until full compensation takes place. At the city level, citizens should be aware of the process and understand benefits and costs. The case could turn into a model for future developments in other neighborhoods, but it is imperative that the municipality takes all of the necessary communication steps to build a successful first case.

- **Adopt land readjustment strategies to reduce upfront costs of land acquisition.** Land readjustment will likely occur in the LDP area even if the municipality does not initiate construction of the ring road segment, because the GLTP foresees area-wide redevelopment and intensification. It is imperative that the municipality benefit from this development opportunity that it is providing to landowners and developers, through guiding the readjustment process and applying financial instruments that capture a portion of the expected increase in land values. Any captured value and opportunity should be turned back to the city in the form of capital investments or compensation for land acquisition for infrastructures. It is extremely important that the cost and benefit analysis and proposal does not favor developers against the landowners and the community at large.

- **Follow the conceptual subunit designs.** The proposed designs confirm the validity of the subunit designations, as the core of a realistic and feasible local detailed plan. If the overall planning vision and economic development potential of the LDP area are to be fully realized, the municipality must show a strong commitment to follow the development concepts.

- **Invite developers to bid for subunits’ development.** Competition will result in higher-quality development and more financial benefits for the municipality than negotiation. It is highly important for the municipality not to enter into one-to-one closed negotiations. Instead it should build and nurture the context for open and transparent competition.
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1.0 The Development Program

1.1 Introduction

1.1.1 Overview of Municipal Development and Need to Develop an LDP

Tirana is Albania’s capital and largest city. It is also the country’s fastest-growing city according to the GLTP. The transport system of Tirana depends primarily on private motor vehicles. The growth in car travel has outpaced the capacity of the existing road network in parts of the city, and traffic congestion is a major concern.

Tirana’s General Local Territorial Plan envisions a comprehensive strategy of public transport, traffic management, and the road network improvements to solve the transport problems in the city with a time horizon of 2030.
One major component of the transport strategy is the construction of a ring road through the urban territory to help alleviate traffic congestion and to increase access to the city. Eleven of the 12 projected segments of the proposed ring road utilize existing streets, which are to be widened to increase traffic-carrying capacity. Segment II in the LDP area is the only segment where the route of the proposed motorway does not follow an existing street. Segment II is critical because, when it is constructed, the ring road will be functional. Widening existing streets in future sections would then bring the motorway to its full traffic-carrying capacity.

The proposed ring road route in Segment II is approximately 475 meters in length and effectively bisects the LDP area. The total local detailed planning area is approximately 12.2 hectares and encompasses structural units 274, 277, 278, 459, and 460. The LDP area is bordered by Rruga e Kavajes on the north, Rruga Shyqyri Bërxolli on the east, Rruga Myslym Shyri on the south, and Rruga Him Koli on the west. Main interior streets are Rruga Islam Alla and Rruga Hajdar Hidri, which run north to south, and Rruga Besim Imami, which runs east to west.

Constructing Segment II would require acquisition of private property for the roadway, including both land and buildings. The municipality also foresees regeneration of the entire area. The project aims not merely to relieve traffic congestion in the municipality but also to promote subunit private residential and commercial developments.

Constructing the ring road segment and related regeneration meets the legal criteria for major redevelopment and infrastructure improvement, which means the construction will have a significant impact on land use and development. Construction will also require mandatory expropriation of private property. Major redevelopment, major new infrastructure, and expropriation trigger the need for a Local Detailed Plan (LDP), per Article 68 of Decision of Council of Ministers (DCM) No. 686/2017 (On the Scope and Purpose of the LDP).

1.1.2 Scope of Work, Objectives, and Principles of the Feasibility Study

The overall objective of the feasibility study is to provide options for the organized and contiguous development of the five structural units, including the new ring road segment, to improve traffic flow and regenerate the LDP area at higher intensities, as foreseen by and defined in the GLTP.

To this end, the study: (1) provides concept-level parcel block designs at the subunit level as a guide for detailed development proposals; (2) assesses the costs and benefits of redevelopment, particularly the financial impacts; (3) provides a strategy for land readjustment, which allows the municipality to acquire the private property in the proposed ring road segment route at minimal financial cost to the public.

The feasibility study sets out a series of principles for the planning and development of the LDP area. The principles inform both the study’s analysis and recommendations:

- Development will be designed to benefit from and contribute to the ring road improvements.
- Areas of designated public space within the LDP area will be protected and new opportunities will be sought.
- The optimal use of a parcel is not necessarily one that produces the highest intensity, but is one that contributes to the overall betterment, land values, and quality of life of the area.
- Public costs will be kept to a minimum.
- The needs and views of residents and other stakeholders will be considered throughout the planning process.
- The process and any decisions will be openly communicated at city and neighborhood level and will be previously negotiated and agreed with stakeholders, especially landowners.
1.1.3 Methodology

This study was prepared by the municipality with the technical support of the USAID-funded Planning and Local Governance Project at the request of the Municipality of Tirana. The study consists of several key analyses used to identify, evaluate, develop, and recommend alternatives for regenerating the LDP area in association with construction of a ring road segment.

The associated tasks for the methodology include, but are not limited to:

Field survey – including an assessment of building topologies, parcel sizes, transport infrastructure, permeability, and other existing conditions of land use in the LDP area.

Financial analysis – addresses private and public development cost assumptions, revenue assumptions, financial modeling, and a financial viability assessment.

Land acquisition strategy – focuses on land readjustment using various methods to reorganize parcels, financial instrument programs to incentivize the contribution of private land for public facilities, and value capture financing to fund public land acquisition. The strategy minimizes the public costs of acquiring land for ring road construction and public open space.

Redevelopment options – provides GIS-based concept-level parcel block designs, at the subunit level, as a guide for detailed development proposals.

Financial instrument options – determines preliminary options for the application of financial instruments for land development so the municipality can capture some of the increases in property values that result from construction of the ring road segment and from higher permitted intensities on adjacent land.

Assessment of potential environmental impacts – according to Environmental Impact Assessment framework

1.2 Legal Issues

1.2.1 LDP Legal Risks

The following may present legal risks to implementing a local detailed plan. These risks are explained in more detail in this study:

Ownership confirmation from IPRO is lacking for certain properties. This can be considered a risk as in the future, the property owners may be against development. Since one of the main instruments that could be used is land readjustment it means that property owners play a central role in the implementation. Another risks that comes from the absence of information on the specific properties is could be linked with various legal conditions imposed on the property, such as for example mortgage freezing from banks, properties which are in judiciary processes etc. Another risks comes from properties which have been part of development previously. Although, in this case, partnership contracts between the developers and property owners were analyzed in order to overcome this challenge. All of these aspects may risk the delay of the implementation of the LDP and of the ring road segment project thereafter.
1.2.2 Legal Framework

The sections immediately following describe the enabling legislation for local detailed plans, feasibility studies, public-private partnerships, and market analysis.

i) Territorial Planning

Territorial planning in Albania is regulated by Law No. 107/2014 “On Territorial Planning and Development”, as amended. The Law aims to ensure sustainable development, a rational use of current and future resources, the protection of natural resources, and the provision of equal opportunity. The Law defines and explains the core principles and rules on planning; the role, responsibilities, relationships of various institutions involved in the process; the methodology and procedures to be followed; and the hierarchy and content of relevant planning documents. The Law also specifies that the costs and benefits of development should be distributed fairly and proportionally relative to the contribution to development.

Law 107/2014 is supported by two important Decisions of the Council of Ministers: DCM 686/2017 “On Adoption of Territorial Planning Regulation” contains rules for creating, implementing, and monitoring local and national territorial plan, and for achieving a uniformity of planning documents; DCM 408/2015 “On Adoption of the Territorial Development Regulation”, as amended, provides detailed conditions and procedures for developing and implementing development controls.

The General Local Territorial Plan is the legally-mandated framework for the protection and use of the administrative territory of local government units (LGUs). A municipality is required to develop a GLTP, which presents a vision for its future, with a long term strategy for implementing projects that are important to the local government. A GLTP also guides the national government in making
investments in a municipality. A GLTP, as per DCM 686/2017, contains several sub-documents, including: Territorial Analysis and Assessment, which examines existing conditions; a Territorial Strategy, which presents a vision for future development; and a Territorial Development Plan, which is an implementation action plan.

One of the most important elements of the GLTP’s Territorial Development Plan is a land use plan, which defines the structural units of the municipality for which a Local Detailed Plan is required before development can occur. While a GLTP is municipal-wide in scope, an LDP develops more detailed planning concepts for strategic development units of the municipality.

DCM 686/2017 states that LDPs are required for structural units where interventions include redevelopment or public investments in infrastructure and services. LDPs contain the parameters of development within a structural unit or units, known as development passports, as well as indicative maps. The passports regulate use, height, intensity, setbacks, parcels sizes, parcel coverage, floor area ratio, and other site and building features. Together with other planning indicators, these regulations allow a Local Detailed Plan to plan for specific development and investment opportunities, always within the context of the planning framework for the municipality as a whole.

An LDP is not required for all structural units. For units where an LDP is not required, development permission for a given parcel can be obtained by meeting all the planning and development controls for the parcel, following the procedures set forth in DCM 408/2015.

ii) Feasibility Assessment

A feasibility assessment, or study, presents and analyzes options and gives recommendations regarding the design and implementation of a program or project.

The requirement for feasibility studies is both stated and implied in Albanian legislation. Law 107/2014 “On Territorial Planning and Development”, as amended, stipulates that feasibility studies are required for financial instruments programs such as conditioned building intensity and transfer of development rights, as well as for mandatory land development, suspension of development, public easement, right of transfer, and right of preference. Financial instruments are implemented as part of the LDP process. The law and the planning regulation, DCM 686/2017, do not specifically define the feasibility assessment as a legal requirement for an LDP. However, these legal acts do define that financial aspects and cost-benefit considerations should be analyzed and provided within an LDP.

DCM 408/201 “On Adoption of Territorial Development Regulation”, as amended, requires feasibility studies as part of applications for permits from the National Territory Council for projects of major and strategic character. Such projects are found in areas of special importance or have a broad impact on the society and are clearly identified in Article 19 of DCM 408/2015.

Properly executed, a feasibility study will analyze of how successfully a project can be delivered, accounting for all the factors that affect it: economic, technical, legal, managerial, and other factors. This information can determine potential positive and negative outcomes before investing considerable time and money into a project.

iii) Public-Private Partnerships

A public authority responsible for the management of a facility, provision of a service, or the performance of certain works has the right to contract an operator to assume the obligations as a third party based on a contract and specific study for each case.

The public-private partnership, as stated in Article 8 of law 125/2013, “On Concessions and Public Private Partnerships”, as amended, is a form of long-term contractual cooperation between the public contracting authority and the private economic operator, in which the latter undertakes the obligation to deliver the public services to the users or perform works that fall under the responsibility of the contracting public authority.

Pursuant to the type of contract and service to be delivered or carried out, the private party has different responsibilities, such as funding, designing, building/rebuilding/refurbishing a public facility, and operating and maintaining a public facility. These responsibilities are clearly specified in the contract
signed by the two parties as specified by a committee established by the contracting authority for the purpose. A series of pre-contractual actions are required, as per Article 16 of law 125/2013, which the committee has to meet before awarding the contract to a private bidder. One of requirements is the preparation of a feasibility study, which must be drafted within 60 days of the committee’s creation.

According to Article 16, the feasibility study must consist of an operational summary, general project description; technical, financial, economic and legal analysis; environmental study; accompanying annexes, required addendums, conclusion and recommendations on the relevant project. It must contain a definition of the type and object of the concession/PPP; estimated direct financial risks and impact on central and local government budget; the estimated contract value; considerations with regard to selection and award criteria of the concession/PPP; and the proposed duration of the contract.

The feasibility study must take into account the public interest, environmental impact and protection, viability and bankability of the project, value for money indicators, alignment of project with national and sector strategic objectives, direct and in-direct financial risks and impacts on central and local government budget, financial support needed, technical and commercial feasibility as well as market interest and ability to attract interested economic operators and financial backers. A feasibility study is required only for PPPs that exceed a certain value. For PPPs less than the threshold value, a summary analysis must be prepared by the contracting authority, applying the basic principles governing the preparation of a feasibility study.

1.3 Market Analysis for Property Values
In order to conduct the market analysis a mixed method was used. Initially a search on web and published adverts regarding properties on sale, or rent was done in order to find average prices. In addition, reports on the property market in Tirana were used and third, semi-structured interviews were conducted with various actors, in order to complement the two initial methods. Interviews were conducted with real estate evaluators, real estate agents and developers in order to get a comprehensive view regarding the property market in Tirana.

The property market in Tirana has fluctuated over the last five years. The fast increase in properties’ values noticed in the first decade of 2000s has slowed down, although maintaining a slight increasing trend. The block on building permits over the period 2013-2017 has somewhat affected the market as only a limited amount a properties have entered the market during this period. Meanwhile, several important projects are in the pipeline and waiting to conclude or start construction. Following the approval of the GLTP of Tirana in 2016 construction activity has quickly responded with a large number of building permits being issues and which are now entering the market with a fast pace.

Graph 1- Building Permits and New Development Area for Tirana

Source: INSTAT (2018); PLGP interpretation
The new properties in the city can be divided in three main categories: 1) New Boulevard Area 2) Multi-Functional Iconic Towers in the city center 3) (mainly) residential buildings scattered across the city.

The new boulevard area foresees the regeneration of the northern part of the city of Tirana with the aim of creating a new quarter with a mix of residential, commercial and institutional functions. This area is expected to become one of the new centers of Tirana. It is yet unclear what the new volume of construction that will enter this part of the city is, however, different speculative documents show that the floor area ratio will be quite high.

A series of new multi-functional towers are being built the city center such as for example: Toptani Shopping Center, Plaza Hotel (completed and operational), Millennium Center, Forever Green Tower, Qemal Stafa Stadium Tower, Turdiu Center (final stages). There are also a variety of other projects entailing large towers in the city center, which are being discussed and soon might initiate the construction phase. Lately, the number of construction permits have increased in the Municipality of Tirana and specifically also in the city of Tirana during 2017 and the first quarter of 2018. These building permits are expected to add a large number of residential buildings into the market. The market analysis in Tirana is structured into 3 main typologies such as residential, shops, retail and recreation and offices.

The residential property market in the neighborhood where the ring road will be constructed, due to the favorable and central position of the area, is characterized by prices for apartments, which are on the upper-middle to high level. According to interviews with real estate evaluators current prices in the area vary between 850-950 €/m² for apartments in buildings pre-1990, to 1,100-1,200€/m² for newer apartments built in the 2000s. Meanwhile, newly built residential apartments can sell between 1,400-1,600€/m² depending on the position of the building, the quality of construction and the apartment itself as a unit.

The offices’ market has increased its supply in 2017 and it is expected to increase also during 2018. According to Colliers International (2017) the increase in supply is mainly due to the finalization of multifunctional towers in the city center such as Millennium Center, which has added almost 5,000m² of A class office space. According to the same report by Colliers, rental prices for prime offices (A Class) has had a slight increase in the last year by rising to 19€/m² per month, while the average office space in Tirana ranges at 15.2 €/m² per month. The development area is located nearby the city center and the “Millennium Center” and the “Forever Green Tower” thus it is faced by strong competition. Due to the entrance of the above mentioned office spaces the vacancy rate of offices has also seen a slight increase going up to 9.82%.

The retail market in Tirana has also seen increase in supply in prime location high quality Malls by the entrance in the market of Toptani Shopping Center. A variety of other projects will soon add additional commercial spaces in Tirana, not to mention the extension of the QTU shopping center located just outside of the city. According to the Colliers Report, average rents in shopping centers are around 22 €/m² per month and have seen a slight increase from the previous years. On the other hand, high streets also have shown an increase in rents from 40€/m² per month to 48€/m² per month. As such, Myslym Shyri is regarded as one of the main “High Streets” in Tirana, thus the development area has a favorable position in terms of retail. In addition, from interviews with real estate evaluator it can be deducted that selling prices for shops along the main roads vary between 3,500-4,000 €/m² while for retail spaces in inner streets prices vary between 1,500-2,000€/m².

In addition to the above there are is also another type of property which over the last years has seen a drastic increase in prices and demand. Parking can be considered to be on short supply in most parts of the city of Tirana and with the conversion of several main streets as paid parking the supply for residents has shown a decrease. According to the interview with property evaluators, parking spaces are increasing over the years rapidly and in the area they vary between 650-850 €/m², or if sold by parking space they can reach values between 20,000€uro-30,000 Euro/spot. Nevertheless, there is a trend where developers are selling fewer and fewer spaces in order to keep them for rent. Rental parking spaces in Tirana vary between 30€uro/space per month up to 50 Euro in areas, which have severe parking shortages. Thus parking has started to become an important source of income for developers. The development area has
shortages in terms of parking and only a few buildings offer underground spaces. On street parking is also limited thus the parking spaces would be on high demand and would go for high prices.

Based on interviews with different actors a few interesting aspects were found which do have important implications for the property market as well as the project area. Firstly, profit requested from developers as part of their construction cost has decreased over the years. Now, developers usually ask for 20-25% profit, which is a drastic reduction from previous values which were between 50-70% and in some cases over 100%. The decrease is seen as a result of three main aspects such as the reduced construction activity in the last 5 years, the increase of local tariffs by the municipality as well as, and most importantly the increased demand for quality from buyers. This has also been associated with the increase of construction costs in Tirana, where prices have increased from 270-350E/m², towards 350-450E/m² and in some cases for high quality constructions/ specialized they go above 500E/m². On the other hand, requests from property owners have not decreased. Through interviews it could be deducted that there is a wide range of value that owners require, which goes from the lowest as much as 30% of the revenues (building space) up to 45%. This aspect plays an important factor in the development area.

