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occupancy plan N°8 "Tiaret"**

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-The index :

-ABSTRACT9

-KEY WORDS LIST..... 11

-General Introduction:12

-The Problematic:13

-Search Objectives:13

-Reasons for selecting the topic:.....14

-Methodology of the research:15

Chapter one

-General Concept.....17

-Introduction:17

-Urbanization ‘ Cities and Related Concepts:.....18

-Concepts of urban planning tools and methods in Algeria:.....20

-conclusion of the chapterone25

chapter two

-Introduction:27

-Presentation of the TIARET commune:28

1-Geographical situation: 28

-Physical and natural siting31

-Natural environments33

-Geotechnical characteristic34

-Basic and infrastructure37

| | |
|--|----|
| -Urban study | 40 |
| -Demographic forecasts for the horizon 2036..... | 44 |
| -Economic study | 48 |
| -Sectors of the city..... | 49 |
| -Urban Problems in Tiaret..... | 50 |
| Problem related to the development of the area | 52 |
| -An analytical study of the land occupation plan NUMBER08: | 56 |
| 1- Presentation of the study area: | 56 |
| -Introduction: | 57 |
| -Situation of POS 8 TIARET: | 57 |
| -Neighborhood equipment: | 58 |
| - Shape and are | 59 |
| -The legal nature of the land | 60 |
| -Accessibility: | 61 |
| -Topography of the area | 63 |
| -Site analysis:..... | 64 |
| -Constraintsand easements: | 64 |
| Artificial constraints: | 64 |
| -Land use:..... | 67 |
| - A.E.P. surveys and assainissement: | 68 |
| -A.E.P | 68 |
| -Sanitation:..... | 70 |
| -Orientations for the revision of THE PDAU: | 72 |
| -Actions to be taken in the development: | 72 |

| | |
|---|------------|
| <i>-Planning directions:</i> | 72 |
| <i>-Analyse the planning</i> | 74 |
| <i>-conclusion of the chapter three</i> | 75 |
| <u>Chapter three</u> | |
| <i>-Introduction</i> | 77 |
| <i>-Principal initializations</i> | 78 |
| <i>-Structuring option</i> | 78 |
| <i>-Urban programming</i> | 79 |
| <i>-Programmed Equipment</i> | 83 |
| <i>-Final schema</i> | 85 |
| <i>-Final management plan</i> | 86 |
| <i>-3D vision</i> | 88 |
| <i>-Conditions book</i> | 95 |
| <i>-Conclusion of chapter three</i> | 98 |
| <i>-References list</i> | 99 |
| <i>- Résumé général</i> | 100 |

DEDICATION

Allah is to be praised for providing me with the motivation and inspiration to endure and continue on my academic path despite all obstacles and hurdles.

I dedicate this humble work to myself as first and to all people including:

My family

My friends

And who ever believe on me and help me

To my lovely sisters NAHO and NAOUMI, thank you for your carelessness.

To my angel nephews KOSSAY, ROZAH and LINA.

To all who helped me in conducting my thesis, I really appreciate your help.

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Dedication

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To every member of the "Dif" family, especially my grandmother, may God
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-ABSTRACT:

Urban expansions indicate the development and expansion of the city in terms of area and infrastructure to meet the needs of the overpopulation and to provide the necessary infrastructure for services and facilities. These expansions are an important part of urban planning and are aimed at improving the quality of life in the city and meeting the diverse needs of the population.

The causes of urbanization vary from city to city and depend on local, economic, and social factors. Cities may expand due to population growth and demographic growth, with the population requiring additional housing, educational, health, and commercial facilities. Economic and industrial development can also create new jobs and attract more workers and migrants to the city.

Urban expansions typically include the establishment and development of new residential areas and communities; the establishment of public facilities such as schools, hospitals, parks, and commercial centers; and the expansion of the city's infrastructure, such as roads, sewage networks, water, electricity, and public transport services.

Urban expansion is a major challenge for urban planners and government officials, as it must be carefully coordinated and planned to ensure the future sustainability of the city. A balance must be struck between meeting the current needs of the population, preserving the environment and natural resources, and providing easy access to economic services and opportunities.

The urbanization process must include comprehensive environmental, economic, and social impact studies and consultation with affected communities. Urban expansion must be implemented on the basis of long-term strategic plans aimed at achieving sustainable development and improving the quality of life of the city's population.

Urban expansions should face challenges such as environmental pollution, traffic congestion, a lack of resources, and increasing illegal urban abuse. Therefore, urban expansion must be managed wisely and properly guided through the implementation of policies and actions that promote sustainability and maintain the balance between urban growth and the preservation of the environment and the city's cultural heritage.

To achieve this, urbanization must rely on the principles of sustainable urban planning, such as the promotion of intensive and sustainable land use, the development of effective public transport, and the provision of green spaces and public parks. Architectural design that reflects local identity and preserves the cultural diversity of the city must also be encouraged

- **KEY WORS LIST**

- PDAU : Plan Directeur D'aménagement et D'urbanisme.
- POS : Plan d'Occupation des sols.
- A.E.P : Alimentation en Eau Potable.
- STEP : Stations de transfert d'énergie par pompage.
- Municipality: Commune.
- PUD : Le plan d'urbanisme directeur.
- COS : Coefficient d'occupation des sols.
- CES : Coefficient d'emprise au sol
- CW: Chemin de wilaya.
- LOGTS: Logements.
- RN: Route national.
- ACL: Agglomération chef-lieu.
- TOL : Taux d'occupation du logement.
- AS: Agglomération secondaire.
- SNAT : Schéma National de l'Aménagement du Territoire.

-General Introduction:

A city is a large spatial space that includes a group of socially heterogeneous individuals, and is also considered to be a habitat. It is a major center for the interaction of all cultures with a system and mix of relationships (economic, political, cultural and administrative). Governed by several factors including services and equipment (water, electricity, health, educational institutions, communications, transport...) The primary objective of any residential community is to provide the human being with a suitable environment in which to carry out his activities and fulfil his needs to the fullest, according to the physical and moral standards of each society. A city or any other community should not be designed away from human perceptions, or designed only according to its biological functions, but rather it should take into account all human, cultural and historical references, in order to give the city its identity and society in its true dimensions. In recent years, Algerian cities have witnessed urban growth through the increase of the urban population and the accompanying consumption of urban space, so the urban expansion of any city is a normal phenomenon.

As urban specialists, we aim to optimize the use of urban spaces for planned expansion in accordance with our country's urbanization and reconstruction plan. For example, we have chosen to focus on the expansion of Tiaret city, as outlined in land occupation plan Numb:08

-The Problematic:

The growth of cities is an inevitable necessity resulting from socio-economic and political factors. They contribute greatly to their unplanned, unorganized and haphazard growth, which disrupts the natural functions of cities and turns urban life into a series of crises in all areas.

To avoid these issues, it is necessary to develop an urban policy tailored to the characteristics of each region. This policy should identify the causes and factors of urban expansion in order to mitigate them. Rapid population growth increases demand for housing, utilities, and other necessities, which can create problems despite policies aimed at facilitating urbanization.

All Algerian cities today are witnessing major urban expansion, because of various projects undertaken by both the public and private sectors to fulfil the requirements and needs of the population. The public and private sectors in order to meet the needs of the population, the basis of which were the tools of urban planning urbanization tools, the implementation of which is still an issue on the ground.

In this context, we have decided to organize the land occupation plan Number. (08), according to mechanisms that are in line with the masterplan for urbanization and reconstruction based on the data found in the latter to reach a plan to meet the needs of today and tomorrow as a link between the current urban fabric and the future expansion area. From here, several questions come to our minds, which were the starting point for diagnosing the issue, which are as follows:

- What are the current and future real needs for housing, equipment, facilities, and facilities to be provided at the level of Land Use Plan 08, while correcting the deficiencies found in previous plans?
- How to customize the land occupation plan to suit the specificities of the region?

-Search Objectives:

- ✚ Preparation of a land occupation plan No. 08 that contributes to improving living conditions in the urban environment.
- ✚ Creating a new urban image for residential areas while respecting building codes.

- ✚ Integrate this area with neighboring residential areas, complementing them functionally and architecturally.
- ✚ Meeting the needs of the population and trying to provide solutions to absorb the deficit in the housing stock and equipment.

Research questions: the goal of this research is to solve Tiaret's expansion issues and quantitative case study that addresses this broad question:

1. What are the factors to consider when planning urban extensions?
2. What is the importance of community participation in the planning process for urban extensions?
3. What are some strategies that can be used to ensure that community needs are met in urban extensions?

Research hypotheses: in this way, in arrange to reply the over specified questions, the taking after hypotheses

❖ **Were defined and tried:**

1. Ensure community needs in urban extensions are met through
2. Effective communication and cooperation to achieve the best results.
3. Analyze these factors in an integrated and balanced manner to
4. reach sustainable and effective solutions.

-Reasons for selecting the topic:

- ✚ The studied area is in the process of being created.
- ✚ To integrate the study area with the existing urban fabric.
- ✚ Accessibility of information.
- ✚ Trying to utilize the scientific gains obtained in the preparation of a land occupation plan that is subject to metrics and standards.

-Methodology of the research:

There are three chapters in this thesis. The first chapter provides an outline of the subject under consideration it offers an overview of the city its expectations and all the descriptions of the planning, development tools, in the second chapter include the urban programming of the town TIARET, and in the last chapter we do our programming with instructions of the PDAU.

Chapter one

General Concepts

-Introduction:

-In this chapter, we will look at the terms that make up the memo's title as well as the hidden notions linked to it. There is no doubt that the latter are critical in the theoretical formulation of any research or study on the one hand and in guiding its progress on the other, because concepts play an important role in defining the theoretical framework that guides the study and defines its principles, as well as in clarifying the opinion of the dimensions of reality related to the general conditions in which the studied phenomenon occurs. They have a role in clarifying the opinion of the dimensions of reality related to the general conditions in which the examined phenomena exist, without conceptions.

-Urbanization, Cities and Related Concepts:

- **Urbanism:** is a dynamic field that continually evolves in response to changing societal needs, technological advancements, environmental concerns, and demographic shifts. Effective urban planning and design are critical for creating sustainable, livable, and equitable cities that accommodate the needs and aspirations of their inhabitants.¹
- **The city:** Throughout history, cities have played pivotal roles in human civilization, serving as centers of trade, culture, and power. As the world becomes increasingly urbanized, with more people living in cities than ever before, understanding the dynamics of urban life and addressing the complex issues facing cities are crucial for building sustainable and resilient urban environments.²
- **A quarter:** is an urban entity consisting of a group of building blocks surrounded by streets. It is based on key points such as crossroads and squares, which play an important role socially and economically, serving as landmarks and meeting points in the quarter.³
- **Urban planning:** is focused on viewing cities and villages as urban units and attempting to shape their structures in accordance with social, economic, political, and natural tendencies. Managing its structure in accordance with social, economic, political, and environmental factors. If it prioritizes physical aspects, one of its most important duties is to coordinate utilitarian components. And combine them into an ordered framework for the urban or rural city, which establishes the overall directed urban planning level and specifies the patterns and stages of future expansion, as well as population sizes for each stage of development. It is seen as the final creative act of uniting.⁴
- **Urban fabric:** is a system made up of physical elements such as the road network, built space, free space, and location. Built space, free space, location, and the interaction between these elements are known as the characteristics of

¹ Dr. Khalafallah Boujemaa, Al-Umran and Al-Madinah, Dar Al-Huda for Printing, Publishing and Distribution, Ain Mellila, 2005, p.09.

² The same page 67

³ Hamia Amara Master's thesis Ecological improvement of collective residential neighbourhoods, 2000, University of Mesilla, pp.

⁴ Compatibility between environmental factors and urban design, 2008, p.13.

urban space, which is characterized by constant transformations due to the evolution of these constituent elements over time.⁵

⁵ Ebenezer Howard, *Garden Cities of Tomorrow*, DUNOD, 1976, P21-

- **The Initialization:** Urbanization is one of the most important urban interventions related to vacant land, and in the following element in the following section, we will elaborate on urban planning as a type of intervention

-Concepts of urban planning tools and methods in Algeria:

1. **-Urbanization (urban planning):** is the process of designing and organizing cities and urban areas to ensure the efficient use of space and provide the right environment for living, working and leisure for its inhabitants. The process of urbanization includes many aspects related to land planning, infrastructure, public services, environmental conservation and the promotion of social and cultural life.

Urbanization aims to achieve the following objectives:⁶

- ❖ **Guiding urban growth:** Urbanization seeks to systematically guide urban growth to avoid sprawl and ensure efficient and sustainable land use.
- ❖ **Provision of infrastructure:** Urbanization involves providing the necessary infrastructure for cities, such as roads, transport networks, public utilities and basic services such as water, electricity and sanitation.
- ❖ **Enhancing environmental quality:** Urbanization seeks to improve the quality of the urban environment by protecting natural spaces, planting parks and green spaces, reducing pollution and promoting environmental sustainability.
- ❖ **Promote social diversity:** Urbanization aims to promote social and cultural diversity in cities by providing diverse and integrated communities and public spaces that encourage social interaction and cultural exchange.
- ❖ **Achieve economic prosperity:** Urbanization seeks to strike a balance between economic growth and quality of life by supporting economic activities, creating jobs and enhancing the economic competitiveness of cities.
- ❖ **Preserving cultural heritage:** Urbanization plays an important role in preserving the cultural heritage of cities by protecting historic buildings and cultural landmarks and enhancing the cultural identity of urban communities.⁷

⁶by Recommendations at the office of the municipality

⁷ Alberto Zuchelli, introduction à l'urbanisme opérationnel et à la composition urbaine. EPAU vol 2-3, 1993, p38-50.

2. The planning and development tools: include planning and development master plans and land occupation plans. These tools, along with the regulations that are an integral part of them, are legally binding for third parties. This is stipulated in Article 10 of Law -9029 of 14 Jumada I 1411 corresponding to 01 December 1990 relating to planning and reconstruction.

1-Urbanisation and Development Plan(P.D.A.U) :is a tool for urban planning and spatial planning that establishes the reference formulas for land occupation plans and specifies the fundamental paths for the urban development of the municipality or particular municipalities while taking the planning designs and development plans into consideration.⁸

Its objectives:

- ✚ Determines the general specialization of land on the territory of a municipality or a group of municipalities
- ✚ Determines the expansion of residential buildings, the concentration of interests and activities, and the location of major equipment, structures, and infrastructure.
- ✚ defines the intervention zones in the urban fabric and the areas to be protected.

