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FEASIBILITY STUDY ON THE LDP FOR UNIT ½ AND THE SPORT FACILITY

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Executive Summary

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1. The Development Program

1.1 Introduction

1.1.1 Overview of Municipal Development and Need to Develop an LDP

Fier is located in the heart of the important Myzeqe agricultural region. It is also the center of Albania's petroleum industry, as well as a tourism destination due to its proximity to important archeological sites and the Adriatic Sea. Fier is about 100 kilometers south of Tirana, and enjoys good highway connections to all major Albanian cities. The municipality has a population of 121,000, with 86,000 residents living in the urban core.

Fier's General Local Territorial Plan (GLTP), adopted 2016 (29/12/2016) and entered into implementation by the National Territorial Council (NTC) in early-2017 (13/01/2017) and the municipality's 2017 Center City Master Plan envision opening the Gjanica riverfront in the center of the city to new possibilities and opportunities for growth, including new public parks, open spaces, and pedestrian paths; new recreational and sports facilities; and the replacement of existing buildings in need of renovation with more intensive private development.

A key strategy of both plans is to create a vibrant waterfront by guiding economic development, targeting private development opportunities, and creating an attractive environment along the river for both residents and visitors to Fier. Construction of an indoor sports center is a primary action to help implement this strategy. The proposed sports center would help satisfy the residents' unmet needs for sports and recreation venues and, along with the other regeneration projects, increase the development potential of adjacent land.

The study area is structural unit 1/2. The GLTP defines the existing base land use categories of this unit as Housing and Infrastructure, and the proposed land uses as Housing, Services, Social and Recreational Activities, and Institutional. Constructing a sports center and other envisioned improvements meets the legal criteria for major redevelopment, which means the construction will have a significant impact on land use and development. The development of the project would require Land Readjustment as well as is a good possibility for the application of Financial Instruments of Land Development. Major redevelopment as well as the provision of the GLTP 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 purpose of this study is to formulate and investigate a range of options for enabling the development of a sports center as part of a wider riverfront regeneration plan. In particular, the study investigates scenarios for private development according to planning standards proposed in the GLTP, and evaluates them based on their financial feasibility, their impacts on the subunit and the municipality, and their potential for contributing to funding for the sports facility and other proposed improvements.

The study is based on the following specific objectives of the municipality:

- Regenerate an area with significant underutilized parcels, physically and economically.
- Use public investment to provide a focus and act as a catalyst for additional private development.
- Realize increases in private land values due to public investments.

This feasibility study is guided by three principles. These principles capture the values and priorities of the study and help ensure that the study remains consistent with the vision of Fier's General Local Territorial Plan and Center City Master Plan. The principles are the basis for both the study's analysis and recommendations:

- Design and develop for social, economic, and environmental sustainability.
- Guide planning and development to be reflective of the vision of the GLTP, Center City Master Plan, and municipality-wide needs and interests.
- Enhance and contribute to building the local economy and employment opportunities.

As a result of this study, the municipality has sufficient information to consider and evaluate a range of possible frameworks for moving forward with more detailed design, engineering, funding applications, and initial phases of development.

1.1.3 Methodology

This study was prepared by the USAID-funded Planning and Local Governance Project at the request of the Municipality of Fier. The following steps were undertaken to provide the detailed assessment and feasibility of developing a new sports center and related private development:

- Assessed local territorial planning documentation, especially the General Local Territorial Plan and Center City Master Plan.
- Conducted multiple site visits to the municipal riverfront to assess the sports facility site and surrounding area of the structural unit, including land and road conditions and environmental conditions.
- Subdivided the unit into smaller, more manageable planning subunits.
- Surveyed local real estate professionals to determine factors impacting the local real estate market.
- Assessed Municipal capacities for the development and management of the project through interviews with the municipal staff and financial performance analysis.
- Prepared three initial concept plans, each with different alternatives, followed with one preferred concept option, supported by financial analysis.
- Estimated capital costs for all of the concepts.
- Analyzed the amount of betterment that could potentially be recovered by the municipality.

1.1.4 Fier Center City Master Plan

The 2017 Center City Master Plan (*Ri-Gjanica: Rikonceptimi i qendres se qytetit te Fierit*) proposes the conceptual redesign of six hectares of public and private land in Fier's center city along the Gjanica River.

The plan proposes a 10,000 square meter linear riverfront park, a public promenade along the river, an amphitheater, pedestrian links from the river to the existing street network, regeneration of underutilized areas, and an indoor sports center with attached private office building.

The master plan respects Fier's existing axial road network, and some axes are envisioned to be converted into pedestrian-only streets. The redeveloped riverfront will become the connection and focal point of all the axes, and the master plan proposes the design of structures in the planning area to enhance visual perception of the river and the entire center city. When implemented, the plan will redefine the municipality's relationship with the river by creating a riverfront that is more visible, usable, and accessible.

Figure 1- Image of City Center Master Plan (Rigjanica Project)



Source: (Fier Municipality; REAN-95; Atelier Cappochin; Archieffe Studio, 2017)

The city center Master-Plan also entails the development of a Sport Facility, for indoor sports, which will serve as a catalyst project for the redevelopment of the area together with the improvements and rehabilitation of River Gjanica.

1.1.5 Capacity for Project Appraisal and Implementation

The municipality’s capacity to manage a feasibility study and implement the LDP after approval was gauged through an interview with municipal staff and specific information provided by the municipality. The following table provides an overview of the issues discussed with the municipality.

Table 1- Appraising the Capacity of the Municipality for Ensuring Project Success and Sustainability

Issues	Appraisal
Administrative Capacity	
Are the mayor and/or municipal council members ready to implement the proposed project?	The regeneration of the center is one of the main priorities for the Municipality of Fier. This is supported by the GLTP as well as it is a continuation of the project for the requalification of the river Gjanica. The latter has already started as a project and the municipality is one of the key drivers behind the project. Therefore, the new sport center is another key investment which complements the city center regeneration activities. The Mayor is enthusiastic about the project and sees it as a priority. From interviews, it is envisaged that the LDP and the project would receive support also from the Municipal Council.

<p>Which managers will oversee the proposed project? Which staff will work on the project? What are their credentials and experience that relate to both building and operating the project?</p>	<p>Similar to the practices of other municipalities in Albania the Fier municipality works with ‘ad-hoc’ technical teams which oversee important projects. The department of projects is one of the main sectors focusing on the project. Nevertheless, other departments such as infrastructure and legal affairs will also be included. Considering that the project will be constructed by the private developer the role of the municipality is mainly as a supervisor of the quality.</p>
<p>Does the municipality have the ability to dedicate personnel to the project?</p>	<p>Considering that the project will be constructed from private developers through a partnership, the municipality has the adequate staff to oversee the project.</p>
<p>How does the municipality measure the project’s progress and document its performance (i.e. in periodic reports)? Does the municipality hold regular project review meetings? Are these meetings open to all stakeholders? How does the municipality learn and adapt from its experiences?</p>	<p>The project’s progress from the municipality is usually managed through periodical team meetings. Usually the technical team meets for different purposes while the Mayor attends only specific meetings where his input is required. After each meeting a short memo is presented to the Mayor. The practice is that the meetings are conducted with the subcontractors of the various projects.</p>
<p>What other stakeholders are critical to the success of the project? How does the municipality conduct relations with these stakeholders?</p>	<p>In the case of the “sports hall” the main stakeholder is the private developer. The relationship between the municipality and the developer will be arranged through a contract/agreement which will form the basis of collaboration. In addition, considering that in the area there will also be a large amount of private development, property owners too are important stakeholders. These will be informed through direct meetings for negotiations in the initial stage or through public consultations.</p>
<p>Technical Capacity</p>	
<p>Do the skills and experience of the municipality’s technical professionals match those required for the project? Are these professionals available to the project?</p>	<p>The Municipality has the required technical skills to oversee the project from an architectural and engineering viewpoint. Nevertheless, considering that it is a specific type of project entailing a sports hall, a part-time supervisor could be also employed. Meanwhile, at the initial stage, the municipality will need support in terms of drafting the partnership agreement with the developer that will built the sport hall.</p>
<p>Does the municipality have the necessary technical infrastructure (i.e., software, data bases, etc.) to support the implementation of the project?</p>	<p>Based on interviews with the municipal staff, the municipality has the required technical infrastructure to support the implementation of the project.</p>
<p>What external technical contacts, consultants, and networks does the municipality utilize?</p>	<p>The municipality works with a variety of consultants and firms for its local projects. In addition, the PLGP program, through the feasibility study, offers technical expertise for the project.</p>
<p>Financial Capacity</p>	

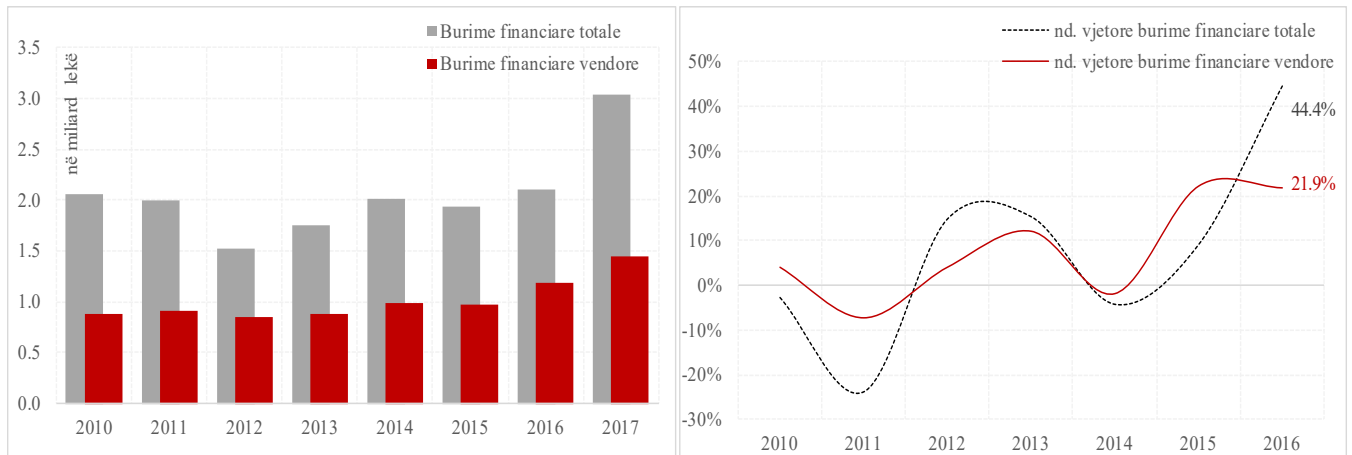
<p>Does the municipality have a budget and capital investment plan sufficient to carry out its activities, particularly in relation to the requirements of the project?</p>	<p>Although the municipality has been performing well over the last years it still does not have the financial capacity to finalize the project on its own. As previously said, the project will be built by private developers through a legal agreement with the municipality.</p>
<p>Do finance managers and personnel have skills and experience that are appropriate to the requirements of the project? Is the existing financial management capacity adequate to meet any additional requirements of the project? Do finance personnel have experience managing donor resources?</p>	<p>The finance office and personal have the right experience to deal with the project. Nevertheless, important in the case of Fier is the PPP between the municipality and the developer.</p>
<p>Does the municipality have the skills and experience to apply for outside funding?</p>	<p>The municipality has gained an increased amount of funding from central government demonstrating that its capacity for project proposals is increasing. Although with slower pace due to the complexity of procedures, the municipality is also gaining experience in attracting foreign financing.</p>
<p>Has the municipality engaged developers in projects of similar size and complexity in the past?</p>	<p>The municipality has limited experience with PPPs. In general, in Albania PPPs are a relatively “new” concept for the local level, thus it is important to gain some external consultancy in the phase of the preparation of the PPP documents and agreements.</p>

1.1.6 Budget and Financial Analysis of the Municipality

In order to identify and evaluate the fiscal and financial performance of the Fier municipality, the data on revenues and expenditures for the first level of local government (municipalities) were available on the local finance portal 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.

Total financial resources (intergovernmental transfers and local own resources) available to Fier Municipality during the observed period have generally followed an upward trend, greatly influenced by funds from intergovernmental transfers. Over the period considered, the total available resources of the Fier municipality ranged from a minimum level of about 1.5 billion ALL in 2012 to a maximum level of about 3.1 billion ALL in 2017. In 2017, financial resources marked a level of around ALL 3.1 billion, up 44.4% over the previous year, largely determined by the performance of intergovernmental (conditional and unconditional) transfers.

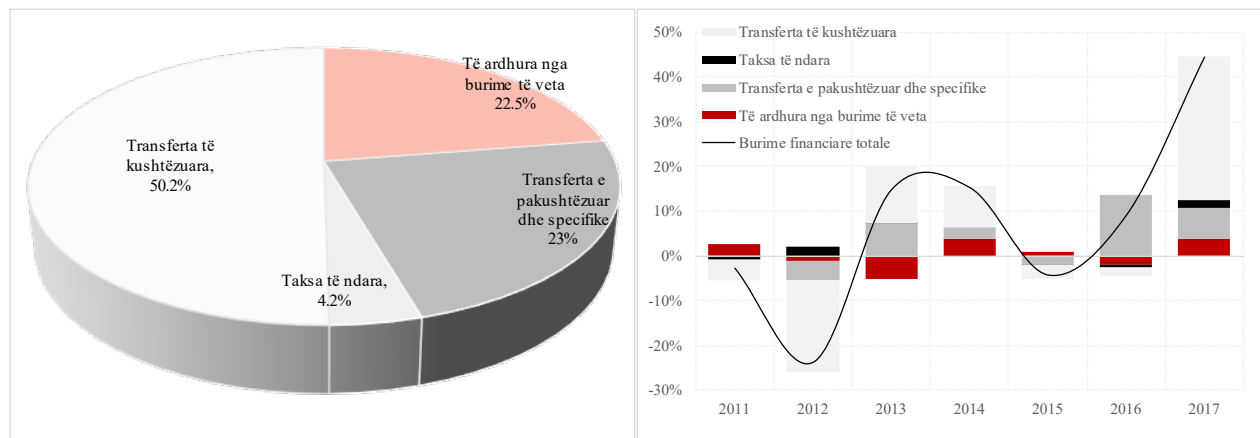
Graph 1- Financial Resources



Source: Local Finances Portal www.financatvendore.al

On average, between 2010 and 2017, conditional, unconditional intergovernmental transfers and separate taxes represented approximately 77.5% of the financial resources available to Fier. Revenues from local sources (taxes, fees and other) represented on average about 22.5% of total financial resources. The weight of this category to total funding sources has shrunk from about 30.1% in 2012 to about 16.8% in 2017. Incomes from Fier municipality's intergovernmental transfers result to be dominant and determinant in the structure and performance of total revenues, suggesting a high financial dependence on intergovernmental transfers. In this regard, for 2017, the dominant role was transferred from the ministry responsible for urban development (RDF), which channeled about 649.9 million ALL in 2017 in Fier municipality. Conditional transfers from the ministry responsible for social welfare contributed around 640.6 million ALL to the revenues of 2017. Unlike those allocated by the ministry responsible for urban development, these funds go to family budgets (economic aid) and vulnerable individuals.

Graph 2- Revenue Structure according to sources (gr. Left, average 2010-2017); the contribution of the categories to the annual growth rate of financial resources (gr. Right)



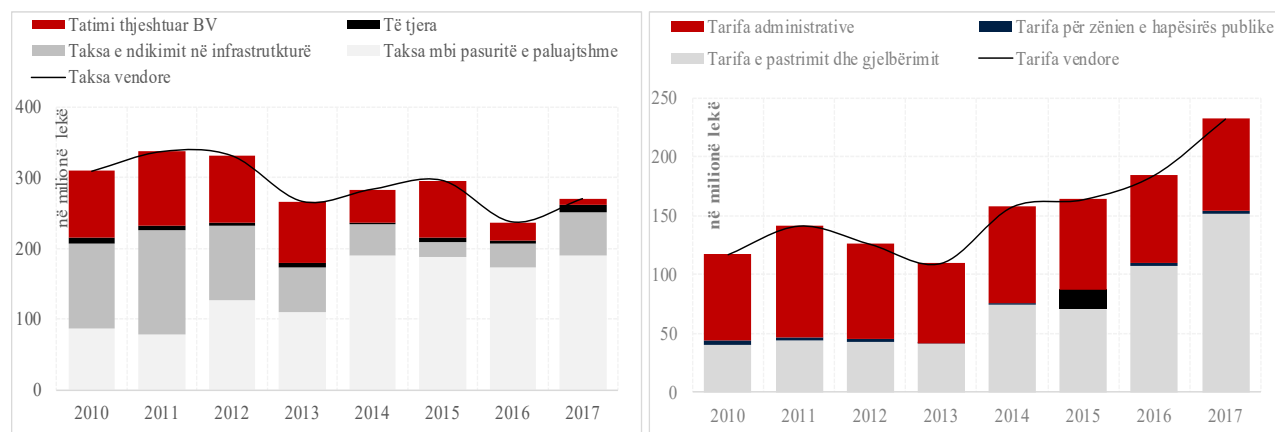
Source: Local Finances Portal www.financatvendore.al

Revenue from unconditional and specific transfers in 2017 contributed about 823.0 million ALL to the local budget. On average, revenues from this source represented about 23.0% of the financial resources for the period considered. Over the past two years, unconditional transfers have been growing at an accelerated rate, by about 62.9% in 2016 and by around 20.9% in 2017. Although at a lower level than other sources in

2017, shared taxes revenues result to have contributed with about 112.4 million ALL to the Fier municipality budget in the last year.