Lastly, through the interviews it was deducted that the opening of the new ring road will not have any major implications regarding prices. Its impact would be rather low if considered as a single project. The main increase in property values for the development area would be through the provision of new open public spaces and better services. In addition, it is said that due to the fact that there is a large increase in supply in Tirana, the demand can be considered limited. However, due to the fact that the development area has a central location, well connected with most parts of the city, it can be considered as an attractive factor.

iv) Expropriation

The legal basis for expropriation in Albania is law nr. 8561, dt 22.12.1999 (amended) “For expropriation and taking in use of private properties for public interest”. This law regulates the rights and procedures for the expropriation of private properties for public interest issues and the expropriations are only conducted once the public interest is larger than the private interest. In addition, this law protects the rights of the private owner’s subject to expropriation and the expropriation is done by respecting and compensating in value the rights of third parties on a specific property.

Subject to expropriation, according the above law can be different type of properties such as immovable properties in the form of land, building of all types and which are permanent; movable object with historical, archaeological, cultural or scientific value which could be in a situation of harm or extinction; and movable or immovable object, which for objective reasons or force major create coherent risks for health and safety of the general public, in a certain scale that even with the help of the government to the property owner the risks cannot be prevented.

The subject which requires the expropriation to occur, presents to the responsible ministry, according to the law, the request for expropriation together with the necessary documentation. Once the request has been filed, the responsible minister creates an interdisciplinary working group, composed of experts from different fields and if necessary also with external experts, which is responsible for realizing all expropriation procedures. After all the documentation has been controlled and verified the procedures for the evaluation of the properties initiates. In the calculation of the value of expropriation for the different properties are taken into consideration a series of different factors such as the initial value of the property, the amortization of the property, the function, the location and the different indexes for the changes in market and currency values.

v) Financial Instruments for Land Development

Law 107/2014 “On Territorial Planning and Development”, as amended, notes two specific financial “instruments for guiding development” in conformance with the General Local Territorial Plan: (1) Conditioned Building Intensity, or the right of a developer to build at a greater intensity in certain areas in return for providing a public amenity or an in-lieu financial contribution that is earmarked for public capital investments (Article 30); and (2) Transfer of Development Rights, in which cultural or historic monuments and agricultural and natural lands are protected from being developed by legally
transferring the parcel owner’s “right to develop” to another site where development is desired (Article 31).

Law 107/2014 also allows “benefits from the right to development and increased value of the land... to be used to build or fund public infrastructure, mainly in the area where the benefits were generated,” thus permitting the use of financial instruments to capture land value gains (Article 22).

In addition, DCM nr. 1096, date 28.12.2015, “For the adoption of rules, conditions and procedures for the use and management of public space, adds also these instruments: areas for business development—mainly central areas with commercial activities; betterment fees for land through public investments, applied on owners and/or developers which benefit from the increase in land values as a result of the public improvements; and co-financing forms between inhabitants/owners in the area and the municipality—mainly in residential areas. These financial instruments area created and managed with the LDP framework, through a voluntary and open agreement between owners, developers and the municipality, and as previously stated, Law 107/2014 requires feasibility studies for financial instrument programs, as well as for mandatory land development.
2. Detailed Analysis of the Development Unit/Case

2.1 GLTP Summary for the Unit
The GLTP of the Municipality of Tirana was approved in December 2016 by the Municipal Council and in April 2017 by the National Territorial Council. As such Tirana aims that by 2030 to become a Polycentric City; and accessible city; a city with high biodiversity; a sustainable city; a Mediterranean center; a creative city; a smart city; an inclusive city; a Balkan Garden and a 24-hour city, with everything fitting under the novelty of a “kaleidoscopic” metropolitan area. The above show a highly ambitious plans for the city and municipality of Tirana in the next 15 years.

The vision of Tirana is composed of 13 strategic “projects” (intervention areas), which should be further developed during these 15 years. Project 3, is directly linked with the feasibility study and the LDP, as its main focus are the ring roads number 2 and number 4. Ring-road number two is the part of the feasibility study and the LDP area.

Figure 4- Extract from Tirana GLTP Vision

![Map of Tirana GLTP Vision](image)

Source: GLTP, Municipality of Tirana (2017)

According to the Municipality of Tirana, the 2nd ring road will have a great focus on public transport and cycling. Thus the priority is not only to create a new road, which will free somewhat traffic from the city center, but also to create a road, which offers dedicated lanes for public transport and cycling.

The ring road segment number 2 affects the structural units 274, 277, 278, 459, and 460. These units are located between the roads of Myslym Shyri and Rruga e Kavajes. The main objective of the municipality is to redevelop the area by giving higher development conditions, and to minimize costs of opening space for and building the new road. As such proposed development floor area ratios in the area vary from 3 to 4, while plot coverage ratios are fixed for the whole city at 45%. In addition, to stimulate development, conditioned (bonus) building intensity (FAR) is proposed, which varies from 75% to 100%. The building height is limited between 8-10 floors. As it can be seen, due to the central location of the area, as well as the infrastructural intervention, the plan proposes the complete redevelopment of the area through the typology of “mix-used towers”. In addition, in the area kindergartens (x2) and nurseries (x2) are proposed to be built.

2.2 Consistency with Other Relevant LDPs
The area subject of the feasibility study is surrounded by a number of other structural units, which are also being developed through LDPs. These LDPs have been analyzed and taken in consideration in
order to harmonize public interests and infrastructure throughout the larger area. As such, the LDPs that were taken in consideration are TR/271, TR/272, TR/276, TR/277 and TR/372.

The main coordination between the different LDPs has been regarding road infrastructure. As such, street “Him Kolli”, is proposed in LDP TR/271 and TR/272 to be expanded and has accordingly been integrated also in the development area. The final street width has been approved at 13m, however, since the development line has been formed in TR/271 and TR/272, the expansion will be accommodated in TR/460 and TR/459.

Figure 5- Impact from other LDP-s

LDP TR/276 has proposed the continuation of streets “Çamëria” and “Shyqyri Bërxulli”. Thus “Çamëria” street has been integrated in the structural units Tr/274 and TR/277. Based on a building permission issued by the Municipality of Tirane, in structural unit TR/277 (former 10/8), for the purpose of our study, proposals for street “Besim Imami” have also been taken in consideration and duly integrated.

2.3 Land Use Analysis

2.3.1 Land Use Categories and Subcategories
There are 558 individual land parcels in the LDP area, divided among five structural units. Each land parcel is classified by how it is used.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Number of Parcels</th>
</tr>
</thead>
<tbody>
<tr>
<td>274</td>
<td>154</td>
</tr>
<tr>
<td>277</td>
<td>192</td>
</tr>
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</table>
Land use classification data are used in this study to analyze the current pattern of development and serve as the framework for formulating how land will be used in the future. Each category and subcategory of land use has its own characteristics. The land use analysis brings together consideration for both the physical development and social qualities of the LDP area. The table below includes most of the land uses in the three base categories and four subcategories that are used to classify properties in units 274, 277, 278, 459, and 460. Land uses are noted in terms of the number and percentage of parcels in each unit. Most parcels in each of the five units are dedicated to residential use or to businesses and services that directly support residential uses.

Table 4- Land use categories and subcategories by Unit
### Parcels

<table>
<thead>
<tr>
<th>BASE CATEGORY 1</th>
<th>Unit 274</th>
<th>Unit 277</th>
<th>Unit 278</th>
<th>Unit 459</th>
<th>Unit 460</th>
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<td>%</td>
<td>No.</td>
<td>%</td>
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<tr>
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<td>3</td>
<td>6</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Services</td>
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<td>8</td>
<td>12</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Transport Infrastructure</td>
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<td>12</td>
<td>18</td>
<td>9</td>
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<td>Social Activities</td>
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#### Subcategory 1.1

<table>
<thead>
<tr>
<th>Housing</th>
<th>Unit 274</th>
<th>Unit 277</th>
<th>Unit 278</th>
<th>Unit 459</th>
<th>Unit 460</th>
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<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
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<td>18</td>
<td>5</td>
<td>3</td>
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<td>18</td>
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#### Subcategory 1.2

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<th>Unit 278</th>
<th>Unit 459</th>
<th>Unit 460</th>
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<tr>
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<td>No.</td>
<td>%</td>
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<td>%</td>
</tr>
<tr>
<td>Commercial and Business Services</td>
<td>18</td>
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<td>6</td>
<td>3</td>
<td>8</td>
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<td>5</td>
<td>3</td>
<td>6</td>
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<td>Accommodation and Entertainment</td>
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#### Subcategory 1.3

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<th>Unit 278</th>
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<th>Unit 460</th>
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### BASE CATEGORY 2

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<th>Unit 278</th>
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<th>Unit 460</th>
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<td>%</td>
<td>No.</td>
<td>%</td>
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#### Subcategory 2.1

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<th>Unit 278</th>
<th>Unit 459</th>
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<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
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Subcategory 2.2

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Accommodation and Entertainment  7  5  0  0  0  0  0  0  0  0

BASE CATEGORY 3

Housing  0  0  1  1  0  0  0  0  0  0
Services  0  0  0  0  0  0  3  3  1  2
Transport Infrastructure  0  0  0  0  0  0  0  0  1  2

Subcategory 3.1

Commercial and Business Services  0  0  0  0  0  0  2  2  0  0
Housing  0  0  1  1  0  0  1  1  0  0
Accommodation and Entertainment  0  0  0  0  0  0  1  1  1  2

The parcels’ map of the three base land use categories in the five units shown below, illustrates the predominance of residential and residentially-related land uses.

Figure 6- Base Land Use Categories

Source: PLGP & Tirana Municipality 2018
### 2.3.2 Specific Land Uses

The following table summarizes specific lands uses by number and percentage of plots for all five of the structural units in the LDP area. Housing and activities related to, and dependent on, housing comprise most of the specific uses. More detailed information on specific land uses in each of the five units in the study area is found in Annex B.

**Table 5- Specific Land uses in the LDPs Area**

<table>
<thead>
<tr>
<th>SUMMARIES OF SPECIFIC LAND USES</th>
<th>UNITS 274, 277, 278, 459, 460</th>
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<tbody>
<tr>
<td><strong>First Specific Use</strong></td>
<td><strong>Second Specific Use</strong></td>
</tr>
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<td>Housing &amp; Services</td>
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<tr>
<td>Shop/Professional Service</td>
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<tr>
<td>Auxiliary Facility (Housing)</td>
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<tr>
<td>Bar/Restaurant</td>
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</tr>
<tr>
<td>Local Road</td>
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<tr>
<td>Primary Urban Road</td>
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<tr>
<td>Parking</td>
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</tr>
<tr>
<td>Rare Bushes</td>
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<td>Second Level Bank</td>
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<td>Subcategory 1.2</td>
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<tr>
<td>Bar/Restaurant</td>
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<tr>
<td>Institution/Administration</td>
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<tr>
<td>Clinic</td>
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<tr>
<td>Middle School</td>
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BASE CATEGORY 2

Subcategory 2.1

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</thead>
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<tr>
<td>Housing &amp; Services</td>
<td>4</td>
<td>0.7</td>
</tr>
<tr>
<td>Auxiliary Facility</td>
<td>4</td>
<td>0.7</td>
</tr>
<tr>
<td>Auxiliary Facility (Housing)</td>
<td>4</td>
<td>0.7</td>
</tr>
<tr>
<td>Parking</td>
<td>5</td>
<td>0.9</td>
</tr>
<tr>
<td>Rare Bushes</td>
<td>5</td>
<td>0.9</td>
</tr>
<tr>
<td>Bar/Restaurant</td>
<td>2</td>
<td>0.4</td>
</tr>
<tr>
<td>Middle School</td>
<td>1</td>
<td>0.2</td>
</tr>
</tbody>
</table>

BASE CATEGORY 3

Subcategory 3.1

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing</td>
<td>2</td>
<td>0.4</td>
</tr>
<tr>
<td>Shop/Professional Service</td>
<td>2</td>
<td>0.4</td>
</tr>
<tr>
<td>Bar/Restaurant</td>
<td>2</td>
<td>0.4</td>
</tr>
<tr>
<td>Parking</td>
<td>2</td>
<td>0.4</td>
</tr>
</tbody>
</table>

2.4 Transport Network Analysis

Transport network analysis looks at aspects of the movement of people and vehicles and the physical system, which supports mobility, such as streets and sidewalks. Transport network analysis plays an important role in the planning and design of a transport system that is appropriate for pedestrians, bikers, private motor vehicles, and public transit in the LDP area.

An on-site field analysis of existing street and sidewalk infrastructure conditions and traffic data from the municipality provided crucial insight into the current state of the LDP area’s motor vehicle and pedestrian network. Existing design deficiencies and infrastructure gaps compromise permeability, safety, and mobility in the area. The comprehensive evaluation process determined where resources should be focused for improvements and new facilities.

Based on the “Tirana Ime” App from the Municipality of Tirana, we can deduct the number of vehicles that circulate in and around the area.
The above map shows that the roads “Rruga e Kavajës” and M. Shyri do have the largest number of vehicles, which travel during one hour. Whereas the inner roads in the area are relatively limited in terms of car traffic. However, there are two main aspects that the application does not show which is that we only have an average of fluxes, but not the peak and minimum for each road, and neither is it divided between the different days. Therefore, although traffic may look low from the above data, from site visits (not quantified) it was seen that the circulation can be quite tricky in certain hours of the day. Both “Rruga e Kavajës” and “M. Shyri” have heavy traffic during the day, and especially during the morning 07:30-09:00; afternoon 12:00-14:00 and during the evening (time when most people get out of work) 16:00-18:00. Especially in the morning, due to the fact that there is also a small market in Him Kolli it is very difficult to pass by car as well as on foot.

Another important aspect that can be deducted from the street analysis is the fact that the vertical mobility is well covered in the area, however if one wants to move horizontally, there are a lot of dead-end small streets, which do not allow this type of circulation. This issue increases transport fluxes in the area and in the main roads of M. Shyri and Rruga e Kavajës.
Street width is an important indicator of adequate sight distances, road space for vehicle maneuvers, and overall safe travel. The border streets of Rruga e Kavajës and Rruga M. Shyri are the only streets in the LDP area with a continuous pavement width and sidewalks. All other streets are fragmented into segments of different widths mirroring the history of building development in the area, which has been fragmented and uncoordinated. For example, Rruga I. Alla is 4.5 meters wide at its beginning at Rruga e Kavajës, and widens to 5 meters and then 6.5 meters before narrowing to less than 5 meters and widening to 6 meters at its end with Rruga M. Shyri. The width of the road itself is constant, however, what is reduced and widened is the sidewalk space. Therefore, there are cases where people, cars and bicycles share the same space creating difficulties in traffic as well as increasing the risks for accidents.

The minimum street width of a street segment in the LDP area is 3 meters, and the maximum is 10 meters. The most common pavement width is 3.5 meters (21% of street segments), followed by a width of 5 meters (15.3%). As it can be seen in the map below, most inner streets fulfill the minimum requirement of street width between 3-3.5m.

Figure 8- Street Width

Paved streets can make driving safer and more comfortable, improve fuel efficiency, and are cleaner than unpaved streets. Eighty-seven percent of streets are paved with asphalt. Some small interior streets are gravel (6.3% of all streets) or dirt (5.4%).
Sidewalks are present primarily on the streets that border the study area (Rruga e Kavajes, Rruga M. Shyri, Rruga H. Koli, and Rruga Sh. Bërkolli) and on parts of interior streets, especially Rruga B. Imami and Rruga I. Alla. Sidewalk widths vary from less than 0.5 meter to 3 meters, with most sidewalks 1 meter wide (41% of all sidewalks) or 0.5 meter wide (35%). A sidewalk width of 3 meters is found only along Rruga Myslym Shyri and a small segment of Rruga Him Koli. Most sidewalks are in good condition (64%) or passable (27.4%), which means they have no noticeable technical conditions but are of insufficient width therefore making difficult to move across. More than half of the sidewalks in the LDP area (53.2%) are paved with paving stones, and 35.8% are with paved with concrete. The remaining sidewalks are unpaved, mostly gravel.
Both open and underground car parking are found in the LDP area. There are 1,568 private underground parking spaces situated underneath tall buildings. An open parking lot in unit 278 has 15 spaces. There are also 2 private open parking lots in the LDP area. Informal parking is spread along the interior streets, especially Rruga H. Koli and Rruga I. Alla. The total number of cars that can be accommodated in surface lots (formal or informal) is 302. Nevertheless, the area still has a shortage of parking and this is visible in the way people park on streets. Finding a parking spot in the area, unless one has a private parking space, becomes a difficult task at different times of the day, and creates mobility problems.

2.5 Urban Analysis and Development Controls
The urban analysis investigates the basic urban structures and regulations, which affect both the efficiency and quality of transport and the potential for regeneration. This includes the characteristics and quality of buildings, how buildings are situated on plots, how buildings are used, the height of buildings, and the amount of existing publicly usable green space.

The urban analysis is combined with the land use analysis, transport network analysis and permeability analysis to inform a conceptual design that supports a ring road without allowing it to dominate the area spatially. Rather, the analyses provide information needed for a conceptual design, which promotes greater overall mobility for people and vehicles, assists roads and public spaces to become more enjoyable places to be, improves the permeability and accessibility of the entire LDP area, and assesses prospects for regeneration.

2.5.1 Floor Area Ratios (FAR) and Plot Coverage Ratios (PCR)
Floor area ratios and plot coverage ratios regulate the volume and height of buildings in each structural unit. What size and height of the building can be built depends on the FAR and PCR of the property, and this also influences the property’s price.