Its content:

According to Executive Decree 177/91 of May 28, 1991, which defines the procedures for the preparation and validation of the PDAU, it contains: Guidance Report, Regulation, and Data Documents

2-Land Occupancy Plan (P.O.S):⁹ is an urban and technical document that goes along with the master plan for urbanization and reconstruction. It serves as a tool for urbanization and spatial planning, outlining in detail the general guidelines for building and land use while accounting for the master plan's directives. It also specifies the kinds of interventions that can be made to the current urban fabric and supports general programming within the framework of how urban space is arranged. It provides a detailed definition of the rights to land use and building within the parameters of the master plan for urbanization and reconstruction.

⁸ By the law 90_29 Dated 01 1st December 1990.

⁹ BY the law 90_29 Article 12.

A. Objectives of the land occupation plan:

- ✦ Defines in detail the urban form, organization, building rights, and land use.
- ✦ defines the minimum and maximum amount of permitted construction and sets the rules regarding the external appearance of buildings.
- ✦ Defines the public space, green spaces, sites for public facilities and facilities of public interest, plans and features of traffic routes, as well as easements.
- ✦ Defines neighborhoods, streets, monuments, sites, and areas to be protected, restored, and rehabilitated.

B. Content of the land occupation plan:

A memorandum of submission attesting to the compatibility of the provisions of a land occupation scheme with the provisions of a master plan for development and reconstruction, as well as the approved programs of the municipality or satellite municipalities for their development prospects and the conditions related to the occupation of the land.

- ❖ graphic documents consisting of:
 - ❖ site plan
 - ❖ general layout plan
 - ❖ geotechnical map
 - ❖ existing situation plan
 - ❖ topographic plan
 - ❖ urban structure plan

C. The plans that make up the land occupation plan:

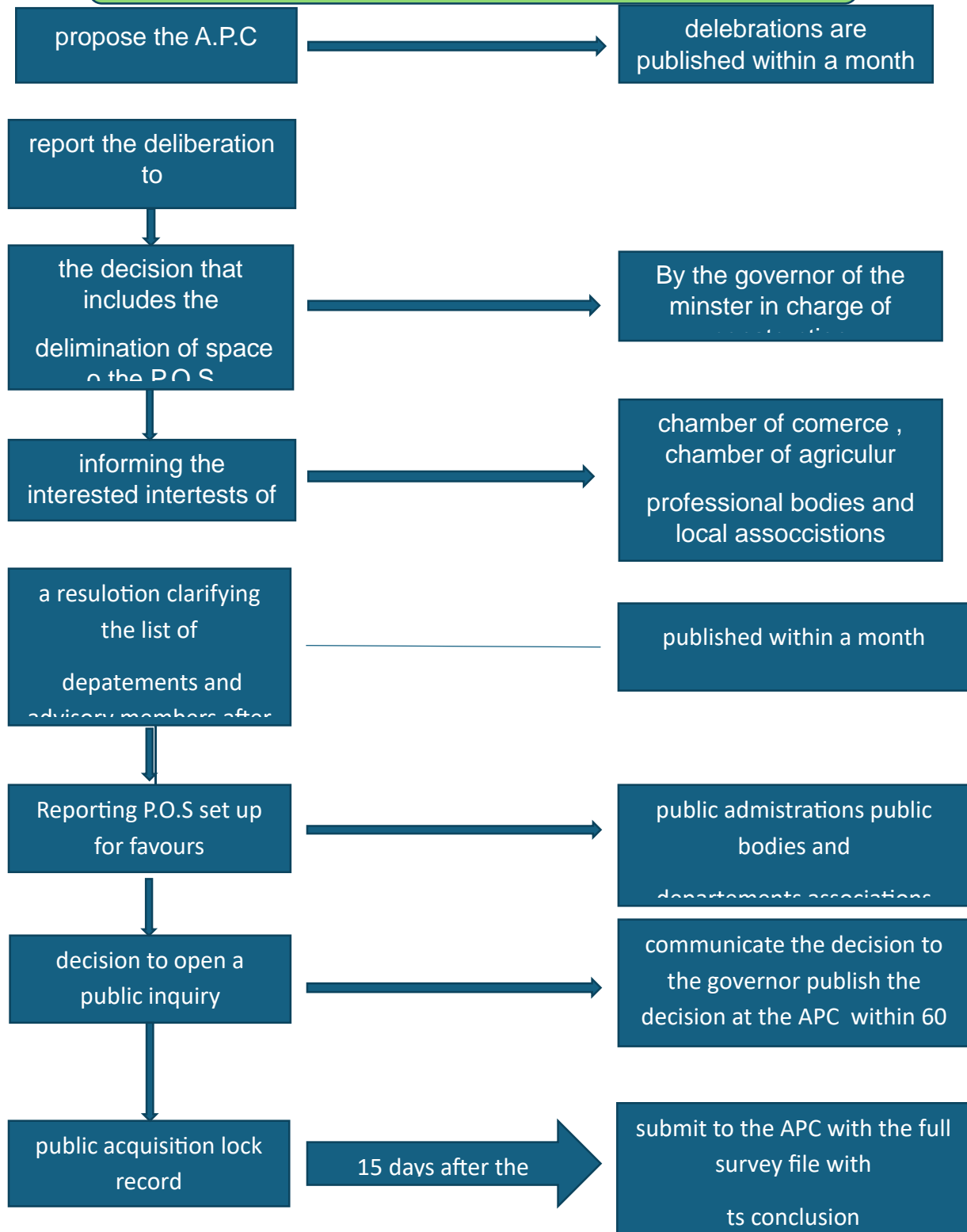
- ❖ A site plan with a scale of 2000/1 or 5000/1.
- ❖ A topographic plan with a scale of 500/1 or 200/1.
- ❖ Geotechnical plan with a scale of 500/1 or 1000/1. It shows the quality and resistance of the soil and is accompanied by a detailed technical report.
- ❖ A plan of the current situation on a scale of 500/1 or 1000/1 showing the various networks and existing buildings.
- ❖ The layout plan on a scale of 500/1 or 1000/1 identifies the following:
 - Homogeneous areas;
 - The location of equipment and facilities of public interest;
 - Areas to be protected due to their privacy.

- ❖ The urban structure plan on a scale of 500/1 or 1000/1, the latter reflecting the urban and architectural forms to be established for the intended sector or several sectors.

W- Stages of developing a land occupation plan:

1. Preparation stage
2. Consultation stage
3. Approval stage

Scheme No1: Summary of Land Occupancy



Conclusion of the chapter:

In This chapter, we gave general concepts through which we can support the information related to the subject of the study, starting with some urban terms such as urban and city, neighborhood, urban planning, urban planning, urban planning, urban fabric, which are related to the subject of the study, and urban interventions, where we defined them and identified their types. Then we addressed the tools of planning and urbanization, namely: PDAU and POS (Plan of Occupation of Land), which were discussed in detail (definition, objectives, component plans, stages of plan development, stages of completion, etc.). This is to help us in the type of intervention we choose to do on the project site. Knowing and understanding the city requires an in-depth reading of the stages that the urban fabric has gone through. Through careful observation and analysis, we can reveal the details of this growth by identifying the various parts of the fabric of roads, divisions, and determinants of growth. This is done by comparing the change in the general appearance of the urban fabric over time while deeply identifying the paths of transformation and benefiting from them in urban planning today. The importance of the urban growth study cannot be neglected, which is an important means of developing a comprehensive picture of the city, drawn by the historical study (growth study), and through this study It is possible to form a picture of what will become the appearance of the urban fabric.

CHAPTER TWO

An analytical study

-Introduction:

-In this chapter, we will attempt a two-part analytical study: The first part is devoted to the analysis of the city of Tiaret (the seat of the study area) in order to identify its physical, demographic, residential and economic aspects, focusing on the urban and architectural study, as the city did not emerge and develop spontaneously, but rather its growth was the result of a number of historical and political factors related to administrative division, etc.

-In the second part of the chapter, we will conduct an analytical study of the study area, represented by the land occupation plan No. 08, as well as its interrelationship with the urban fabric, to ensure its continuity in terms of form and space, by knowing the extent of its influence and impact on the local area.

-Presentation of the TIARET COMMUNE:

1- Geographical situation:

The wilaya is located in the north-west of the country. It is limited by the following wilayas:

- ↪ North: **TISSEMSILT** and **RELIZANE**
- ↪ South: **LAGHOUAT** and **EL-BAYADH**
- ↪ West: **MASCARA** and **SAIDA**
- ↪ East : **DJELFA**

The commune of Tiaret is the administrative center of the wilaya of Tiaret, situated at an altitude of 1,080 m on the Gezoul Mountain, part of the Tellian Atlas chain, and 361 km west of the capital, Algiers. It covers an area of 111.45 km² out of a total Wilaya area of 20 050 km².

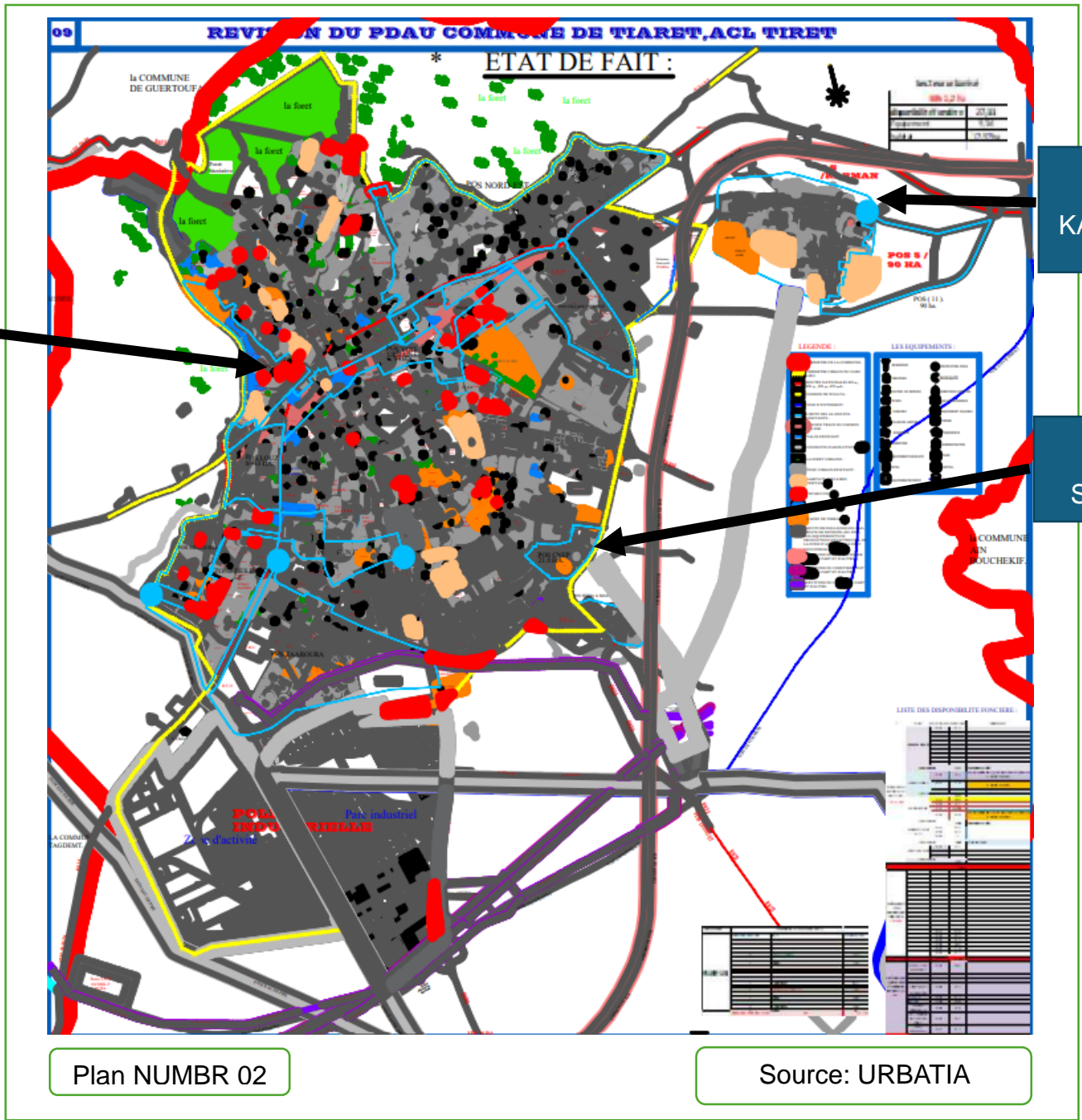
- **The geographical coordinates are:**
 - **Latitude: 35.3879, Longitude: 1.32282**
 - **35° 23' 16" North, 1° 19' 22" East**



-Administrative situation:

The limits of Tiaret are as indicated below:

- North by the **OUED LILI** commune and the **GUERTOUFA** commune.
- South by the commune of **AIN BOUCHEKIF** and the commune of **MELLAKOU**.
- East by the municipality of **DAHMOUNI**.
- West by the municipality of **TAGDEMPT**.