Revenues from local sources are an important element in the local budget. Over the period considered, the weight of this category of income has shrunk from about 30.1% in 2012 to about 16.8% in 2017, significantly influenced by the increase in the weight of other categories of financial resources in the budget. For 2017, this revenue source contributed around 510.0 million ALL to Fier municipality's budget, an increase of about 19.0% compared to the previous year. Income from local taxes and fees is the main determinant of annual revenue performance from its own resources.

Graph 3- Revenues from taxes (gr. Left) and from local tariffs (gr right)

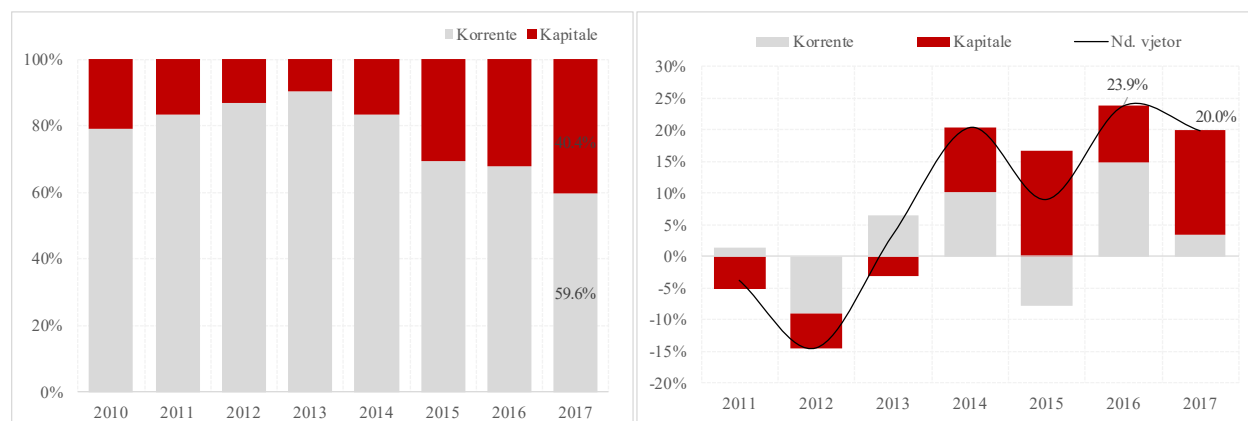


Source: Local Finances Portal www.financatvendore.al

Domestic revenues for 2017 amounted to about 270.1 million ALL, up by about 14.0% in annual terms. The main contribution to this direction was given by the income tax on immovable property (mainly that on buildings) and tax revenues from the impact on infrastructure from new constructions. Domestic tariffs have also contributed positively to domestic revenues by about ALL 232.1 million in 2017. Within this category, service tariffs are the most important.

Expansion of available financial resources was reflected in the increase of Fier municipality's expenditures, mainly of capital ones (for investments). Unlike previous years, about 1.3 billion ALL or about 40.4% of the total expenditure went to investment in 2017. This is also the highest level of capital expenditure registered for Fier municipality for the period considered, also significantly affected by conditional funds (from the RDF).

Graph 4- Expenditure Structure (gr. Left); contribution of expenditure categories to the annual growth rate of expenditures (gr. Right)



Source: Local Finances Portal www.financatvendore.al

In allocating expenditures by function, purpose of using available funds or budget programs, Fier municipality's expenditure structure is dominated by spending on functions: "community housing and commodity", which includes spending on local housing, community development, public lighting, water supply and sewerage etc .; "Social protection" and "economic issues".

In general, the available financial resources of Fier municipality have been increasing, significantly influenced by intergovernmental transfers. Especially in the last three years, financial resources point to a clear orientation towards capital spending, signaling for a long-term development orientation of the municipality. In this context, improving performance on the domestic revenue side and making more efficient use of available assets would improve Fier Municipality's financial performance and somewhat mitigate its dependence on intergovernmental transfers. The latter would create space for undertaking strategic investments independently. On the other hand, there is a need for some sort of efficiency in the use of available financial resources by prioritizing widespread investment in community and territory under administration and lower operating costs.

1.2 Legal Issues

1.2.1 LDP Legal Risks

Each option in this study is different, presents slightly different legal risks, and therefore will require tailored legal advice. While it is impossible to foresee every legal issue that may arise, we can broadly anticipate potential issues that may occur as part of a normal development process.

- Is the municipality informed on laws related to waterfront development, such as public access, views, buffers, water levels and flows, drainage, flooding, water quality, aquatic life, erosion, construction standards, etc.?
- What are the tax implications of any chosen option? For example, does the transfer of public land trigger VAT, business, or other tax issues?
- Do calls for tender follow applicable legal provisions? Do they include output-based specifications to reduce risk for the municipality?
- When engaging a private developer in a public private partnership, does the contract allow the municipality to manage sufficient control and influence over the project?

These legal issues are treated in more detail throughout the feasibility study.

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 range strategy for implementing projects that are important to the local government. A GLTP, as per DCM 686/2017, contains several sub-documents, including: a Territorial Analysis and Assessment, which examines existing conditions; a Territorial Strategy, which presents a vision for future development; and a Territorial Development Plan which contains the land-use plan and the regulation of the territorial plan and development.

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 certain strategic structural 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.

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.

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 the 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) *Market Analysis for Property Values*

The market analysis with regard to real estate in Fier was conducted through a series of interviews with 6 real estate agents as well as through review of different adverts for sale and rent. The real estate analysis focused on two main market sectors such as the residential and the commercial sector.

- *Residential Market in Fier*

According to real estate agents, properties in Fier vary from 250-300 Euro/m² in the periphery, 300-400 E/m² close to the city center, and between 450-600E/m² in the city center. Nevertheless, for high quality properties, in prime locations, according to the real estate agents a price of 700E/m² could be achieved, although difficult.

Properties in demand are usually of medium sizes, apartments of 1+1 or 2+1 ranging between 70-100m². This comes also as a consequence of the changing family structures with younger families choosing to live separate from their parents. Larger properties are difficult to sell and in less demand.

The areas in most demand are the ones close to the city center, near the “newly pedestrianized streets”. However, when property agents were asked about the impact that the Gjanica River Regeneration might have on property values they answered that at first it might not have impact, due to the polluted image and history of the river, but in the long run they see it having a good impact with potential market values increasing. Also, the sport facility was seen as a favorable project which may have an increase in market values. But, the improvements in public open space and availability of parking are seen as the two main factors which can definitely drive up property values.

A diminishing factor regarding the residential market in Fier is the high number of vacancies in previously developed apartment blocks. These are mostly situated in the periphery and in the outer border of the “main city center”, however the absence of public spaces and sometimes the poor quality of constructions are factors which influence their vacancy.

- *Commercial Market in Fier*

Commercial Properties in Fier vary in prices between 600-700 E/m² in the periphery but located in main roads, to 800-1200 in the city center, and 1500-2000 E/m² in main roads in the city center, especially in the pedestrianized areas. In Fier there are two main shopping centers located in the periphery, VIVA in Mbrostar, and Gold Center which is just outside of the main city center. Within the city, there are no shopping centers and most shopping activity is located in “high streets”. Therefore, the absence of shopping centers, combined with the low availability of shops in the high streets and the benefits of the regeneration project could offer a good opportunity for the development of commercial spaces in Fier as part of the regeneration. Properties in demand are usually for shops and for bars and restaurants.

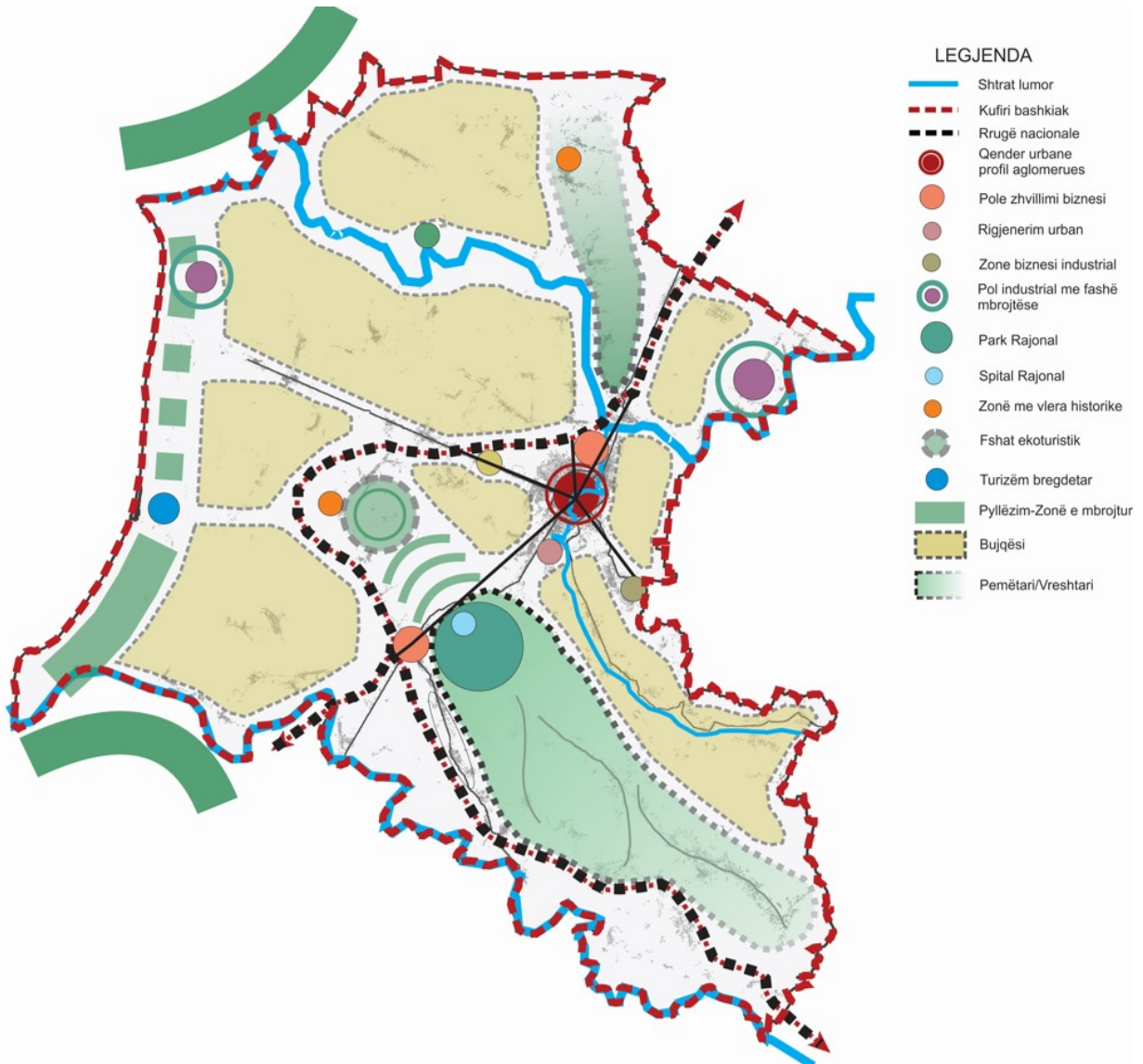
1.3 Detailed Analysis of the Development Unit

1.3.1 GLTP Summary for the Unit

The GLTP has a duration of 15 years and aims to guarantee a sustainable development of the territory. The vision of the Fier Municipality is to encourage economic diversity and to increase competition, to support agriculture and tourism in Fier as future pillars for the municipality, to protect and even regenerate the natural values of the territory, to guide urban development and empower the social of the community. In addition, the municipality of Fier aims to improve quality of life and services for its citizens as well as the improvement of urban conditions in the city center. The Fier vision is based on principles of sustainable

development where as a precondition is the development which respects and uses in prudent manner the environmental resources.

Figure 2- GLTP Vision

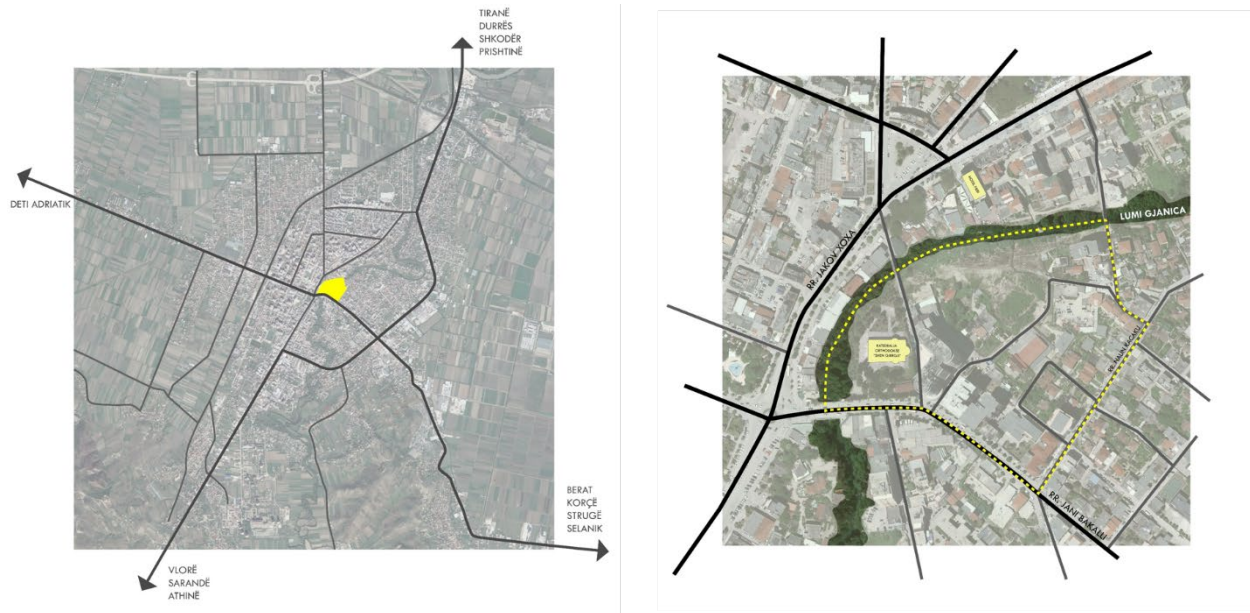


Source: Bashkia Fier dhe Co-PLAN, 2016

The Regeneration of the City Center, the Rehabilitation of the River Gjanica and the development of a sport facility for indoor Sports are seen as priority interventions in the plan.

The structural unit $\frac{1}{2}$, is located in the city center. It is confined by Road Javov Xoxa, Road Jani Bakalli and Road Jani Kaçaku. Through the structural unit runs River Gjanica which divides it into two main parts.

Figure 3- Location of Structural Unit



Source: Co-PLAN (2018)

The regeneration is proposed for structural unit 1/2, in conformance with Fier's General Local Territorial Plan. The total area of the unit is 81,298 m², or around 8 hectares. Buildings occupy 25.5% of the unit's area, and roads, 9.4%. Most of the balance is vacant land.

Existing permitted land use categories include residential and infrastructure. The GLTP envisions significant new private development in unit 1/2 in the near future, stimulated by the riverfront improvements and construction of the sports center. The GLTP envisions an increase in building intensification from the current 0.53 to 4.0 or 5.0, depending on the subarea. When fully redeveloped, according to the vision outlined in the GLTP, buildings are expected to occupy about half of the unit's area; roads, 25%; and public space, 30%. Regeneration with new uses and higher intensities implies substantial changes to the unit's spatial organization and functionality, making a Local Detailed Plan a legal necessity.

Annex A includes the current passport, or development controls, for unit 1/2, which were developed as part of the GLTP and will guide creation of the LDP.

1.3.2 Land Use Analysis

Structural Unit 1/2 has a variety of land uses. Housing is the dominant land use category in the structural unit, followed by Natural Lands which are located by the river and in the central part of the unit. Transport Infrastructure is also a major land use category. This is usually located along the perimeter of the structural unit.

Figure 4- Land Use according to Main Category of Use



Source: Co-PLAN (2018)

Housing and Housing and Services are the major land use subcategories comprising over 60% of both parcels and total land area. Most parcels used for housing with services are located on the edges of the unit, and exclusively residentially-used parcels are generally in the interior.

Figure 5- Main Functions of Buildings



The major specific uses for parcels are Housing and Services and Housing. The most common second specific use for parcels is Stores and Professional Services. A small number of parcels have a third use, Bars and Restaurants.

A more detailed overview of the land uses is also presented in the below table:

Table 2- Summary of Land-uses by Base Category and Subcategory

Base Category			Subcategory		
Category	Parcels (No.)	Land Area (%)	Subcategory	Parcels (No.)	Land Area (%)
Housing	66	62.3	Housing	29	27.4
			Housing & Services	37	34.9
Natural Lands	18	17.0	Natural Lands	18	34.9
Transport Infrastructure	15	14.2	Transport Infrastructure	15	14.2
Business Services	3	2.8	Business Services	3	2.8
Social & Recreation Activities	2	1.9	Sport Activities	1	0.9
			Cultural Activities	1	0.9
Public Services	1	0.9	Public Services	1	0.9
Water	1	0.9	Water	1	0.9

1.3.3 Subunit Division

Structural unit 1/2 has been divided into three subunits for planning purposes. The municipality determined which parts of the unit are not to be considered for this phase of planning, mostly because they are densely built (in light brown).