The existing gross floor area ratio and plot coverage ratio for each unit in the LDP area is:
Table 6- Existing FAR and PCR

<table>
<thead>
<tr>
<th>Unit</th>
<th>Gross FAR</th>
<th>PCR</th>
</tr>
</thead>
<tbody>
<tr>
<td>274</td>
<td>2.27</td>
<td>64.35%</td>
</tr>
<tr>
<td>277</td>
<td>1.84</td>
<td>62.18%</td>
</tr>
<tr>
<td>278</td>
<td>3.72</td>
<td>70.20%</td>
</tr>
<tr>
<td>459</td>
<td>3.14</td>
<td>60.73%</td>
</tr>
<tr>
<td>460</td>
<td>1.92</td>
<td>61.51%</td>
</tr>
</tbody>
</table>

Figure 11- Map Left: Existing FAR; Map Right: Existing PCR

Source: PLGP & Tirana Municipality, 2018

2.5.2 Building Quality

Overall building quality in the LDP area ranges from very good (1.6% of all buildings) to good (56.7%) to functional (38.9%) to poor (1.8%). Buildings of very good quality were recently-built, while those rated functional were usually constructed before 1990 and without any visible improvement. Poor buildings were qualified buildings which were abandoned, or which do have noticeable structural failures or any other problems, which make them hazardous to live or work within.
2.5.3 Building Height by Number of Floors

Buildings in the LDP area have from 1 to 11 floors. One-floor buildings comprise 49% of all buildings and are located primarily in the interior of the area. These are typical Tirana buildings constructed in the early 1900s. However, over the years these building have gone through several interventions and in most cases losing their “historical values”. Buildings with more floors are generally located on the main streets, with the highest concentrations of buildings from 8 to 11 floors on “Rruga e Kavajes” and “Rruga H. Koli”. These buildings have been sporadically spread in the area over the years after 1991. Their quality varies upon the time of construction. Buildings along Rruga M. Shyri have a uniform height of 5 floors and are usually constructed before the 1990s. Although, these buildings were supposed to have a similar typology and respect certain architectural and urban design conditions, after the 1990s the buildings have gone through transformation. Most of them have “extensions” constructed by citizens in different time periods. These “extensions” can be attached to the older building on its side/s or added on top of the building as an extra floor. In addition, there are also other smaller scale interventions such as closing of balconies, or conversion of ground floors into commercial spaces, hence destroying the previous uniformity or urban character of the area and the typology.
2.5.4 Buildings with Windowless Walls (Kallkanet)
A high proportion of buildings have at least one wall without any kind of opening such as a window or balcony. Many of these walls are common or connecting walls for another building on an adjacent plot. Several windowless walls have no construction next to them and could be used for new buildings. These potentially utilizable windowless walls are located on Rruga I. Alla (6 windowless walls on 5 buildings) and Rruga H. Koli (2 windowless walls on 1 building). It is important to understand which windowless walls could support future development as a new building next to a windowless wall does not have to meet setback requirements.
As it can be seen from the above figure, there are a number of buildings with no opening in one of their walls, which can be used for construction in the future. Especially if we look at “Islam Alla” one can see that the logic is to follow the building line parallel to the street. This is a good opportunity also for the ring road, which passes adjacent to the I. Alla Street.

2.5.5 Subcategories of Building Use

The LDP area contains 365 buildings. Most (287 buildings or 78.6%) are used for housing. Exclusively residential buildings are situated mainly in the interior of the area and are mostly low-rise buildings. There are 46 buildings, which combine housing and commercial and business services, or 12% of all buildings. These mixed-use buildings are found primarily along Rruga e Kavajes and Rruga M. Shyri, with a few located on Rruga I. Alla and Rruga H. Koli.

Buildings with commercial and business services are dispersed throughout the area, and represent 12% of all buildings. Housing and services as a single subcategory can be found in 3.2% of buildings; accommodation and entertainment services in 1.9%, and a mix of the three subcategories of housing, housing and services, and commercial and business services is found in 4 buildings, or 1.1% of all buildings.

A single building may contain different subcategories or combinations of subcategories on different floors or different parts of floors.

Table 7- Subcategories of Building Use

<table>
<thead>
<tr>
<th>Subcategory of Building Use</th>
<th>Number of Buildings</th>
<th>Percent of Buildings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing</td>
<td>287</td>
<td>78.6</td>
</tr>
<tr>
<td>Housing &amp; Commercial and Business Services</td>
<td>46</td>
<td>12.0</td>
</tr>
<tr>
<td>Commercial and Business Services</td>
<td>46</td>
<td>12.0</td>
</tr>
<tr>
<td>Housing and Services</td>
<td>12</td>
<td>3.2</td>
</tr>
<tr>
<td>Accommodation and Entertainment Services</td>
<td>7</td>
<td>1.9</td>
</tr>
<tr>
<td>Housing &amp; Housing and Services &amp; Commercial</td>
<td>4</td>
<td>1.1</td>
</tr>
<tr>
<td>and Business Services</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2.5.6 Specific Building Uses

The most common specific building use is housing. Almost half (49.8%) of all buildings are used exclusively for residential purposes, and most of these are low-rise structures. Housing mixed with stores and professional services is found in 12.8% of buildings. Buildings with only stores comprise 12.3% of all buildings in the LDP area and are located along the interior streets (I. Alla, H. Hidri, and Sh. Bërxolli) and along Rruga e Kavajes. The specific use of Supporting Facilities for buildings is found in 9.3% of all buildings; housing and services, 3.2%; and other single or mixed uses, 13.2%.

Table 8- Specific Building Uses

<table>
<thead>
<tr>
<th>Specific Building Use</th>
<th>Number of Buildings</th>
<th>Percent of Buildings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing</td>
<td>182</td>
<td>49.8</td>
</tr>
<tr>
<td>Housing and Stores and Professional Services</td>
<td>47</td>
<td>12.8</td>
</tr>
<tr>
<td>Stores</td>
<td>45</td>
<td>12.3</td>
</tr>
<tr>
<td>Supporting Facilities</td>
<td>34</td>
<td>9.3</td>
</tr>
<tr>
<td>Housing and Services</td>
<td>12</td>
<td>3.2</td>
</tr>
<tr>
<td>Other</td>
<td>45</td>
<td>13.2</td>
</tr>
</tbody>
</table>
2.5.7 Green Space
In the LDP area, 80.9% of plots have greenery, and 19.1% have no green space. However, public green open space is extremely limited not to say inexistent. Of the plots with greenery, 17% are private property and the green space is house gardens. Street trees account for the rest of the greenery in the LDP area. The latter are only situated in Rr Kavajes and M. Shyri Street. The rest of the inner streets have very limited amount of trees or any other kind of greenery.

Private houses do have green spaces in their gardens. This is a good aspect for the area as these trees perform eco-system services in the area. However, it is also important to highlight that these green areas are not accessible for all people. If anything, public spaces in the area are completely absent with the exception of two schools. Therefore, one of the key elements that needs to be solved, if the area is to be redeveloped is to increase the availability of “green” spaces in the area which are accessible to all.

2.6 Permeability / Accessibility
Permeability describes how easy (or difficult) it is for people to reach their destinations. Urban areas with high permeability are characterized by numerous intersections, many short and connected street segments, adequate sidewalks, and few streets with dead ends. There is a range of secure and comfortable routes for pedestrian and vehicle travel. Urban areas with low permeability often have severed neighborhoods and movement is relatively difficult and can be an unpleasant experience.

Accessibility and permeability are highly related. Areas that are permeable possess buildings, car parking, roads, and services that are easy to reach. A primary objective of this feasibility study is to propose new high-quality development that supports a ring road segment but does not allow the ring road to dominate the area. The new development must connect pedestrians and bikers to key destinations and make local trips safer, easier, and more pleasant. Therefore, it is important to
understand the factors affecting accessibility and permeability when undertaking conceptual designs for regeneration of the LDP area.

The following indicators measure how easily one can sense and move through the LDP area.

2.6.1 Building and Parking Access
A field analysis of access in the LDP area identified the locations of entrances to buildings and car parking. Most buildings have entrances on the main border and interior roads. Most car parking is located under large buildings. An analysis of access provides important information for designing redevelopment concepts that make location finding easier for residents and visitors and enable quicker emergency response and commercial deliveries.

Figure 17- Entrances to Buildings and Car Parking

Source: PLGP & Tirana Municipality, 2018

2.6.2 Axial Integration
Axial integration refers to the directness of links in the road network. A highly permeable network has many short links, allowing pedestrians and motorists to reach their destinations easily and with multiple route options. The colors on the red-to-yellow gradient on the map below show which points are most easily reached by foot or by motor vehicle, with dark red signifying the highest integration. The colors on the blue-green gradient indicate points that are less easily accessed, with dark blue signifying the lowest integration. Axial integration is higher on Rruga e Kavajes, Rruga M. Shyri, and Rruga I. Alla.

Source: PLGP & Tirana Municipality, 2018
2.6.3 Axial Connectivity
Axial connectivity refers to the density of connections in the road network. A highly permeable network has numerous intersections and minimal dead ends. As connectivity increases, travel distances decrease, allowing more direct travel between destinations and creating a more accessible and resilient transportation system. The colors on the yellow-to-orange gradient on the map below show points that are most directly and comfortably connected, with dark orange signifying the most connected, and colors on the blue-green gradient indicate points that are less connected, with dark blue indicating the least connected. In the LDP area, Rruga I. Alla displays the most connectivity.

2.6.4 Visual Integration
Permeability involves not only how far and how easily one can move through an environment, but also how easily one can “sense” an environment, that is, understand it clearly just by looking at it. Visual integration measures how the physical properties of an environment (roads, buildings, walls, etc.) affect perceptual permeability; in other words, how appealing a place is to the emotions and therefore how likely people will use or avoid a route voluntarily. On the diagram below, colors in the orange-yellow spectrum indicate a highest degree of visual integration, with dark orange indicating the highest
integration, and colors of the green-blue spectrum indicate lesser degrees of visual integration, with dark blue denoting the lowest integration.

The highest visual integration in the LDP area is on part of Rruga e Kavajes, likely due to its wider width. Other street segments with higher visual integration are found on Rruga I. Alla and Rruga M. Shyri, due in part to their straight axes. The lowest visual integration is found in the interior of the area, which has many dead-end streets and walled buildings.

![Figure 20- Visual Integration](image)

**Source:** PLGP & Tirana Municipality, 2018

### 2.7 Services in the Area

In the area there are two schools, one “primary school”, Konferenca e Pezës, and a high school, “Kostandin Kristoforidhi”. The primary school offers education from year 1 to year 9 prior to entering high school. On the other hand, Kostandin Kristoforidhi offers a 3-year program. In addition to the two public institutions, there is also a private primary school in the area. In the area there are no kindergartens nor any nurseries, but there are some small privately offered services of this kind, which however do not satisfy the demand in the area.

In the area there is also a small healthcare center, which is located in the I. Alla Street. This center offers basic healthcare services such as General Practitioner and Family doctors. Nevertheless, the healthcare center is within a residential building, in its ground floor and could do with a better and improved environment to accommodate for the demands of the citizens in the area. Besides these basic facilities, the area lacks other socio-cultural spaces, which can serve to the community or the general public.

### 2.8 Property Ownership

The following table summarizes the status of land and property ownership in the LDP area.

<table>
<thead>
<tr>
<th>Ownership</th>
<th>Buildings (%)</th>
<th>Land Parcels (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>98.6</td>
<td>60.5</td>
</tr>
<tr>
<td>Public</td>
<td>1.3</td>
<td>16.3</td>
</tr>
<tr>
<td>Uncertain</td>
<td>0.0</td>
<td>22.5</td>
</tr>
</tbody>
</table>
i) *Land Ownership*

The majority of land parcels in the LDP area (60.5%) are privately owned. Public plots comprise 16.3% of all plots. The ownership status of 22.5% of plots is unclear.

*Figure 21- Land Ownership*

Buildings in the LDP area are predominantly privately owned (98.6% of all buildings). Public buildings include 2 schools (Konferenca e Pezës and Konstadin Kristoforidhi), the Ministry of Social Affairs, and 2 fruit markets, which are administered by the municipality.

Source: PLGP & Tirana Municipality, 2018
2.9 Budget and Financial Analysis of the Municipality

In order to identify and evaluate the fiscal and financial performance of Tirana Municipality, data on revenues and expenditures for the first level of local government (municipalities) were used from the local finance portal [www.financatvendore.al](http://www.financatvendore.al). The data presented on this portal is derived from the Treasury's Financial Information System (Treasury System) at the Ministry of Finance and Economy, are factual data, have quarterly frequency (cumulative terms) and are available for the period 2010-2017. From a methodological point of view, comparison with factual data of previous years (by 2015) is done by referring to 373 local government units that were consolidated at the level of 61 municipalities.

The Municipality of Tirana represents a special case in the local government of the first level, starting from the population number (based on Census data 2011, in Tirana municipality is about 20% of the population of Albania) and businesses (28.7% of the total active enterprises) focused on the territory under administration. On the one hand, demography and entrepreneurship located in the territory of Tirana Municipality create favorable conditions for generating budget revenues significantly higher than those of other municipalities. On the other hand, and among other things, these features face the municipality with ongoing challenges in relation to services for the necessary infrastructure and the provision of public services.

Source: PLGP & Tirana Municipality, 2018
Based on the above, the total financial sources (intergovernmental transfers and local own resource) available to the Municipality of Tirana during the considered period have followed an upward trend, significantly influenced by revenues from local own resources. Throughout the period considered, the total available resources of Tirana Municipality ranged from a minimum level of about 8.3 billion ALL in 2012 to a maximum level of about 16.7 billion ALL in 2017. After a decline of about 8.7% in annual terms in 2015, revenues in the Tirana Municipality budget have increased at accelerated rates, which is somewhat dictated by the general increase in the level of taxes and local tariffs. In 2017, Tirana Municipality had about ALL 16.7 billion, about 31.5% more compared to the previous year.

During the considered period, the growth rate of financial resources available in Tirana Municipality budget is largely determined by the performance of revenues from its own local sources (Graph 3). On average, this income category represented around 53.0% of total financial resources. Intergovernmental (conditional, unconditional and specific) transfers and shared taxes represented on average about 47.0% of total financial resources in 2010 - 2017.

Local own source revenues are an important element in the local budget, and their ratio to total financial resources can be used as an indicator of municipal financial autonomy. In Tirana, this income category turns out to be about 5 times higher than unconditional transfers, signaling for local autonomy significantly better than other municipalities in the country. In the municipality of Tirana, revenues from its own resources seem to have been volatile from year to year. After a significant increase of about 17.1% in annual terms during 2015), revenues in this category
marked double-digit growth over the next two years. For 2017, this revenue source contributed around 9.9 billion ALL to the Tirana Municipality budget, an increase of 43.7% compared to the previous year.

Local revenue performance is mainly determined by the positive contribution of local tax revenues and tariffs. Domestic revenues for 2017 amounted to about 6.6 billion ALL, up by about 35.2% in annual terms. The main contributing factor in this direction was the revenues from the infrastructure impact tax from new construction (about 3.5 billion ALL) and income from real estate tax (mainly over buildings with about 1.7 billion ALL). Income from domestic tariffs contributed positively to the total revenue growth from own sources by about 3.4 billion ALL in 2017 (up by about 22.0% in annual terms). Within this category, revenues from utility tariffs are estimated to have contributed about 1.7 billion ALL, followed by revenues from administrative fees of about 1.2 billion ALL.

In financial resources, intergovernmental transfers have grown from year to year. Revenue from unconditional and specific transfers in 2017 contributed with about 2.9 billion ALL to the local budget. On average, revenues from this source represented about 15.2% of the financial resources for the period considered (and about 17.2% in 2017). Revenues from shared taxes occupy a relatively low share in the total funding sources of the Tirana municipality and in 2017 contributed with about 585.9 million ALL to the local budget. Conditional transfers from line ministries contributed around 3.4 billion ALL to the budget of the Tirana municipality in 2017. Among them, the ministry responsible for urban development (RDF) channeled about 606.1 million ALL; the ministry responsible for social welfare about 2.0 billion ALL; and the ministry responsible for health about 606.1 billion ALL. Unlike those allocated by the ministry responsible for urban development, these funds go to family budgets (economic aid) and individuals in need.

Expansion of available financial resources was reflected in the increase of Tirana Municipality expenditures, which increased by about 15.3% in annual terms. In 2017, about 16.6 billion ALL was collected, 61.8% of which for current expenditures. Among current expenditures, annual increases also result in personnel costs (which represent about 42.8% of current expenditures). Capital expenditures amounted to about 6.3 billion ALL, down by about 28.2% in annual terms, focused on infrastructural interventions.
In the division of expenditures according to functions, the expenditure structure of Tirana Municipality results to be dominated by spending on functions: "economic issues", which includes the transport program; "Community housing and commodities", which includes expenses for local housing, community development, public lighting, water supply and sewerage etc.; "Education" and "social protection".

In general, the financial resources at the disposal of Tirana Municipality have followed upward trends, based on the significant contribution of their own revenues. Demography and localized entrepreneurship in the territory place the municipality of Tirana in a favorable position to generate income independently and to reduce dependence on the central government. In this context, improving performance on the domestic revenue side and making more efficient use of available assets would further improve the financial performance of the Municipality of Tirana. The latter would create space for undertaking strategic investments independently, even in large amounts. On the other hand, there is a need for some kind of efficiency in the use of available financial resources (especially current spending cuts) by prioritizing the widespread investment in the community and territory under administration and lowering the level of operating costs.
3. Development Proposals

3.1 Description of Conceptual Development Alternatives

The GLTP of Tirana sees the intervention for the opening of the “middle” ring road as a key solution for the traffic problems that the city faces. However, the segment II area, which links “Rruga e Kavajes” with “Rruga Myslym Shyri” is a highly complex area, with multiple private owners. The opening of the ring road could lead to potential conflicts and social issues between the municipality and the landowners, due to the relatively low values used for expropriation. In addition, a portion of the inner part of the area, composed by low-rise older buildings can also (subject to interpretation) be considered as part of the urban memory of the city of Tirana. However, these houses are dilapidated and by purpose left in neglect by the owners, in order to proceed with development. Some of them have gone through transformations, which make the urban memory unrecognizable anyhow.