- Physical and natural setting:

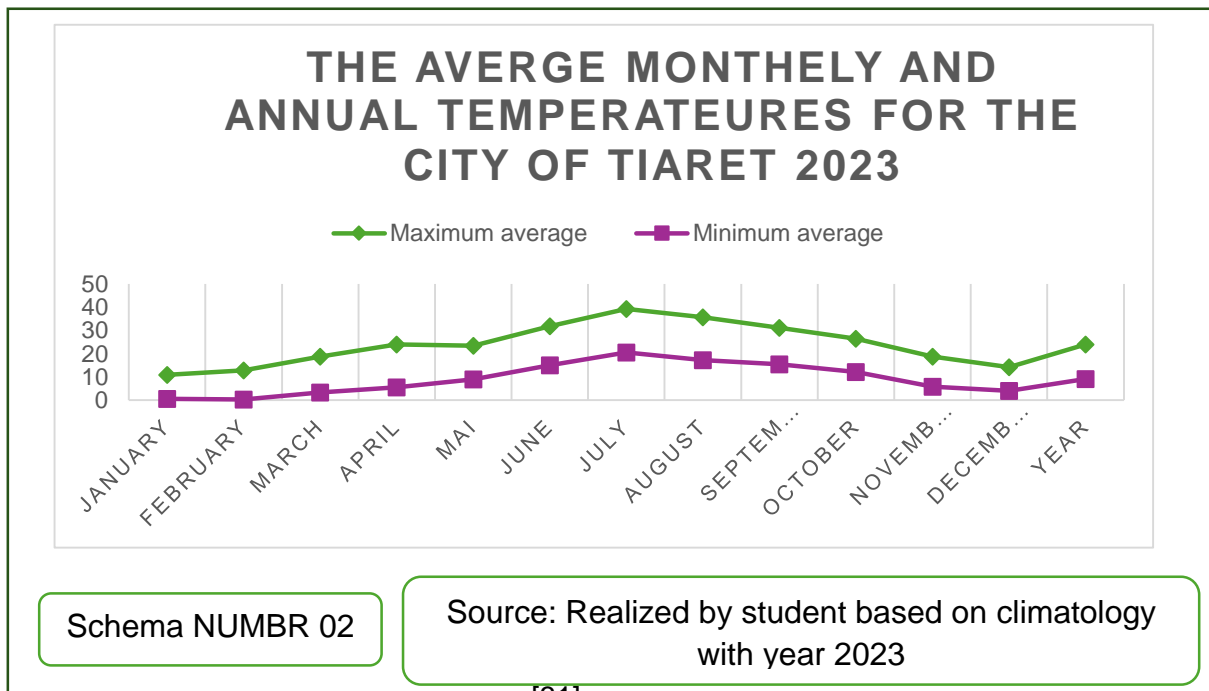
Any serious study of the area of a city requires us to address several important points in order to determine the qualifications to recognize it and understand the reality of its reality. In order to realize and identify them, we will address the study of the natural characteristics that characterize the area of the city of Tiaret, by addressing the position and terrain of the city, as well as addressing the most important climatic elements of the city in order to know the most important natural factors that govern it and affect the growth of its area and the directions of future expansion

a. Climate:

The study of climate is important for the urban field because of its great role in determining the urban elements to be used in cities, in addition to the effects of climate on human activities, especially in agricultural exploitation, plant life and architectural and urban formation, and from here we must address the study of the climate in the city of Tiaret with a sub-continental climate, which is characterized by cold rainy winters and hot and dry summers.

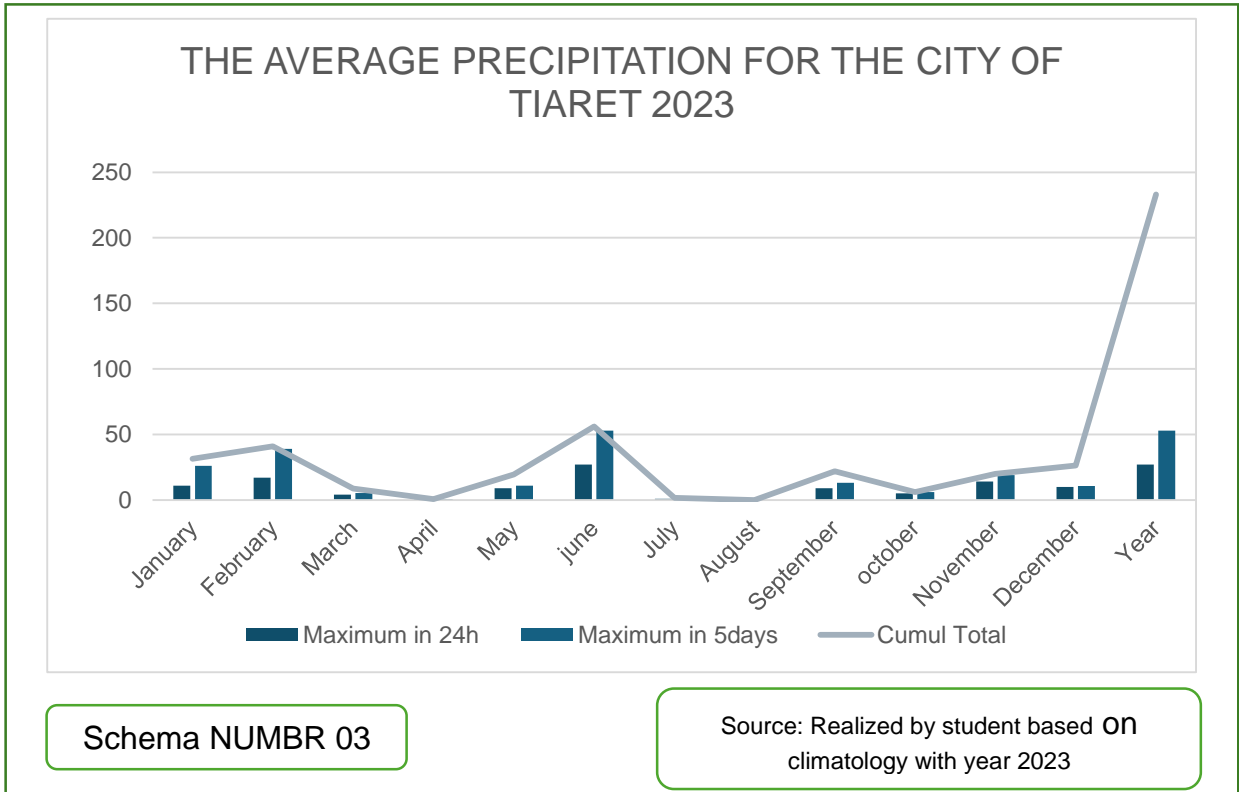
✚ Temperature:

Graphical representation of the distribution of average temperatures (monthly and annual) between January and December for the city of Tiaret



REMARK: We realize that there is a significant change in the weather conditions from summer to winter, which makes it necessary to choose suitable materials for the road network that can withstand this temperature difference.

Precipitation: The average annual precipitation is estimated 233,0mm, Maximum annual precipitation recorded in a month of June 56,0mm, The lowest value was recorded in august with no precipitation



REMARK: January, February, June, September, November and December are the months with the heaviest precipitation in Tiaret March, April, May, July, August and October are the months when the city experiences the lowest amount of precipitation.

b. Territory:

The commune of Tiaret is accessible from the wilaya road N° 11, leading to the commune of Mechraa-Sfa on the north-west side and the commune of Sidi Hosni on the north-east side. It is also accessible from R.N. 23, which leads to the wilaya of Relizane on the north side and to the commune of Sougueur on the south side. commune of Sougueur on the south side, the R.N. 14 on the

east side leading towards the wilaya of Tissemsilt, and the the west side towards the commune of Freneda, the R.N. 90 leading towards Ain Guesma, and the R.N. 40A leading towards the commune of Bouchekifa. Towards the commune of Bouchekif

And the recently-built local road linking the capital of Tiaret to the wilaya of Tissemsilt, passing through the secondary agglomeration of Karman.

c. Natural Environment:

-Tiaret is part of a wilaya located in north-west Algeria, on the western high plateaux between the Tellian range to the north and the Atlassian range to the south.

-The municipality of Tiaret lies at the foot of the last foothills of the Tellian Atlas in a region of vast Tabular domain extending to the foot of the Ouarsenis, where flat interlocking forms predominate between 900 and 1100 m altitude and on the edge of the vast plains of the high plateau.

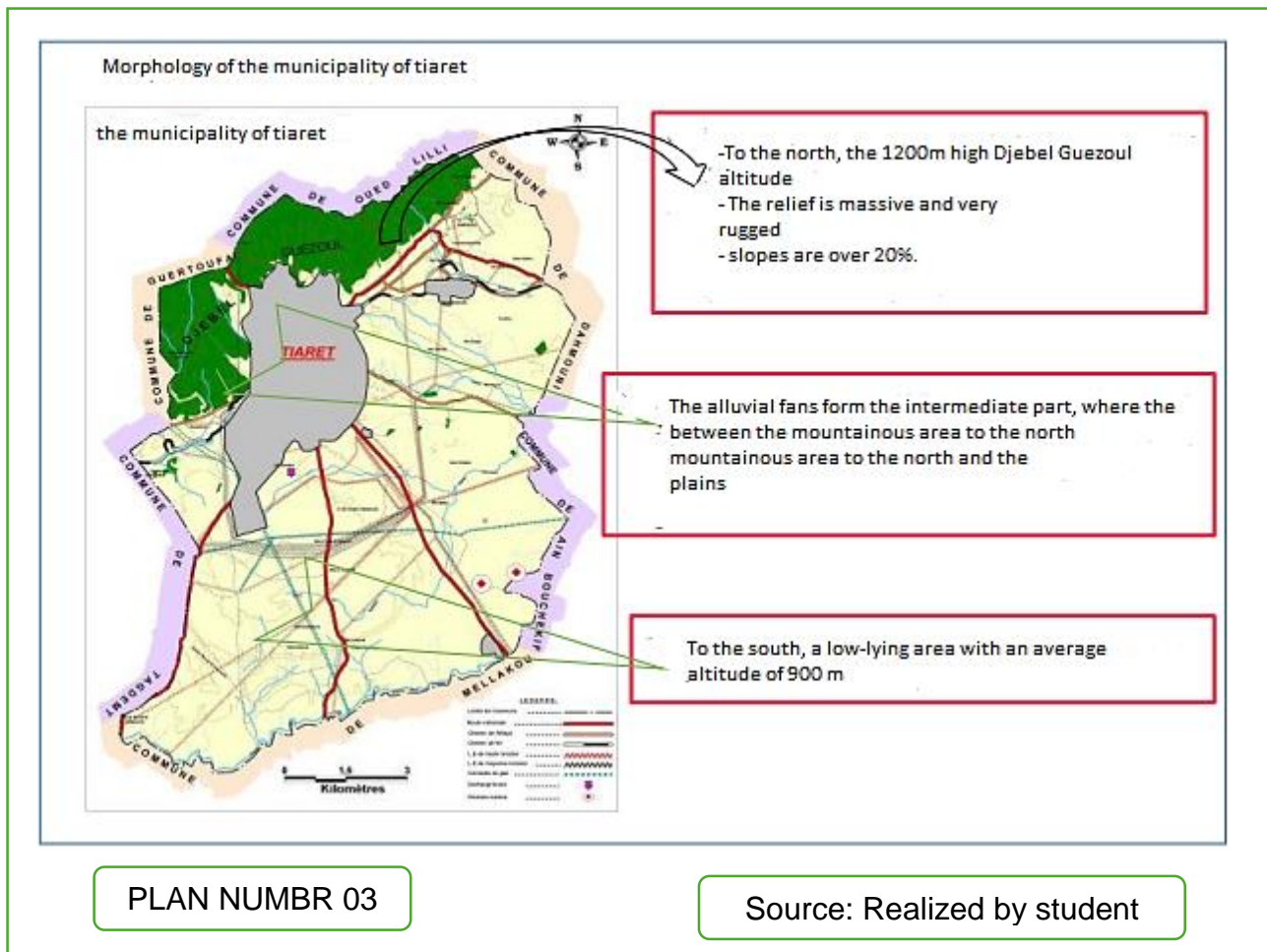
-By extrapolation, this is the Sersou, drained by a number of intermittent watercourses, which flow into the main watercourse of the region: the Nahr Ouassel.

More specifically, The communes of the massif of the Tiaret mountains (Tiaret, Dahmouni and Tagdempt); to the south, it is bordered by the communes of the foothills

In the south, the foothills and contact with the southern sub-steppe region (Mellakou and Bouchekif) border it.

There are two very distinct physical environments:

- To the north, the **Djebel Guezoul**
- To the south, the **Sersou plateau**



d. Geotechnical characteristics:

Tiaret's soils are low-lying, clayey, and devoid of stones. High ground, precisely where the limestone shell is often found. It can also be found in the Nahr Ouassel valley. An old geotechnical map from the preliminary study of the P.U.D. shows three categories of land. Soils:

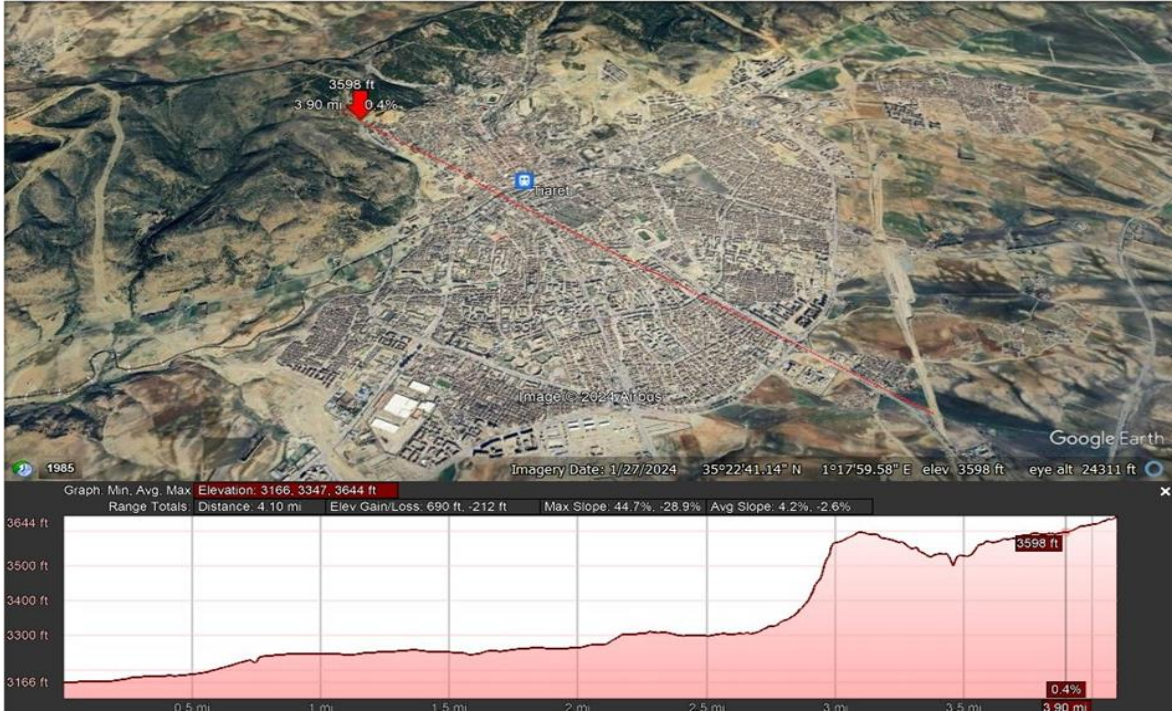
1. An area moderately favorable to urbanization, represented by the southern part of the wilaya, with a simple sandy clay composition simple sandy clay to marl with rocky outcrops in places.
2. Zone favorable to urban development.
3. Hilly area with gray to blackish clay formations in places, above the forest site.
4. Zone unfavourable to urbanisation marshy zone located to the south of Tiaret (haï l'avenir, CNEP land, Hai Louz) and to the north located by the forest (Z'MALA forest).

e. The Relief :

The slope decreases from the north to the south of the municipality, with one third of the surface area on slopes of more than slopes in excess of 25%, a huge proportion for a very limited area. The remainder is made up of gentle slopes that sloping towards the south-east.