Figure 6- Subunit Division

The third subunit (in green) forms the planning area. This subunit includes lands which the municipality intends to reserve for public use, including a sports center and public green space and private parcels which are considered underutilized and suitable for potential new private development.



Table 3- Subunit Area

Subunit	Area (m2)
1	24,084
2	37,220
3	19,994
Total	81,298

As it can be seen, the third sub-unit which is also the largest one has been defined as the area where most of the development will occur. *Therefore, the analysis will*

concentrate on the lower part of the river, where sub-unit 2 and 3 are located. The first sub-unit is a consolidated one where minor interventions are expected. Thus the analysis and the proposals focus on the other two subunits.

1.3.4 Road Condition Analysis

There are 1,394.6 meters of existing roads in the LDP area, and understanding their condition is important for designing a future road network that can meet the needs of all users (pedestrians, bicyclists, bus riders, and private motorists).

It is important to note that the conceptual designs produced for this study utilize existing roads as much as possible to both support proposed new public and private development and provide safe and convenient access to the riverfront area for all users, as envisioned in the center city master plan.

An on-site field analysis of existing road and sidewalk infrastructure conditions provided important data about current road conditions in the LDP area, which informed recommendations for future use and improvements.

i) Road Width

Pavement width is an important indicator of adequate sight distances, road space for vehicle maneuvers, and overall safe travel. Road widths vary throughout the LDP area, a function of the history of building construction in the area. Eleven roads have a width of 5 meters, and six roads have a width of 6 meters. Three roads have widths of 3 to 4.5 meters, and one, a dead end.

The municipality aims to improve the road network within the structural unit. In addition, it also wants to widen road Naun Kaçaku in order to deviate some of the traffic flows from and to the center towards this road. In the future, road Naun Kaçaku is expected to join with the Fier Ring Road, providing fast access in and outside of the city.

ii) Road Pavement

Paved roads can make driving safer and more comfortable, improve fuel efficiency, and are cleaner and easier to maintain than unpaved roads.

Photo 1- Unpaved Roads in the Area (Source: Co-PLAN 2018)



Seventy-one percent of the roads in the LDP area are paved with asphalt. The rest, mostly small interior roads, are gravel. These roads also present a challenge in terms of widening.

Figure 7- Map of Paved Roads



iii) Sidewalks

Sidewalks are present on both sides of the road only on the eight roads which border the area. Two exit roads from the area have a sidewalk on one side. The remaining roads lack sidewalks.

The municipality aims to improve the quality of the sidewalks in the area. Increasing the walkability of the area is an important aspect of sustainable and healthy mobility. Safe cycling paths are absent in the area. The municipality aims to also improve this component.

iv) Crossing the River Gjanica

Currently the River Gjanica can be crossed only at one point by automobiles at the intersection between the main Roads Jakov Xoxa and Jani Bakalli. There is one pedestrian bridge on the other corner of the structural unit, however it is in poor conditions. The aim of the municipality is to develop a new bridge which can be used both for pedestrian and for vehicles.

Photo 2- Pedestrian Crossing over Gjanica River (Source: Co-PLAN 2018)



1.3.5 Building Analysis

Existing buildings affect both the prospects for improving the transport system and the potential for regeneration. The building analysis includes the quality of buildings, how buildings are used, and the height of buildings.

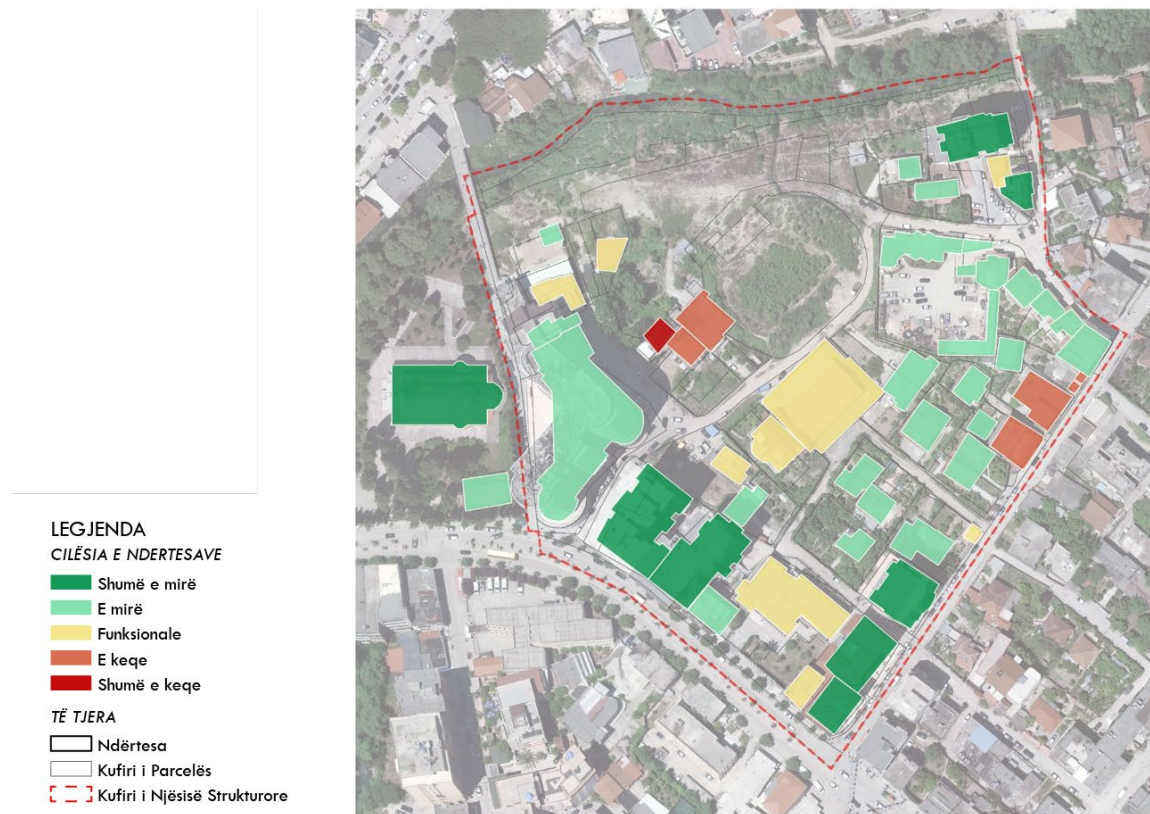
The building analysis is combined with the road condition analysis and financial analysis to provide information needed for a conceptual design which promotes greater overall mobility for people and vehicles, increases access to the river, assists roads and public spaces to become more enjoyable places to be, and assesses prospects for new private development.

The building analysis is composed of different aspects such as quality, construction status, height and function. Considering that the upper part of the unit is a densely developed area, where there will be little intervention in terms of improvement of public spaces, but not much development, the analysis has focused on the area below river Gjanica. This part of the structural unit is predicted to have most of the development.

i) Building Quality

Overall building quality ranges from very good (14.4% of all buildings) to good (53%) to functional (18.4%) to poor or very poor (14.2%).

Figure 8- Building Quality



Source: Co-PLAN, 2018

iii) Construction Status

Six buildings in the LDP area are under construction; the rest are complete.

iv) Building Height

Buildings in the LDP area have from 1 to 13 floors. One-floor and two-floor buildings comprise 59.2% of all buildings and are located primarily in the interior of the area.

Figure 9- Building Height

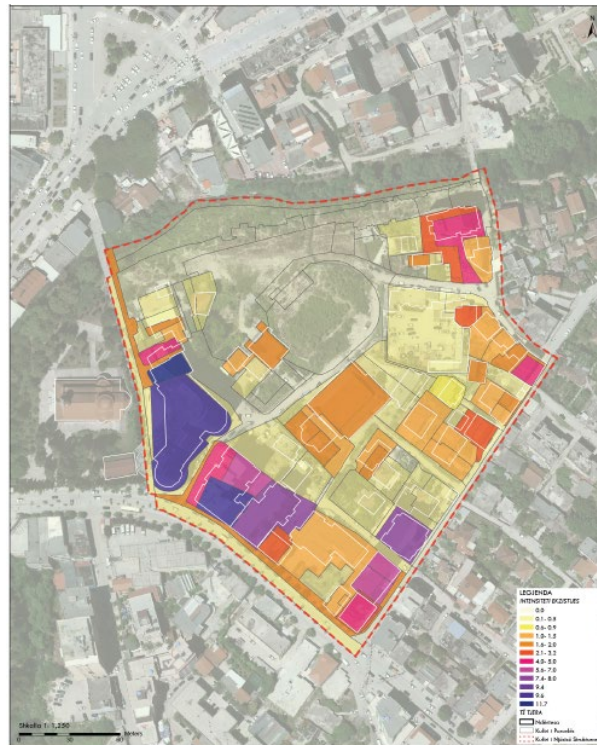


Source: Co-PLAN, 2018

Buildings with 3 to 9 floors (32.6% of all buildings) are generally located on the main border roads of the area. Three buildings have 10 or 11 floors and one has 13 floors. The minimum building height is 5 meters. The single 13-floor building is the tallest at 41 meters.

The building height is also a reflection of the FAR used in the area. Most of the buildings located on the main road Jani Bakalli with the highest FAR.

Figure 10- FAR in the Area



v) *Subcategories of Building Use*

Most buildings in the LDP area are used for exclusively for housing or contain a mix of residential and commercial uses. Residential uses are concentrated on the interior of the area. Buildings with commercial and business services include about a third of the buildings in the area. These buildings are generally larger and located on the main border roads. A single building may contain different subcategories or combinations of subcategories on different floors or different parts of floors.

Table 4- Subcategories of Building Use

Subcategory of Building Use	Number of Buildings	Percent of Buildings
Subcategory 1		
Housing	19	37.2
Housing and Services	18	35.3
Housing & Commercial and Business Services	5	9.8
Public Services	3	5.9
Religious Institutions	2	4.0
Other	4	8.0
Subcategory 2		
Commercial and Business Services	17	33.3
Subcategory 3		
Accommodation and Recreation Services	3	6.0

A single building may contain different uses or combinations of uses on different floors or different parts of a floor. The most common specific building use in the LDP area is housing. More than one third (37.2%) of all buildings are used exclusively for residential purposes. Housing mixed with other uses is found in 45.1% of buildings. Buildings with only stores and professional services comprise 33.3% of all buildings in the LDP area.

1.3.6 Environmental Concerns

The Gjanica River has been very important in urban development of the municipality. The development of the urban area has caused significant damage to the river's riparian zone. During field visits, it was noted that the lack of green belts (which should be up to 30m) along the river is highlighted, accelerating the river-water pollution process from various discharges (urban wastewater, urban waste and industrial, inert waste) produced from the surrounding area, but also from erosion as a result of lack of green belts along the river.

Photo 3- Image of Gjanica River



Source: Bashkia Fier & Co-PLAN, 2018

Quite important to mention, as far as the quality of Gjanica river waters is concerned, is the constant pressure under which it is from the discharge of polluted waters of the oil industry directly into the river without any prior treatment. The river is considered one of the most polluted rivers in Albania, as a result of all the above-mentioned actions.

In addition, within the city of Fier, the quality of air is not good, influenced by industrial air emissions, public and private transport, and lack of green space. Also, the 2016 environmental status report of the Fier city rank in cities with the level above the noise level. During the day the measurements have shown that average noise levels are 59.65 dB (A), while overnight the average values have been 46.95 dB (A).

1.3.7 Property Ownership

The area has a mixture between private and public ownership in terms of buildings and land. The following table summarizes the status of land and building ownership in the LDP area. The current status of property ownership was received from the IPRO in Fier on 09/02/2018, with letter Nr.698/1 under the subject “Reply to Municipality of Fier Request”, with Nr Prot 1280, dt 05/02/2018.

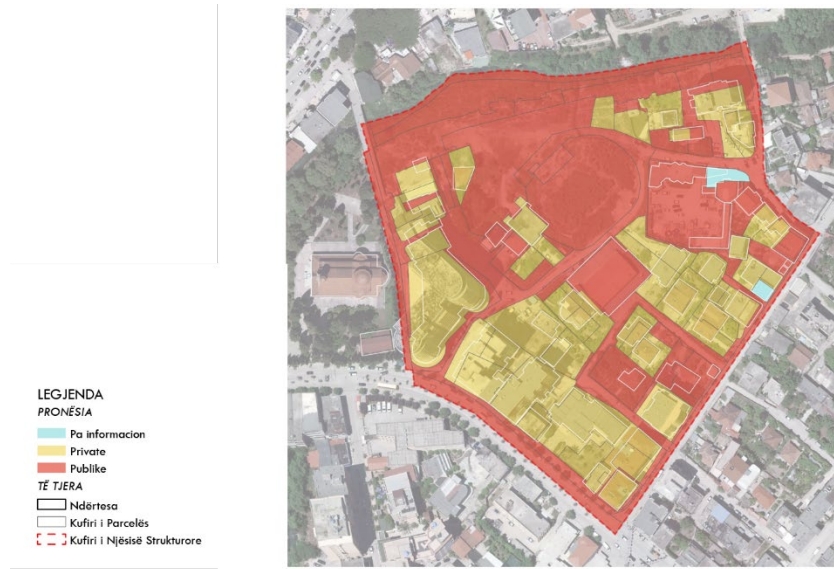
Table 5- Property Ownership Status

Ownership	Buildings (%)	Land Parcels (%)
Private	89.6	47.1
Public	10.4	51.0
Uncertain	0.0	1.9

Source: IPRO Fier (2018)

The above table provides a summary of the property status, while in annex XX can be found a detailed inventory of properties. Public ownership accounts for half of the number of plots (54) and most of the land area (28,694 square meters). There are 54 privately-owned plots with a surface area of 19,144 square meters. The ownership status of 1.9% of plots is unclear.

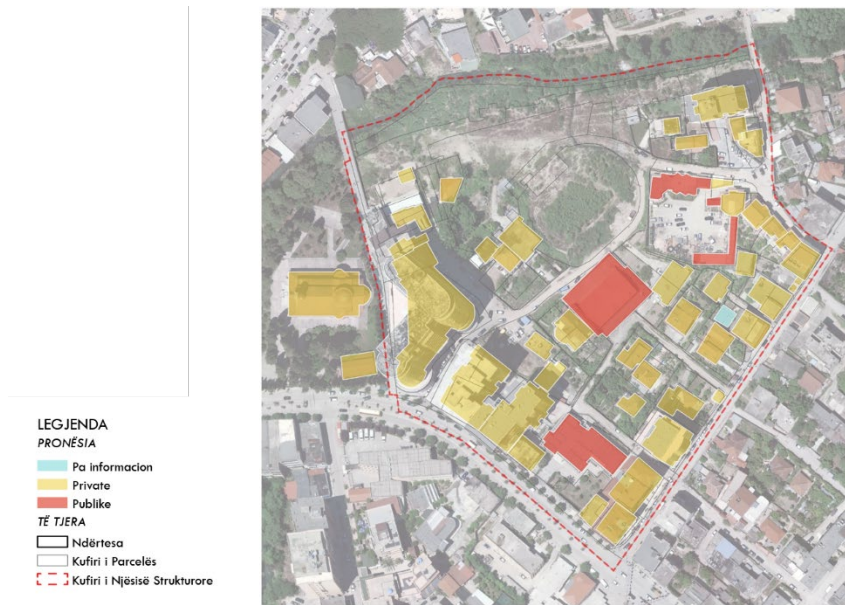
Figure 11- Land Ownership Status



Source: IPRO Fier (2018)

Buildings in the LDP area are predominantly privately owned (89.6% of all buildings). Public buildings comprise 10.4% of all buildings and are related to cultural and institutional use such as for example the water utility building and a gym.

Figure 12- Building Ownership



Source: IPRO Fier (2018)

As it can be seen from the above two maps there are also some properties which have a peculiar situation. These are cases where the buildings are privately owned however the land results public. These cases can become potential inhibitors for development as the land ownership is one of the pre-requisites for development to occur.

1.4 Development Proposals

1.4.1 Riverfront Development Guidelines

This feasibility study focuses on the potential economic impacts of private development, including its potential to provide financial support to a public sports center. It also recognizes that the municipality can have a big influence on the quality of what will be built by the private sector and the amount of private investment that can be leveraged.

Municipalities around the world are exploiting their waterfronts. However, not all waterfront development projects are successful. In many cases, implementation of these projects is driven primarily to meet the short-term needs of private investors rather than the long-term needs of the community, leading to less than desirable results.

A large body of research has examined waterfront projects to understand what causes beneficial impacts—economic, social, and environmental—rather than negative impacts for all stakeholders. Their findings are remarkably similar. All of these studies find that successful and sustainable waterfront development projects follow a few basic policies and guidelines.

After painstaking international research of waterfront regeneration projects, the 2010 conference of the International Centre Cities on Water released the following principles for sustainable waterfront development. These principles inform the conceptual designs developed for Fier as part of this study:

1. The protection of the quality of water and environment is a precondition for all waterfront developments.
2. Waterfronts are an integral part of the urban fabric, and should be designed to develop functions which will contribute to the city's vitality such as housing, transportation, entertainment, and culture.
3. The historic identity and industrial past of a waterfront gives character and should be protected.
4. Mixed use development, such as culture, trade, and housing, is a priority.
5. Public access to the water and waterfronts is a prerequisite.
6. Planning in public-private partnerships speeds the process, but government must ensure the quality of design and infrastructure and protect the public balance.
7. Public participation is an element of sustainability, and stakeholders must be meaningfully involved in planning from the beginning.
8. Waterfront regeneration is an ongoing and long-term process.
9. Waterfronts profit from international networking to ensure the exchange of information in the planning process.