Based on the above, the working group started the process for the conceptual design with two different alternatives. One alternative assesses the potential of accommodating the proposals of the GLTP for the ring road while the second alternative tries to work with an intervention which respects the older structure of the city/neighborhood, while trying to solve traffic problem through different one way streets as shown in the following figure.

Figure 23- Alternative with no-Ring Road

The above conceptual design proposes a street network of one-way roads, mostly existing ones, which will be slightly widened and improved in order to guarantee better access. In terms of development the area is composed by interventions of regeneration and development (blocks in yellow) and conservation (blocks in red), which will be subject to infrastructural improvement. The areas subject to redevelopment will accommodate also the property owners, which will need to be displaced for creating the road network. In addition, due to the fact that the area has a limited amount of public spaces a series of new public area have been proposed.
However, the municipality has decided to follow the second option. In this option the conceptual design based on the GLTP proposals is as below:

Figure 24- Conceptual Design Inner Ring Road Area

The above is the final conceptual design achieved for the area, following multiple steps of work and consultations among staff based on requests received from landowners and developers interested on the area. The design offers a solution for the opening of two main road axes such as the inner ring road (which runs through the middle of the area) and the “Çamëria” Street which comes from the east of the area. This conceptual design integrates a series of new development (private residential buildings) with the new road network, the new public spaces and social services proposed in the area such as kindergartens (x2) and the extension of the school area. As specified by the municipality, the baseline conceptual design takes as its starting point the established road system of the LDP area. From this point of departure, the ring road segment is added. Some existing roads are converted to pedestrian walkways and others are extended to create parcels/blocks that are suitably-sized for development. The municipality provided road profiles for the conceptual designs. Green space is added for the quality of life of residents and to enhance the value of new development. The conceptual design minimizes the land acquisitions required for public facilities. The road network is the primary organizational strategy also for the designation of the subunits. The subunits are the framework on which the financial analysis is based and constitute the components of the model for future development.
4.0 Feasibility Assessment of the Development Program

4.1 Development Assumptions
The data used for development financial calculations are from official market data and statistics provided by the municipality and the Government of Albania and from a detailed review of recent real estate developments in Tirana. These market data inform the assumptions used in the development proformas, such as land values, construction costs, revenue estimates, and other inputs, some of which are listed below:

Table 10- Development Assumptions

<table>
<thead>
<tr>
<th>LAND COST</th>
<th></th>
<th>% of total development revenues</th>
<th>PLGP Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developable land cost</td>
<td>42.5%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BUILDING</th>
<th></th>
<th></th>
<th>PLGP Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base residential sales price</td>
<td>1,500 €/m²</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average base commercial sales price</td>
<td>3,000 €/m²</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average apartment size (sales)</td>
<td>100 m²</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average underground parking space sales price</td>
<td>20,000 €/Space</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONSTRUCTION COSTS</th>
<th></th>
<th>% of total building construction revenues</th>
<th>PLGP Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average total costs (residential and commercial)</td>
<td>450 €/m²</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infrastructure impact tax</td>
<td>8%</td>
<td></td>
<td>Municipality of Tirana</td>
</tr>
<tr>
<td>Application Tariff</td>
<td>1%</td>
<td>% of total construction cost</td>
<td>Municipality of Tirana</td>
</tr>
<tr>
<td>Parking (surface)</td>
<td>100 €/Space</td>
<td></td>
<td>PLGP Analysis</td>
</tr>
<tr>
<td>Parking (underground)</td>
<td>5,000 €/Space</td>
<td></td>
<td>PLGP Analysis</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INVESTMENT</th>
<th></th>
<th>% of total development costs</th>
<th>PLGP Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developer's profit</td>
<td>30%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The feasibility study establishes the total revenues that could be produced by the new development, mainly through the sale of residential and commercial space. This represents the market value of the new development. The potential revenues were estimated using residual value analysis, a typical method for determining what land costs development can support. This involves first calculating the market value of new development, and then deducting the total costs of development (construction costs and developers’ profit). The amount that is left (residual value) represents what a developer can afford to pay for land and still make the expected profit. The market value of land (required as a % of development by property owners) is then deducted from the residual value. This entails the land costs. If the amount left in the end is negative, the project is not feasible, as the developer does not have enough funds to pay for land. In case we have a positive amount, this means the development is feasible and will generate also adequate financial means to support public benefit. The added value can be captured by the municipality.

4.2 No-Ring Road Scenario Development Calculation
Based on the possible new development that can occur in the area and the conceptual design for the no ring road scenario, a series of calculations have been made to assess the financial feasibility of this alternative. In such case, the “residual value of land” method was used as a basis also for calculating
potential public benefits that might rise as a result of the development of the area. The below table offers a summary of the potential for development as well as the public benefits:

Table 11 - Estimates of Potential Values of New Development for Vernacular Concept: Base Intensity

<table>
<thead>
<tr>
<th>Total amount of new development (m²)</th>
<th>Total value of new development (€)</th>
<th>1% of total value of new development (€)</th>
<th>5% of total value of new development (€)</th>
<th>10% of total value of new development (€)</th>
<th>Value Added (potential value capture) (€)</th>
<th>Estimated total infrastructure impact tax (€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIT 274</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subunit 274.1</td>
<td>860</td>
<td>1,935,000</td>
<td>19,350</td>
<td>96,750</td>
<td>193,500</td>
<td>492,135</td>
</tr>
<tr>
<td>Subunit 274.2</td>
<td>4,361</td>
<td>10,599,400</td>
<td>105,994</td>
<td>529,970</td>
<td>1,059,940</td>
<td>2,011,900</td>
</tr>
<tr>
<td>Subtotal Unit 274</td>
<td>5,221</td>
<td>12,534,400</td>
<td>125,344</td>
<td>626,720</td>
<td>1,253,440</td>
<td>2,503,255</td>
</tr>
<tr>
<td>UNIT 277</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subunit 277.1</td>
<td>10,170</td>
<td>22,613,500</td>
<td>226,135</td>
<td>1,130,675</td>
<td>2,261,350</td>
<td>4,188,984</td>
</tr>
<tr>
<td>Subtotal Unit 277</td>
<td>10,170</td>
<td>22,613,500</td>
<td>226,135</td>
<td>1,130,675</td>
<td>2,261,350</td>
<td>4,188,984</td>
</tr>
<tr>
<td>UNIT 278</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subunit 278.1</td>
<td>860</td>
<td>1,937,160</td>
<td>19,372</td>
<td>96,858</td>
<td>193,716</td>
<td>487,536</td>
</tr>
<tr>
<td>Subtotal Unit 278</td>
<td>860</td>
<td>1,937,160</td>
<td>19,372</td>
<td>96,858</td>
<td>193,716</td>
<td>487,536</td>
</tr>
<tr>
<td>UNIT 459</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subunit 459.1</td>
<td>4,075</td>
<td>9,915,120</td>
<td>99,151</td>
<td>495,756</td>
<td>991,512</td>
<td>1,902,172</td>
</tr>
<tr>
<td>Subunit 459.2</td>
<td>3,672</td>
<td>9,487,100</td>
<td>94,871</td>
<td>474,355</td>
<td>948,710</td>
<td>1,864,264</td>
</tr>
<tr>
<td>Subtotal Unit 459</td>
<td>7,747</td>
<td>19,402,220</td>
<td>194,022</td>
<td>970,111</td>
<td>1,940,222</td>
<td>3,766,436</td>
</tr>
<tr>
<td>UNIT 460</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subunit 460.1</td>
<td>13,505</td>
<td>28,745,930</td>
<td>287,459</td>
<td>1,437,297</td>
<td>2,874,593</td>
<td>5,749,186</td>
</tr>
<tr>
<td>Subunit 460.2</td>
<td>5,610</td>
<td>12,478,430</td>
<td>124,784</td>
<td>623,922</td>
<td>1,247,843</td>
<td>2,495,674</td>
</tr>
<tr>
<td>Subtotal Unit 460</td>
<td>19,115</td>
<td>41,224,360</td>
<td>412,244</td>
<td>2,061,218</td>
<td>4,122,436</td>
<td>8,244,860</td>
</tr>
<tr>
<td>TOTAL</td>
<td>43,113</td>
<td>97,711,640</td>
<td>977,116</td>
<td>4,885,582</td>
<td>9,771,164</td>
<td>17,910,180</td>
</tr>
</tbody>
</table>

Source: PLGP & Tirana Municipality, 2018

Based on this scenario, a total development of 43,113 m² can be achieved, with a total development value of 97,711,116 Euro. Through the residual value of land, it was calculated that a total amount of 17,910,180 Euro can be generated through development in the area as an “added value”. The municipality of Tirana in this case can use different instruments for capturing part of this additional value and use it for different purposes. The accommodation of property owners subject to “potential” expropriation, as a result of road extensions and expansions in the area, is possible and can be covered through the above added value. In addition, the municipality can also capture part of this value which can be invested in public infrastructures like roads, public spaces, kindergartens etc.

Moreover, if the municipality wishes to generate higher public benefits, a conditional building intensity can be applied for development in the area, as the GLTP has foreseen this instrument. This can be done through a program for conditional intensity, approved in the municipal council next to negotiations with the investors and property owners (in compliance with the current regulatory framework). In such case, the municipality would be able to generate higher levels of development, as well as higher added values, though this could also lead to high building volumes, beyond the current scale of the neighborhood.
Table 12: Estimates of Potential Value of new Development for Vernacular Concept: Conditional Intensity

<table>
<thead>
<tr>
<th>Potential Public Benefits</th>
<th>Total amount of new development (m²)</th>
<th>Total value of new development (€)</th>
<th>1% of total value of new development (€)</th>
<th>5% of total value of new development (€)</th>
<th>10% of total value of new development (€)</th>
<th>Value Added (potential value capture) (€)</th>
<th>Estimated total infrastructure impact tax (€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL BONUS INTENSITY</td>
<td>20,656</td>
<td>34,808,160</td>
<td>595,162</td>
<td>1,785,408</td>
<td>3,570,816</td>
<td>5,357,224</td>
<td>6,820,276</td>
</tr>
</tbody>
</table>

UNIT 274

Subunit 274.1

| Base Intensity | 860 | 1,935,000 | 19,350 | 96,750 | 193,500 | 492,135 | 154,800 |
| Bonus (Conditional - Base) | 3,063 | 6,126 | 122,520 | 245,040 | 490,080 | 735,120 | 367,596 |

Subunit 274.2

| Base Intensity | 4,361 | 10,599,400 | 105,994 | 529,970 | 1,059,940 | 2,019,880 | 847,952 |
| Conditional Intensity | 6,351 | 13,584,400 | 135,844 | 679,220 | 1,358,440 | 2,476,880 | 1,086,752 |
| Bonus (Conditional - Base) | 1,990 | 2,985,000 | 29,850 | 149,250 | 298,500 | 435,810 | 238,800 |

UNIT 277

Subunit 277.1

| Base Intensity | 10,170 | 22,613,500 | 226,135 | 1,130,675 | 2,261,350 | 4,188,984 | 1,809,080 |
| Conditional Intensity | 13,413 | 27,877,700 | 278,777 | 1,373,885 | 2,747,770 | 4,999,157 | 2,198,216 |
| Bonus (Conditional - Base) | 3,243 | 4,864,200 | 48,642 | 243,210 | 486,420 | 710,173 | 389,136 |

UNIT 278

Subunit 278.1

| Base Intensity | 860 | 1,937,160 | 19,372 | 96,858 | 193,716 | 487,526 | 154,973 |
| Bonus (Conditional - Base) | 3,243 | 4,864,200 | 48,642 | 243,210 | 486,420 | 710,173 | 389,136 |

Subunit 277.2

| Base Intensity | 4,075 | 9,915,120 | 99,151 | 495,756 | 991,512 | 1,983,024 | 888,826 |
| Conditional Intensity | 6,351 | 13,584,400 | 135,844 | 679,220 | 1,358,440 | 2,476,880 | 1,086,752 |
| Bonus (Conditional - Base) | 1,990 | 2,985,000 | 29,850 | 149,250 | 298,500 | 435,810 | 238,800 |

UNIT 459

Subunit 459.1

| Base Intensity | 4,075 | 9,915,120 | 99,151 | 495,756 | 991,512 | 1,983,024 | 888,826 |
| Conditional Intensity | 4,872 | 11,110,320 | 111,103 | 555,516 | 1,111,032 | 2,222,064 | 888,826 |
| Bonus (Conditional - Base) | 797 | 1,955,000 | 19,550 | 97,750 | 195,500 | 293,250 | 95,616 |

Subunit 459.2

| Base Intensity | 3,672 | 9,487,100 | 94,871 | 474,355 | 948,710 | 1,897,420 | 758,968 |
| Conditional Intensity | 4,177 | 10,245,050 | 102,451 | 512,253 | 1,024,505 | 2,049,010 | 819,064 |
| Bonus (Conditional - Base) | 505 | 1,265,950 | 12,659 | 63,295 | 126,595 | 210,190 | 105,095 |

UNIT 460

Subunit 460.1

| Base Intensity | 11,505 | 28,745,930 | 287,459 | 1,437,297 | 2,874,593 | 4,650,635 | 2,299,674 |
| Conditional Intensity | 22,843 | 54,284,630 | 542,846 | 2,714,232 | 5,428,463 | 8,888,734 | 3,662,770 |
| Bonus (Conditional - Base) | 9,138 | 23,138,700 | 231,387 | 1,156,935 | 2,313,770 | 3,855,540 | 1,827,770 |

Subunit 460.2

| Base Intensity | 5,610 | 12,478,430 | 124,784 | 623,920 | 1,247,840 | 2,495,680 | 998,274 |
| Conditional Intensity | 8,673 | 17,073,380 | 170,734 | 853,669 | 1,707,338 | 3,414,676 | 1,365,870 |
| Bonus (Conditional - Base) | 3,063 | 4,594,950 | 45,950 | 229,748 | 459,495 | 709,863 | 367,596 |

TOTAL BONUS INTENSITY | 20,656 | 34,808,160 | 348,082 | 1,740,408 | 3,480,816 | 6,319,276 | 2,784,653 |

Source: PLGP & Tirana Municipality, 2018

The application of the “conditional intensity” as proposed in the GLTP, would allow for an additional 20,656 m² of new development to be incorporated in the area. In turn this development would generate a potential added value of 6,319,276 Euro, which can be captured in part by the municipality of Tirane. Both calculations, base intensity and conditional intensity, show positive results in terms of feasibility and potential added value that can be generated in the area.

Although this scenario is feasible from the financial point of view and it could be a potential scenario, the Municipality of Tirane, decided not to take it in consideration, and assess only the possible feasibility of the GLTP proposal. This sounds as a reasonable decision, as it would otherwise increase tremendously the building area/volume in the neighborhood, hence exceeding the human urban scale.

4.3 GLTP Scenario Development Calculations

Using a similar method as in the vernacular scenario, the calculations for the financial feasibility were prepared for all five structural units, as well as the subunits with potential development. The subunits which can accommodate new development are the ones which are numbered in the below map:
The development values were calculated using the development proformas, which can be found in the annex of the report. A summary table for all development can be found below:
The total amount of development in all subunits is calculated at 167,016 m² and this development generates a total development value of 363,251,395 Euro. The application of this scenario can provide additional sources, which can be captured by the municipality for public benefits up to a level of 64,322,588 Euro. Compared to the estimated values that can be generated from the infrastructure impact tax, this is considerably higher and the municipality should aim to capture part of this value and use it for different public interventions (public infrastructure amelioration).

Considering the availability of finances and the financial feasibility, this scenario was only developed with the base intensity. This was also done through various consultations with the municipal staff, who decided not to apply for conditional intensity in the area.

### 4.4 Private Development Sensitivity Analysis

A sensitivity analysis was conducted to determine whether the proposed options’ feasibility and public benefit capacity would be affected by changes in the market. Four aspects of project feasibility, as well as two combination scenarios, were analyzed:

1. Total construction costs (-15%; +20%)
2. Developer profit (-15%; +20%; +50%)
3. Total revenues (+/- 20%)
4. Decrease in construction costs by 15%, and an increase in revenues by 20%
5. Increase in construction costs by 20%, and a decrease in revenues by 20%
6. Land costs (-20%; +25%; +50%)

One hundred percent reflects the value of each input assumed in the original baseline proforma analysis. In general, marginal changes in costs, profit, and land do not significantly alter the viability of the options or the potential for value capture. A change in total revenues has the most significant impact on viability and, especially, the potential for public benefits.

The sensitivity analysis was applied to the private development from the alternative based on the GLTP. The municipality of Tirana, after assessing both alternatives, decided to follow through with the option based in the GLTP.
As it can be seen from the above table, the sensitivity analysis of private development works quite well. With the exception of the case where land costs are increased by 15%, in all other cases the development is positive and provides added value.