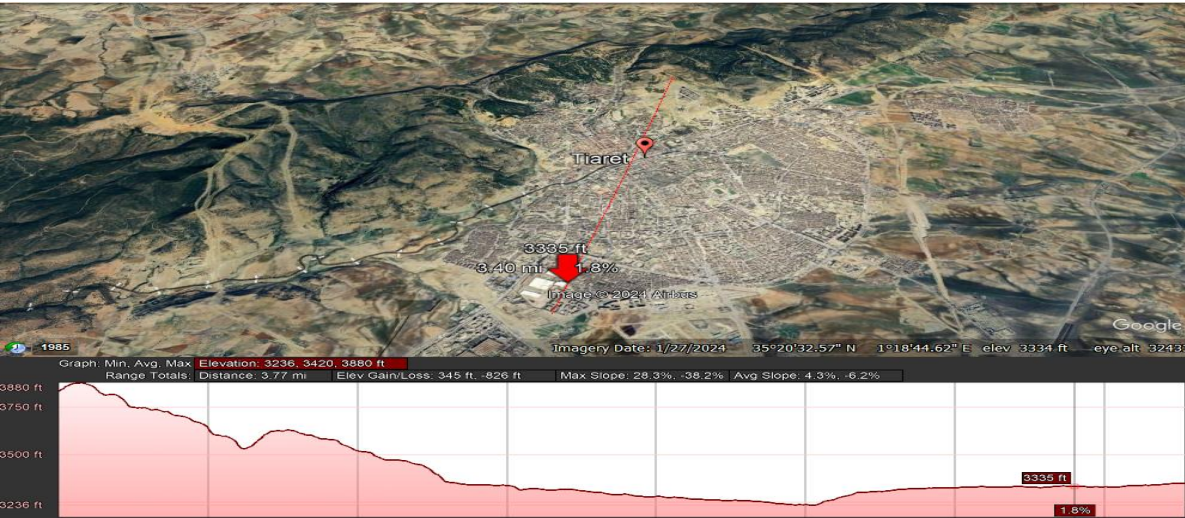
-The town of Tiaret has **three types of terrain:**

- Zone 1: with a slope varying between 60 and 25%, is the main source of soil input in the event of flooding.
The soil is very crumbly, made up of sand or sandy clay, and the plant cover is very poorly maintained, encouraging the appearance of areas of esparto grass that are precursors to the advance of the desert.
The vegetation cover is very poorly maintained, favouring the appearance of esparto grass areas that are precursors to the advance of the desert.
maintenance of firebreaks and calibration of water flow is not carried out in spite of the importance that reveals for the protection of the town itself.
- Zone 2: representing the old urban fabric for the most part, has slopes varying between 7 and 5%, with maximums in some cases.
This zone is completely urbanised with very little plant cover, which allows all the rainwater to run off quickly, leading to the possibility of buildings collapsing.
- Zone 3: represents the extension of the town after Independence, with slopes varying from 5 to 1%, with flood zones in places. This area is 70% urbanized, with most of the run-off flowing into Nahr OUSSEL



Pics NUMBR 03 represent Topography of the city cross-section

Source: Google earth pro + student's



Pics NUMBR 04 represent Topography of the city longitudinal

Source: Google earth pro + student's

Basic Infrastructures:

1-Road network:

The capital of the commune of Tiaret is at the crossroads of several nationally important communication routes, but these are still in only average condition.

The city of Tiaret is now less congested as a result, on the one hand, of the design of a traffic plan for the city, with internal traffic regulated by the installation of appropriate horizontal and vertical signage and the creation of parking areas in judicious locations, thus facilitating the smooth flow of traffic.

2-National Roads:

- ☞ The R.N. -14: links Tiaret to the south-west region of the Wilaya and to the Wilayets of Saida and Mascara. It also links Tiaret to its northeastern region and Algiers via Tissemsilt.
- ☞ The R.N. 23: This is a very important route, which opens up the commune to the north-west via Relizane and to the southeast via Tissemsilt. Relizane and to the southeast via Aflou.
- ☞ The R.N. - 90: A third very important route linking the town to the north via OuedR'hiou and to the south via Ain Guesma.
- ☞ The R40A: links Tiaret to the town of Bouchekif.

3- The Wilaya Trails:

The secondary network is generally in average condition. It carries a smaller volume of traffic than the primary network. There is just one Wilaya road:

CW.11: links the commune to Sidi Hosni to the east and to Mechrâa sfa to the west.

4- Communal roads:

The tertiary network is generally in average condition. It carries little traffic compared with the secondary network. A single communal road has recently been built, linking the main town of Tiaret to the wilaya of Tissemsilt via the secondary town of Karman.

5-Tracks:

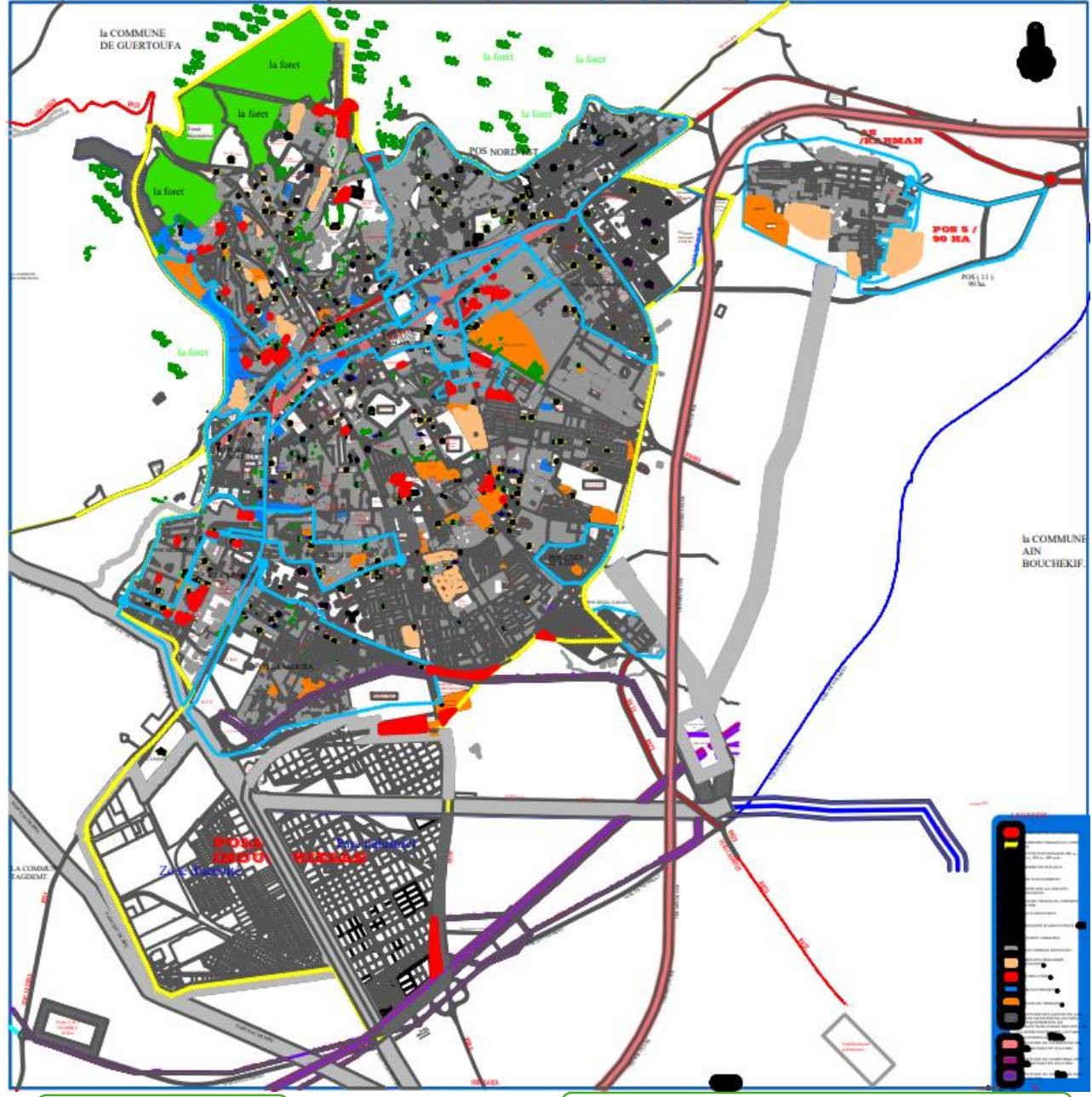
A large number of farms and human settlements are linked by tracks. These tracks require maintenance to ensure easy access in all seasons.

6- The railway:

The commune is crossed by **two railway lines**:

- ➔ The old line crosses the ACL linking Relizane to Tiaret and is in a very poor state of repair.
- ➔ The new line, planned for the vicinity of the ACL, is currently under construction.

PLAN OF BASIC INFRASTRUCTURES



Plan NUMBR 04

Source: Urbatia+ with student

-Urban study:

▪ A historical overview of the city of Tiaret:

The city of (Tiaret) is among the historical cities that have a distinct presence and influence that made it possess an important historical past.

In addition to its strategic location, Tiaret was the first capital of the Central Maghreb, where it flourished thought, civilization, and urban development, and witnessed many men of thought, politics, and culture, which made it a city of history and science.

○ Stages of the city's development:

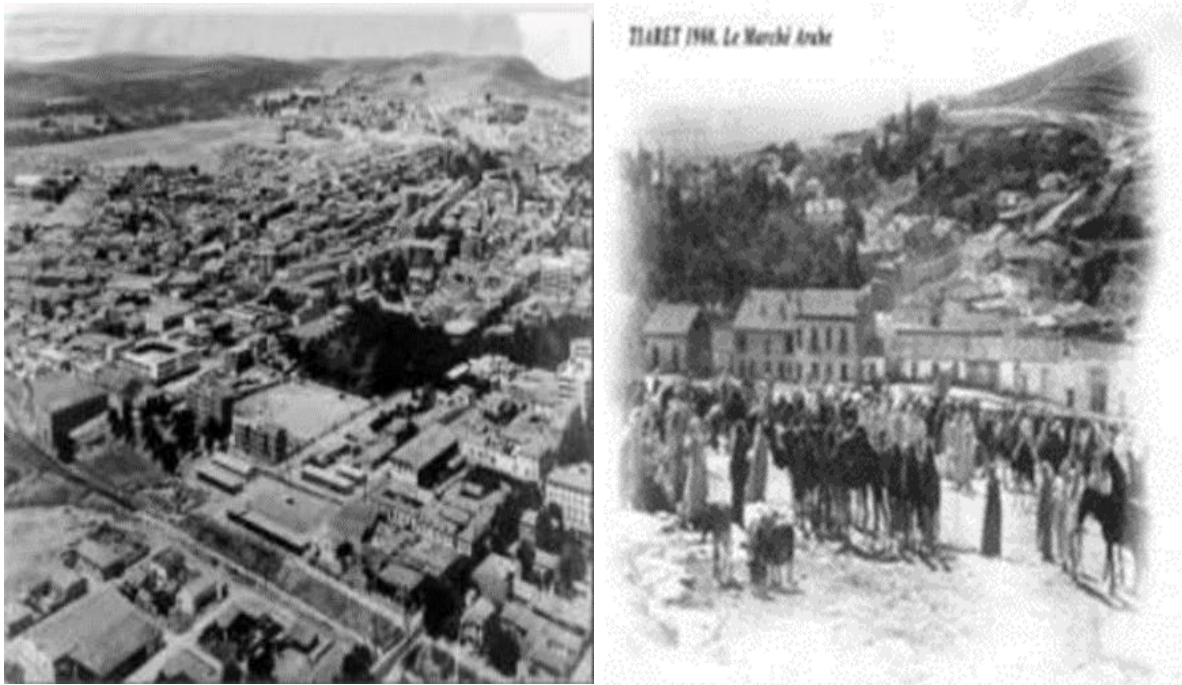
1) First stage:

The Rustamia state was established in 764 by Abdul Rahman ibn Rustam, who created this city. to protect against the Abbasid threat from the east and the Byzantine threat from the sea, where the availability of pastures and fertile lands led to the prosperity and development of the city.

The region's availability of pastures and fertile lands led to the prosperity and development of the city, which led it to attract. The city attracted people from many parts, especially scientists, as it was a prominent scientific beacon.

- ↳ In 1836, Amir Abdelkader founded his castle near the ruins of the Rustamia state, where he established a factory.
- ↳ In 1841, Emir Abdelkader established a factory for making weapons, a gunpowder mill, and a coin-minting factory.
- ↳ On 23 March 1843, French colonialism entered the city of Tiaret, where a colonial center was established. Which turned into a residential center for some Europeans 1856.
- ↳ In the period between (1875-1889), the most important roads were built, the first strategic road linking Tiaret and Masker, and the road between Glizan and Tiaret were launched. , then the road linking Tissemselt and Tiaret, and the Tiaret axis and Mostaganem were connected by a 197 km long railway.
- ↳ In the period between (1923-1962), the city of Tiaret benefited from several land reclamation operations.