In the financial models which follow in Section 2 of this study, the variable that has the most impact on potential public benefits is total development revenues. One way to maximize revenues is for the municipality and private developers to build high-quality projects that follow the above-mentioned best practices for waterfront development.

1.4.2 Fier Riverfront Design Opportunities

The conceptual designs in this study follow the guidance of the General Local Territorial Plan and Center City Master Plan. Specifically, they aim to contribute to the public's positive experience of the waterfront while improving local quality of life and directing economic opportunities. Among the key opportunities that we found in the LDP subunit are the following:

Views. The area has wonderful views of the city center and the river. In other cities, these are some of the best opportunities to develop high-value projects. Developed correctly, properties with such views are especially appealing for housing and offices.

Water access. The potential direct pedestrian access to the river provides for a further attractor to investment, especially if that access is developed better than it is today.

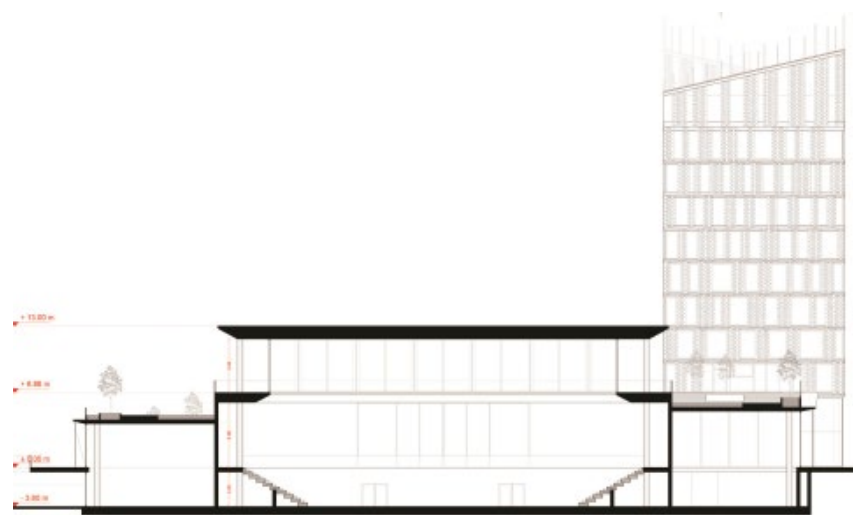
Road access and circulation. The subunit has good access and visibility from the municipality's roads, which can be enhanced by the widening of Road Naun Kaçaniku and the provision of a new Bridge connecting to the previously mentioned road. Good internal circulation can be assured at relatively modest public cost.

Low value parcels. Property values are low enough that they do not form an overwhelming obstacle to redevelopment.

1.4.3 Conceptual Development

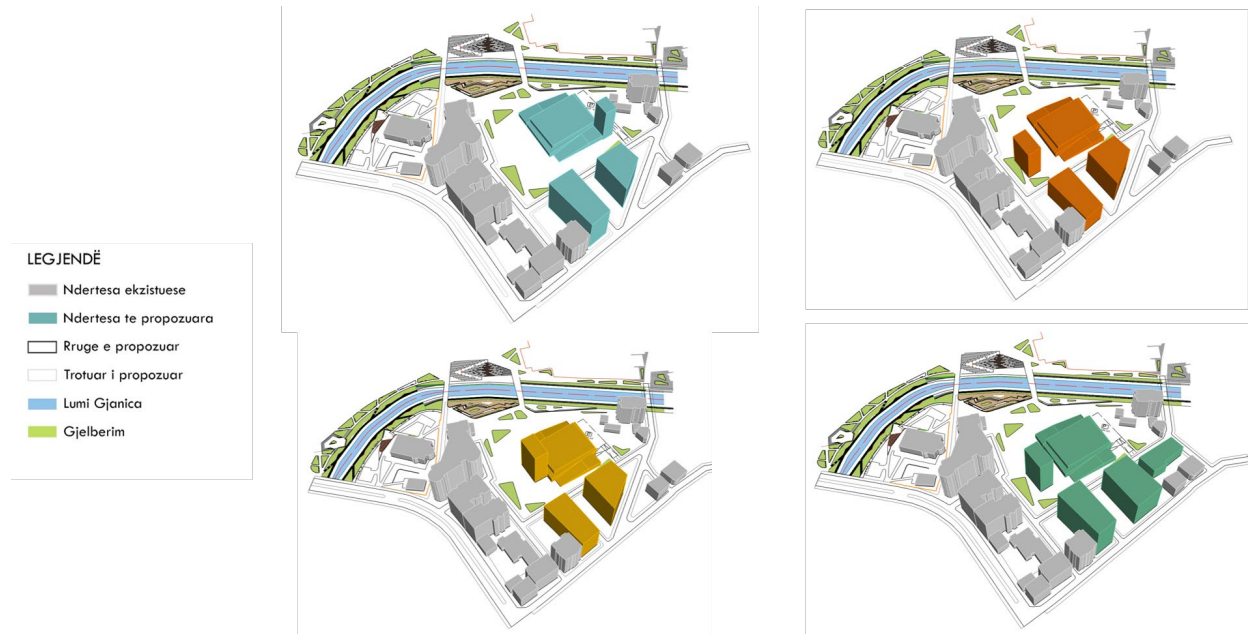
The initiation of the process for the concept of development of the area was the Fier City Center Masterplan. The trigger of the concept was the proposal to develop a sport center facility, which due to the lack of financial means to finance by the municipality, it was envisioned to be developed through a public private partnership. In order for the latter to occur, a tower was proposed attached to the sport facility.

Figure 13- Proposed Concept for the Sport Facility and Tower



The tower was proposed to have a base ground floor of 175m² and a height of 9 floors. From pre-feasibility analyses it became clear that the tower on itself, with the proportions proposed, could not fully finance the whole project. Thus, a series of different alternatives were analyzed in order to better understand which options or alternatives could be used. Afterwards these alternatives were discussed with different municipal representatives as well as the Economic Counseling Board of the Municipality. Below there is a brief overview of all concepts taken into consideration:

Figure 14- Alternative Concepts



As it can be seen from the above image a series of alternatives were proposed which tried different urban as well as financial solutions for the area, including not only the sport center and its tower, but also incorporating private development further south in the area. After intensive consultations with the municipal staff and the Mayor it was decided for the following:

- 1- The tower should be in the same position as proposed in the masterplan, however different alternatives in terms of size and functions should be tried in order to assess the feasibility.
- 2- Private development further south in the area should be tried with two options, one option comprising two separate residential towers with commercial spaces on the ground floors, and the second option comprising one unified tower, spreading in length along the Naun Kaçaku road.

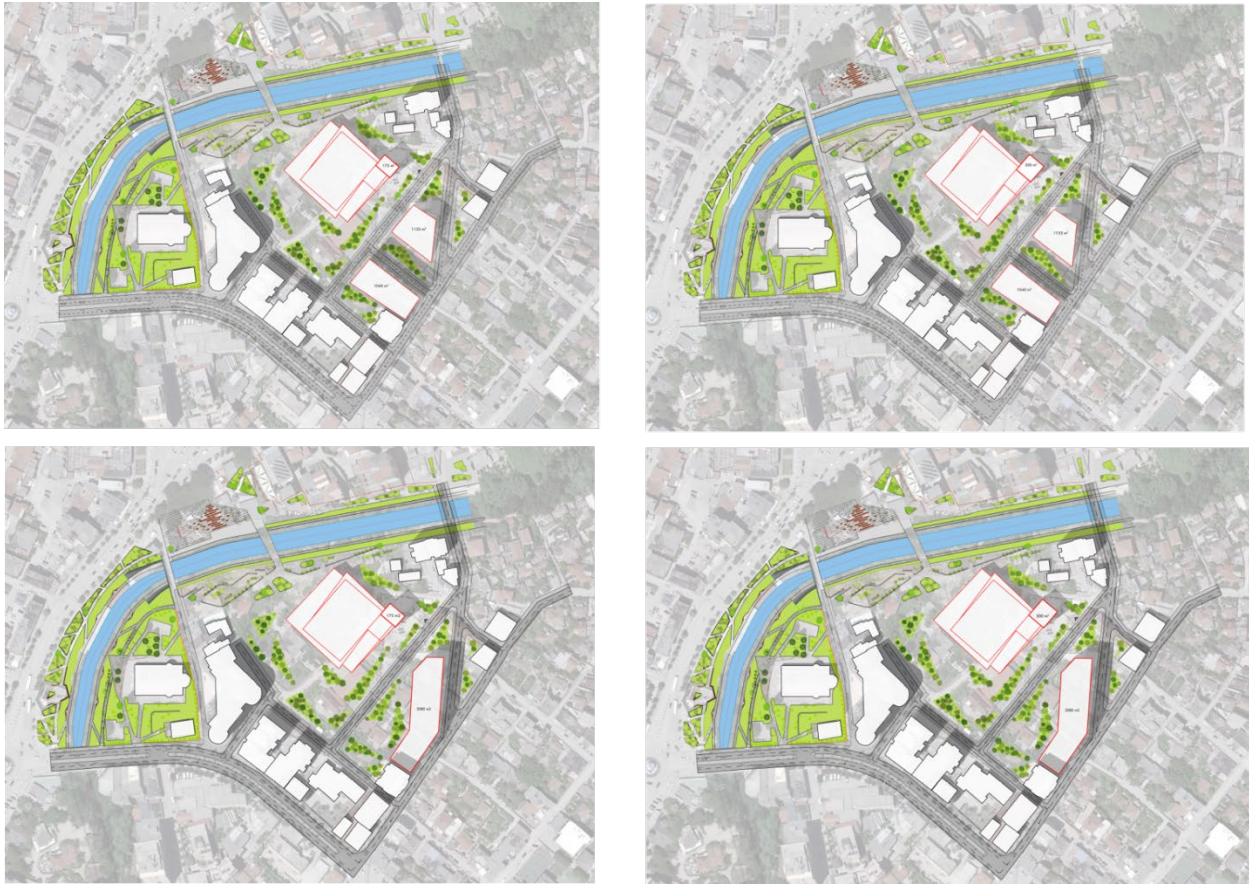
Based on the above the alternatives for the sport center and its tower were assessed under these conditions:

Table 6- Sport Center Tower Alternatives

Height	Base 300 m2
9	(1) Only commercial / (2) mix 50% commercial; 50% residential
11	(1) Only commercial / 2 mix 50% commercial; 50% residential
13	(1) Only commercial / 2 mix 50% commercial; 50% residential
15	(1) Only commercial / 2 mix 50% commercial; 50% residential

The private development alternative 1 was conceptualized with two towers of different heights (8; 10; 11 Floors) while the second alternative with one single tower was assessed through height alterations of (6; 8; 10 and 12) Floors.

Table 7- Conceptual Development of the Area



2.0 Feasibility Assessment of the Development Program

2.1 Development Calculations

2.1.1 Development Assumptions

The data used for development financial calculations are from official Government of Albania statistics, data provided by the municipality, and a detailed review of real estate conditions in Fier.

A survey of local real estate professionals conducted by PLGP found that commercial properties in Fier typically sell for 1,500 to 2,000 euro per square meter, and residential properties typically sell for 500 to 700 euro per square meter. Apartment sizes range from 60 to 120 square meters, with larger penthouses. Commercial properties rent for 500-1,200 euro/m², and residential properties rent for 150-200. In addition, land values range between 150-200 Euro/m². The information from the survey supports information provided by the municipality. A copy of the real estate survey questionnaire is included as Annex D.

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 8- Development Assumptions

LAND COST			
Developable land cost	22.5%	% of total development revenues	Municipality
Expropriation Cost for Land	99	E/m2	DCM
Expropriation Construction Cost	250	E/m2	EKB
Market Value for Land	150-200	E/m2	Municipality
BUILDING			
Base residential sales price	600	€ / m2	Municipality/ Market Survey
Base commercial sales price	1750	€ / m2	Municipality/ Market Survey
Average apartment size (sales)	100	m2	PLGP Analysis/ Market Survey
Average underground parking space sales price	7000	€ / Space	PLGP Analysis
Average surface parking space annual revenues	240	€ / Space	PLGP Analysis
CONSTRUCTION COSTS			
Average total costs (residential and commercial)	275	€ / m2	Municipality
Infrastructure impact tax	4%	% of total building construction revenues	GoA
Parking (surface)	120	€ / m2	PLGP Analysis
Parking (underground)	250	€ / m2	PLGP Analysis
Cost to build sports center	1,837,070	Euro	Municipality
INVESTMENT			
Developer's profit	25%	% of total development costs	PLGP Analysis

2.1.2 Build-Out Analysis

A build-out scenario is used to calculate the amount of possible future development. It is also an indication of the potential financial benefits that can accrue to the municipality and community.

Table 9- Development Conditions according to GLTP

Conditions of Development	
Subunit Area	36, 029 m2
Base FAR	5.00 Residential / 4.0 Services
Public Space	30%
Road Space	25%

PCR	70%
-----	-----

Based on the proposed improvements to public infrastructure, private development parcels could be built out (i.e., developed) to the maximum amount of floor space shown below. The proposed total space is designed to maximize that amount of value that goes to the public while still ensuring the financial feasibility of the development of each parcel.

To arrive at the amount of potential new private development, the municipality's limits for building intensity, height, and distances were balanced to allow the maximum amount of new development on each site. The build-out tables are separate for the sport center and tower; and for the private development alternatives

Table 10- Build-out of Sport Center

	Large Tower (300m2 G-Floor + 9 Storey)		Large Tower (300m2 G-Floor + 11 Storey)		Large Tower (300m2 G-Floor + 13 Storey)		Large Tower (300m2 G-Floor + 15 Storey)	
	Commercial	Mixed	Commercial	Mixed	Commercial	Mixed	Commercial	Mixed
New residential space (m2)	0	1350	0	1650	0	1950	0	2250
Number of new residential units	0	14	0	17	0	20	0	23
New commercial space (m2)	3120	1860	3810	2160	4410	2460	5010	2760
Market value of new construction (€)	5,785,500	4,233,000	6,835,500	4,938,000	7,885,500	5,643,000	8,935,500	6,348,000

Meanwhile for private development in the adjacent land, the following are the build-out data for the option with the single tower:

Table 11- Total Build-out Private Development

	Option 4 Single Tower			
	A (6-Floors)	B (8-Floors)	C (10-Floors)	D (12- Floors)
New residential space (m2)	10550	14770	18990	23210
Number of new residential units	106	150	190	232
New commercial space (m2)	2110	2110	2110	2110
Market value of new construction (€)	11, 204,100	13,736,100	16,268,100	18,800,100

In Addition to the above, a build out calculation was done also for the scenario with two separate towers:

	Two Tower Scenario					
	8 Floors		10 Floors		11 Floors	
	T1	T2	T1	T2	T1	T2
New residential space (m2)	7,280	8,085	9,360	10,395	10,400	11,550
Number of new residential units	73	81	93	104	104	116
New commercial space (m2)	1,040	1,155	1,040	1,155	1,040	1,155
Market value of new construction (€)	6,770,400	7,519,050	8,018,400	8,905,050	8,018,400	9,598,000

2.1.3 Development Costs/Benefits for Private Development

The feasibility study established 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, an internationally-recognized 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 a required profit. The market value of land is then deducted. If the amount is negative, the project is not feasible. A positive amount means the development will generate adequate returns to support a public benefit.

The positive amount in the last row of the table ("value added") represents the amount of value that the planned public investments in the area add to private development. This type of analysis gives the municipality the financial information it needs to compare options and evaluate and make sure that it is using the money available to it in the best interest of the public.

The added Value was calculated initially for the Sport Center and afterwards using the same methodology for the private development.

Table 12- Added Value Analysis for the Sport Center and associated Tower based on each alternative

Residual Land Value Analysis		1	2	3	4	5	6	7	8
Total development revenues	€	5,785,500	4,233,000	6,835,500	4,938,000	7,885,500	5,643,000	8,935,500	6,348,000
(-) total development costs	€	3,080,990	3,018,890	3,287,990	3,212,090	3,494,990	3,405,290	3,701,990	3,598,490
(-) developer's profit	€	770,248	754,723	821,998	803,023	873,748	851,323	925,498	899,623
(=) residual land value	€	1,934,263	459,388	2,725,513	922,888	3,516,763	1,386,388	4,308,013	1,849,888
(-) Private land cost (alternative 1: expropriation)	€	945,860	945,860	945,860	945,860	945,860	945,860	945,860	945,860
(-) Private land cost (alternative 2: market value)	€	1,730,524	1,730,524	1,730,524	1,730,524	1,730,524	1,730,524	1,730,524	1,730,524
(-) Private land cost (alternative 3: % of development)	€	1,301,738	952,425	1,537,988	1,111,050	1,774,238	1,269,675	2,010,488	1,428,300
(=) Value added by development / Public Benefit (1)	€	988,403	-486,472	1,779,653	-22,972	2,570,903	440,528	3,362,153	904,028
(=) Value added by development / Public Benefit (2)	€	203,738	-1,271,137	994,988	-807,637	1,786,238	-344,137	2,577,488	119,363
(=) Value added by development / Public Benefit (3)	€	632,525	-493,038	1,187,525	-188,163	1,742,525	116,713	2,297,525	421,588
Total Value of New Development	€	5,785,500	4,233,000	6,835,500	4,938,000	7,885,500	5,643,000	8,935,500	6,348,000

As it can be seen, the added value of public benefit varies between positive and highly beneficial conditions towards negative and costly scenarios. These come as a result of the different alternative methods that are used to calculate the land costs for private owners as well as the size and composition of the tower. In the scenario with 15 Floors, the calculations result positive. However, considering the size of the tower, for this scenario it is advantageous to use a mixed use tower, rather than a purely commercial one. The calculations

for the private land can be seen in further detail in [Appendix XX](#). In addition to this, as part of the total development costs are also 1, 837,000 Euro which serve for the construction of the sport facility.