4.5 Public Project’s Intervention Costs

Two are the main public project interventions in the Area, the middle ring road Segment II and the opening of the Çameria street. Both of these interventions have been calculated based on the data provided by the municipality on average construction costs for similar size roads. As such, the cost for the provision of both roads is as follows:

<table>
<thead>
<tr>
<th>Table 15- Cost of Road Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost/ml 320,999 for width 19.5m</td>
</tr>
<tr>
<td>Cost/ml 268,373 for width 17m</td>
</tr>
</tbody>
</table>

The total value for the construction of both road segments is 159,910,760 ALL or otherwise Euro 9,270,767. Besides this, there are road segments construction to be developed through the means of expropriation, and the project would have an added value of:

<table>
<thead>
<tr>
<th>Table 16- Expropriation Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ring Road 5,572,373 Euro</td>
</tr>
<tr>
<td>Çameria 1,405,893 Euro</td>
</tr>
<tr>
<td>Total 6,978,267 Euro</td>
</tr>
</tbody>
</table>

The expropriation costs have been calculated based on the data from the Albanian Government through DCM nr 89, dt 03.02.2016, “For the Approval of the Map of Land Values in the Republic of Albania”.

Source: Tirana Municipality and PLGP, 2018

The expropriation costs have been calculated based on the data from the Albanian Government.
A detailed calculation for expropriation costs, for all properties, which are subject to expropriation can be found in the appendix of the report.

Figure 26- Properties for Expropriation as a result of direct impact from the Ring Road and the Çamëria Road

The total amount of expropriation costs however is considerably lower than the market value of properties, given the lower prices used for expropriations. This may create social problems between the municipality and the property owners as well as, the citizens. The difference between the two goes beyond 13,000,000 Euro, therefore it is understandable as to why the expropriation can lead to social problems and might create strong resistance from the interested parties.

4.6 Subunit Division
Due to its size, complexity, and impact, each unit in the LDP area has been divided into subunits for planning purposes. The subunits were designated based on an analysis of existing conditions, especially proximity to the new ring road, opportunities and limitations of the existing road network, input from the municipality, and public input received during the planning process. Each subunit has undergone an extensive planning process where all considerations for various land uses are mapped out.
Subunits have been tested for the potential development and the financial feasibility. The latter has been one of the tests for the sub-divisions of the structural units and one of the main defining factors for the new management units (subunits of development), which will accommodate development.

Based on different factors such as current state of development, property ownership, infrastructural and social services improvements, the subunits were divided in two categories: the ones which will accommodate new development (pink color in the above map) and the ones, which are consolidated and cannot further absorb new development (subunits in yellow). The latter are subunits where intensive development has already happened and there is no more space to add additional buildings, or subunits where apartments were constructed prior to 1990 and regardless of the current quality, there is no intention to reconstruct them or on those plots.

The borders of the developable subunits were tested with the financial feasibility in order to see whether development could cover the costs for land. This test for conducted for all subunits in order to achieve the optimal size of new development, which can cover all the required costs, provides profit for developers and ensures public benefits. For example, subunit 274.1, has changed as shown in the below figure:
The initial idea was to include part of the “Rruga e Kavajës”, in order to increase the potential for new development. However, due to the different tests done with setbacks it was understood that the new development could not achieve its full potential. Therefore, the smaller size of development could not cover the land costs. Thus in the end it was decided to take out the “Rruga e Kavajës” and reduce the size of the subunit. The rationale behind this choice were: “Rruga e Kavajës” is a city road, serving to more than merely the neighborhood and constructed years ago. Therefore, the cost of this public space should not be charged to landowners and/or developers.

Another issue was that of the previously developed high-rise buildings, evident in the case of subunit 460.1. In this case, the management area of the previously developed building used to acquire building permission was quite large. However, after verifying the contract of development between landowners and the property developer, it was understood that not all of the management area was to be part of the new development. Thus this helped in re-shaping the borders of the sub-unit by including a larger area as shown in the figure below:
As it can be seen from the above figure, now the potential new development is larger as well as it has a better shape in terms of spatial organization. It is worth to clarify, that the building layout in both images have been prepared only for purposes of calculations of the feasibility and do not reflect the layout of the future development. This is only an expression of the building envelope and of the maximal potential development that can be used in the area once all required urban conditions and standards have been applied according to the planning legislation and to the regulation of the GLTP of the Municipality of Tirana.

A similar approach was applied with all subunits subject to development. The following figure shows the main changes that have occurred in the sub-unit divisions from the beginning to the final stage:
4.7 Land Costs, Value Sharing

In order to understand the financial feasibility, one of the main aspects is the ability of development to create revenues which are adequate to cover construction costs, costs of land as well as allow for the developer to make a required profit. In this case, all subunits subject to new development were tested in this aspect. For each subunit, property values were calculated through two main ways, initially through the expropriation value and secondly, through market values. The total cumulative value of land for each subunit was afterwards compared with the values of land calculated through the land cost (42.5% of development revenues) and the residual value of land (42.5% of development revenues + added value of public benefit). This approach was applied on an individual basis for each property as well as on cumulative basis.

The main data used for the calculations were as in the below table:

<table>
<thead>
<tr>
<th>Type</th>
<th>Cost/m²</th>
<th>Unit</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expropriation Cost Land</td>
<td>530</td>
<td>Euro/m²</td>
<td>Euro/m² based on DCM</td>
</tr>
<tr>
<td>Building Expropriation Cost</td>
<td>255</td>
<td>Euro/m²</td>
<td>NHE (EKB)</td>
</tr>
<tr>
<td>Market Value Building</td>
<td>1,200</td>
<td>Euro/m²</td>
<td>Market Analysis</td>
</tr>
<tr>
<td>Market Value Land</td>
<td>1,000</td>
<td>Euro/m²</td>
<td>Market Analysis</td>
</tr>
</tbody>
</table>

Below there is an example of the calculations regarding the cost of land for one of the subunits (459.1):
## Table 18- Sample of Calculation for Land Cost

<table>
<thead>
<tr>
<th>Parcel Area within Management Area</th>
<th>Parcel Area Building Ground Floor</th>
<th>Building Area Ownership Building</th>
<th>Total Cost by Expropriation</th>
<th>% of Share of Property Value</th>
<th>Value According to LC</th>
<th>Value According to RLV (2)-(1)</th>
<th>(3)-(1)</th>
<th>(4)-(1)</th>
<th>(3)-(2)</th>
<th>(4)-(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>256</td>
<td>465</td>
<td>25</td>
<td>51  Private</td>
<td>136,494</td>
<td>231,535</td>
<td>5.95%</td>
<td>504,889</td>
<td>722,025</td>
<td>121,041</td>
<td>988,395</td>
</tr>
<tr>
<td>26</td>
<td>3,270</td>
<td>6</td>
<td>48  Private</td>
<td>14,983</td>
<td>28,734</td>
<td>0.65%</td>
<td>55,630</td>
<td>79,249</td>
<td>13,269</td>
<td>64,445</td>
</tr>
<tr>
<td>95</td>
<td>1,833</td>
<td>24</td>
<td>47  Private</td>
<td>50,196</td>
<td>94,714</td>
<td>2.19%</td>
<td>186,383</td>
<td>265,533</td>
<td>44,151</td>
<td>215,333</td>
</tr>
<tr>
<td>28</td>
<td>27</td>
<td>24</td>
<td>47  Private</td>
<td>11,565</td>
<td>56,400</td>
<td>1.30%</td>
<td>110,570</td>
<td>158,118</td>
<td>44,415</td>
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<td>1,991</td>
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<td>9,191</td>
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<td>33,966</td>
<td>48,618</td>
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<td>75  Private</td>
<td>53,015</td>
<td>100,029</td>
<td>2.31%</td>
<td>196,104</td>
<td>280,434</td>
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</tr>
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<td>582,000</td>
<td>13.44%</td>
<td>1,140,863</td>
<td>1,631,656</td>
<td>456,325</td>
<td>1,017,318</td>
</tr>
<tr>
<td>60</td>
<td>60</td>
<td>60</td>
<td>110  Private</td>
<td>30,379</td>
<td>142,962</td>
<td>3.30%</td>
<td>280,273</td>
<td>400,797</td>
<td>112,563</td>
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</tr>
<tr>
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<td>75  Private</td>
<td>18,615</td>
<td>67,600</td>
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</tr>
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<td>1.70%</td>
<td>144,195</td>
<td>206,303</td>
<td>57,922</td>
<td>143,926</td>
</tr>
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<td>230</td>
<td>198</td>
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<td>357,600</td>
<td>8.26%</td>
<td>701,084</td>
<td>1,102,540</td>
<td>381,610</td>
<td>926,592</td>
</tr>
<tr>
<td>198</td>
<td>187</td>
<td>56</td>
<td>74  Private</td>
<td>18,870</td>
<td>88,800</td>
<td>2.05%</td>
<td>174,080</td>
<td>248,953</td>
<td>69,930</td>
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<td>534,000</td>
<td>12.33%</td>
<td>1,046,880</td>
<td>1,497,081</td>
<td>933,415</td>
<td>1,383,608</td>
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<tr>
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<td>56</td>
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<td>39,717</td>
<td>186,905</td>
<td>4.32%</td>
<td>366,421</td>
<td>523,962</td>
<td>147,186</td>
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<td>553,169</td>
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<td>123,675</td>
<td>582,000</td>
<td>13.44%</td>
<td>1,140,863</td>
<td>1,631,656</td>
<td>456,325</td>
<td>1,017,318</td>
</tr>
<tr>
<td>87</td>
<td>81</td>
<td>25</td>
<td>49  Private</td>
<td>12,445</td>
<td>58,800</td>
<td>1.36%</td>
<td>115,270</td>
<td>164,847</td>
<td>46,305</td>
<td>152,781</td>
</tr>
<tr>
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<td>51</td>
<td>8</td>
<td>81  Private</td>
<td>20,598</td>
<td>96,931</td>
<td>2.24%</td>
<td>190,030</td>
<td>271,747</td>
<td>67,333</td>
<td>169,422</td>
</tr>
<tr>
<td>92</td>
<td>92</td>
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<td>125,685</td>
<td>278,976</td>
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<tr>
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<td>311</td>
<td>44</td>
<td>63  Private</td>
<td>16,065</td>
<td>75,600</td>
<td>1.75%</td>
<td>148,211</td>
<td>211,948</td>
<td>50,535</td>
<td>132,146</td>
</tr>
<tr>
<td>422</td>
<td>216</td>
<td>22</td>
<td>47  Private</td>
<td>11,565</td>
<td>56,400</td>
<td>1.50%</td>
<td>110,570</td>
<td>158,119</td>
<td>44,415</td>
<td>99,545</td>
</tr>
<tr>
<td>69</td>
<td>81</td>
<td>68</td>
<td>68  Private</td>
<td>17,237</td>
<td>81,117</td>
<td>1.87%</td>
<td>159,027</td>
<td>227,413</td>
<td>63,880</td>
<td>141,760</td>
</tr>
</tbody>
</table>

| Total                             |                                  |                                 |                             |                              |                      |                              | 1,078,309 | 4,330,482 | 100.00% | 8,489,775 | 12,140,695 | 3,252,174 | 7,411,466 | 11,062,294 | 4,159,292 | 7,810,123 |

1 2 3 4
The above table shows that the difference between the land cost (42.5% of development revenues) and the current market value of properties, are all positive. This shows that not only the development can cover land costs, but also have a large amount of remaining added value which can be captured by the municipality in order to finance part of the ring road construction cost, social services in the area, or any other infrastructural improvements.

The above holds true for all other subunits (see Appendix), with the exception of 274.1 and 278.1. Due to the restrictions from setbacks, the total development in unit 274.1 cannot achieve the full potential allowed by the FAR. Therefore, due to lower amount of development, it is not possible to cover the claims of the property owner regarding the value of their property. In fact, the difference between the current market value of the properties and the land cost (calculated as 42.5% of development revenues) is negative, almost 2.3 mil Euro. In this case it was also calculated whether the adjacent subunit, 460.1, could cover part of the land costs of 274.1. Based on the calculations, it is possible to cover both land costs. Thus landowners in the subunit 274.1 and 460.1 can be all accommodated, if the two units are treated together.

In unit 278.1, the amount of new development proposed in the area could not cover land costs. This comes as a result of the setback restrictions. Therefore, subunit 278.1 will be integrated in subunit 277.1. This (277.1) is the largest subunit in terms of potential new development. Therefore, also in the feasibility it shows that it can accommodate the additional property owners from subunit 278.1. Besides this fact, the space in subunit 278.1 will be used for the provision of a new kindergarten, which is a GLTP requirement for the unit 277.

In unit 274, there is an apartment block, which has been constructed in an informal way (without permission). The building is on the axes of the ring road and therefore the municipality plans for demolition. As such, based on the fact that the apartment owners do not have any properties titles they can’t be expropriated. To avoid social problems, all existing owners of apartments in this informal building, can and should be compensated with the same size/value apartments in the development that is expected to occur in subunits 460.1, 274.2, 459.1, 277.2, 277.1.

Based on the GLTP provisions, unit 274 is required to host a kindergarten. The latter has been planned for development within unit 274.3. Based on the feasibility study, the potential new development can cover all land costs for the property owners, as well as it can incorporate the construction of the kindergarten.

In any case, it is highly recommended and even mandatory that once the municipality engages with implementation of this project, carries the following tasks:

1. Revisit once again all feasibility calculations to refresh the assumptions (market values, construction costs, etc.) and count for the landowners and developers expectations and plans at the exact time of implementation and/or construction of infrastructures and private development.
2. If necessary and feasibility will have changed after data are refreshed, a revision of the plan (subunits and related calculations of building envelope) may be needed to take place.
3. Both of the above actions should only take place if the feasibility turns out negatively and with no unjust costs imposed over landowners, the community in the neighborhood and the community in the city of Tirana.
4. For any possible changes, the municipality should communicate regularly to stakeholders (landowners, developers, community at large).
5. In order to implement no.4 above, but also during the whole process of implementation of the infrastructures works, the municipality should implement an open communication platform, where the stakeholders (landowners, developers, community at large) should be regularly informed and allowed to negotiate upon their rights.
4.8 Project Benefits and Risks

4.8.1 Anticipated Benefits

Overall project benefits, which contribute to the economic and social sustainability of the project, include:

Governance
- Progress towards the development vision of the municipality and priorities encompassed in the GLTP.
- Higher intensity of development can allow for scale economies, thus enabling the municipality to provide local public services efficiently.
- The project to be implemented requires intensive communication and negotiations between developers, the municipality and property owners. This increased participation and transparency in decision making towards mutual – equilibrated public and private benefits.

Traffic and Transport
- Improves access in Tirana.
- Improves mobility and circulation in city center.
- Reduces travel time/faster travel.
- Reduces travel costs.
- Improves bus service and reliability.

Economic
- Re-configures, develops and expands a central commercial area.
- Enhances the potential to generate more revenues through infrastructure impact tax and property taxes and other possible value capture instruments.
- Creates better living conditions through better/improved housing quality.
- Creates new jobs through re-development, both temporary jobs during the construction phase and permanent jobs once the project is complete.

Urban Quality
- Public infrastructure construction and/or reconstruction (streets).
- Public and green spaces added to the area.
- Improved water and sewerage systems.
- Better quality of buildings with higher construction standards.
- Improved public services such as the two new kindergartens.

4.8.2 Risk Assessment

The implementation of the LDP and the “Ring Road Segment II” besides the benefits that provides in the area may also be faced by a series of legal, technical and financial risks, which the municipality needs to be aware before deciding on the strategy of development.

Legal Risks

In the area there are a number of properties with no information on their status and unknown property owners. The claims of possible owners could delay the process. This may include possible court cases, which can postpone development and also the construction of the Ring Road. Thus it is imperative that the municipality of Tirane clarifies all the cases that could not be resolved during the time of the preparation of the feasibility study.

The negotiations and the preparations of agreements with property owners and developers can be associated with legal risks. Considering that there are different subunits (management areas), which all need to be negotiated and agreed on with the developers and the property owners, it requires a great
attention in the preparation of procedures, communication and transparency platform, and a clear land readjustment strategy.

As previously mentioned, in unit 274, there is an apartment block, which has a building with informal status. Before starting any procedures, the municipality needs to make sure that the status of the building has not changed, as well as hold transparent negotiations with the apartment owners/users in order not to create further issues. In case this issue goes to court, it can create delays as the building is in the main axes of the ring road segment.

Financial Risks

The feasibility study has been prepared by using a set of assumptions, which were derived as a result of market analysis, existing costs as by the current legal framework and information provided by the municipality of Tirana. In addition, a sensitivity analysis has been developed in order to verify the feasibility of the implementation of the LDP and as shown in the above section, the implementation of this area is sustainable from the financial point of view.

Nevertheless, the timing of the implementation and development in the area could cause different elements to change such as:

- Increased construction costs;
- Decrease of demand for housing and commercial spaces in the area;
- Lower selling prices as compared to the ones used to make assessments in this study;
- Increased property costs as a result of higher costs of land due claims from property owners.

Developers that will be interested to invest in the area might not engage all at the same time. This means that the developers entering in a later stage could benefit from higher selling prices as a result of the improved infrastructure in the area, but also bear higher costs due to increased land values. Thus, in order to reduce disparities in terms of financial costs and benefits the municipality needs to make sure it has the right mechanisms in place and steer the process openly since the early stages.

Competition from other areas, which are under construction could also lead to financial risks. Projects such as the extension of the Boulevard for example could be direct competitors with development in the ring road area. The large supply of housing as a result of increased building activity in the municipality of Tirana could lead to the reduction of selling prices.

Technical Risks

The Ring Road Segment II, due to the current state of development in the area, can’t be constructed with the same width throughout its axes. The opening of a ring road is a large intervention for a dense city center area. Contingent factors, unknown at the moment, can increase construction costs of the ring road segment.