Picture05: Tiaret in the colonial era



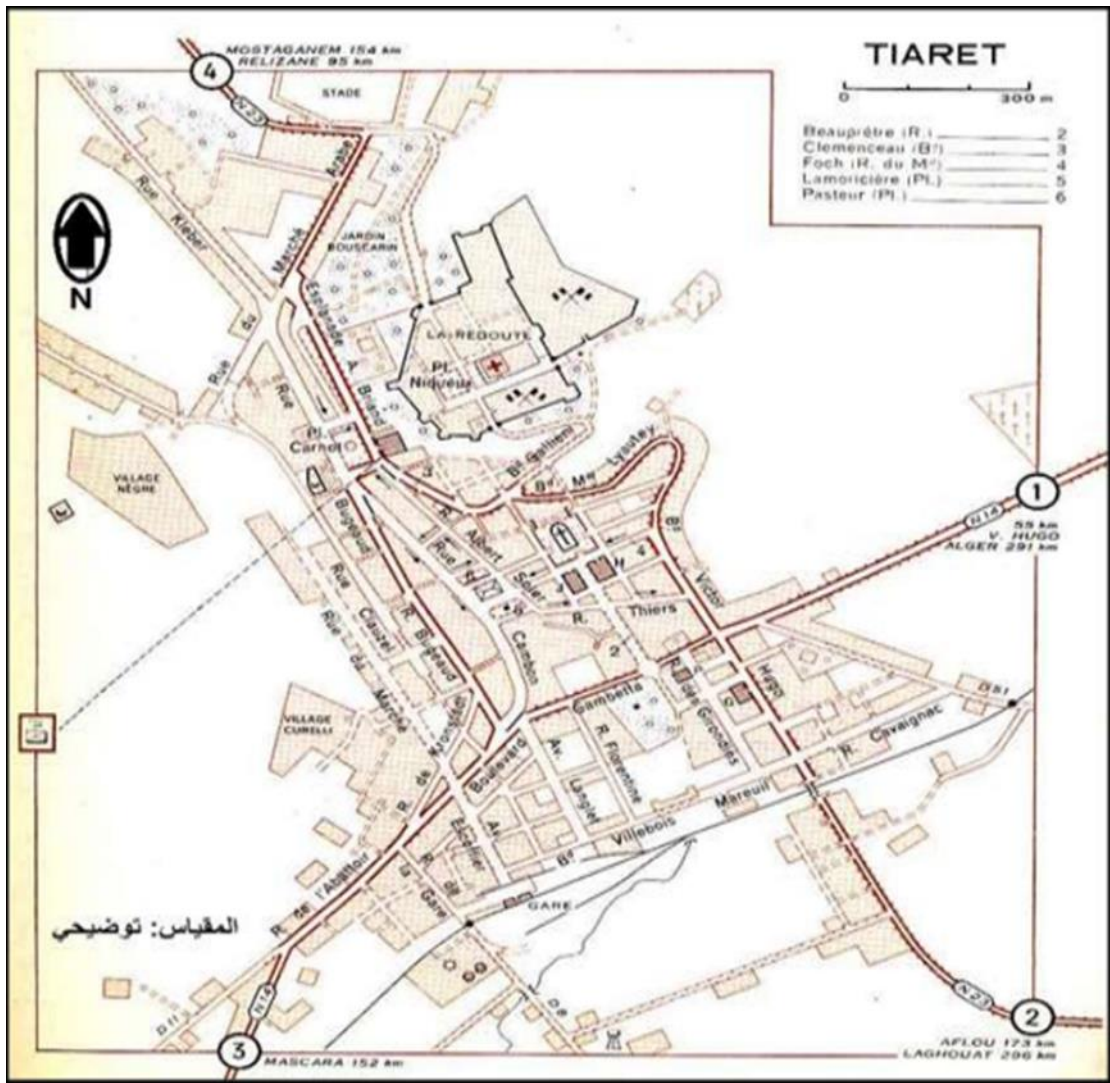
Source: By Google

2) Second stage:

Tiaret benefited from a few land reclamation operations that reached a very significant area, especially for the development of administrative services.

The city was home to many equipment and warehouses.

Schema NUMBR 04: Representing the city of Tiaret in the year 1962



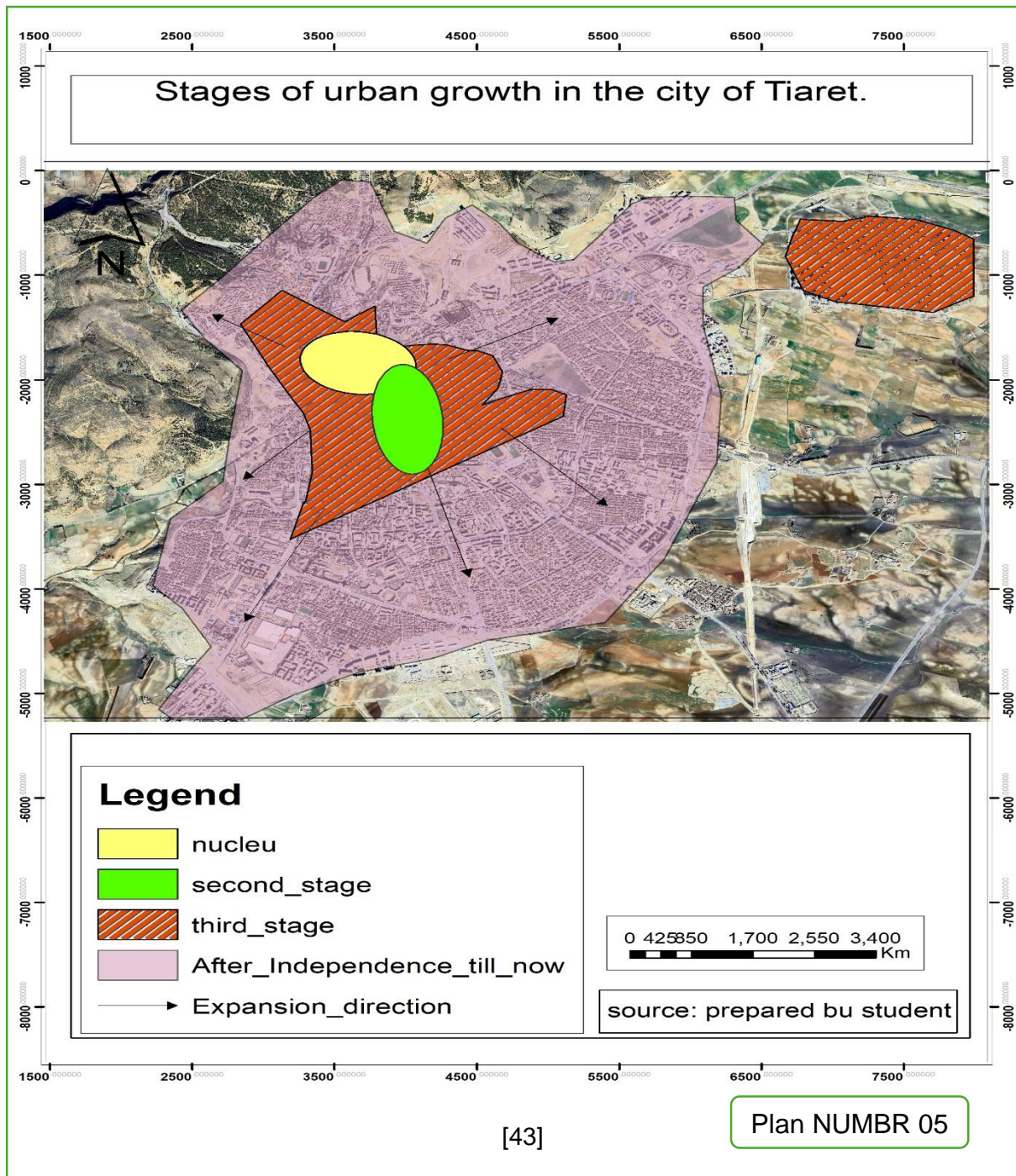
Source : Directorate of Culture

3) Third stage: From 1962 to the present day:

With the departure of most Europeans, the socio-economic structure was profoundly altered, especially with the migration of many people of rural origin.

With the migration of many people of rural origin:

- The social and economic structure has been profoundly altered. As the island's economy was linked to the colonial economy, it was at its worst and was replaced by socialist-style economic instruments.
- Socialist-style economic tools in the wake of independence, resulting in the loss of important industries, most of which are unsuitable for the the nature of the region.
- The city of Tiaret, as an attractive Center of attraction, has expanded rapidly and chaotically due to this significant influx of unequipped rural inhabitants due to rural exodus.





Pics06

Source: Google earth pro + student's

Demographic forecasts for the horizon2036:

- **Demographic projections by assumption STRONG:**

This strong assumption is also based on the principle of the remarkable evolution of the rate growth. Indeed, the rate of growth recorded at the national level of the order of 1.41 % and that of the commune 2.17 % between the two inter-census censuses 1998 and 2008 confirm the upward trend of growth. In this variant we assume the evolution of the rate of which it varied between 2.47% and 4% under the effects the combination of the two demographic phenomena, namely the natural movement represented by a controlled birth rate and the migratory movement representing an exodus striking interior justify by the concentration of

structuring equipment to the profile of the capital of wilaya as well as the very favorable lifestyle of the latter.

To this end, the digital application of the option of this hypothesis gives the results as follows:

 **-POPULATION PROJECTIONS:**

| TABLE01: POPULATION PROJECTIONS | | | | | | |
|--|---------------|---------------|---------------|---------------|---------------|---------------|
| Dispersion | 2008 | 2008 | 2016 | 2021 | 2026 | 2036 |
| Chef-lieu | 178888 | 196335 | 239215 | 277 316 | 329364 | 487540 |
| Karman | 14545 | | | | | |
| Senia | 2902 | | | | | |
| Ain Mesbah | 2593 | 2593 | 2921 | 3 147 | 3474 | 4447 |
| Zone Eparsé | 2306 | 2306 | 2598 | 2 798 | 3090 | 3955 |
| Commune | 201234 | 201234 | 244734 | 283261 | 335928 | 495942 |

Source: Revision of the PDAU2019

The population estimate for the short, medium, and long term is based on the growth rate, which varies between 2.47% and 4% for the commune as a whole. The expected population by the end of the urban development plan (2036) would therefore be 495942, an increase of 251208 compared with the current situation (2016).

 **-RESIDENTIAL REQUIREMENTS:**

TABLE02: RESIDENTIAL REQUIREMENTS

| Dispersion | 2016 | 2021 | 2026 | 2036 | TOTAL |
|-------------|-------|------|-------|-------|-------|
| Chef-lieu | 10720 | 9525 | 13012 | 39544 | 72801 |
| Ain Mesbah | 66 | 45 | 66 | 195 | 371 |
| Zone Eparsé | 58 | 40 | 58 | 173 | 330 |
| Commune | 10844 | 9610 | 13136 | 39912 | 73502 |

Source : Revision of the PDAU2019

To meet the housing needs of the projected population between now and the year 2036, a new housing stock of the order of housing stock of around 73,502 dwellings.

These new needs have been calculated on the basis of an occupancy rate per dwelling (TOL) of 04persons per dwelling.

-HOUSING LAND REQUIREMENTS:

The gross density used to assess urban land requirements is 120 dwellings/ha for collective housing in urban areas, and housing/ha for collective housing in urban areas, and 30 housing/ha for individual housing for single-family housing outside the main town (A.S. and scattered areas), taking into account and green spaces. Based on this density,

The cumulative are illustrated in the following table:

TABLE03: HOUSING LAND REQUIREMENTS WITH (HA)

| Dispersion | 2016 | 2021 | 2026 | 2036 | TOTAL |
|-------------|-------|-------|--------|--------|--------|
| Chef-lieu | 89,33 | 79,38 | 108,43 | 329,53 | 606,68 |
| Ain Mesbah | 2,19 | 1,50 | 2,18 | 6,49 | 12,36 |
| Zone Eparsé | 1,94 | 1,34 | 1,94 | 5,77 | 10,99 |
| Commune | 93,46 | 82,22 | 112,56 | 341,79 | 630,03 |

Source: Revision of the PDAU2019

The urban land requirements corresponding to the demographic growth of the 2036 are estimated at: 606.68 Ha (deficit short-term needs), i.e. 91.80% of the total surface area released for the wilaya administrative center;

12.36 Ha, or 5.53% of the total area available for the secondary urban area of Ain Mesbah ;

5.97 Ha, i.e. 2.67% of the total area released for the sparse zone. 630.03 Ha for the commune as a whole.

EQUIPMENT LAND REQUIREMENTS + 20% SALES

TABLE04: EQUIPMENT LAND REQUIREMENTS WITH (HA)

| Dispersion | 2016 | 2021 | 2026 | 2036 | TOTAL |
|-------------|-------|-------|-------|-------|--------|
| Chef-lieu | 17,87 | 15,88 | 21,69 | 65,91 | 121,34 |
| Ain Mesbah | 0,44 | 0,30 | 0,44 | 1,30 | 2,47 |
| Zone Eparsé | 0,39 | 0,27 | 0,39 | 1,15 | 2,20 |
| Commune | 18,69 | 16,44 | 22,51 | 68,36 | 126,01 |

Source: Revision of the PDAU2019

Equipment requirements are calculated on the basis of a range of 20% in relation to housing requirements. Housing needs, i.e. 126.01ha. Nevertheless, this area remains basic, with structuring facilities such as the courthouse hospital, and investment facilities such as hotels, showrooms, shopping arcades parking lot, swimming pool, etc.). The area required can be as much as 60 hectares.

Total urban development requirements would amount to 126.01 ha, broken down as follows: A.C.L 92% of the total, i.e. around 121.34ha.

The scattered zone is approximately 3 ha.

-LAND REQUIREMENTS FOR HOUSING AND AMENITIES:

TABLE05: LAND REQUIREMENTS FOR HOUSING AND AMENITIES WITH (HA)

| Dispersion | 2016 | 2021 | 2026 | 2036 | TOTAL |
|-------------|--------|-------|--------|--------|--------|
| Chef-lieu | 107,20 | 95,25 | 130,12 | 395,44 | 728,01 |
| Ain Mesbah | 2,62 | 1,81 | 2,62 | 7,78 | 14,83 |
| Zone Eparse | 2,33 | 1,61 | 2,33 | 6,92 | 13,19 |
| Commune | 112,16 | 98,66 | 135,07 | 410,15 | 756,04 |

Source: Revision of the PDAU2019

This table shows that, according to the strong hypothesis, the municipality of TIARET by 2036 will need 756 ha of land, including 728 ha for the urban center chief town of the wilaya, 15 ha for the secondary urban area of Ain Mesbah and 13.19 ha for the rural area. The rural environment to improve the way of life and subsequently stabilize the rural population on the premises the area.