Meanwhile the added value from the private development was calculated for both scenarios comprising a single tower and the scenario with two towers. The below table shows the scenario one for two towers:

Table 13- Added Value Calculations from Scenario with two towers

	Two Tower Scenario					
	8 Floors		10 Floors		11 Floors	
	T1	T2	T1	T2	T1	T2
Residual Land Value Analysis						
Total development revenues	€ 6,770,400	7,519,050	8,018,400	8,905,050	8,642,400	9,598,050
(-) total development costs	€ 3,078,816	3,419,262	3,700,736	4,109,952	4,011,696	4,455,297
(-) developer's profit	€ 769,704	854,816	925,184	1,027,488	1,002,924	1,113,824
(=) residual land value	€ 2,921,880	3,244,973	3,392,480	3,767,610	3,627,780	4,028,929
(-) land cost (Market value - alternative 2)	€ 5,052,404	5,052,404	5,052,404	5,052,404	5,052,404	5,052,404
(-) land cost (22.5% of development - alternative 3)	€ 1,523,340	1,691,786	1,804,140	2,003,636	1,944,540	2,159,561
(=) Value added by development / Public Benefit (2)	€ -2,130,524	-1,807,432	-1,659,924	-1,284,794	-1,424,624	-1,023,475
(=) Value added by development / Public Benefit (3)	€ 1,398,540	1,553,186	1,588,340	1,763,974	1,683,240	1,869,368
Total Value of New Development	€ 6,770,400	7,519,050	8,018,400	8,905,050	8,642,400	9,598,050

Afterwards, a similar calculation was done also for the scenario with the single tower.

Table 14- Added Value from Private Development

	Scenario 2 (Single Tower)			
	1	2	3	4
Residual Land Value Analysis				
Total development revenues	€ 11,204,100	13,736,100	16,268,100	18,800,100
(-) total development costs	€ 4,984,664	6,246,444	7,508,224	8,770,004
(-) developer's profit	€ 1,246,166	1,561,611	1,877,056	2,192,501
(=) residual land value	€ 4,973,270	5,928,045	6,882,820	7,837,595
(-) land cost (Market value - alternative 2)	€ 5,052,404	5,052,404	5,052,404	5,052,404
(-) land cost (22.5% of development - alternative 3)	€ 2,520,923	3,090,623	3,660,323	4,230,023
(=) Value added by development / Public Benefit (2)	€ (79,134)	875,641	1,830,416	2,785,191
(=) Value added by development / Public Benefit (3)	€ 2,452,348	2,837,423	3,222,498	3,607,573
Total Value of New Development	€ 11,204,100	13,736,100	16,268,100	18,800,100

As it can be seen from the above calculations, the added value (public benefit) is positive in most scenarios for the Single Tower. The above proves that there is a possibility to apply different value capture instruments in order to use some of the potential added value for the improvement of different aspects in the area.

As shown previously in the residual analysis not all options will generate adequate returns to support a public amenity, including public construction of a sports facility.

The table below shows the total amount of new development for each the different alternatives of private development and from the tower of the sport facility as well as the estimated infrastructure impact tax revenues generated by each option. The table also shows the estimated total market value of new development and proportions of that value compared to the total added value of the development. If, for example, the municipality captured one, five, or ten percent of the value of new development, it would generate significant revenues for the municipality but still be considerably less than the value added to the private development by current and planned public investments in the area for the scenarios which are positive. On the other hand, there are also negative values for the added value coming as a result of land costs.

Table 15- Potential of Public Benefits

NEW DEVELOPMENT VALUE SUMMARY								
	Total value of new development (€)	Potential Public Benefits						Estimated total infrastructure impact tax (€)
		1% of total value of new development (€)	5% of total value of new development (€)	10% of total value of new development (€)	Value Added (potential value capture) (€)	Value Added (potential value capture) (€)	Value Added (potential value capture) (€)	
Sport Center Tower								
1	5,785,500	57,855	289,275	578,550	988,403	203,738	632,525	231,420
2	4,233,000	42,330	211,650	423,300	(486,472)	(1,271,137)	(493,038)	169,320
3	6,835,500	68,355	341,775	683,550	1,779,653	994,988	1,187,525	273,420
4	4,938,000	49,380	246,900	493,800	(22,972)	(807,637)	(188,163)	197,520
5	7,885,500	78,855	394,275	788,550	2,570,903	1,786,238	1,742,525	315,420
6	5,643,000	56,430	282,150	564,300	440,528	(344,137)	116,713	225,720
7	8,935,500	89,355	446,775	893,550	3,362,153	2,577,488	2,297,525	357,420
8	6,348,000	63,480	317,400	634,800	904,028	119,363	421,588	253,920
Private Development					<i>Value Added (potential value capture) by using land cost as 22.5% of development</i>	<i>Value Added (potential value capture) by using land cost at market value</i>		
Two Towers								
1	6,770,400	67,704	338,520	677,040	1,398,540	(2,130,524)		270,816
2	7,519,050	75,191	375,953	751,905	1,553,186	(1,807,432)		300,762
Two Towers								
1	8,018,400	80,184	400,920	801,840	1,588,340	(1,659,924)		320,736
2	8,905,050	89,051	445,253	890,505	1,763,974	(1,284,794)		356,202
Two Towers								
1	8,642,400	86,424	432,120	864,240	1,683,240	(1,424,624)		345,696
2	9,598,050	95,981	479,903	959,805	1,869,368	(1,023,475)		383,922
Single Tower								
1	11,204,100	112,041	560,205	1,120,410	2,452,348	(79,134)		448,164
2	13,736,100	137,361	686,805	1,373,610	2,837,423	875,641		549,444
3	16,268,100	162,681	813,405	1,626,810	3,222,498	1,830,416		650,724
4	18,800,100	188,001	940,005	1,880,010	3,607,573	2,785,191		752,004

For the sport facility there are four different options calculated through the different methods. Due to the different land costs, the sport center produces the potential for added value only in option 4, the 15-storey tower. On the other hand, the private development, shows positive values only for the options 3 and 4 when private property costs are calculated according to market values.

Therefore, based on the above calculations it can be noted that the best alternative for the Sport Facility is the tower with 15 Floors. This option is positive and produces added value in both cases, for a single use commercial tower and for a mixed use tower. However, considering the size and market conditions in Fier, a mixed use tower would be more favorable.

Regarding the Private development. The option with the Single tower with 10 and 12 Floors perform better in terms of added value.

2.1.4 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. The sensitivity analysis was conducted for the private development (option 4) and for the sport facility option (4) considering the calculations of the previous section. 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.

Table 16- Sensitivity Analysis of Public Benefit in Private Development

	<i>Single Tower</i>	
	<i>Option 4</i>	
Construction costs	Value Added/ Public Benefit (1)	Value Added/ Public Benefit (1)
85%	4,090,753	4,913,135
100%	2,785,191	3,607,573
120%	1,044,441	1,866,823
Developer profit		
85%	3,114,066	3,936,448
100%	2,785,191	3,607,573
120%	2,346,691	3,169,072
150%	1,688,940	2,511,322
Total revenues		
80%	-786,828	881,558
100%	2,785,191	3,607,573
120%	6,357,210	6,333,587
85% construction costs, 120% total revenues	7,662,772	7,639,150
120% construction costs, 80% total revenues	-2,527,578	-859,192
Land costs		
0	7,837,595	7,837,595
80%	3,795,672	4,453,577
100%	2,785,191	3,607,573
125%	1,774,710	2,761,568
150%	258,989	445,377

As it can be seen from the above table, the only time when the sensitivity analysis is negative in terms of public benefits is when the total revenues are reduced by 80% and the construction costs are increased by 120%. The other indicators used to trigger the sensitivity analysis show positive results.

In addition to the sensitivity analysis for the private development, a similar exercise was conducted also for the sport center. In general, the development of the sport center is more sensitive towards alterations in the above mentioned factors.

Table 17- Sensitivity Analysis Sport Tower

	Sport Tower Option 4		
	Value Added (Land Cost 1)	Value Added Land Cost 2	Value Added Land Cost 3
Construction costs			
85%	1,136,059	351,395	653,619
100%	904,028	119,363	421,588
120%	594,653	-190,012	112,213
Developer profit			
85%	1,038,971	254,307	556,531
100%	904,028	119,363	421,588
120%	724,103	-60,561	241,663
150%	454,217	-330,448	-28,224
Total revenues			
80%	-302,092	-1,086,757	-498,873
100%	904,028	119,363	421,588
120%	2,110,148	1,325,483	1,342,048
85% construction costs, 120% total revenues	2,342,179	1,557,515	1,574,079
120% construction costs, 80% total revenues	-611,467	-1,396,132	-808,248

The combination of an increase of construction costs by 120% with a reduction of revenues by 80% is the only combination which always creates a negative added value.

Nevertheless, the detailed sensitivity analyses for each option are part of the development proformas in Annex E.

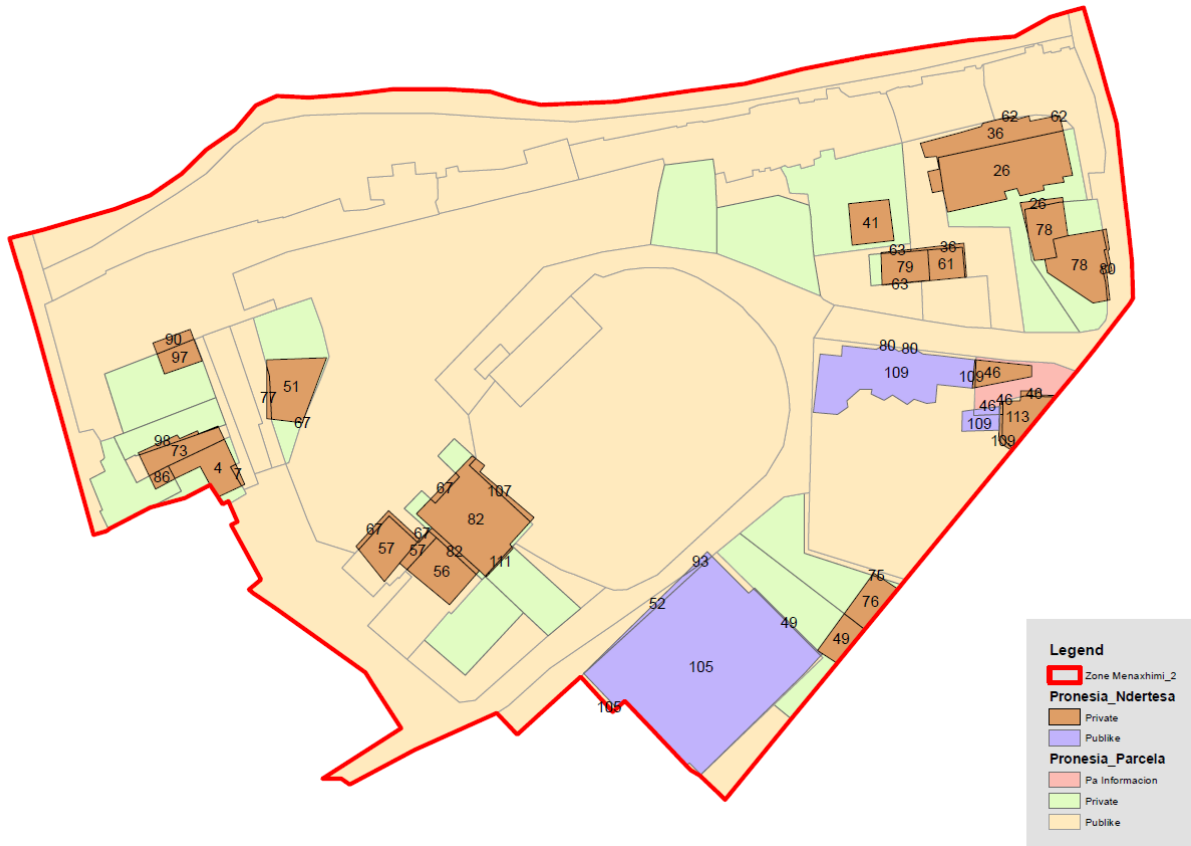
2.2 Calculation of Land Costs

2.2.1 Calculation of Private Land Cost for Sport Facility and Tower

The total footprint of the sport center, tower, and surrounding commercial facilities around the sport center perimeter are 4245m² (using a 300m² base), of which 3945 is the footprint of the sport center and the commercial area around its perimeter.

Based on the property data from the IPRO Fier and on the positioning of the Sport Facility and its Tower there are a number of private properties which are impacted by the project. Although, not all are fully impacted, the interest of the municipality of Fier is to have the surrounding area of the sport center as public open space. Therefore, the private buildings need to be cleared in order to open way for the facility and public space. In order to avoid expropriations their value is calculated in order to be incorporated in the development of the tower.

Figure 15- Map of Property Status in the Sport Facility Area



The private properties are composed of land and buildings. For the purpose of giving a fair compensation value, the value of the properties has been calculated with three different methods such as:

- Expropriation Value (Using average Expropriation costs and Construction Costs for Fier Center)
- Using the Assumption that 22.5% of Development is for land Costs
- Using a Market Value

Table 18- Private Land Cost Comparison

Nr	Property_Number	Parcel_Ownership	Parcel_Area (m2)	Footprint (m2)	Building Area (m2)	Building_Ownership	(1) Property Value by Expropriation (Euro)	(2) Property Value by Market Value (Euro)	(3) Property Value by 22.5% (Euro)
4	11/30	Private	133.59	83.56	167.12	Private	55,013	115,293	83,352
41	11/172	Private	444.09	76.76	153.52	Private	82,366	170,181	123,034
				8.08	32.32	Private	8,079	17,128	12,383
46	11/273	Pa Informacion	168.82	48.37	48.37	Private	12,093	25,637	18,534
49	11/18	Private	334.86	48.26	96.51	Private	57,296	118,124	85,399
56	11/285	Public	272.53	100.94	201.88	Private	50,470	106,996	77,354
57	11/286	Public	152.35	102.58	205.16	Private	51,290	108,734	78,610
61	11/293	Public	183.62	46.87	93.74	Private	23,436	49,684	35,920
				14.76	29.52	Private	7,379	15,644	11,310
67	11/31	Public	2,904.80	8.98	17.95	Private	4,488	9,514	6,878
73	11/316	Public	87.16	66.86	133.72	Private	33,431	70,874	51,239
76	11/318	Private	298.47	60.65	121.29	Private	59,886	123,978	89,631
78	11/36	Private	342.65	214.50	487.51	Private	155,816	326,907	236,341
79	11/37	Private	79.15	63.54	127.09	Private	39,612	83,186	60,140
80	11/39	Public	674.04	11.01	33.02	Private	8,254	17,499	12,651
82	11/41	Private	337.75	287.61	575.21	Private	177,256	372,410	269,237
86	11/73	Private	168.26	13.61	27.22	Private	23,472	48,079	34,759
98	11/99	Private	128.13	0.00	0.00		12,691	25,626	18,527
107	11/303	Public	2,936.48	16.95	33.91	Private	8,477	17,971	12,992
				344.26	660.45	Publike	0	0	0
109	11/164	Public	1,567.50	6.09	24.35	Private	6,087	12,904	9,329
111	11/45	Private	162.08	0.00	0.00	Private	16,054	32,416	23,436
85	11/72	Private	307.31	0.00	0.00		30,439	61,462	44,435
87	11/74	Private	226.91	0.00	0.00		22,476	45,383	32,810
							945,860	1,975,631	1,428,300

In addition to this, there are also a series of public properties which will be used as the basis for the construction of the sport facility. The most considerable public properties which are impacted by the development of the sport center and its tower are 11/164 (2057 m2); 11/19 (1173 m2) and 11/303 (2937 m2). A calculation of the potential value of public properties was also conducted in two methods, by expropriation and market:

Table 19- Property Value of Public Land

Nr	Property_Number	Parcel_Ownership	Parcel_Area (m2)	Footprint (m2)	Building Area (m2)	Building_Ownership	Total Property Value (Euro) Expropriation	Total Property Value (Euro) Market Value
7	11/94	Public	74.72				7,401	14,944
							16,722	33,765
46	11/273	No Infor	168.82				0	0
51	11/28	Public	306.83				30,392	61,367
52	11/280	Public	198.81	21.75	43.50	Public	30,568	26,102
56	11/285	Public	272.53				26,994	54,505
57	11/286	Public	152.35				15,090	30,469
61	11/293	Public	183.62				18,187	36,723
62	11/294	Public	361.26				35,783	72,251
63	11/296	Public	209.77				20,778	41,955
							287,720	580,960
67	11/31	Public	2,904.80				0	0
73	11/316	Public	87.16				8,633	17,433
75	11/317	Public	37.77				3,741	7,554
77	11/319	Public	118.28				11,716	23,656
80	11/39	Public	674.04				66,764	134,809
90	11/85	Public	1,286.11				127,389	257,222
93	11/86	Public	2,280.81				225,914	456,162
97	11/98	Public	266.07				26,355	53,215
105	11/19	Public	1,173.17	1,137.64	2,275.28	Public	685,023	1,365,168
107	11/303	Public	2,936.48				290,858	587,296
				344.26	660.45	Public	320,373	396,270
109	11/164	Public	1,567.50				0	0
113	11/291	Public	68.25				6,761	13,651
							2,263,162	4,265,477

2.2.2 Calculation of Land Cost for Private Development

The two alternatives, one with two towers and the other with two towers are developed in an area composed of public and private properties. As previously mentioned, the alternative with one single tower was the one producing higher added values.