The construction of the Ring Road Segment II may not happen at the same time as the private developments. Therefore the municipality should assess all of the possibilities for when and how to start implementation and benefit from land readjustment. After all, every contract set between the municipality and the landowners should guarantee their fair and just compensation based on market values as expected by them, while at the same time achieving land readjustment and avoiding expropriation for the construction of the Ring Road Segment II and Çamëria road.
5.0 Consistency of Project with Environmental Policy

5.1 Water Resources

5.1.1 Surface Waters

The development area, subject of this study (the middle ring road segment II), is located in the western part of the city center of Tirana, about 300m away from the river Lana, on its right. The area is located on a flat ground, sloping towards the riverbed and parallel to it.

The territory of the Municipality of Tirana has a rich hydrographic network and it is located within the watersheds of River Ishëm and Erzen, which form one of the 6 basins of the country.

River Ishëm is formed by the waters of rivers Tirana, Tërkuza, Zeza and Lana, with the main branch of these waters being the river of Tirana. Its watershed is located in the middle Albania between the Mat basin in the north and the Erzeni river basin in the south, the watercourse that passes through the mountains of Micak (1,828 m) and Dajti (1,612 m). It has an area of 673 km² and it is 357m above sea level, while the length of the bed is 79.2 km. The main branches of the river were characterized as rattling, typical mountain streams. The Lana and Tirana Rivers cross into the inner city of Tirana, joining together in the western part of the city.

The quality of the water of river Ishëm is not in good condition, according to the monitoring carried out by the NEA in 2017, the values of oxygen dissolved in water are lower than the EU standard values. Also, the biological need for Oxygen and Chemical in these waters is too high. Total phosphorus passes significantly the permissible water levels, as well as ammonia passes dozens of times the allowed limit values.

The main pressures that deteriorate the quality of these waters are the discharges of urban wastewater from the city and the surrounding urban settlements, as almost all of the Ishëm River branches pass into areas with high urban densities. Also, chemical fertilizers and pesticides used in agricultural lands are another source of pollution of these waters.

The Erzeni River is one of the most important rivers bordering the central part of Albania. Erzen's watershed has an area of about 760km², with an average height of 435m above sea level. Erzeni source is in the Gurakuqi Cove section at 1,300m altitude, and has a total length of about 109km and an average annual flow rate of 18.1ms/flow module 24l/s. The geological construction of the Erzen basin consists of unsurpassed formations in 60% of the surface, semi-permeable at 5% of it and 35% of the unsaturated formations. The underground sources represent 31% of the annual flow, while the surface area is 69%. The waters of the Erzen River are used mainly for irrigation and very little for drinking water. Along the valley there are many shallow water wells used for water supply in the surrounding areas.

The water quality of the Erzen River is presented in a relatively good condition, where according to the monitoring carried out by the NEA in 2017, the values of oxygen dissolved in water are higher than the EU standard values. While the Oxygen and Chemical Biological need in these waters is roughly equivalent to the EU standard value. Total phosphorus is within the permissible water norms, as well as ammonia does not present high values.

The sources of river pollution in the territory of the Tirana Municipality are numerous. Among them are the direct discharge of polluted water into the water surface (without being subjected to cleaning processes in wastewater treatment plants), the use of river bank areas for solid urban waste dumps (penetration of slopes and accidental spillage of solid waste in river running waters creates direct pollution), industrial wastewater discharges (light industry), Erzen bedding for inert materials, discharges and water penetration of chemicals used in the agricultural lands directly into the river, etc.
5.1.2 The impact of the LDP in the surface waters

Though the new developments (in the LDP area) are at a relatively small distance from the Lana River bed, the impact rate could be relatively low and controllable, if mitigation measures are taken to avoid negative impact on the surface water. It is worth thus considering some impacts that may affect surface water quality deterioration. There are two main processes envisaged for the LDP area: the first is about demolition of buildings and cleaning of the area from inert waste to free the surface where the road will pass and second is the construction of the buildings and of the new road segments.

Possible project impacts on surface water bodies are expected from both processes, during project implementation and during operation. Some of the most important influences are mentioned below.

Potential Impacts during the Implementation Phase:

- The demolition of buildings and the opening of the roadway will produce large quantities of inert wastes, which in case of rains are expected to have an impact on the surface waters by adding the suspended solids to and dissolved in water. This impact is expected to be at low levels and in short intervals (rinsing only in case of rains).
- Rinsing off building materials or accidental spills in case of rain during the construction phase may also have an impact on the growth of polluting elements in surface water bodies.
- Accidental hydrocarbon spills from technological tools that will work on the site. Hydrocarbons can be extracted and transported to surface waters (Lana River); they can also infiltrate the soil by contaminating it and entering groundwater.

Possible Impacts during Operation Phase:

- Accidental spills of hydrocarbons from means of transport that will land in the area or move in the area (this impact is also present under current conditions). Accidental hydrocarbon spills can be irrigated and go into surface water bodies or infiltrate into groundwater by polluting them.
- Used waters that will leave the area, whatever their use. The used waters will pass into the urban wastewater network that drains in the course of the Lana River (This impact is also in the current conditions of the area but may be added with the re-emergence of the area).

In order to account for all of these polluting affects and prevent and mitigate them, the municipality should prepare the Environmental Impact Assessment (EIS) report for the infrastructural interventions in the area and request private developers to prepare the EIA for their construction works. The EIS
reports should be implemented accordingly and should provide detailed information on impacts and measures.

5.2 Underground water sources (Aquifers)

The Tirana Municipality territory extends over the Quaternary gravel aquifer of Tirana, which represents the Tirana - Ishmi basin area. In this basin, the main water horizon is represented by gravel deposits spreading throughout the area where Tirana's city lies. The thickness of these deposits increases from the city towards Selita e Vogël, Kombinat, Mezez - Laknasit. The thickness of the aquifer layer varies from 2 to 3 m, to 5-10 m, the largest thickness is in the sectors of Selitë e Vogël, New Ring, Kombinat, Mëzez-Laknas. The water carrying layer has good hydraulic indicators, the specific flow ranges from 2 to 5 l/sec/m to 10-20 l/sec/m, the filtration coefficient ranges from 50 to 100 m/day at 200-400 m/day 10.

The annual coefficient of utilization of the quaternary gravel aquifer ranges from K = 0.85 to 0.95 while the amount of water used is Q = 1,200-1,300 l/sec and is used for drinking water supply of the city of Tirana, Kamza and other inhabited centers as technological water. With regard to the characteristics of the underground waters of this basin, there are mainly waters without pressure (the city of Tirana, Lapraka, etc.) and with pressure but without self-flow (Kombinat, Sëliti, Laknas). The groundwater of the Tirana basin is fueled by the infiltrations of atmospheric rainfall, especially when they are unpressurized, as well as by the infiltrations of the surface waters of the Tirana, Tërkuza rivers. Physico-chemical properties of water are good with Mp = 0.5-08 mg/l. From the analyzes carried out it turns out to be neutral waters 11.

Underground water has good physical-chemical properties. The overall strength varies from 20 to 260 grams, the total mineralization ranges from 650 to 900 mg / l. Water is calcium hydrocarbon type. Groundwater is used for the supply of drinking water and technology. In this aquifer, a number of drilling rigs for the supply of potable water have been used, such as the station Sëliti, New Ring, Kombinat, Laknas, Bëruxull, Valias, Gjec-Fushë, Rinas. Also underground water is utilized for technological water and irrigation. 12

5.2.1 Impacts of Aquifers

Possible project impacts on groundwater bodies are expected to take place in two phases, during project implementation and during operation. Some of the most significant influences are mentioned below.

Potential Impacts during the Implementation Phase:

- Moving soils and inertia during construction and demolition of buildings and opening of the roadway are expected to have an impact on groundwater. This impact is expected to be at low levels and at short intervals
- Infiltration of building materials or accidental spills in case of rains during the construction phase may also have an impact on the growth of polluting elements in groundwater bodies.
- Accidental hydrocarbon spills from technological tools that will work on the site. Hydrocarbons can be infiltrated into groundwater bodies; it should be noted that groundwater in this area is very close to the soil surface.

Possible Impacts during Operation Phase:

- Covering/sealing of soil of parking spaces for vehicles, pedestrian crossings and roads will limit infiltration into groundwater. In this situation, it should be taken into account that in those places where there is a possibility to leave the space for water infiltration, this to avoid flooding of the surface water, soaking the ground, and infiltrating the groundwater.
- Accidental hydrocarbon spills from means of transport that will move in the area. Accidental hydrocarbon spills can be infiltrated into underground groundwater by polluting them with hydrocarbons.
waste waters coming out of the area (this is a problem even in the current state of the area), whatever the use they are. Waters will pass into the urban wastewater network that drains in the course of the Lana River and as such can be infiltrated into groundwater.

The Environmental Impact Assessment (EIA) for the implementation project should analyze in detail all possible impacts and ensure that appropriate mitigation tools are used for any possible impact. The EIA should have all the mitigation steps presented through an action plan that will be implemented and monitored in accordance with the legislation, during the implementation of the project and its operation.

5.3 Air Quality

Air pollution continues to be a serious problem for the health of the population in Tirana. Emissions from different vehicles and constructions contribute greatly to urban air pollution, causing respiratory problems, especially in very young ages and the elderly. Of particular importance is the fuel quality used by vehicles, which in our country is of lower quality than that of EU countries. However, construction activities constitute another significant source of air pollution, especially in cities like Tirana, where construction is quite intensive.

In 2017, NEA and IPH monitored the quality of air in the city of Tirana throughout the year. Monitoring is usually performed on three points, where six indicators (SO$_2$, NO$_2$, O$_3$, CO, Benzene and PM$_{10}$) are observed. From the data published by NEA on annual averages of the main pollutants in the city of Tirana, high PM$_{10}$ levels are noted, with about 62.5 μg/m$^3$, while 40 being the limit value allowed by the EU. The values of NO$_2$ in Tirana reach 49.3 μg/m$^3$ (EU 40 μg/m$^3$), SO$_2$ reaches about 14 μg/m$^3$, O$_3$ reaches an average of 26.2 μg/m$^3$, CO at 2.65 μg/m$^3$ and Benzene reaches the value of 1.83 μg/m$^3$. Referring also to the NEA data on heavy metals values in the air, based on the monitoring carried out in the city of Tirana it results that all types of heavy metal in the air are many times below the norms allowed by the European Union.

Figure 32 Average Annual Values for Air Quality indicators for 2017 (μg/m$^3$)

<table>
<thead>
<tr>
<th>2017 Measuring Stations</th>
<th>SO$_2$</th>
<th>NO$_2$</th>
<th>O$_3$</th>
<th>CO</th>
<th>PM$_{10}$</th>
<th>Benzene</th>
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<td>(Tirana Mobile) B.T</td>
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<td>26.22</td>
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<td>90</td>
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<td>5</td>
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</tbody>
</table>

Source: AKM, 2017; Amended by: Co-PLAN, 2018

Taking as a reference the above data indicates that there is an excess of air pollutants rates, mainly PM$_{10}$, NO$_2$, etc.. The factor in this situation, in addition to the emissions from the light industry, construction, public and private transport as well as infrastructural interventions, is the lack of green spaces and recreational spaces that perform, among other things, the function of polluted air filtration and the production of [small] amounts of O$_3$, which is important for air quality, especially in urban centers. Green spaces or urban vegetation, as often called in literature, directly or indirectly affect the improvement of air quality. Specifically, urban vegetation affects the reduction of pollution by absorbing pollutants through their leaves.

5.3.1 The impact of the project on air quality

The development of the project is expected to have a positive impact on the large scale as the opening of the connecting road from "Myslym Shyri" to "Kavaja" road will eliminate some of the traffic that is directed to the city center and consequently will lower air pressure caused by the traffic and transport vehicles.

Possible impacts of the project on air quality are expected to take place in two phases, during project implementation and during operation. Some of the most significant influences are mentioned below.
Possible impacts during the implementation phase of the project:

- Soil and inert mixing from the demolition of the buildings for opening the roadway during the project implementation phase is expected to have an impact on air quality degradation, mainly due to massive material movement. This impact is expected to be significant, but in a short period, mainly at project stages where excavations will be more intensive and when demolition will take place.
- Airborne emissions from the combustion of diesel from the technological machinery that will be needed to enable conducting various processes during the construction phase will add the polluting elements in the air. Pollutants in this case will mainly be (LGS) CO$_2$, SOx, SOx, PM$_{10}$, and PM$_{2.5}$. It should be noted that these emissions will occur in a short interval of time and the impact is expected to be localized.

Possible Impacts during Operation Phase (Project Completion):

- In the area of the project the flow of vehicles is expected to increase after the completion of works, mainly small vehicles (cars), as a consequence the level of pollution in the area will increase, mainly with (LGS) CO$_2$, SOx, SOx, PM$_{10}$, and PM$_{2.5}$. It should be noted that these emissions will occur in the long run and the impact is expected to be localized. Therefore, measures should be taken at the early stages of the project to avoid creating hot spots in the area.
- Increasing the density of buildings in this area will have a notable impact on the degradation of air quality. The main pollution will be from increasing CO$_2$ emissions, and increasing building heights can also cause problems with the natural ventilation of the area, so special attention should be paid to the positioning of buildings to allow ventilation of the area. (See project master plan section). The municipality should take care of the latter during design layout stages.

The Environmental Impact Assessment (EIA) for the implementation project should analyze in detail all possible impacts and ensure that appropriate mitigation tools are used for any possible impact. The EIA should have all the mitigation steps presented through an action plan that will be implemented and monitored in accordance with the legislation, during the implementation of the project and its operation.

Mitigation measures include but do not limit to the following:

- The construction site should be surrounded with protective fences and the buildings with the air pollution protective net.
- Regular water sprinkling of the surfaces to be excavated and leveled in order to reduce the particle dispersion in the air.
- In the case of the transport of soil and inert waste, needs to be carried out correctly, the coverage of the trucks and their bins must be checked to eliminate the cracks. This minimizes and prevents air pollution from particles/dusts.
- Prior to the beginning of the works, the technical control of the vehicles will be subjected to the examination of emissions of pollutants into the atmosphere, if it is necessary, measures need to be taken for their technical adjustment or suspension of works.
- Periodic inspections of the motorized condition of the transport vehicles should be carried out during the road operation phase and examination of the emissions of the pollutant into the atmosphere from combustion of the fuel. This requires a collaboration between the Tirana Municipality, the General Directorate of Road Transport Services, RDRTS - Tirana and the Private Vehicle Technical Control Company (SGS).
- Exercise continuous control over new residential, commercial and residential buildings with the aim of implementing energy performance measures in them, thus reducing the emissions from the residential and commercial sector in the area.

5.4 Noise in the Environment

According to the National Environment Agency, noise pollution in the environment is becoming a daily and more serious concern for the health and wellbeing of citizens. Noise is caused by a large number of sources that are natural but also caused by many human activities. Noise pollution has impacts on
human health and comfort, mainly affects the nervous system, problems with hypertension, decreased immunity and life-threatening prematurely.15.

Tirana is in one of the cities planned for monitoring the noise in the environment. For 2017, NEA has monitored the noise level in the environment at 15 points of the city. From the monitoring carried out for the city of Tirana in 2017 it turns out that Tirana is the most noisy city in Albania, exceeding by 20.4% the WHO standard for noise in the daytime environment (LAAeq/Day dB (A)) and exceeding from 24.7% night noise noise (LAAeq/Night dB (A)).

The LDP area is located in the western part of the city center of Tirana, and in the vicinity of the Police Directorate. At these two noise monitoring stations in the environment, according to the NEA, the noise level reaches 64.07 LAeq/Day dB (A) and 53.8 LAeq/Night dB (A) at the station near the Police Directorate, while at the station in the city center, it is about 70.3 LAeq/Day dB (A) and 55.06 LAeq/Night dB (A).

Some of the major causes of noise pollution in the environment are: Large fleet of vehicles circulating on the main streets of the city, Lack of temporary/permanent parking space, motor vehicle condition not in a good state, construction work on different sites/roads etc. in urban areas.

5.4.1 The potential impact of the project on noise in the environment

Possible project impacts on environmental noise are expected to take place in two phases, during project implementation and during operation (project completion). Some of the most significant influences are mentioned below.

Potential Impacts during the Project Implementation Phase:

- Increase the level of noise and vibration at the project construction stage. Mainly in the process of demolition of existing buildings and in the opening of the roadway and its construction. Being in a high-density residential area, it is important to keep in mind how to control the noise emission and work with reduced hours.
- Increasing the noise level of technological machinery on the construction site, mainly heavy-duty vehicles cause considerable noise and vibration.
- Increased movements in the construction site of workers and equipment used to carry out different work processes.

Possible Impacts during Operation Phase (Project Completion):

- Increased level of the amount of motor vehicles that will move in the area after the construction of the ring segment.
- Increased number of people who frequent the area is another factor that increases the noise in the environment, as besides the movement of the vehicles the area will also have the development of public spaces and the increase of the density of housing.

Mitigation Measures

The EIA Action Plan should include measures to avoid and/or mitigate all the above impacts. These include, but do not limit to the following:

- The obligation of the technical control (and the time interval to be completed) of the vehicles that will work during the construction phase. The vehicles should be in good motor and generic conditions so that the noise level is as low as possible.
- Signaling equipment for stopping the use of honks and limiting speed table at the entrance of the area and in the interior.
- Planting trees and shrubs in places where considered necessary to play the role of the mitigation zone for noise.
- Avoid obstacles, intersections, use of noise-causing materials (cobblestone), etc.

The Environmental Impact Assessment (EIA) for the implementation project should analyze in detail all possible impacts and ensure that appropriate mitigation tools need to be used for any possible impact. The EIA should have all the mitigation steps presented through an action plan that will be implemented.
and monitored in accordance with the legislation, during the implementation of the project and its operation.