○ **The Economic study:**

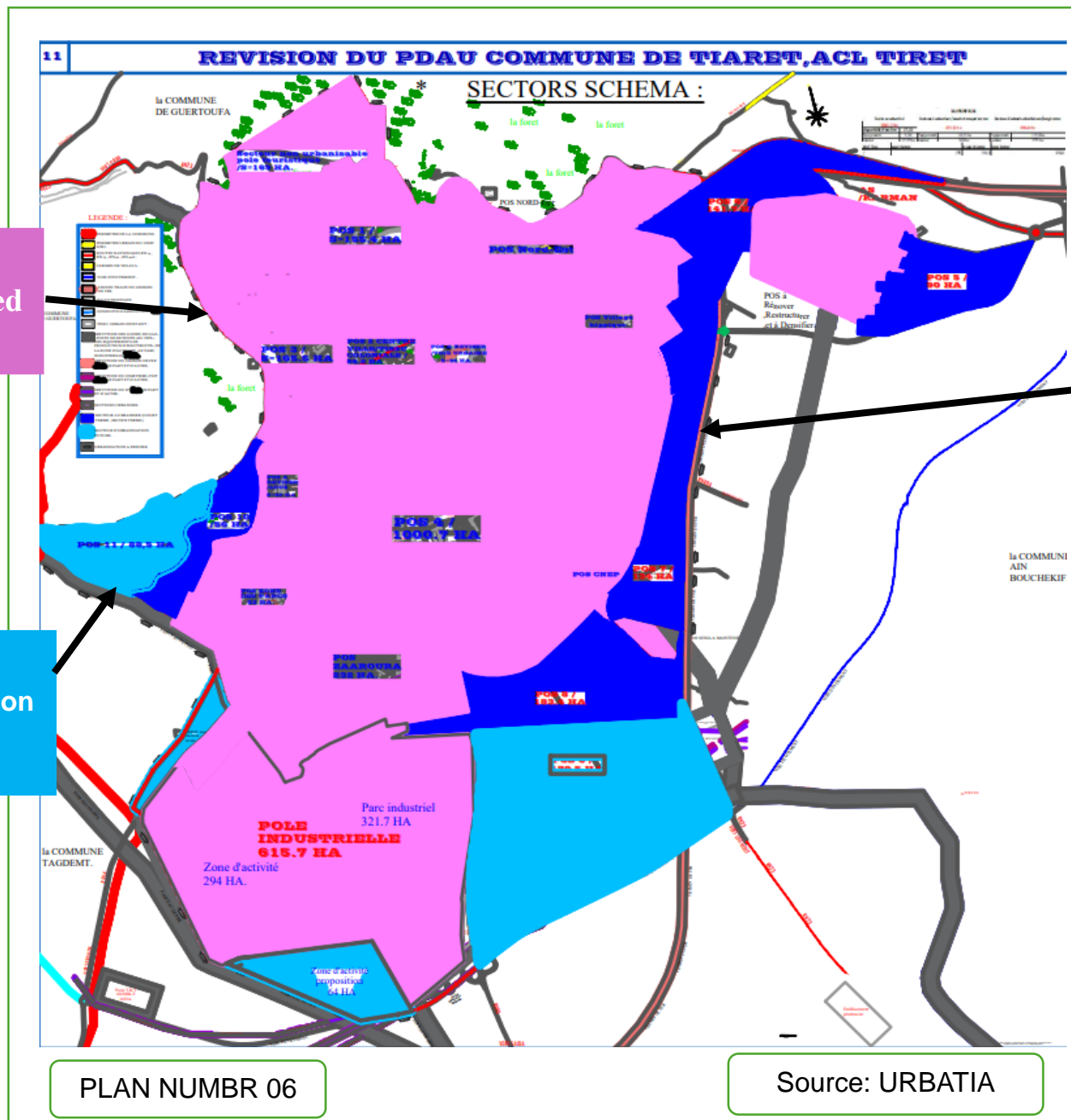
➤ The economic composition of the city's population:

Table No06. Economic structure of the population for the year2019

| | Number | Percentage % |
|----------------|--------|--------------|
| Not registered | 498 | 0.39 |
| Not active | 71824 | 32.97 |
| Retired people | 51544 | 7.09 |
| Students | 31871 | 14.63 |
| Active | 97793 | 44.89 |

REMARK: By analyzing the economic structure of the city of Tiaret, we conclude that the economic strength of the city is represented by the fact that 11127% of the city's total population is estimated to be active.

Divide the city into sectors: The Master Plan for Development and Urbanization (PDAU) divides the city of Tiaret into three sectors with varying densities and population distribution



| Area | | | | | |
|--------------------------|-------------------|-------------------------------|-------|-----------------------------------|-------|
| Urbanized sector | | Sector to be urbanized | | Future urbanization sector | |
| 3061.2HA | | 471.5HA | | 398.8HA | |
| land availability | 27.33 | | | | |
| Equipment | 9.36 | Equipment | 141.5 | Equipment | 119.8 |
| Habitation | 17.97 | Habitation | 330 | Habitation | 279 |
| CHEF LIEU | Short-term | Medium term | | Long term | |

Table number 07 represent the Sectors

-Urban Problems in Tiaret:

The deliberate strategy of preserving the agricultural land close to the town, which inevitably supports any expansion of the town, imposes the following condition:

- To exclude any spatial growth of the town outside the current urban perimeter, which could affect the neighboring agricultural land of good value and thus compromise the main development sector.

Two lines of research need to be developed:

- Assessment of the land potential offered by vacant and enclosed plots within the urban fabric.
- Spatial development in the commune of Tiaret, and more specifically in the main town, is the result of demographic growth, which has led to the saturation of housing, socio-educational, and economic facilities, resulting in

a large amount of space being consumed.

The land use plans for September 10 for the municipality of Tiaret are intended to describe land use and the organization and structuring of the area.

-In particular, the analysis should make it possible to:

- Identify the type and extent of land use and the layout of built-up areas, distinguish between built-up and unbuilt land, For the former, the nature, characteristics, and condition of the buildings should be specified. Of the latter, there are those that are undeveloped but in use, those that are planted or covered with vegetation, or those that can be assimilated to natural or developed green spaces, and lastly, those that can be urbanized.
- To consider the position of the area in relation to the surrounding road system, noting the most important access roads and thoroughfares, and not forgetting to mention their condition and specialization (shopping street, facilities axis, etc.).

☞ The **conclusions** of this analysis should provide the knowledge and guidance required for the future development of TIARET.

◆ **-Problems related to the urban development of THE AREA:**

The rapid urban growth of the town, which is out of all proportion to the size of the old fabric, which in 1977 covered only 509 hectares and which currently covers some 2,245 hectares, of which 1,762 hectares are used, including the industrial zone, has been largely improvised and without any respect for a town planning instrument (PUD), except for the overall structure of the town.

As a result, a multitude of housing estates and cooperatives were built on top of the Z.H.U.N. with no connection whatsoever to the old fabric, giving rise to incoherent, fragmented urban planning without the slightest urban planning research at any level of integration between these different "urban acts" and between the different parts of the town.

In the meantime, the city center has retained its original size and has been left to its own devices without any maintenance, resulting in a high rate of dilapidated and unhealthy buildings.

In addition, the shantytowns that constituted the urban malaise have been eradicated, although there are still a few shantytowns that have recently sprung up. Paradoxically, the program to reduce precarious housing has resulted in poor land management, leading to irrational consumption of land reserves

Urban development plan (PDAU):

The first revision of Tiaret's urban development plan was approved in 2006. This consumed 50% of the time required to implement the plan, adding to which the 06-year period during which the study was underway, and the short-term programmers were running in parallel.

The obvious result is an overlap and interaction between the various players, consuming the maximum amount of land in the pockets set aside to make up for the municipality's shortfall in facilities and residential areas.

There are a number of noteworthy achievements in this regard:

1/ The total eradication of precarious housing in the secondary settlement of Karman in particular, where this settlement was intended as an urban support pole for the parent municipality of Tiaret and not for the absorption of spontaneous habitation.

2/ Slow implementation of operational urban planning instruments.

a- P.O.S. Zone of Parks, where the problem of land regulation remains insoluble to this day.

b-P.O.S. Nord-East, which needed to be revised in view of the anarchy of land choices made on this site.

c-The restructuring of the town center was not included.

d- Slow approval of the P.O.S. for the secondary towns of Karman, Sénia, and Aïn-Mesbah.

3/ Development of the industrial sector, for which the government has planned an industrial park on the Aïn Guesma road.

4/ The role of the commune in the high flat region, where Tiaret is designated as the capital of the western high flat.

5/ The SNAT's recommendations for the de-casualization of northern Algeria, with a focus on the south, where the town of Tiaret plays a key role via the development of the RN90, RN23, and RN14 and the construction of the high flat motorway.

6/ The slow pace of rural housing development in the wilaya is forcing the population to move to the capital of Tiaret in search of security, employment, and well-being.

It's Objectives after the revision 2019:

-To satisfy social demand for residential accommodation and ensure the availability of a wide range of facilities for all.

- To provide a better living environment by meeting the current needs of the population.

-Ensure social progress and respect for the quality of life in the area by offering an

-Appreciable level of public transport services, in particular.

- Develop the area in a way that reflects a desire for balance, progress, and solidarity.

- Reintroduce architectural aesthetics into residential areas by proposing appropriate regulations.

- Facilitate links between the city's various districts.

- Enhance the value of major thoroughfares.

- Densify existing empty pockets in order to rationalize land space and preserve high-potential agricultural land.

The principal direction:

The main town of the municipality of Tiaret has undergone very specific development despite:

The age of the town center, which needs to be restored; the availability of land; The dynamics of urbanization in the main town depend on two essential parameters: The population of the main town; the establishment of an urban structure.

-Through the analytical study of the city of Tiaret, we conclude the following points:

The key issue is the creation of a land portfolio capable of supporting new programs.

This land portfolio must respond to the various constraints facing the city of Tiaret. These include:

- ❖ The impossibility of extending the town northwards (presence of the Djbel Guezoul forest).
- ❖ The possibility of extending to the east is limited by the agricultural land and forest on the one hand, and the presence of 11 pipes (on the west side) requiring a 75m easement corridor not including the width of the pipes.
- ❖ Presence of the industrial pole on the south-west side.
- ❖ University campus on the east side towards Karman.
- ❖ Possibility of extension to the south and south-east where the characteristics of the site are :
- ❖ Existence of a road easement for the southern bypass linking the RN14 towards Algiers to the RN14 towards Freneda via the RN90, RN40A and RN23.
- ❖ Existence of a T.G.V. railway easement currently under construction.
- ❖ The obligation to create development hubs in particular:
 - a/ University hub (towards Karman)
 - b/ Industrial pole (Tiaret industrial park + industrial zone)

c/ Health centers in the south and north.

d/ A Commercial Pole for the activation and fluctuation of commercial facilities such as: the weekly market, the dry port, etc. In this direction, the tree cover is hardly visible, the vegetation layer is practically absent in certain places (Hdjar Barberie) where the bedrock is visible to the bare eye.

**An analytical study of the land
occupation plan NUMBER08:**

1-Presentation of the STUDY AREA:

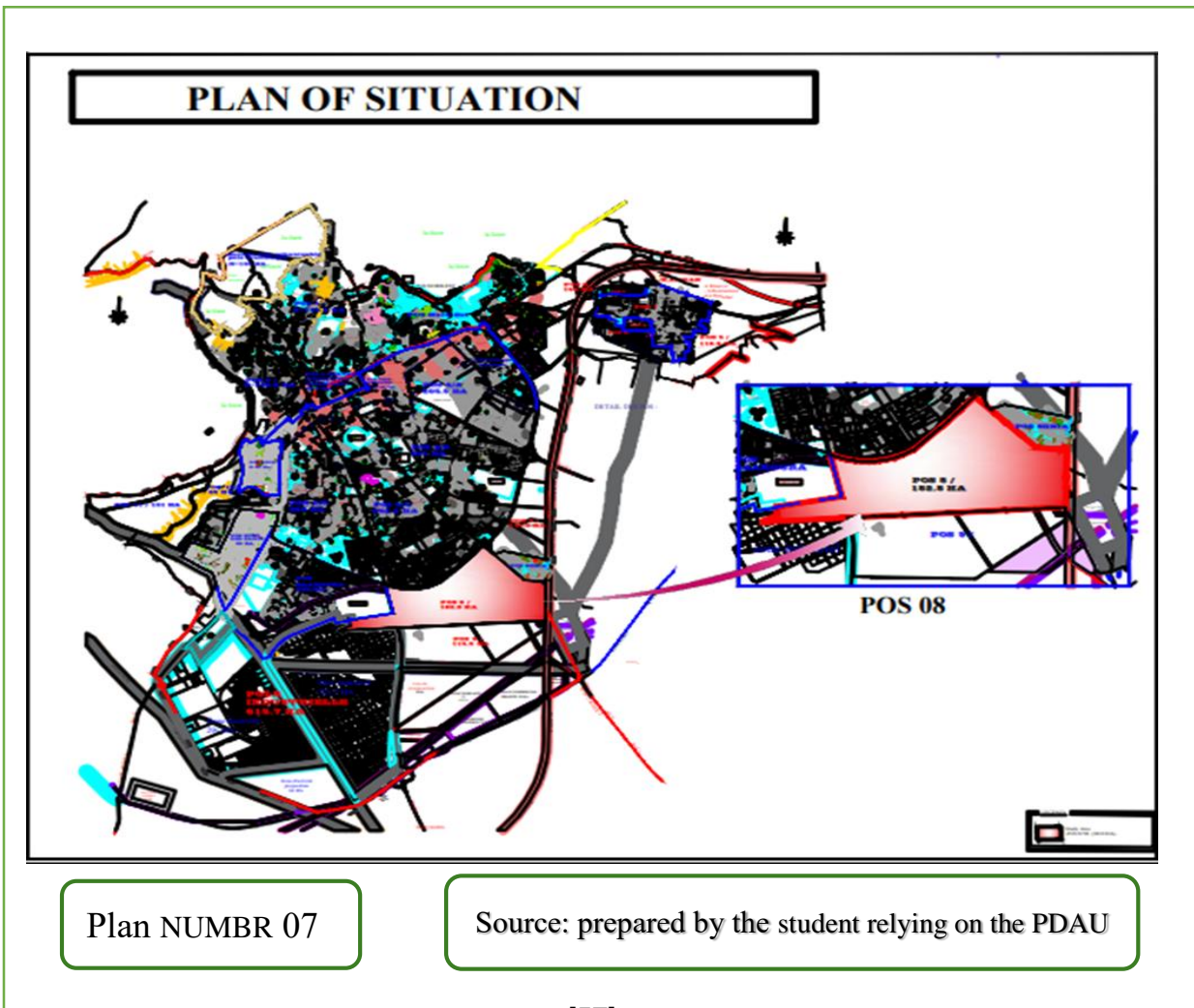
-Introduction:

The POS 08 TIARET land use plan was proposed as part of the 2nd revision of the PDAU for the municipality of Tiaret, with the aim of meeting the needs of the population in terms of residential accommodation and equipment.