The single tower has a ground floor of 2110m² based on the planning conditions for setbacks and plot coverage ratio. In the center part the area is converted into public open space and is interlinked with the open space of the sport center.



This tower is developed in the same area as the other alternatives and manages a larger pool of properties composed of private and public properties:

Figure 16- Property Composition for Single Tower



Similarly, to the other Sport Center property values were calculated through three main methods.

Table 20- Private Property Values

Nr	Nr Property	Land Ownership	Land Area	Building Ground Floor	Building Area	Building Ownership	(1) Property Value By Expropriation	(2) Property Value by Market Value	(3) Property Value by 22.5%	(4) Property Value by Residual Value of Land	(3-2)	(4-3)	(4-2)
1	11/103	Private	199.6	22.2	110.8	Private	47,464	66,477	55,657	103,123	-10,820	36,646	47,467
18	11/104	Private	205.5	69.0	207.1	Private	51,769	124,244	104,021	192,735	-20,223	68,491	88,714
19	11/106	Private	311.9	96.2	288.5	Private	92,477	173,128	144,948	268,566	-28,180	95,438	123,618
22	11/121	Private	955.5	106.5	319.5	Private	110,761	191,711	160,506	297,393	-31,205	105,683	136,887
23	11/122	Private	489.3	140.9	150.2	Private	132,144	90,110	75,443	139,784	-14,667	49,674	64,341
28	11/100	Private	489.3	147.1	294.2	Private	121,983	176,491	147,764	273,784	-28,728	97,293	126,020
29	11/12	Publike	753.8	134.4	268.9	Private	95,393	161,311	135,055	250,236	-26,257	88,924	115,181
33	11/14	Publike	271.1	112.4	112.4	Private	28,098	67,436	56,459	104,610	-10,977	37,175	48,151
34	11/173	Publike	364.0	112.2	224.5	Private	56,124	134,696	112,772	208,949	-21,925	74,253	96,177
35	11/166	Private	211.8	163.3	489.7	Private	122,417	293,801	245,979	455,762	-47,822	161,961	209,783
37	11/168	Publike	266.7	74.8	224.5	Private	77,087	134,694	112,770	208,945	-21,924	74,251	96,176
38	11/169	Pa Informacion	266.7	84.9	84.9	Private	21,224	50,938	42,647	79,018	-8,291	28,080	36,371
39	11/17	Private	97.4	69.8	139.5	Private	44,527	83,729	70,101	129,886	-13,629	46,157	59,785
40	11/171	Publike	605.2	221.8	665.3	Private	226,251	399,195	334,218	619,255	-64,977	220,060	285,038
49	11/18	Private	431.7	190.0	350.5	Private	87,625	210,300	176,069	326,230	-34,231	115,930	150,161
50	11/278	Publike	251.8	80.3	160.6	Private	65,066	96,341	80,659	149,450	-15,681	53,109	68,790
54	11/283	Private	115.9	23.5	70.5	Private	17,615	42,276	35,395	65,582	-6,881	23,305	30,187
55	11/284	Publike	101.4	50.7	50.7	Pa Informacion	22,717	30,439	25,484	47,218	-3,955	16,780	21,734
59	11/289	Publike	114.2	13.6	40.7	Private	10,178	24,426	20,450	37,891	-3,976	13,465	17,441
66	11/305	Private	56.4	26.1	130.6	Private	32,652	78,364	65,609	121,563	-12,755	43,199	55,954
71	11/314	Private	100.8	91.5	182.9	Private	55,718	109,768	91,901	170,278	-17,867	60,511	78,377
74	11/302	Private	354.3	88.3	353.1	Private	123,360	211,873	177,387	328,671	-34,487	116,797	151,284
75	11/317	Publike	349.0	134.7	269.5	Private	101,917	161,684	135,367	250,815	-26,317	89,130	115,448
76	11/318	Private	166.1	10.6	21.2	Private	5,312	12,749	10,674	19,777	-2,075	7,028	9,103
80	11/39	Publike	142.8	85.8	171.6	Private	57,035	102,960	86,201	159,718	-16,759	56,758	73,517
84	11/60	Private	452.3	16.5	67.2	Private	16,800	40,320	33,757	62,546	-6,563	22,227	28,789
88	11/70	Private	146.0	117.6	235.2	Private	73,241	141,097	118,311	218,879	-22,966	77,781	100,748
91	11/91	Private	31.1	31.1	31.1	Pa Informacion	42,546	18,661	15,624	28,948	-3,037	10,287	13,325
92	11/90	Private	351.2	219.3	658.0	Private	164,497	394,792	330,532	612,426	-64,260	217,633	281,894
95	11/81	Private	233.6	95.2	381.0	Private	118,368	228,571	191,367	354,573	-37,205	126,002	163,207
112	11/107	Private	228.8	98.6	394.4	Private	121,243	236,629	198,112	367,073	-38,516	130,444	168,960
113	11/291	Publike	155.2	100.1	296.6	Private	89,511	177,942	148,978	276,034	-28,964	98,092	127,056
113	11/93	Private	311.4	143.4	430.3	Private	138,403	258,179	216,155	400,504	-42,024	142,324	184,348
113	11/291	Publike	98.5	72.1	288.3	Private	72,069	172,966	144,812	268,316	-28,154	95,349	123,503
113	11/93	Private	242.6	128.4	256.8	Private	88,225	154,105	129,021	239,057	-25,084	84,952	110,036
							2,731,818	5,052,404	4,230,023	7,837,595	-822,382	2,785,191	3,607,573

These calculations were compared also vis-à-vis the residual value of land (4) in order to see the potential added value.

Nr	Nr Property	Land Ownership	Land Area (m2)	Building Ground Floor (m2)	Building Area (m2)	Building Ownership	Total (Euro) Expropriation	Total (Euro) Market Value
29	11/12	Publike	753.8	0.0	0.0		74,629	150,765
33	11/14	Publike	271.1	0.0	0.0		26,838	54,217
34	11/173	Publike	364.0	0.0	0.0		36,041	72,809
37	11/168	Publike	266.7	0.0	0.0		26,407	53,348
40	11/171	Publike	431.7	0.0	0.0		42,742	86,347
42	11/174	Publike	77.3				7,652	15,458
47	11/274	Publike	734.8				72,741	146,951
48	11/275	Publike	83.9				8,309	16,786
50	11/278	Publike	115.9	0.0	0.0		11,478	23,188
55	11/284	Publike	114.2	0.0	0.0		11,309	22,847
59	11/289	Publike	56.4	0.0	0.0		5,580	11,272
68	11/311	Publike	49.2				4,867	9,833
75	11/317	Publike	166.1	0.0	0.0		16,447	33,226
80	11/39	Publike	452.3	0.0	0.0		44,773	90,450
109	11/164	Publike	489.6	221.9	221.9	Public	103,934	133,112
113	11/291	Publike	98.5	0.0	0.0		9,752	19,701
							503,498	940,313

2.3 Options Analysis and Cost Benefit Analysis

All of the conceptual development options support the vision of Fier's General Local Territorial Plan and Center City Master Plan. However, the options present different development arrangement. The options for the sport tower and for the private development area assessed separately.

- Sport Center Tower

Regarding the sport center, options 3, 5, 7 and 8 are the most profitable from a financial point of view. These options provide considerable public benefits (added value) compared to the other options. These benefits can be captured from the municipality through different arrangements with the private developer by investing the added value for infrastructural provision, rehabilitation of the area (landscaping) or directly by taking a share of the development which can be further used by the municipality for office space or directly renting in order to increase its income.

Options 3, 5 and 7 are based on a purely commercial use development of the Tower. Considering the relatively limited demand in Fier it increases the risks of occupancy for the Tower. On the other hand, option 8 offers a better balance in terms of uses, lowering the risks of occupancy.

In terms of social benefits, the above four options offer a good solution also for the accommodation of private owners in the project. In this case, the municipalities cost of expropriation area reduced and at the same time a social problem which can be caused due to the expropriation is resolved.

Table 21- CBA Sport Facility

Shareholders	Municipality				Property Owners		Developer	
	Market Value		Legal Reference Value		Market Value		Market Value	
	Cost	Benefit	Cost	Benefit	Cost	Benefit	Cost	Revenues
Land without buildings on it (m2)	13,656	14,036	13,656	14,036	2,115			0
Land with buildings on it (m2)	1,504	3,446	1,504	3,446	848			810
Building area (m2)	2,979	3,446	2,979	3,446	2,876			5,010
Property value - Land (Euro)	2,477,937	2,807,200	1,518,354	2,807,200	164,887			
Property value - Building (Euro)	1,787,540	1,837,070	744,808	1,837,070	1,565,637			6,348,000
Property value - Total (Euro)	4,265,477	4,644,270	2,263,162	4,644,270	1,730,524	1,730,524	1,730,524	6,348,000
Expropriation (Euro)	0		0					
Landscaping & infrastructure (Parking)	215,040		215,040					
Parking Cost	0	120,000		120,000				120,000
Development Cost								3,598,490
Development Profit								899,623
Public benefit / Added value		119,363		119,363				119,363
Total (m2)	18,139	20,928	18,139	20,928	5,839			5,820
Total (Euro)	4,480,517	4,883,633	2,478,202	4,883,633	1,730,524	1,730,524	5,568,378	7,247,623

Also when conducting the sensitivity analysis, as shown above, options 3,5,7 and 8 perform the best, with option 7 being completely "immune" to different alterations.

Based on the above consideration, option 7 scores the best in terms of financial performance, however, option 8 offers a good alternative in terms of possible risks, as considering Fier real estate market would be easier to sell.

- Private Development

In terms of private development two options were analyzed, one with two towers and a 2nd with a unified tower. Nevertheless, in this option, a large amount of continuous public space is provided which is well linked with the open space from the sport center. In the other alternative, public space provided is less as well as it is scattered in the area.

In terms of road network and parking both options offer good opportunities and complete in order to complete, expand and widen existing roads. Both options allow for the completion of roads with sidewalks as well as bikeways. The alternative with the two towers creates a larger amount of land intake as well as

creates a larger amount of residential development in the area. The alternative with a single tower provides also good opportunities for potential value capture. It offers a fair compensation to private owners and creates a larger amount of public space.

Table 22- CBA Private development

Shareholders	Municipality				Property Owners		Developer	
	Market Value		Legal Reference Value		Market Value		Market Value	
Shares on:	Cost	Benefit	Cost	Benefit	Cost	Benefit	Cost	Revenues
Land without buildings on it (m2)	4,304	8,537	4,304	8,537	3,782			0
Land with buildings on it (m2)	222	0	222	0	2,548			2,110
Building area (m2)	222	0	222	0	8,421			25,320
Property value - Land (Euro)	807,201	1,707,400	448,035	845,163				
Property value - Building (Euro)	133,112	-	55,464	-	5,052,404	5,052,404		18,800,100
Property value - Total (Euro)	940,313	1,707,400	503,498	845,163	5,052,404	5,052,404	5,052,404	18,800,100
Expropriation (Euro)	0		0					
Landscaping	128,055		128,055					
Development Cost							8,770,004	
Development Profit								2,192,501
Public benefit / Added value		2,785,191		2,785,191			2,785,191	
Total (m2)	4,747	8,537	4,747	8,537	14,750			27,430
Total (Euro)	1,068,368	4,492,591	631,553	3,630,354	5,052,404	5,052,404	16,607,599	20,992,601

Considering the large amount of public benefit which can be generated, this value can be used for the provision of landscaping for the public space, provision of new roads as well as a part of the value added can be captured from the municipality via a monetary compensation, social housing or other alternatives the municipality may see fit.

- *Combination of Sport Center with Private Developments*

Based on the above consideration, the best alternative which combines financial benefits with social and environmental one would be a combination of Sport Center Facility option (8) with the alternative of private development with one single tower of 12 floors.

3.0 Consistency of Project with Environmental Policy

During the drafting of the General Local Territorial Plan (GLTP) of the Municipality of Fier, a Strategic Environmental Assessment (SEA) document was prepared, which aims to provide high environmental protection and sustainable development for activities with potential adverse environmental impacts. The SEA document has evaluated each of the projects, part of the various municipal development programs, in order to avoid or minimize the impact on the environment.

Each of the projects has been evaluated on the basis of 9 environmental objectives in order to reflect the protection of all elements (air, water, soil, biodiversity, forests, landscape, climate, culture, health and socio-economics). During design and implementation of the project for the construction of the “Sport Hall” in the Fier Municipality will need to apply the maximum protection of all environmental objectives, so that negative impacts on the environment are minimized if it is not possible to avoid.

3.1 Assessment of the Impact of the project on environment according to SEA

The construction of the Sport Hall aims, besides offering a new sports space to the city, to requalify the area through the addition of green spaces, the opening of roads, sidewalks and the construction of a few residential/commercial buildings in its vicinity.

According to the assessment made to the project in the SEA document, it results that the project has negligible impact on the environmental objectives of air, water, biodiversity, forestry and landscaping. Meanwhile, the implementation of this project has been assessed with positive impact on the environmental

objectives of climate, culture, health and socio-economics. In the table below, the SEA project assessment is recapitulated.

Table 23- Evaluation of the impact in the environment of the project according to SEA

Bashkia FIER: Ndikimi										
Objektivat Mjedisore	OM1	OM2	OM3	OM4	OM5	OM6	OM7	OM8	OM9	
Objektivat e Programet e Planit	Ajri	Uji	Toka	Biodiversiteti	Pyjet	Peizazhi	Klima	Kultura	Shëndet	Social-ekonomik
O5: Zbutja e pabarazive dhe Infrastruktura sociale										
Pr19: Rikonstruksioni i pallatit të Sportit	↔ 7,85	↔ 7,6	↔ 7,65	↔ 6,8	↔ 8,5	↔ 8,3	↑ 9,15	↑ 8,75	↑ 9	↑ 9,6

Source: Co-PLAN/PLGP and Bashkia Fier, 2017

As we see from the table, the municipality during the drafting of the GLTP has described the project "Reconstruction of the Sports Palace", while in reality it is that the building will be built from its inception. According to the assessment made, the compliance of the environmental objectives with the objectives of the plan results as shown below:

Table 24- Conformity of environmental objectives with the GLTP objectives according to SEA

Bashkia FIER: Përputhshmëria										
Objektivat Mjedisore	OM1	OM2	OM3	OM4	OM5	OM6	OM7	OM8	OM9	Vlerësimi mesatar
Objektivat e Programet e Planit	Ajri	Uji	Toka	Biodiversiteti	Pyjet	Peizazhi	Klima	Kultura	Cilësia e jetës	
O5: Zbutja e pabarazive dhe Infrastruktura sociale	1,79	1,79	1,79	1,69	1,85	1,85	2,13	3,00	3,00	2,10
Pr19: Rikonstruksioni i pallatit të Sportit	2	2	2	2	2	2	3	3	3	2,33

Source: Co-PLAN/PLGP and Bashkia Fier, 2017

From the above table, the implementation of this project has partial compliance with environmental, air, water, land, biodiversity, forest and landscape objectives. While, compliance is high with the objectives of climate, culture and socio-economics.

Although, there is a discrepancy between what has been written in the SEA and the LDP project, impact assessment will remain subject to more accurate assessment when drafting the Environmental Impact Assessment (EIA) document.

3.2 Analysis and Environmental Impacts of the construction of the Sport Facility in environment

The construction of the sports hall, proposed in the city of Fier, is expected to have a significant impact on the state of the environment but also on the socio-economic situation. Impacts are foreseen to be in the environment both during the construction process of the sports hall and during the period when the sports palace will be placed in function for use by the citizens.