### 5.5 Urban Forests (greenery)

The area is located in a highly dense urban setting, mostly used for residential purposes. The area in question has a reduced greenery, mostly composed by side street trees which are damaged and very rare. Part of the vegetation in the area includes cultivated vegetation within the yards of private homes. The trees in the area are represented by fruits and/or decorative fruits in the courtyards of private houses and trees planted along the roads.

At the city scale, the green per inhabitant is smaller than the standard, although there are enough spaces to reach the necessary standards of public greenery. According to the municipality of Tiranë (2017) urban greenery at the unit level is 1.7m²/inhabitant versus 2m² which is the standard. A similar situation is related to massive greening (0.7m²/inhabitant versus 4m² which is standard) and road greenery, squares, waterfronts and urban areas. Only in peripheral areas it is noticed that the green surface is or exceeds the standards. Greening in the city is represented by parks, street trees, peripheral parks. The total area of greenery in Tirana reaches 35ha, which is a very low value compared to the required standard.

#### Table 19- Urban Greenery in the City of Tirana

<table>
<thead>
<tr>
<th>URBAN GREENERY</th>
<th>TIRANA</th>
<th>TOTAL AREA m²</th>
<th>COVERED AREA m²</th>
<th>ROADS m²</th>
<th>FICTUAL AREA m²</th>
<th>GRASS AREA m²</th>
<th>FLOWER AREA m²</th>
<th>ROADS AND PLAZAS m²</th>
<th>GREEN WEDGES m²</th>
<th>WATER BASINS m²</th>
<th>OTHER AREAS m²</th>
<th>DEKORATIVE TREES (No)</th>
<th>DEKORATIVE SHRUBS (No)</th>
<th>BASKETS (no)</th>
<th>BENCHES (No)</th>
<th>DECORATIVE VASES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Greenery</td>
<td>Tirana</td>
<td>346,084</td>
<td>6,199</td>
<td>48,476</td>
<td>339,595</td>
<td>259,038</td>
<td>4,584</td>
<td>64,903</td>
<td>3,504</td>
<td>4,229</td>
<td>2,610</td>
<td>20,774</td>
<td>14,660</td>
<td>263</td>
<td>1,014</td>
<td>159</td>
</tr>
</tbody>
</table>

Source: Bashkia Tirane / APR 2017; 

Figure 33- Photos from the Area

Source: Co-PLAN Archive, 2018
5.5.1 Possible impact of the project on urban forestry (greenery)

The implementation of the LDP is expected to have a positive impact in terms of adding green areas and planting new trees, if all infrastructures and services will be implemented as planned in this feasibility analysis and in the LDP proposal that supports this analysis. In the development project of the area it is foreseen to increase the green areas. Trees will also be planted along the ring road II section and Çamëria road.

The project envisions hedging of trees throughout the project area, mainly in the area where the middle ring axis passes and within the area. Greening will be used as a landscape/architectural element, but also to utilize its environmental benefits, i.e. the shade of the parking places, the green zones for noise reduction, etc.

*Figure 34- Section of the Ring Road Segment II*

![Image of Section of the Ring Road Segment II](source: Municipality of Tirana, 2018)

The Environmental Impact Assessment (EIA) for the implementation of the LDP should analyze in detail all possible impacts and ensure that appropriate mitigation tools are used for any possible impact. The EIA should have all the mitigation steps presented through an action plan that will be implemented and monitored in accordance with the legislation, during the implementation of the project and its operation. When drafting the EIA, consideration should be given to adding green areas and leaving as much porous surface as possible to infiltrate water on the ground.

5.6 Landscape

In the area of the LDP there is the urban landscape typology. At a slightly larger scale, we can also distinguish elements of the natural landscape made up of the water bodies of the Lana River, about 300m south of the area in question. The river, although completely modified, features the characteristic of a green corridor in the interior of the city, with shrubs and trees. The area is distinguished for a typical urban landscape, with high density of construction combined with older organic settlements. It preserves to some degree also the quadratic shape. Greenery in the area is very poor, with very few trees, which sometime are not in good conditions. Private houses within their yards have a considerable amount of greenery, mostly with trees and fruit bushes.
Urban Landscape Features are characterized by trees planted close to each other along the road axes, while their types are diverse along the way. The stalks where these trees stand are different from one road to the other, some with raised edges and some borderless. Meanwhile, the size of most of the tree holes is relatively small in relation to the tree. Decorating or “island” tree groups are only found within or small gardens, and the purpose is aesthetic rather than their environmental function and services. Most of the parking areas appear exposed to the sun as plants for shading these spaces are missing. The hedges and the separating walls of properties in some areas are over 2 meters high and aesthetically "narrow" the common space, leading to a feeling of lack of security.

5.6.1 The potential impact of the project on the landscape

The potential impacts on landscape can be expected during implementation and during operation. Some of the most significant influences are mentioned below.

Potential Impacts during the Project Implementation Phase:
Digging and demolition of buildings will bring a temporary deterioration in the landscaping aspect of the area. There will be unwanted visual impacts as a result of project development, which can be minimized with appropriate measures that can provide covering of the inappropriate visual impact, i.e. refurbishment of the area with non-transparent material.

Auxiliary tools and the movement of technological machinery will also have a bad impact on the landscaping aspect of the area. The negative impact on the landscape will be only during the implementation phase of the project, i.e. in a relatively short period of time.

Possible Impacts during Operation Phase (Project Completion):

- Improved landscape through the introduction of natural elements into the area, combining the planting of trees with other plants and minimizing the negative impact of objects.
- Increased public space and creation of suitable, relaxing spaces, which can be used during the afternoon hours by citizens.
- Planted trees along the roads and parking areas will be another positive aspect in improving the landscape and introducing natural components into the area.

Mitigating Measures

The Environmental Impact Assessment (EIA) for the implementation project should analyze in detail all possible impacts and ensure that appropriate mitigation tools are used for any possible impact. The EIA should have all the mitigation steps presented through an action plan that will be implemented and monitored in accordance with the legislation, during the implementation of the LDP and its operation. Some of the specific measures are:

- Introduction of natural elements within the area (porous surface, grass surface, flowers, shrubs and decorative trees),
- Planting tall trees to shade the surface of the parking lots as well as to obtain other environmental benefits such as air cleaning, the creation of a noise reduction zone, etc.
- Creating green walls to hide objects that are unsuitable for the human eye;
- Combined planting of shrubs and autochthonous trees in order to create a harmonious landscape in the area.

5.7 Biodiversity/ important natural areas

The area of Tirana has many natural resources, including rivers, middle and high mountain areas, green hills surrounding the city, Mediterranean shrubs, leafy forests, coniferous meadows and pasture blends.

The area of Tirana is known for its high biological diversity, both flora and fauna. In the area around Tirana there are about 860 high plant species, distributed in 90 families. Life forms consist of hemycryptophytes (37%), terophyte (28%), geophytes (17%) and phylophyte (13%). Tirana's surroundings also host some 224 species of faunistic species. In the list of fauna species of Tirana are predominantly birds of about 130 species, mammals of 53 species, 28 species of reptiles and 13 species of amphibians.

Figure 37- Fauna Types in Tirana

<table>
<thead>
<tr>
<th>Types</th>
<th>No. of types in Tirana</th>
<th>No. of types in Albania</th>
<th>(%) of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mamals</td>
<td>53</td>
<td>71</td>
<td>74.6</td>
</tr>
<tr>
<td>Birds</td>
<td>130</td>
<td>330</td>
<td>39.3</td>
</tr>
<tr>
<td>Reptiles</td>
<td>28</td>
<td>37</td>
<td>75.6</td>
</tr>
<tr>
<td>Amphibious</td>
<td>13</td>
<td>15</td>
<td>86</td>
</tr>
</tbody>
</table>

Source: VSM, Bashkia Tiranë, 2017;

Flora in the study area is considered very poor, with herbaceous and monotonous species, mostly represented by herbs, trees and decorative shrubs. In the area, the tree types are soft pine and Platanous, all planted along the roads. While in the private yards of the houses there are mostly Persimon, Pommegranades, Fiqs, Plums and Grapes.

Also fauna’s species are in limited numbers, mainly represented by insects and birds. Reptiles are present in very limited numbers. Birds are represented by sparrows and soft doves.
The main causes that endanger the extinction of fauna and flora species in the area and in the suburbs are the selling of various species, the collection of some species such as butterflies, habitat destruction, habitat contamination, the development of agriculture and the use of fertilizers and chemicals to a large extent, tourism development, habitat disturbance, urban expansion, food shortages, fragmentation of habitats, forest degradation etc.

Figure 38- Biodiversity in the project area

5.7.1 Possible project impacts on biodiversity

Considering that the area of the LDP does not have a high biodiversity, it can be said that the impact that the project will have in this area is seen as positive. Possible impacts (impacts on those few species) on the biodiversity by the LDP implementation are expected to take place in two phases, during project implementation and during operation. Some of the most significant influences are mentioned below.

Potential Impacts during the Project Implementation Phase:
- During the construction phase it will have an impact on the species in this area, mainly of sparrows and doves, which are very few in number. There will also be an impact on insects, which have a small presence in the area.

Potential Impacts during the Project Implementation Phase:
- Adding green areas will create the possibility of creating a new habitat for birds, mainly sparrows and doves that are accustomed to human presence and best fit in urban areas.
- Increasing the types of trees, shrubs and grasses in the area will increase the number of species and create an environment as close to nature. Careful attention should be paid to the breeding of species, suggesting native species.

Mitigating Measures

The Environmental Impact Assessment (EIA) for the implementation project should analyze in detail all possible impacts and ensure that appropriate mitigation tools are used for any possible impact. The EIA should have all the mitigation steps presented through an action plan that will be implemented and monitored in accordance with the legislation, during the implementation of the project and its operation. Some of the specific measures are:
- A detailed study of the biodiversity of the area, mainly of species that use the area as a habitat.
- Avoiding the destruction of bird nests, mainly of sparrows and doves located in the buildings of the area;
- Reduction of noises during the works and during the operating phase.
- Increasing green spaces, flowering areas and trees and shrubs, in order to create opportunities for continuous biodiversity development in the area.

5.8 Land

The city of Tirana is located on the depositions of the Quaternary (Holocene), the new alluvial deposits (current river beds) and the old ones (river terraces), which are represented by gravel, aleurolite, sand and clay. The thickness of the quaternary deposits varies from 40 to 90m. From the abovementioned characteristics it is thought that during the quaternary period the immersion prevailed. Later on, due to the rise of the eastern wing of the synchronous Tirana - Ishem occurred the increase of the erosion process, evidently by the deepening of the river beds and the formation of the river terraces. Based on the seismic regionalization map, Tirana is located in an area where an earthquake of 7 Magnitude is expected in the next 100 years. (MKS-64)²⁰.

Within the territory of the Municipality of Tirana are evidenced several types of land, mainly brown soils. Influenced by Mediterranean climate and terrain, and 0-200m above sea level, this land type has the largest spread in the territory, covering the entire central territory of the municipality. The primary material of these lands is proluvial, deluvial and alluvial. In hilly areas, also brown soils have been formed and at altitudes above 1,000 meters above sea level. In general, the lands in the territory of Tirana are productive and in the lowland area they have high production output²¹.

Figure 39- Geological Map

Source: www.geoportal.asig.gov.al

Regarding the use of land, almost all over the territory of the Municipality of Tirana we find overlapping land uses. The most frequent overlaps are between housing-agriculture, housing- industry, housing-nature, indudstry-agriculture, industry-economy, special-residential uses. The overlap of housing with natural, and residential areas with agricultural areas is present almost all over the territory, because urbanization of the territory has occurred in both urban and rural areas uncontrolled.
5.8.1 Possible impacts of LDP on land

Potential project impacts on the ground are expected to take place in two phases, during project implementation and during operation. Some of the most significant influences are mentioned below.

Potential Impacts during the Project Implementation Phase:
- During soil excavations, there is the possibility that the pollutant element may mix and remain under the surface of the soil. Therefore, care should be taken when cleaning areas that are contaminated, or have stored urban and inert waste.
- During the use of technological machinery in the site there is the possibility of accidental spills of hydrocarbons and oils. At this point, special attention should be paid to the prevention of such accidents and, in the event of accidental spillage, immediate measures should be taken to address the contaminated area.

Possible Impacts during Operation Phase (Project Completion):
- Covering the soil with concrete and asphalt coating, which will last throughout the entire cycle of implementation. The covering of the earth prevents the infiltration of water into the ground, creates the compression of the soil and ruins its structure.
- Covering with concrete and asphalt will damage the soil structure and stop the infiltration of water into it. Consequently, we will face the reduction of soil productivity and the collapse of its structure.

Mitigation Measures

The Environmental Impact Assessment (EIA) for the implementation project should analyze in detail all possible impacts and ensure that appropriate mitigation tools are used for any possible impact. The EIA should have all the mitigation steps presented through an action plan that will be implemented and monitored in accordance with the legislation, during the implementation of the project and its operation. Some of the specific measures are:
- During the construction phase, the technical control of the machinery in order to avoid the spills of hydrocarbons and oils on earth, can also prevent their accidental spillage. In the event of spill, take preventive measures to neutralize the pollutant in order to prevent penetration into the deep layers of the soil;
- Reduce as far as possible the areas with asphalt and concrete, so that the soil gets the right humidity from rainfall.
- All inert and not only, generated in the area during the construction phase should be sent to the sites provided by the municipality.

5.9 Water and Sewerage Services

5.9.1 Water supply system

The Municipality of Tirana provides the supply of public water for public consumption from 11 sources around the city of Tirana. The main sources of water supply for the supply of drinking water are the source of Selita, St Mary, Old Boville, Bovilla plant, Brulja, etc. Average annual water output by the water enterprise is about 105,000 m³/year. The distribution network starts from warehouses to end customers. The distribution network of the water supply is two types, ring and open.

Population supply with drinking water is not continuous and displays many problems, mainly water quality, low pressure, network drainage, and considerable water loss in the grid. Uninterrupted supply of water is carried out only for the first category facilities such as hospitals, kindergartens, prime ministry, prisons, etc.

5.9.2 Urban Wastewater System

In Tirana, the service is at unsatisfactory levels, because the sewage system is mostly blocked and damaged due to its old age as well as the construction of concrete pipes, where the bond between the sections is performed with mortar. This system is combined; collects wastewater discharges as well as
high waters. No treatment level of these waters is offered and discharges occur near the surface water bodies, namely, the Lana and Tirana River are the hosts of these polluted waters.

The compilation of this system for the collection of urban wastewater is such that it collects high waters, as well as various uncontrolled releases occurring in collectors or open channels. Currently Tirana has about 590 km of sewage network, with 23.5 km being main collectors and 85 km secondary network, while the rest is tertiary.

Currently, a municipal wastewater treatment plant is being built in the Kashar area, which has a water treatment capacity of around 350,000 inhabitants, otherwise this impacts will withstand about half of the urban area with wastewater treatment.

The area in the study is all served with the sewerage network of used water, from field observation and information from local specialists, in the area there has been no problem with the provision of normal wastewater removal services. Wastewater collected in the area is discharged into the water body of the Lana River.

5.9.3 Possible impacts of the project on water supply and sewerage

As the city of Tirana itself has many problems with the depletion of the water supply and sewerage network, new developments do add more risks for pollution to the current ones.

In the implementation phase of the project there will be an increased demand for the use of water, mainly in the construction and spraying processes of areas that will be paved with concrete/asphalt. This phase will require considerable amounts of water, so it is reasonable to think of different alternative ways of getting water, not always using the supply for citizens. Also at this stage should be taken into account the wastewater used, which in some cases will pass through the sewerage network. These are in poor condition and have relatively low carrying capacity.

At the operational stage the demand for water supply and sewerage will increase considerably. Primarily, the increase in demand for water and sanitation will come from the proposed residential area. There will also be other services in the area that will require connection to the water supply and sewage network as well as commercial units and services.

Currently, the city of Tirana discharges untreated used waters into the Lana River. With the development of the project the environmental pressure from the discharge of polluted waters will increase. Therefore, a final solution should be considered to treat all urban wastewater in the city of Tirana in an environmentally friendly way, which requires a citywide solution.

Mitigation measures

The Environmental Impact Assessment (EIA) for the implementation project should analyze in detail all possible impacts and ensure that appropriate mitigation tools are used for any possible impact. The EIA should have all the mitigation steps presented through an action plan that will be implemented and monitored in accordance with the legislation, during the implementation of the project and its operation. Some of the specific measures are:

- Assessing the amount of water needed at the project implementation stage and finding alternative ways of water supply so that it does not create problems with the supply of water to the citizens.
- Increase the amount of water used to be put into the sewerage network in order to avoid filling the sewerage capacity and to find appropriate ways to avoid the problems that may arise.
- Due to the assessment of the quantity required for water and the required capacity for discharging the waters used, measures should be taken to intervene in the respective networks and to be able to offer these services in optimal standards.
- To plan and implement as soon as possible a way to finally solve the treatment of water used in the city of Tirana and the suburbs. Lava River discharge is a high environmental pressure, which requires an emergency solution.
5.10 Solid urban and inert waste

Tirana Municipality produces average about 256,632 tons of waste per year, with a production volume of 1.5kg/inhabitant/day. The amount of waste produced has increased year by year. Tirana has also produced 58,743 tons/year inert waste generated by construction, reconstruction and demolition of illegal buildings. To date, the Municipality does not have a special deposit site for inert waste disposal. It is worth noting that most of the inert waste is used to fill the wells of the swamps generated by inert absorption. However, in most cases, inert waste is deposited at inappropriate disposal sites. While solid urban wastes are deposited in the landfill of Sharra, 3 km from the city of Tirana.