-Situation of POS 8 TIARET:

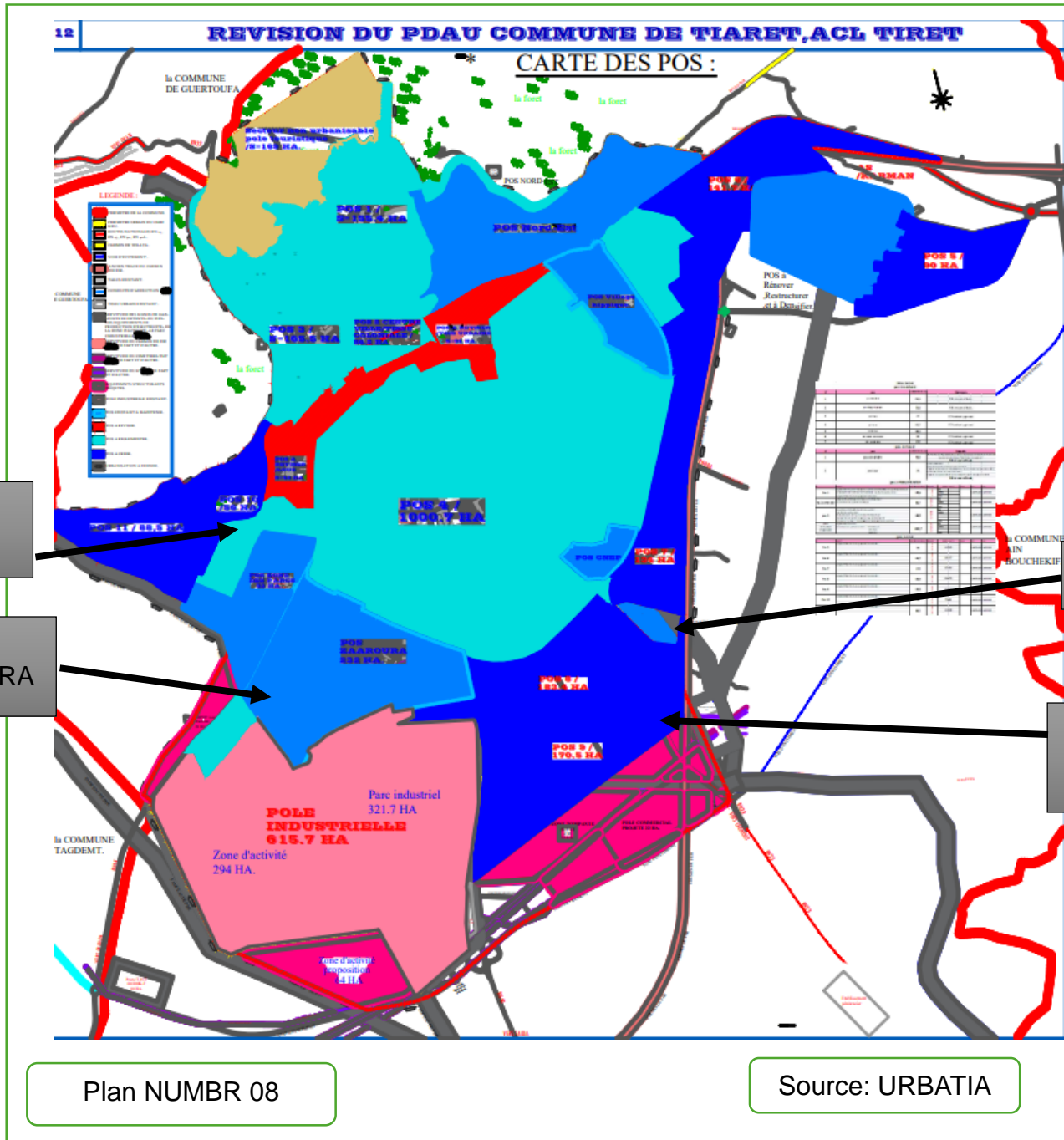
POS 08 TIARET is located in the southern part of the capital of the wilaya of Tiaret. Its limits are as set out below:

- **North:** via the old siding
- **South:** by POS N° 09
- **East:** via the RN 23 in the direction of Sougueur
- **West:** via the RN 90, Street market, service station and the direction of duiane.



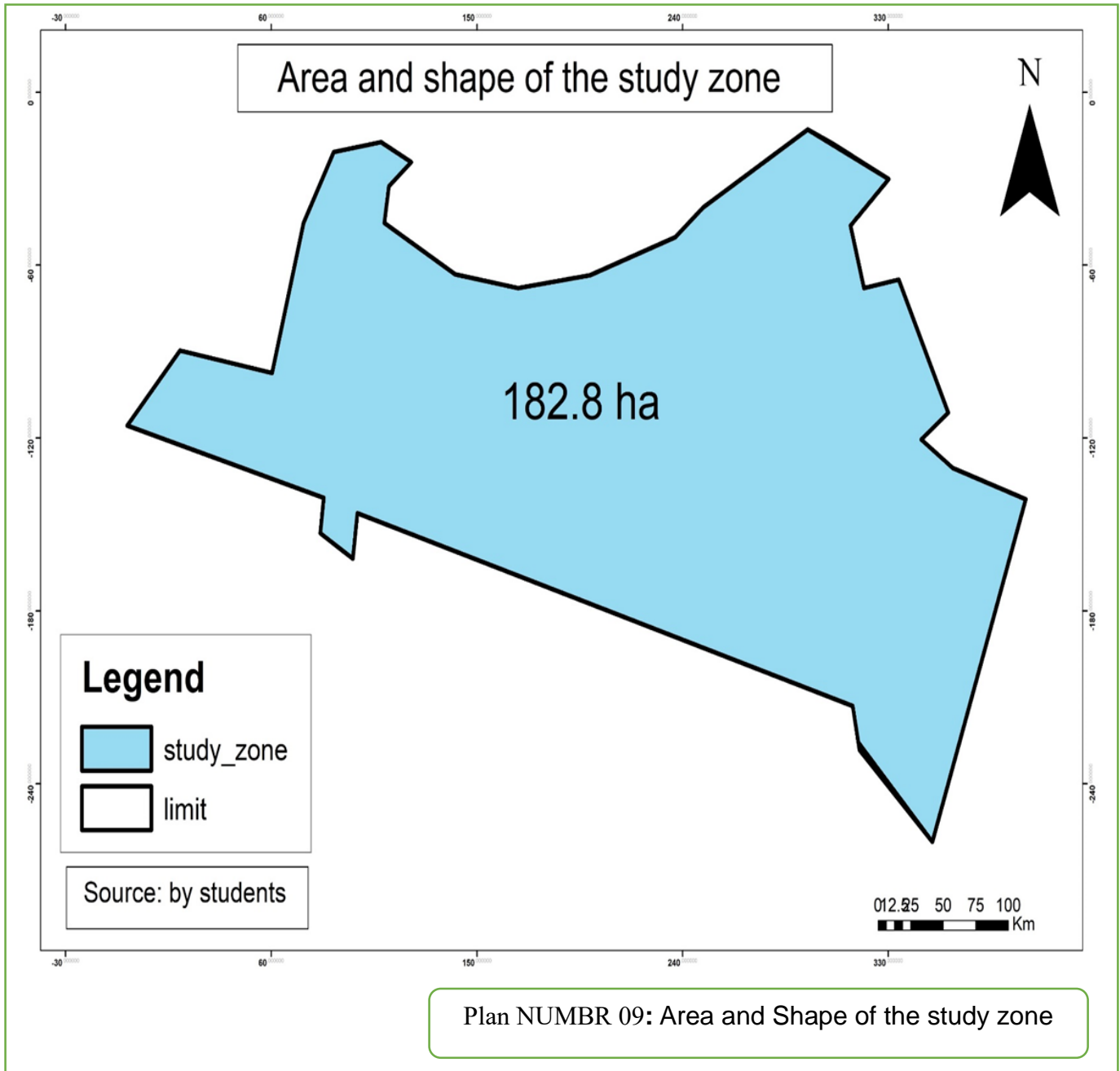
-Neighborhood equipment:

There is a complete absence of equipment in the immediate vicinity for land occupation plan Nm:09, as it is under construction, except for the presence of the direction of duiane, Street market.



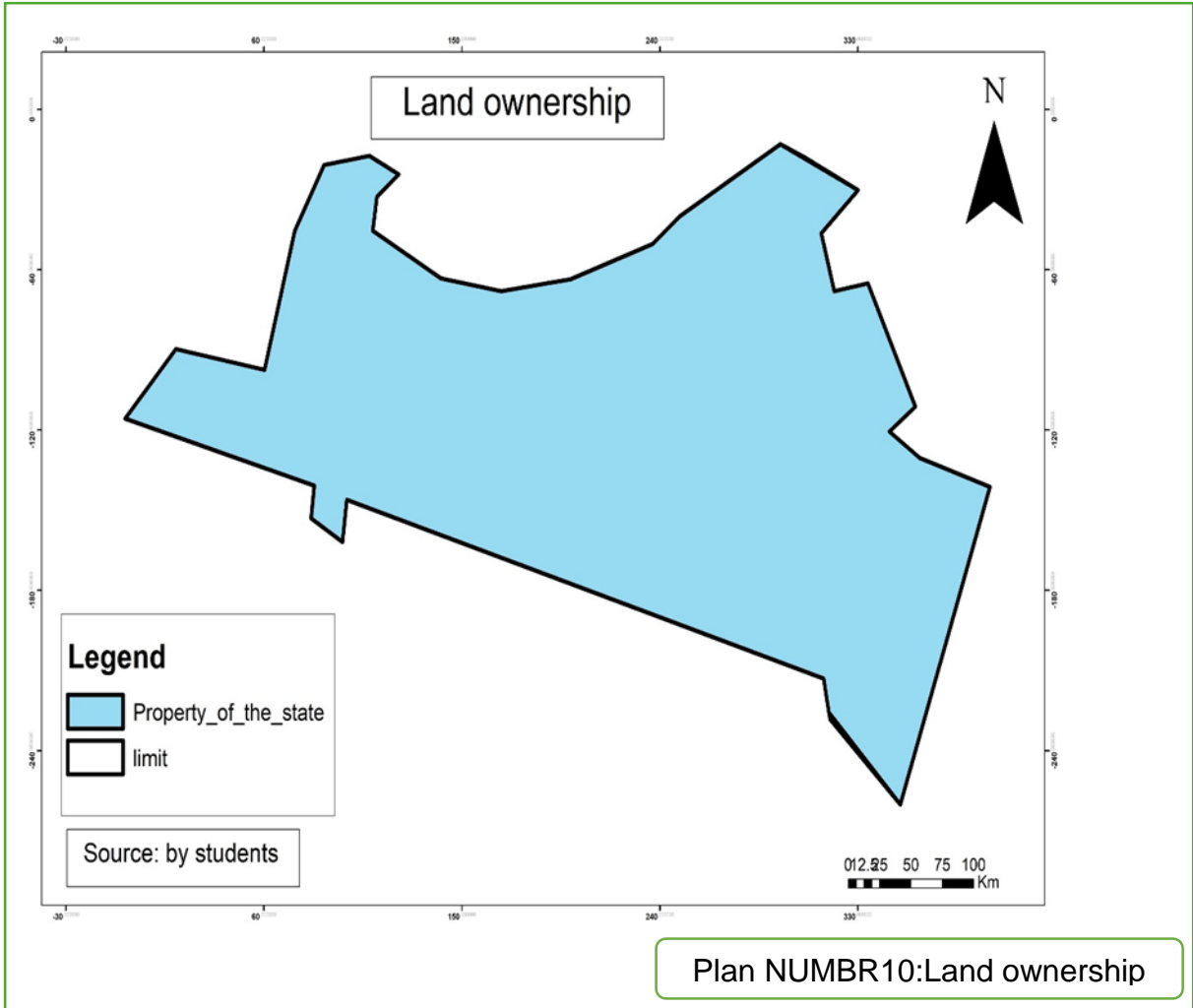
-Area:

Covering a surface area of 182.8 ha, it is located in the area to be urbanized in the short term (2023) and meets the needs of the main town in terms of housing and accompanying facilities to satisfy the needs of the future population.



The legal nature of the land:

The legal nature of the study area is state-owned and EAC



Accessibility:

Accessibility is ensured by :

- An urban road (formerly a siding) located in the northern part of our site; leading east towards Algiers, north towards the city center and west towards Oran.