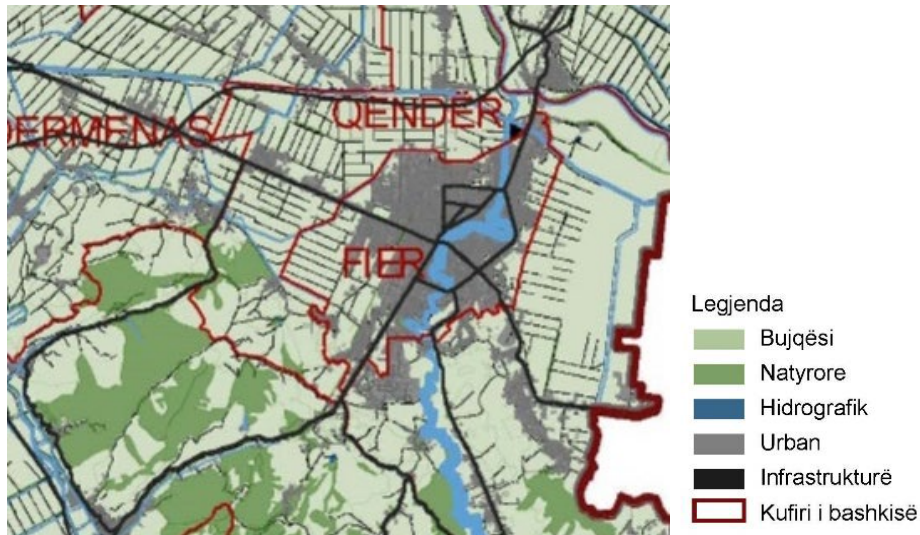
Residents near this area can find themselves with many problems in their hands at the time of construction and during the operation of the sports hall.

The greatest environmental and health challenges are air pollution, noise, surface and groundwater contamination, and waste generation. Let's take a look at these problems in more detail.

3.2.1 Impacts on Land

The municipality of Fier has a surface area of 620 km², with the largest distribution being the agricultural land area (70.18% or 435.82 km²)¹. The same situation appeared in the city of Fier. 30.95% of the total area has agricultural use, including cultivated and non-cultivated soils. Residential areas account for 26.89% of the territory, followed by industry and economy by 10.64%, water surfaces occupy 9.57% of the territory and the rest (21.95%) is used as land for special uses, health, infrastructure, services, and activities social and recreational and natural.

Figure 17- Territorial System in the city of Fier

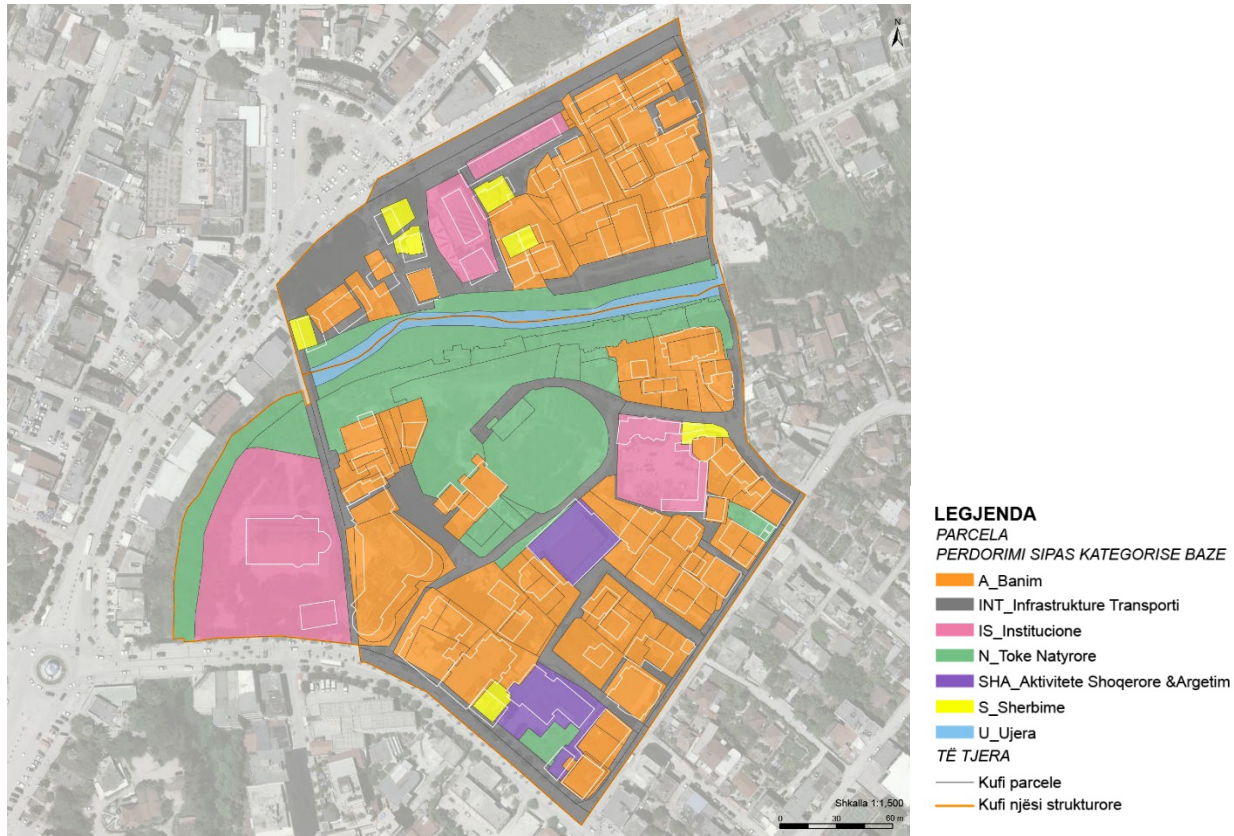


Source: Strategic Environmental Assessment of the GLTP of Fier Municipality, 2016

As can be seen from the above map, the urban system is intertwined with the infrastructure system. The agricultural system extends more to the western part of the city of Fier, a considerable extent visible in its eastern part. An important part of the development and placement of urban areas is the Gjanica River, which passes through the city of Fier. There are industrial activities along this area.

The construction of the sport hall and the requalification of the surrounding area extends into an urban area, very close to the Gjanica River (see figure below), part of the water surface. The basic use of land for the LDP area is mainly residential (44.81%). Natural land is second in size (24.88%), followed by transport infrastructure (17.27%) and institutions (4.27%). Social and recreational activities, water surfaces and services occupy a smaller area compared to other basic uses, respectively 5.66%, 1.16% and 1.96%.

Figure 18- Land use in the project area



Source: Bashkia Fier and Co-PLAN, 2018

During the construction phase of the sports hall, the impact will be considerable on land where as a result of the construction will need to scrape a considerable number of buildings. As a result, a large amount of inert waste will be created. Also, land excavation and its displacement will cause problems with inert collection in the area or transport to the final landfill. In the case of such work, with large displacement of soil, it should be taken into account that, in the case of rainfall, large amounts of soil will be displaced and surface soil erosion can occur.

If we take into consideration the impact that the sports hall will have on the ground during its operation phase, it is estimated that impact on the ground will be sensible. During this time, it is predicted to have soil contamination due to various discharges that may occur from cars that will come to the parking lot of the sports hall. The pressure on this surface will be increased because by covering with concrete the parking area and the sports hall area which will decrease the infiltration of water to the ground, causing flooding of the squares.

In such cases, it is recommended that large and shallow canals be planted through large concrete surfaces, with dense trees, shrubs and grasses, thus allowing infiltration, water volume reduction and filtration of pollutants. It is also recommended that parking (if it is above the surface of the ground and not underground) is not a concrete or asphalt surface. It is suggested that the parking lot is laid with tiles that allow the grass to grow in the spaces between them, thus avoiding floods from rainwater and increasing the possibility of infiltration.

Figure 19- Parking Cover



Burimi: <http://www.jardinnews.com>

It is also suggested that inert materials produced as a result of the removal of existing buildings to be reused, for different works at the construction stage of the sports hall and its auxiliary facilities or in improving the embankments of rivers.

3.2 Impact on Water Resources

3.2.1 Surface water resources

The Municipality of Fier is rich in surface water resources, being very well represented by the River Semani, which runs through the municipality and at the exit of the city of Fier joins the Gjanica River. Meanwhile, in the southern part of the municipality, the river of Vjosa is regarded as the municipal boundary. Also, the Municipality of Fier is rich with irrigation and drainage channels, as a municipality which has supported its economic development in the cultivation of agricultural crops.

The main problems of the river have been studied by the Albanian Geological Service and concluded that: there is a reduction in the river bed as a result of erosion of its bed. Flooding in the river's flatland area creates problems in the surrounding lands. Pollution of surface waters from discharges of urban and industrial wastewater and the deposition of urban and industrial waste have caused damages to the flora and fauna of the Gjanica and Seman River, thus causing damage to the river landscape.

Co-PLAN's surface water monitoring has shown that the waters of the Gjanica River, from the Mbrostari Bridge to the estuary, are acidic (pH <7). Light penetration is problematic in the Gjanica River due to high erosion. Electrical conductivity ranges from 601 to 661 $\mu\text{S} / \text{cm}$, values higher than environmental standards are observed in rivers with acidic water. NBO5 values are within the norm at all monitoring points, but in the case of Gjanica, which receives wastewater and industrial waste (oil extraction and processing industry), the results should be carefully analyzed because the presence of chlorine and heavy metals in water slows down NBO5 values significantly because it inhibits the activity of microorganisms.

Gjanica has high levels of nitrite at the monitoring station at Mbrostar Bridge. The same situation occurs with respect to ammonia, where values are exceeded compared to the norm. Nitrogen compounds are the main substances used in agriculture, they cause contamination of surface waters by rinsing the earth by rain. The presence of nitrogen compounds in surface waters is also caused by discharges of urban and industrial wastewater in them.

The most problematic are the results of the analysis of the presence of heavy metals. In the basin of Semani, the waters are polluted with lead (Pb), cadmium (Cd), nickel (Ni), iron (Fe), copper (Cu), and chrome (Cr). Cadmium is found in higher content than lead. Meanwhile, the manganese (Mn) and zinc (Zn) values are within the environmental parameters. Pollution sources are different, mainly human activities (oil industry, polluted soil of Nitrogen, landfills, agriculture, etc.)

Figure 20- Surface Waters in Fier



Source: GLTP of Fier Municipality, 2016

As mentioned above, the Gjanica River has been very important in urban development of the municipality. The development of the urban area has caused significant damage to the river's riparian zone. During field visits, it was noted that the lack of green belts (which should be up to 30m) along the river is highlighted, accelerating the river-water pollution process from various discharges (urban wastewater, urban waste and industrial, inert waste) produced from the surrounding area, but also from erosion as a result of lack of green belts along the river.

Photo 4- River Gjanica

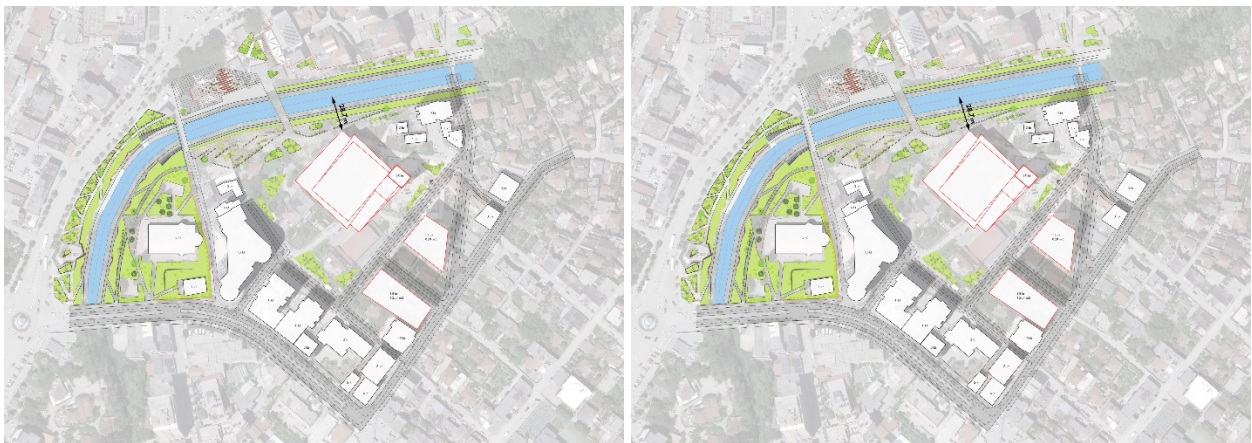


Source: Co-PLAN, 2018

Quite important to mention, as far as the quality of Gjanica river waters is concerned, is the constant pressure under which they are from the discharge of polluted waters of the oil industry directly into the river without any prior treatment. The river is considered one of the most polluted rivers in Albania, as a result of all the above-mentioned actions.

The sports hall will be built at a distance of 28.7m to 38m (according to various variants proposed in the LDP) by the Gjanica River. At such a distance from the water body, it is predicted that the impact during construction and operation of the sports hall will be low.

Figure 21- Distance of Sport Center from the Water



Source: Co-PLAN, 2018

During the construction phase, various interventions like demolitions, excavations and constructions will be carried out. Such activities pose a significant risk to surface water contamination, such as solid matter, damaging and clouding the waters. Also, the large amounts of inert waste to be generated but also the quantities of land that will need to be excavated are in danger of filling the body of the Gjanica River with inert.

At a time when the sports hall will be operationa, it is anticipated that there will be wastewater production, so they must be managed in a way that does not cause pollution of surface and underground waters, at the same time of the ground.

Careful management and removal of this volume of wastewater is very important for the preservation of human and environmental health, and especially water resources.

Also, during the winter season, when there is high rainfall intensity, the waters will have to be managed so as not to create flooding around the stadium, and the pollution caused to be discharged to the Gjanica River. It is recommended to create biological barriers between the sports hall and the Gjanica River, respecting the defensive generations and planting herbaceous vegetation, shrubs and tall trees. In this way, there is a risk of discharge of solid substances that are suspended directly in surface waters.

Gjanica River waters may be polluted if there is accidental leakage from the vehicles and various discharges that may occur direct in the river body.

A necessity during the operation of the sports palace is the disposal of polluted waters, in order to ensure the categorical avoidance of their discharge without being treated in the Gjanica River.

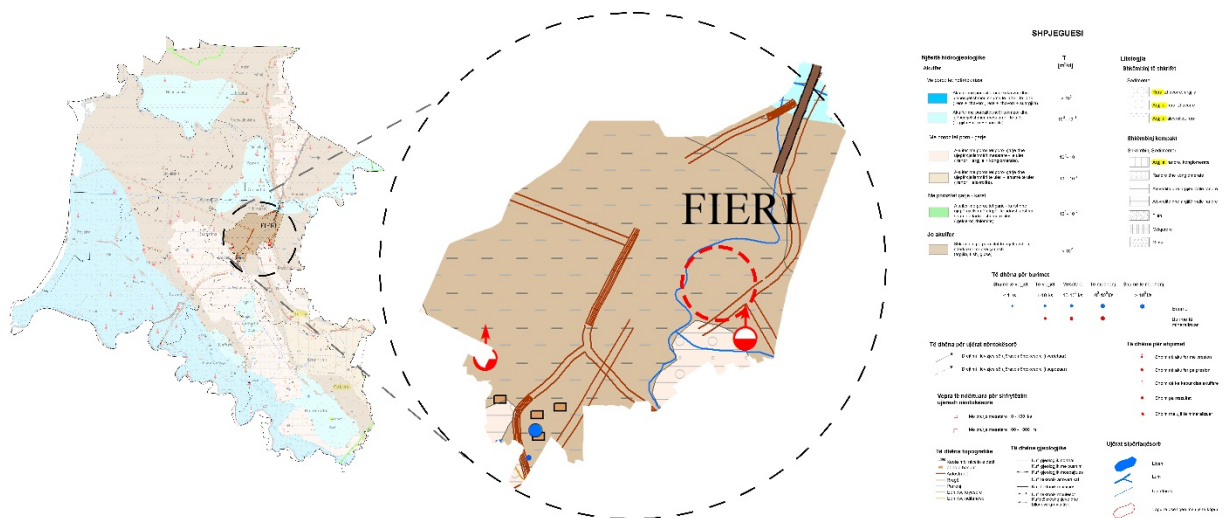
3.2.2 Underground Water Resouces

The underground water resources of the Municipality of Fier are numerous. The municipality has stretches of different types of aquifers: cracks-karst porous aquifers, porous-cracking aquifers, cross-border porous aquifers and non-aquiferic surfaces. The most important are cross-border aquifers and karst cracks, which are also the main source of water supply for people, industrial activity and agriculture.

In the city of Fier are stretched non-aquiferic surfaces, which do not serve to extract groundwater and have low water quality characteristics.

The area where the building is planned to be built is located on deposits, such as marine, tidal, and marshy sand, clay, trout and organic waste. Such deposits do not matter for use and are not recommended for drinking.

Figure 22- Aquifers in the city of Fier



Source: Co-PLAN, 2018

Despite the fact that underwater water can be scarce and not an object of human use, it is suggested that in the later stages of project design consideration should be given to the development of a more detailed hydrogeological study.

3.3 Impact on Air

The Municipality of Fier is one of the representative municipalities in which there is clear high air pollution in the industrial areas (in the extraction and processing areas of oil) and the opposite occurs in rural areas where the air quality is better.

The National Environmental Agency has carried out air quality monitoring over the years 2002-2014 for parameters PM10, SO₂, NO₂, O₃, LNP and BP. During monitoring, a high concentration of LNP, PM10, O₃ and SO₂ components is observed. As far as ozone and sulfur dioxide values are concerned, they have been declining in recent years. The LNP and PM10 parameter values continue to remain high by exceeding 2-3 times the EU norms.