Problematic areas related to urban and inert waste in the city of Tirana are areas along the banks of the river Tirana as well as the lower part of Lana.

In the project area waste collection is carried out with 1,100 liters container, and then withdrawn from the EkoTirana shareholding company every 24 hours. The area does not pose problems with waste management, as well as illegal dumping of waste in the area.

Figure 40- Collection point in the project area

Source: Googleimagery, 2018

5.10.1 Waste generation and management

Large amounts of inert waste are expected to be generated during the construction phase, mainly from excavation of soils, demolition of old buildings, construction of roads, parking places and construction of multi-story buildings for residential and commercial purposes. All inert waste must be transported to safe locations, predetermined by the responsible authority, the municipality. Inert waste produced in the site should be reused if they are not considered as contaminated with different elements that may have a negative impact. If after assessment, the content of inert waste generated in the area would result as inappropriate, the waste should be differentiated and treated separately according to the type of waste, based on the laws in force for the treatment of special categories of waste. All urban waste quantities that will be generated from the area after the completion of the project will be managed by the responsible authority, municipality, or contracting firm, which will deal with their treatment in accordance with the laws and guidelines in force.

During operation, large amounts of solid urban waste will be generated, mainly by residents who will be added to the residential area and the new services and businesses in the area. At this stage of planning, accurate data on the future generation of urban solid waste in the area cannot be ensured, but it is assumed that the amount of urban waste will be increased significantly. Therefore, in the development phase of the technical project, in parallel with the EIA, an accurate analysis of the amount of expected waste generation in the area should be done. The information should be used by the city to review its waste collection and management process in the area accordingly.

Mitigation Measures
The Environmental Impact Assessment (EIA) for the implementation project should analyze in detail all possible impacts and ensure that appropriate mitigation tools are used for any possible impact. The EIA should have all the mitigation steps presented through an action plan that will be implemented and monitored in accordance with the legislation, during the implementation of the project and its operation. Some of the specific measures are

- Analyzing the amount of solid urban waste generation in the project area in order to recognize the amount of waste that requires integrated management.
- Proposal of the waste collection scheme, no. of WCPs (waste collection points), no. of the containers, the size of the containers, the location of their positioning and the time interval of the waste drawbacks.
- Analyze the cost of service and calculate the impact on the municipality's general scheme, both on the cost and by the capacities of the municipality to cover the service also in this area.
- Waste management will be carried out with an integrated scheme, as envisaged by the law and the National Integrated Waste Management Plan.

5.11 Climate Changes

Climate change is already a reality. Changes at the local level will be felt in terms of lack of drinking water, changing the time of cultivating agricultural products, and so on. Tirana Municipality is projected to face temperature increases from 1.7-2.2 °C to 2050, and up to 2.8 °C to 2080. Meanwhile, the temperature rise is projected to occur from 2.4 to 4.1 °C to 2100 °C.

This climate change shall have a major impact on sectors such as agriculture, energy, biodiversity, land and aquatic ecosystems, as well as on the urban areas. The city of Tirana is built between the Tirana and Lana rivers that under the conditions of increasing intense rainfalls will damage the different settlements near their streams. For this reason, measures should be taken to fortify river barriers, mainly in the most problematic areas, which are also affected by river erosion. Measures should also be taken to meet food needs in extreme cases where agricultural crops are damaged by massive floods and long periods of drought. On the other hand, in the conditions of a negative scenario of flooding caused by climate change, the territory of the Tirana Municipality can (probably) turn into one of the main host territories of the displaced population.

5.11.1 The potential impact of the project on the changes

The construction of the middle ring segment, and the development of the area, subject to this study will positively affect climate change compared to the current situation, at the city scale, if the green area will increase as planned in the LDP and the feasibility analysis. Along with the addition of greenery in the area (infiltration increased), the project is expected to contribute to less traffic congestion in the city. Hence, GHG discharges will be reduced by bringing about a slight improvement in the total GHG discharge in the city of Tirana.

However, during the implementation phase it is expected that greenhouse gases will be discharged into the air, which will result from discharges and combustion of materials from technological machines that will work on the site.

After the completion of the project, as mentioned above, to a large extent (in the city rank) will bring greenhouse gas emission reductions. While on the city level this intervention will have a positive impact as it will reduce traffic, on the other side it is expected that within the area it will have a higher concentration of GHG. This will come as a result of a crossroad and main road axis that will go through the center of the area which consequently the GHG will be discharged to higher levels.

In the area, after the implementation of the project, a considerable space will occupy the green spaces, in the form of flowers and trees, which will contribute to the absorption of greenhouse gases and the release of pure oxygen.

The Environmental Impact Assessment (EIA) for the implementation project should analyze in detail all possible impacts and ensure that appropriate mitigation tools are used for any possible impact. The
EIA should have all of the mitigation steps included in an action plan that will be implemented and monitored in accordance with the legislation, during the implementation of the project and its operation.

5.12 Suggestions for Minimizing the Impact on the Environment

Project implementation is accompanied by negative impacts on the environment, which should be taken into account in the early stages of its implementation. Concretely, impacts are envisaged to occur in all constituent elements of the environment, mainly on land, water and air. To minimize the potential impact on the environment from project implementation, both during the construction phase and the completion, it is necessary to consider these suggestions, but not limit to:

- Materials used for construction should be as environmentally friendly as possible. Whenever it is possible to use materials that can be easily moved, or local materials such as stones, wood, etc.
- Consider the possibility that areas designated for sidewalks or recreation be constructed with concrete slab tiles that allow water infiltration on the ground, also allow the grass to grow between them.
- Take care of landscaping elements during construction, well-defined landscapes for trees and gardens.
- During the works, apply technical safety measures in order to avoid any accident with consequent impact on people, or with negative impact on the environment.
- Technological tools and accessory devices should be subject to technical control to avoid possible accidents and to reduce to a maximum the noise level from being in operation.
- To avoid the use of many technological equipment at the same time, in order to avoid the high levels of noise in the environment.
- In case of accidental oil spills or hazardous substances that have a negative impact on the environment, immediate measures must be taken to address the affected area.
- Take into consideration that in the early stages the wind corridors cannot be disrupted in order to allow the ventilation of the area.
- Consider the degree of shading and air ventilation in the area by studding the positioning of high buildings.
- Carry out accurate underground engineering works for infrastructure networks.
- Preserve and expand as far as possible public spaces and green areas in the area.
- Road infrastructure should be designed so as to facilitate ease of traffic in the area, be free of roadblocks and be freely maneuvered on the road, since blocking has direct impact on air quality degradation and the increase in noise levels in the area.
- Prior to the implementation of the project, an environmental impact assessment must be carried out in such a way as to address all the problems and minimize as far as possible potential impacts on the environment from project implementation.

The Environmental Impact Assessment (EIA) for the implementation project should analyze in detail all possible impacts and ensure that appropriate mitigation tools are used for any possible impact. The EIA should have all the mitigation steps presented through an action plan that will be implemented and monitored in accordance with legislation, during project implementation and operation.
6.0 Conclusions and Recommendations

The Municipality of Tirana and PLGP have collaborated for the preparation of the feasibility study for an area where the new middle ring road (segment II) of the city of Tirana is planned to be built in the future. The overall objective of the feasibility study was to provide options for the organized and contiguous development of the five structural units, including the new ring road segment, to improve traffic flow, add public space and services, and renew the LDP area at higher building intensities.

The feasibility study was conducted through a mixed methodology entailing field surveys, interviews with real estate agents and property valuation experts, GIS calculations and financial calculations by using the residual value method. Development pro formas were used to assess the financial feasibility of the project and sensitivity analysis were conducted on development in order to simulate the impact of change in different development components.

The LDP area is quite complex, and it is situated in the city centre, between Myslym Shyri and Rruga e Kavajes streets. It comprises a mix of tall residential buildings of 8-11 storeys combined with low-rise (relatively old) villas. The area is predominantly composed by private properties. In terms of road access the area has limited horizontal connections while vertical ones are accommodated through a series of small one-way streets (considering the quadratic road network). The area also lacks public green spaces and kindergartens.

The aim of the municipality of Tirana is to open the way for the construction of Segment II of the middle ring road of the city. In addition, it also aims to extend the existing Çamëria street in order to connect it with the new ring road. Considering the complexity in property ownership and urban structure, the municipality aims to reduce the costs through the new development that has been planning in the GLTP. Development intensities (FAR) are higher than the existing ones, meaning that the area will undergo a considerable transformation once the development occurs. Based on the calculations of the feasibility study, the total cost of construction for both roads is 9,270,767 Euro, while if the municipality was to apply expropriations it would require an additional 6,978,267 Euro. Although the municipality of Tirana has seen an increase in its revenues over the last years, it can’t cover the costs of this project. In addition, considering that this is a local priority and not a national one, it seems difficult for the national government to agree financing the project (especially the expropriation costs).

In order to find a solution, both from the urban and financial point of view, two alternatives were taken in consideration. One of the alternatives proposes a set of expanded and new one-way streets instead of the ring road, which have a smaller impact on the area compared to the ring road. This alternative would also be feasible in the short term, as it would require a smaller amount of property involved in the process. From a financial point of view, the new development proposed in the area, can cover and accommodate the claims at market value also of property owners which could be subject to expropriation. In addition, it also provides a considerable added value, which the municipality can capture in part and use for further infrastructural improvements.

The other alternative, assesses the financial feasibility of the GLTP proposal through the development of the ring road. In this case, different conceptual designs were tested at first in order to arrive to the final version, which was also favored by the municipality. The conceptual design includes the combination of a new street network with new residential development and improved public spaces and social services (two kindergartens). The conceptual design was used as a main framework for the division of the LDP area in subunits (management areas of development). The subunits were designated based on an analysis of existing conditions, especially proximity to the new ring road, opportunities and limitations of the existing road network, input from the municipality, and public input received during the planning process.

Each subunit afterwards was tested in terms of the potential new development it can incorporate and the financial feasibility. Regarding financial terms, the main important defining factor was to assess whether the new potential development could cover the cost of land. As part of this process, the subunits were altered accordingly in order to find the most suitable division and combination as shown below:
As a result of the different tests, due to the restrictions from setbacks, the total development in unit 274.1 could not cover land costs. In this case it was tested that adjacent subunit, 460.1, could cover part of the land costs of 274.1. Thus landowners in the subunit 274.1 and 460.1 can all be accommodated if the two units are treated together. In unit 278.1, the amount of new development proposed in the area could not cover land costs. Therefore, subunit 278.1 can be integrated in subunit 277.1. This (277.1) is the largest subunit in terms of potential new development and it can accommodate the additional property owners from subunit 278.1. Besides this fact, the space in subunit 278.1 will be used for the provision of a new kindergarten. In unit 274, there is an apartment block, which has been constructed in an informal (illegal) way. The building is on the axes of the ring road. As such, based on the fact that the apartment owners do not have any properties titles they can’t be expropriated. In order not to create social problems all existing owners can be compensated with the same size/value apartments in the development that can occur in subunits 460.1, 274.2, 459.1, 277.2, 277.1. Based on the GLTP, unit 274 is required to provide a kindergarten. The latter has been planned for development within unit 274.3. Based on the feasibility study, the potential new development can cover all land costs for the property owners as well as it can incorporate the construction of the kindergarten.

As a conclusion, the financial feasibility of the area in study shows that the new development holds the potential to accommodate and cover the land costs for the opening of the new Ring Road as well as Çamëria Road. In addition, the municipality has the potential to capture further added value of development in order to finance part of the infrastructural improvement in the area. This entails both kindergartens as well as part of the cost of construction for the ring roads.

**Recommendations**

In terms of implementation, the municipality could use three potential strategies:

1- **Expropriation** first and then use value capture instruments such as betterment fee in order to cover the initial costs. This strategy is the quickest in terms of opening the way for the construction of the ring road segment II and the Çamëria Road. However, it can lead to potential social issues, as property owners will be expropriated with lower values of land compared to
the market ones. Also, the municipality is dependent on the timing when development will occur in order to recover the costs of construction of the roads.

2- *Negotiation* with property owners and signature of contracts, between the municipality and the property owners, making sure that they will be compensated once new development occurs. The municipality would have to provide alternative accommodation to the property owners, while they release their land in order to open the main axes of the Ring Road and the Çamëria road. This option however faces several challenges:
   a. Negotiation with property owners can take a long time in order to achieve an agreement with all individual owners
   b. The costs for housing and accommodating all existing property owners until new development could occur will all be taken up by the municipality.
   c. The timing when developers enter into the area could be different and unpredictable.
   Therefore, the municipality and property owners may both incur higher costs.

3- The municipality *can wait until development can occur* in order to open the way for the ring road and the Çamera road. This is the option with the lowest costs for the municipality and the best in terms of the financial compensation of property owners. However, it comes with the high uncertainty of when development will occur. Developers may enter in the area at different moments in time, and after several years. This could leave the construction of the ring road unfinished.

The three alternatives mentioned above all have different costs and benefits and are associated with uncertainties and legal risks. Thus, most likely, the municipality could use a mixed method, in order to achieve the aim of the infrastructural improvement.

As an initial step in its LDP process, the municipality should ascertain how residents and business people in the LDP area feel about the substantial development that will likely result from the LDP. The following information should be obtained at public meetings.

- Is it viewed as an improvement of infrastructure, housing, services, and facilities in the area? Or a way of displacing long term residents?
- Is the project seen as an opportunity to redevelop the area and provide opportunities for residents? Do people think the LDP is necessary for improving transport? Creating jobs? Reducing poverty? Other?
- Are current residents and business owners supportive of the ring road and redevelopment?
- Is the support tied to an expectation of getting fair compensation for their property? Do people have a preference for compensation, land of higher value or cash?
- Do residents prefer to stay in the area after redevelopment or move?
- What other concerns do people express?

In addition, the municipality should discuss the different strategies for the implementation of the LDP with the property owners. This could involve some preliminary negotiations in order to assess the willingness of the different property owners in the process.

In parallel with the communication with the property owners and the general public, the municipality should also start negotiations with potential developers who have interests of development in the area. The municipality could try to use different strategies in order to attract developers towards this area in order to fasten the process of development.

Once the communications with the public, property owners and developers have occurred, the municipality should draft a strategy for land acquisition based on the feasibility report. This should be a detailed land acquisition strategy involved using land readjustment to reconfigure the size and number of original parcels in order to support new development. Property owners are compensated either through ownership of part of the new development (for example, new residential and/or commercial space) or monetary compensation. As part of the strategy, the baseline conceptual design scenario has minimized changes to existing streets. The conceptual design retained the majority of roads for either motor vehicle or pedestrian-only use, while accommodating the ring road segment and creating parcel blocks that are both sized appropriately for future development and supported by financial analysis.
The strategy should use a “value sharing” methodology. When the municipality of Tirana allows increased intensity, economic value is created from that intensity. That value goes to some or all of three parties: (1) the developer through higher profits; (2) the property owner through higher land value; or (3) the public through increased public benefits such as infrastructure. The land acquisition strategy used by the municipality should seek to maximize the amount of value that goes to the public while still ensuring the financial feasibility of development.

The land readjustment process is based on a compensation process that considers the value of land and not the size of each parcel prior to development. This is possible because land values are projected to rise as a result of the construction of the ring road and higher intensities allowed in the GLTP. Compensating landowners through higher building intensities on private land and/or providing them with smaller plots of higher land value can be used to acquire land for the ring road.
Notes

1 Të ardhurat nga transfertat ndërqueritare përfshijnë të ardhurat nga: taksat e ndara, transfertën e kushtëzuar dhe transfertën e pakushtëzuar.

2 Të ardhurat vendore përfshijnë të ardhurat nga: taksat dhe tatime, tarifa, të ardhura nga asetet vendore, dividendi, fonde ose asete të KSHP-ve, donacione dhe hua.

3 Shpenzimet e kryera nga njësitë e qeverisjes vendore klasifikohen sipas natyrës ekonomike dhe sipas qëllimit të përdorimit të tyre (funksionit apo programe) në përputhje me standardet ndërkombëtare të zhvilluara nga Organizata për Bashkëpunimin Ekonomik dhe Zhvillimin (OECD), të publikuara nga Organizata e Kombeve të Bashkuara.


5 Agjensia kombetare e mjedisit, Raporti I gjendjes ne mjedis, 2017

6 AKM, RGJM, 2017

7 Strategia dhe PPV, Bashkia Tiranë, 2017

8 AKM, RGJM, 2017

9 AKM, RGJM, 2017


11 Shërbimi gjeologjik Shqiptar, gjeoresurset dhe gjeorreziqen në qarqet e Shqiperise, 2014.

12 Shërbimi gjeologjik Shqiptar, gjeoresurset dhe gjeorreziqen në qarqet e Shqiperise, 2014.

13VKM Nr. 594, Dt.10.9.2014 Përmiratimin e Strategjisë Kombëtare të cilësisë e ajrit të Mjedisë.


15 AKM, RGJM, 2017

16 AKM, RGJM 2017

17 Bashkia Tiranë, Vlerësimi Strategjik Mjedisor, 2017

18 Bashkia Tiranë / APR 2017


20 Shërbimi gjeologjik Shqiptar, gjeoresurset dhe gjeorreziqen në qarqet e Shqiperise, 2014.

21 Shërbimi gjeologjik Shqiptar, gjeoresurset dhe gjeorreziqen në qarqet e Shqiperise, 2014.

22 Bashkia Tiranë, Vlerësimi Strategjik Mjedisor, 2017


25 Bashkia Tiranw, 2018

26 Bashkia Tiranë, Vlerësimi Strategjik Mjedisor, 2017