Table 25 Average Values of indicators monitored during 2002-2014 in Fier Municipality and the allowed norms in EU and Albania

Vlera mesatare e parametrave të monitoruar ndër vite	Parametrat e monitoruar (në µg/M ₃)					
	SO ₂	NO ₂	Pb	O ₃	LNP	PM ₁₀
2002	21	21	0.23	51	258	109
2003	19.75	18	0.21	73.5	215	92
2004	18.5	15	0.19	96	172	75
2005	18	23	0.25	100	203	93
2006	24	25	0.29	100	219	106
2007	25	24	0.25	98	213	102
2008	32	33	0.32	70	238	112
2009	33	27	0.25	74	225	110
2010	26.7	31	0.24	62.6	195	93
2011	19.6	31.5	0.23	76	185	89
2012	20	25		74	221	97
2014		25.33				95
Norma R.SH ⁱⁱ	20.00	40	1	40	140	40

Source: MoE, 2002-2014 and AKM 2014, Adapted by: Co-PLAN

As far as the project area is concerned, it is located within the city of Fier, the quality of air is not good, influenced by industrial air emissions, public and private transport, and lack of green space.

Potential impacts on air quality during the construction phase will be due to dust emissions in the area caused by building demolitions, excavation of land, cars and trucks moving into the construction site of the project.

These will cause a potential impact on the quality of the air by causing pollutants into the atmosphere, by discharging gases and dusts as a result of combustion of vehicles fuel, but also as a result of damaged roads during the time the project is to be implemented. Also, dust emissions are thought to be high due to ground interventions.

Dust emissions can be caused by carrying out works during the dry period, loading or unloading of construction materials, transportation of people and goods. Such impacts are estimated to have a small extension both in time and space.

During the operation of the sports hall it is recommended to take into consideration the impact of traffic created on the grounds of various sporting events that can be organized within the building. Local-level impacts during the life cycle of the sports hall will be related to pollutant emissions (ie PM10, CO, SO₂, etc.) mainly due to service vehicle movements (trucks, cars, etc.).

Employees involved in the preparation of the construction site and construction of the sports hall will be required to wear personal protective equipment, such as: nursing masks to reduce the impacts on their health from dust and gases released into the air. While the implementation of common measures to minimize the

impact of solids on suspended solids through the terrain where it works, will provide potential mitigation of project impact on the air.

3.4 Impact of Forests

The Municipality of Fier has a substantial forest estate in its territory, a surface area of 5 288.85 ha forests and pastures, not including areas of protected areas. Part of the forest and pasture fund are the areas for use: forest (2827.99 ha), pasture (537.1 ha), field (34.5 ha), vegetation area (371.24 ha), water (387.84) and fallow (41.5 ha) of inproductive (937ha)ⁱⁱⁱ.

Administrative Unit Center has a very limited forest and pasture fund, transferred according to DCM No. 433 dated 8 June 2016 "On the transfer of forests and pastures owned by the Municipality" excluding from this fund the areas belonging to the protected areas. The total area of the forest fund for the Center is 81.42ha, limited only along the Gjanica River with surface area 81.42 ha (see table below).

Table 26- Forest and pastures in Fier

Nr	Fondi pyjor/Kullosor	Kategoria	Sipërfaqja (ha)
1	Lumi Seman 1	Pyll	81.42

Source: SEA of GLTP of Municipality of Fier, 2016

Regarding the project area, the sports palace does not extend beyond the area of this forest fund. It is therefore estimated that its construction will not have any impact on this forest area.

But it is recommended that, when the project is implemented, wood trees planted in the area around the sports field and on the dedicated parking area are similar to those of the forest stock near it, such as oak. This alternative is suggested given that this tree has been adapted to the area and developed there.

The choice of the tree should be done in such a way as to "isolate" the transfer of dust particles but also other airborne emissions. Some varieties but possible could be autochthonous shrubs, such as: pomegranates, high trees such as robinia (Robinia Pseudoacacia), Platanus, Willow (Salix) and White poplar (Populus Alba) and herbaceous plants

3.5 Impact on Climate

Increased temperatures from 1.7 to 3.5 oC and reduced rainfalls and changing their regime will be some of the consequences that people will experience as a result of climate change. Changes are expected to occur until 2100, and are expected to cause large amounts of precipitation at certain times, causing flooding of soils, while high temperatures risk destroying the quantity and quality of the waters.

Changes at the local level will be felt with regard to the lack of drinking water, changing the time of cultivating agricultural products, and so on. Fier municipality is projected to face temperature increases from 1.7-2.2 oC in 2050, and up to 2.8 oC in 2080. Meanwhile, the temperature rise is projected to occur from 2.4 to 4.1 oC in 2100 oC.

During the construction of the sports hall, greenhouse gases will be generated as a result of combustion from machinery that will work in the area. Also, solid suspended particles formed from the works that will be carried out in the area will be suspended if the necessary measures are not taken. The area of the project is covered with herbaceous plants, bushes and some trees, which when cleansed will release into the atmosphere all the accumulated carbon dioxide.

While during the time the sports hall will be operational, carbon dioxide will be the result of combustion of fuel from cars. But these emissions will be limited in time and space.

3.6 Impact on Biodiversity

The diversity of flora and fauna is defined as biodiversity. In the Municipality of Fier there are such natural areas where species of particular importance are concentrated, such as: Levan Park, Poro Poro and the Seman's Old River Wreath. Flora in the municipality is represented by: soft and wild pine, cypress and oak, poplar, oak and pine trees. Meanwhile, the most prevalent bushes are: Mediterranean blend and tide. The variety of fauna is represented by jackals, foxes, and so on.

As far as the city of Fier is concerned, there is no genuine biodiversity study of the area. Biodiversity in the city has been negatively affected by urbanization and development of the environment.

On the planned surface for the construction of the sports hall there is a low diversity of fauna, it is planted with bushes and trees that are planted in the backyard and most of the surface is covered with shrubs and grasses.

Photo 5- Plants in the Project Area



Source: Co-PLAN, 2018

During construction all this surface will be excavated and displaced by reducing the number of planted plants. It is therefore recommended that during the construction phase, the vegetation planted for the purpose of creating a natural corridor should have a variety of plants. This would increase the number of plant species, but would also create a zoned habitat, to make it possible for birds to approach the area.

3.7 Impact on Landscape

The Municipality of Fier is characterized by five main landscape typologies, such as: rural, urban, natural, aquatic and industrial. Creating landscape strips is the result of a number of components that influence their formation, such as geological formation, hydrogeology, hydrography, and slope of the terrain. The combination of these components, but not only, offers wide variety in the municipality.

The situation appears more limited in the city of Fier, this administrative unit is characterized by an urban landscape stretching almost all over its surface. The urban landscape is intertwined with the industrial one in the southern area. Also, the central part of the unit is depicted by an aquatic landscape.

Closer and closer to the project area, the entire surface has a character of urban landscape, which is characterized by several storey buildings and unpaved roads.

Photo 6- Landscape in the Project Area



Source: Co-Plan, 2018

During the construction phase of the sports palace the landscape will be transformed, because the area will be populated by site workers and machinery for various functions, such as excavation, construction and transportation. Establishing structures to build a sports hall will visually damage the landscape, but this will be a timely intervention, so the impact is projected to be low.

Whereas, during the phase of operation the landscape will be added to urban landscape elements, such as buildings, vehicles, parking spaces, etc. Since the area is a stretched, open, and an uncultivated area, this view will change because the number of people present in the area over time will increase (especially during sports days).

It is suggested that to improve the impact on the landscape, measures should be taken that the vegetation planted on the parking area and around the sports palace, to maintain the character of the area where it is located (see the forest section).

3.8 Impacts on Noise

The National Environment Agency has included the city of Fier in the map for noise monitoring along with other cities, such as; Tirana, Vlora, Saranda, Korca, Berat and Gjirokastra. The monitoring performed in the city has shown that during daytime the noise level is high, while at night there is no overrun of the norms.

Some of the main factors affecting the high noise level in the city of Fier are: the high flow of vehicles in main road axes, the age of vehicles, construction sites, the lack of green barriers, the failure to implement technical conditions to minimize noise during construction time, lack of green spaces and lack of public parking spaces and secondary roads in order not to focus the car movement on only certain road axes.

The 2016 environmental status report of the Fier city rank in cities with the level above the noise level. During the day the measurements have shown that average noise levels are 59.65 dB (A), while overnight the average values have been 46.95 dB (A).

The construction of the sports hall in the city of Fier is expected to have potential impacts during the implementation of the project by increasing the noise level through machinery to be used for different processes such as demolition of existing buildings, excavation, preparation of construction materials etc. The noise level is expected to increase and as a result of the increased moves on the site of workers and equipment used to carry out various processes during construction.

Possible impacts during the operating phase of the sports hall are predicted to be during the days when there will be sports activities. Increasing the level of means of transport that will move (entrance and exit) to the

parking of the sports hall. It is also expected that the increase of these movements will increase and traffic in the area.

It is recommended that measures be taken during the works to minimize noises, using advanced technology machinery, or installing devices that reduce the noise generated by the machinery.

A possible suggestion which if implemented will minimize the noise level to the area's residents is the creation of green corridors around the sports palace, thus creating a buffer zone for the environment and people.

3.9 Recommendations

In order to avoid the risks posed to the inhabitants of the area it is very important to take measures to improve the quality of environmental components from all activities that will take place for the construction of the sports palace. It is foreseen that the building of the sports hall and the improvement of the surrounding area will cause problems as during the construction phase and after the construction phase.

Potential impacts on the environment will be caused as a result of the construction of the sports palace and the degree of influence varies with the deployment of the palace and other elements of the project. The current lack of technical details and the definitive deployment of the version to be implemented does not create the appropriate conditions for a profound analysis of the impacts, but their expected types can be foreseen.

The Environmental Impact Assessment (EIA) will be the final document, which will analyze in detail the state of affairs and potential impacts that come with the implementation of the project. This document should also include a detailed environmental protection plan.

Various construction activities can affect changing the conditions of surface water resources. Also potential impacts on earth and in the air are expected, while limited impacts on time will be caused by noise generation. In the case of groundwater, biodiversity and forestry areas, there are no potential impacts because the area where the project is stretched is limited in space and in number as far as these resources are concerned.

Regardless of the fact that the above situation has been analyzed, the possible impacts and the necessary recommendations are envisaged, it is necessary to consider the installation of solar panels as the area where the building will be built will have a high solar radiation, with high potential use of solar energy. The sports palace will need electricity, which is used for various functions, such as: lighting and hot water. Taken in this situation, it is recommended that the designers of the sports palace take into consideration the possibility of using solar panels for power generation.

4.0 Conclusions and Recommendations

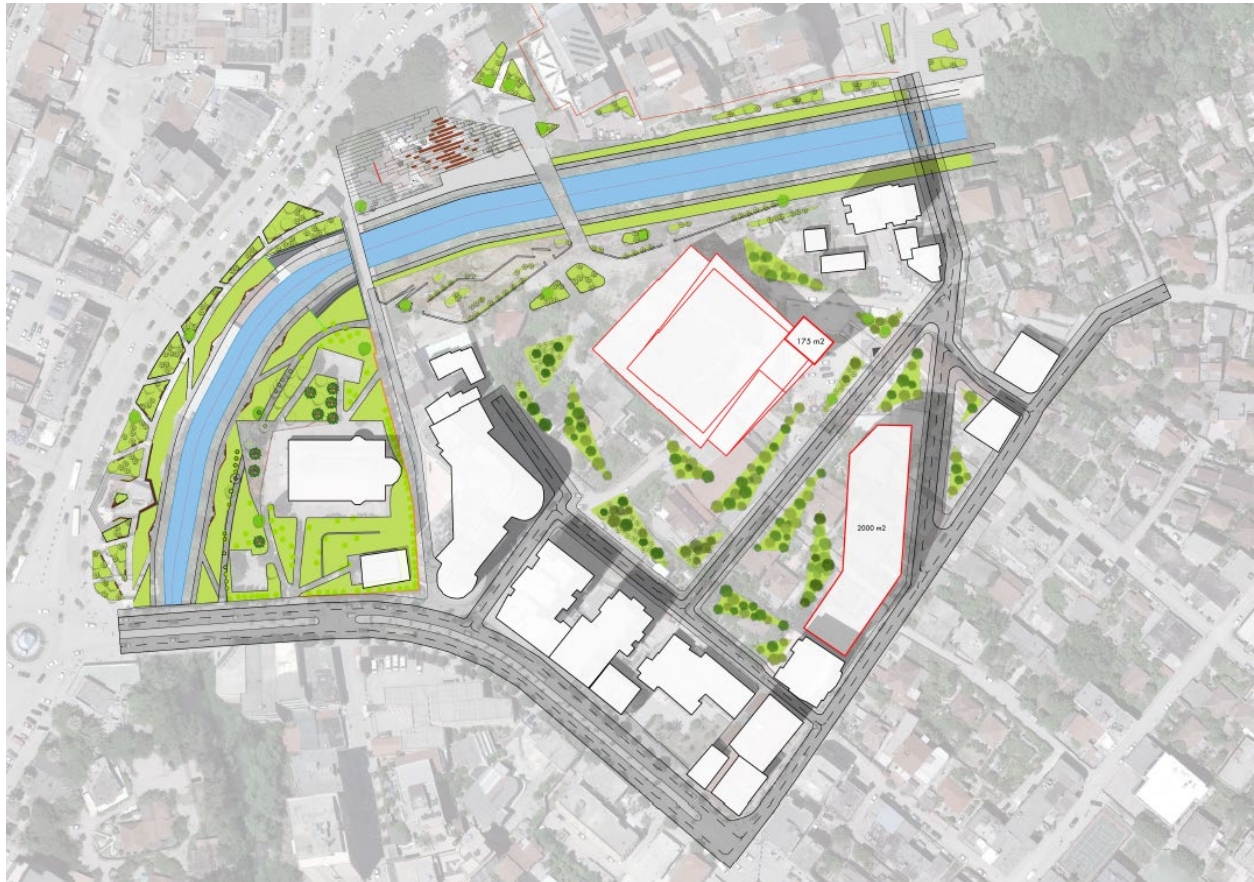
The purpose of this study was to formulate and investigate a range of options for enabling the development of a sports center as part of a wider riverfront regeneration plan. In particular, the study investigated different scenarios for private development according to the planning conditions proposed in the GLTP, and evaluated them based on their financial feasibility, their impacts on the subunit and the municipality, and their potential for contributing to funding for the sports facility and other proposed improvements.

Different alternatives were taken in consideration regarding the sport center facility and the tower attached to it. The alternatives assessed the financial feasibility and the potential public benefits from the tower. The scenarios were developed through a combination of size and use of the tower in order to enable a feasible and sustainable development.

Two alternatives were also considered for the private development in the area. One scenario with two towers and a second scenario with a single tower. Based on the financial, social, public benefit, environmental and landscape characteristics and on the principles of sustainable waterfront development the recommended

combination for the municipality is Alternative (8) of the Sport Center with the Alternative of a single tower of 12 floors.

Figure 23- Recommended Alternative



In order to implement the project, it is recommended as following:

- The sport center facility should be developed through an open competition for different developers and private investors
- The design of the sport center should be a that of a landmark building of high standards
- Ideally, the competition should include the development of the whole area, sport center facility + tower together with the single tower of 12 floors. This would allow for a coherent and full regeneration of the area.
- In the case the municipality decides to develop the two parts separately, it is also recommended that the “private development” through a single tower to be also conducted via an open competition for different developers and private investors. The reason is that the municipality owns almost 50% of the land in the area, therefore it is the largest property owner, and thus should aim to maximize public benefits.
- In the case of the sport center facility, in order to avoid expropriation costs (financial and social) to be incorporated in the development and be compensated via market value for land and construction costs for building. This option would allow for a considerable “added value” of 119,336 Euro or 421,588 Euro (depending on the way private owners are compensated) which the municipality should negotiate to be compensated directly in part of the development.
- In this case, land-readjustment is necessary prior development occurs. It is important to consolidate all the public land.

- In the case of the sport center, the municipality must make sure that the final sport center is public property and operated as a public facility. Also the land where the sport center (without the tower and commercial facilities in the perimeter) should continue to be public.
- In the case of the private development adjacent to the sport center and the application of the alternative with a single tower, the municipality should ensure that the open space generated due to setback and PCR remains public.
- Prior to development land-readjustment should be conducted in order to accommodate this aspect. Public Land shall be consolidated.
- In addition, the municipality, being the largest single property owner, should also try to capture part of the value added which amounts to 2,785,191 Euro. Part of this value should be directly imposed on the developer for the landscaping and construction costs of roads. In addition, the municipality is advised to aim to capture through different conditions such as provision of social housing as a % of total development area.

The final project of the sport center and tower should go through a process of EIA (Environmental Impact Assessment) in order to minimize negative impacts on the environment.

If implemented according to the internationally-recognized principles for sustainable waterfront development, the recommended option will make a major contribution to Fier's overall center city regeneration project. The recommended option will likely contribute to the following interrelated economic, social, and environmental benefits:

- Pull areas from marginal use into the mainstream of public activity and private investment.
- Increase real estate property values.
- Increase municipal revenues.
- Provide new homes.
- Providing new jobs.
- Provide residents access to enhanced sports and recreational opportunities.
- Provide residents an expanded awareness of the natural aspects of the river.
- Provide a direct relationship between the river and the municipality.
- Help unite residents and visitors in a shared experience of the municipality.
- Improve quality of life of nearby neighborhoods by regenerating the unit.
- Restore the river bank.
- Improve environmental conditions in the unit.
- Improve the municipality's image.

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