- The -National road 23 bordering our site on the eastern side leads to the wilaya of Aflou

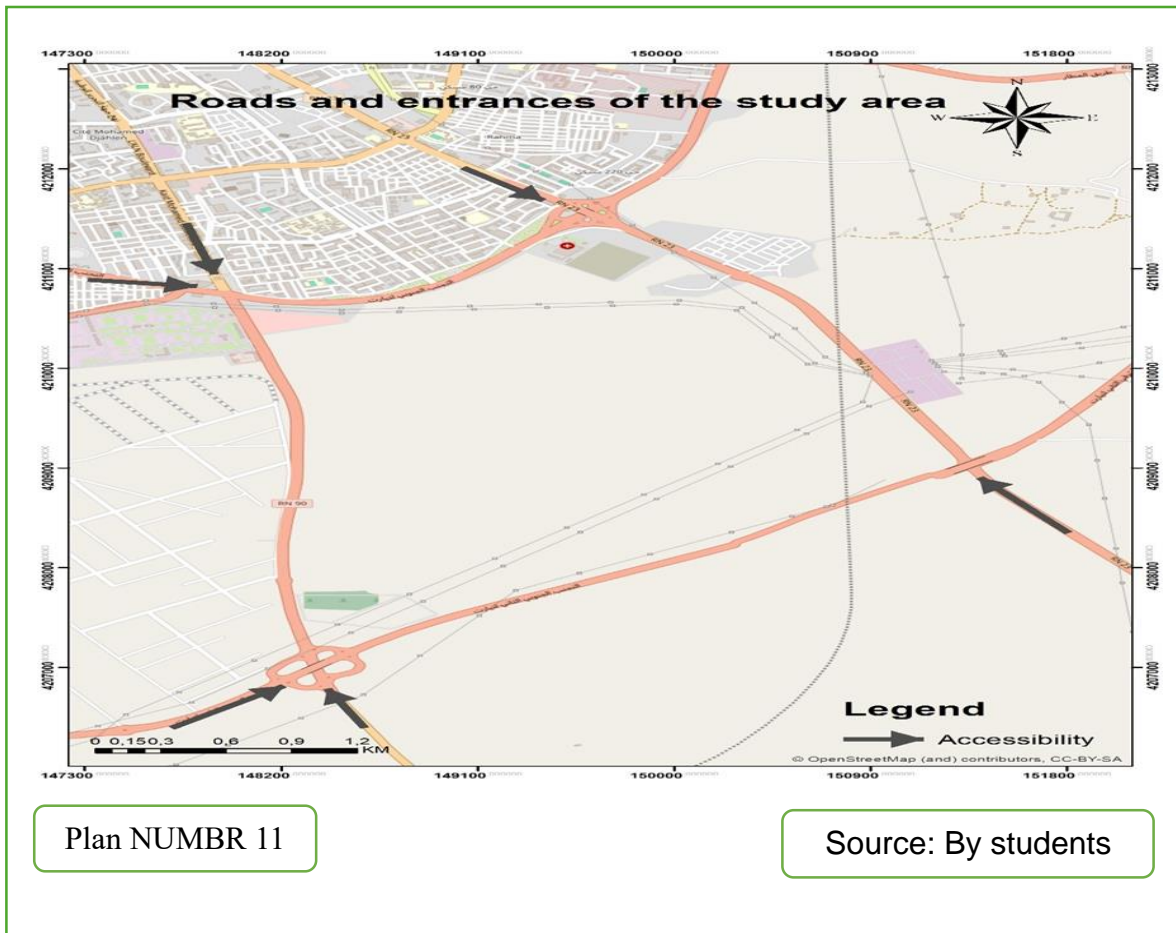


-La route nationale 90 limitant notre site dans côté Ouest menant à la wilaya de Saida

-Something to structure our site inside



Pics08.09.10: By Students

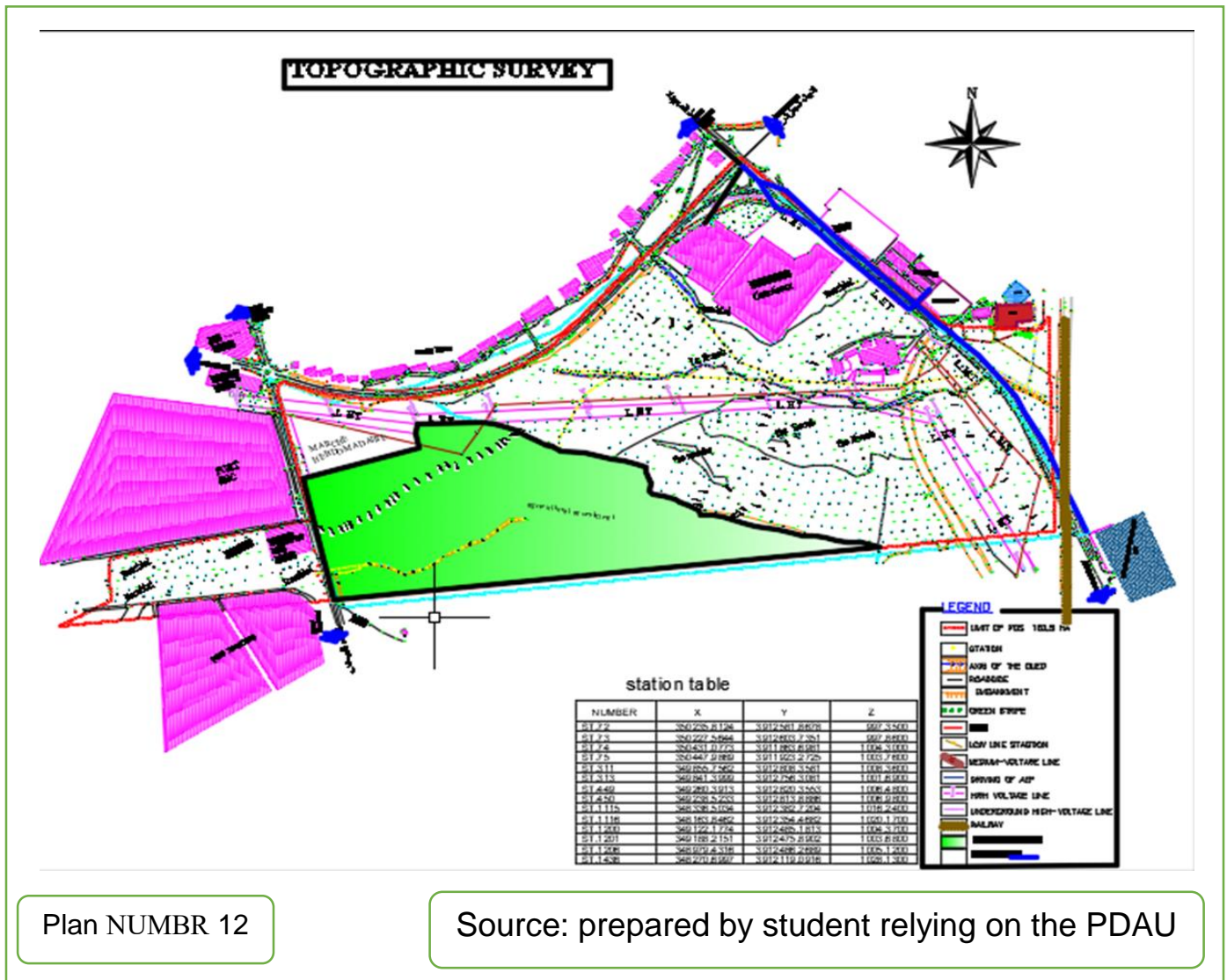


Plan NUMBR 11

Source: By students

Topography of the area:

The geomorphology of the region is not entirely homogeneous, indicating the existence of flat terrain with farmland within the site. Slopes do not exceed 3%. The soil on these slopes is generally stable and therefore suitable for urban development (rocky soil).



Plan NUMBR 12

Source: prepared by student relying on the PDAU

Site analysis:

a- Constraints and easements:

1-Artificial constraints:

High-voltage power lines are reported to cross the center of the study area. The easement corridor is 14 m long (7m on either side of the line).



Medium-voltage power lines cross the center and eastern side of the study area. The easement corridor is 6 m long (3 m on either side of the line).



Pics11.12.13: By students

- Oued requires a 6 m easement corridor.
- The railroad requires a 72 m easement corridor (36 m on either side).
- The passage of an underground high-voltage power line does not require an easement.

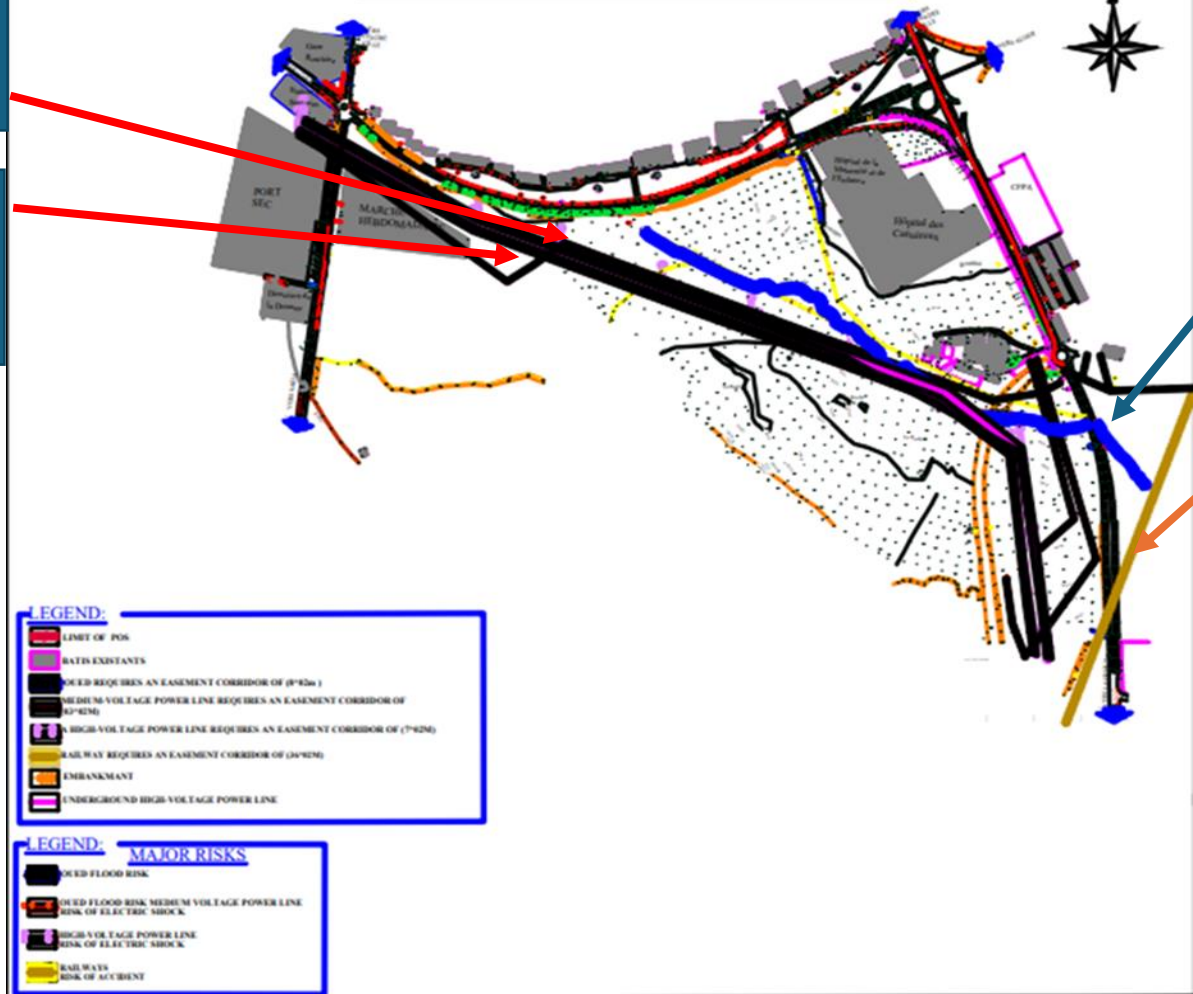
Medium-voltage power lines

High-voltage power lines

OUED

The railroad

CONSTRAINTS AND EASEMENTS



Plan NUMBR 13

Source: prepared by student relying on the PDAU

-Land use:

The area allocated to the P.O.S. in question is currently 10% occupied. Our site visit and topographical survey revealed:

- The existence of a few dwellings



- And a few facilities, limited to:

-The maternity and children's hospital, the cancer hospital, the Customs Department, and the weekly market on the one hand, and on the other, the existence of a few facilities on the outskirts of our site, including the service station, the dry port, the bus station, and the CFPA.

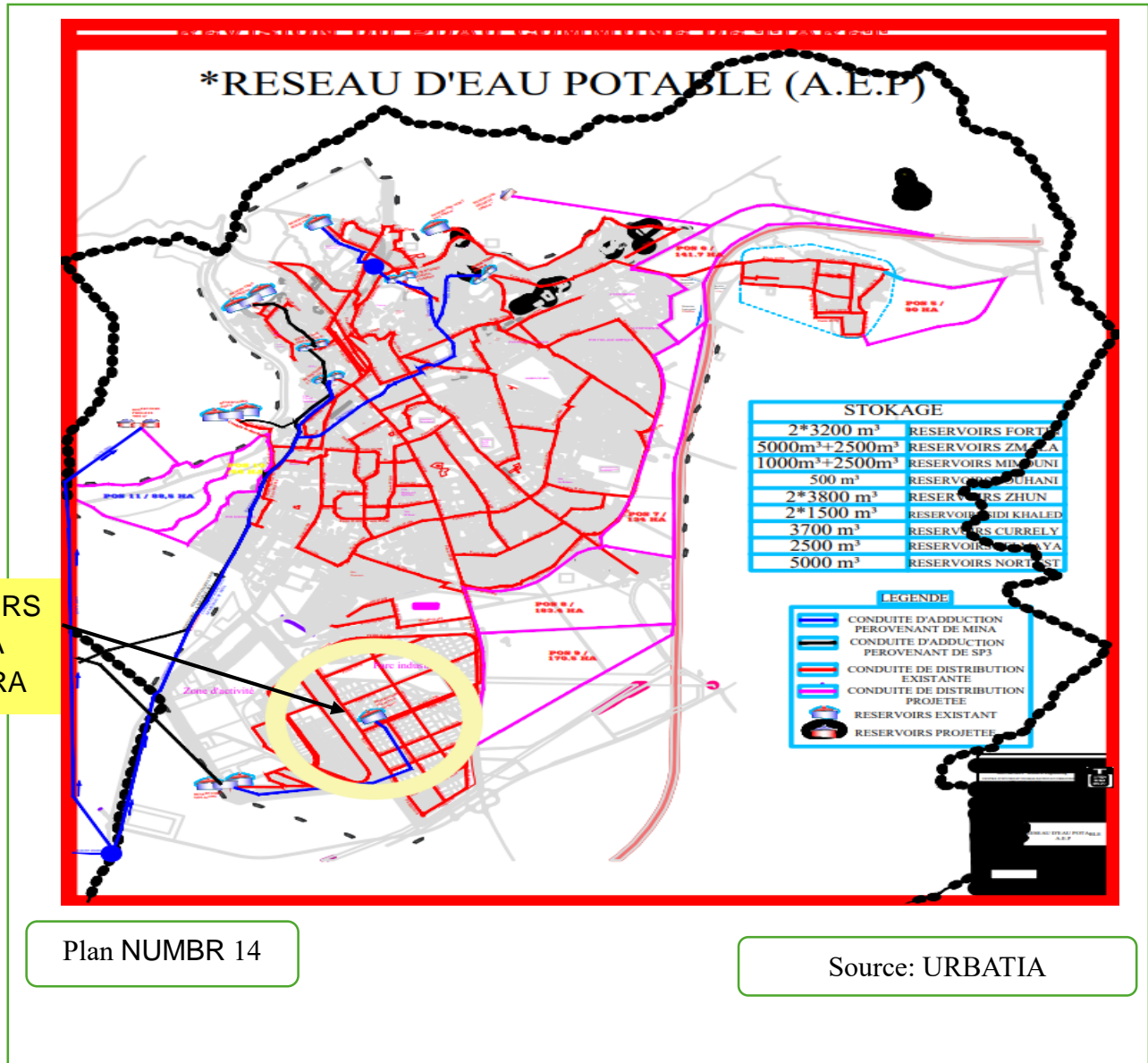


Pics14.15: By students

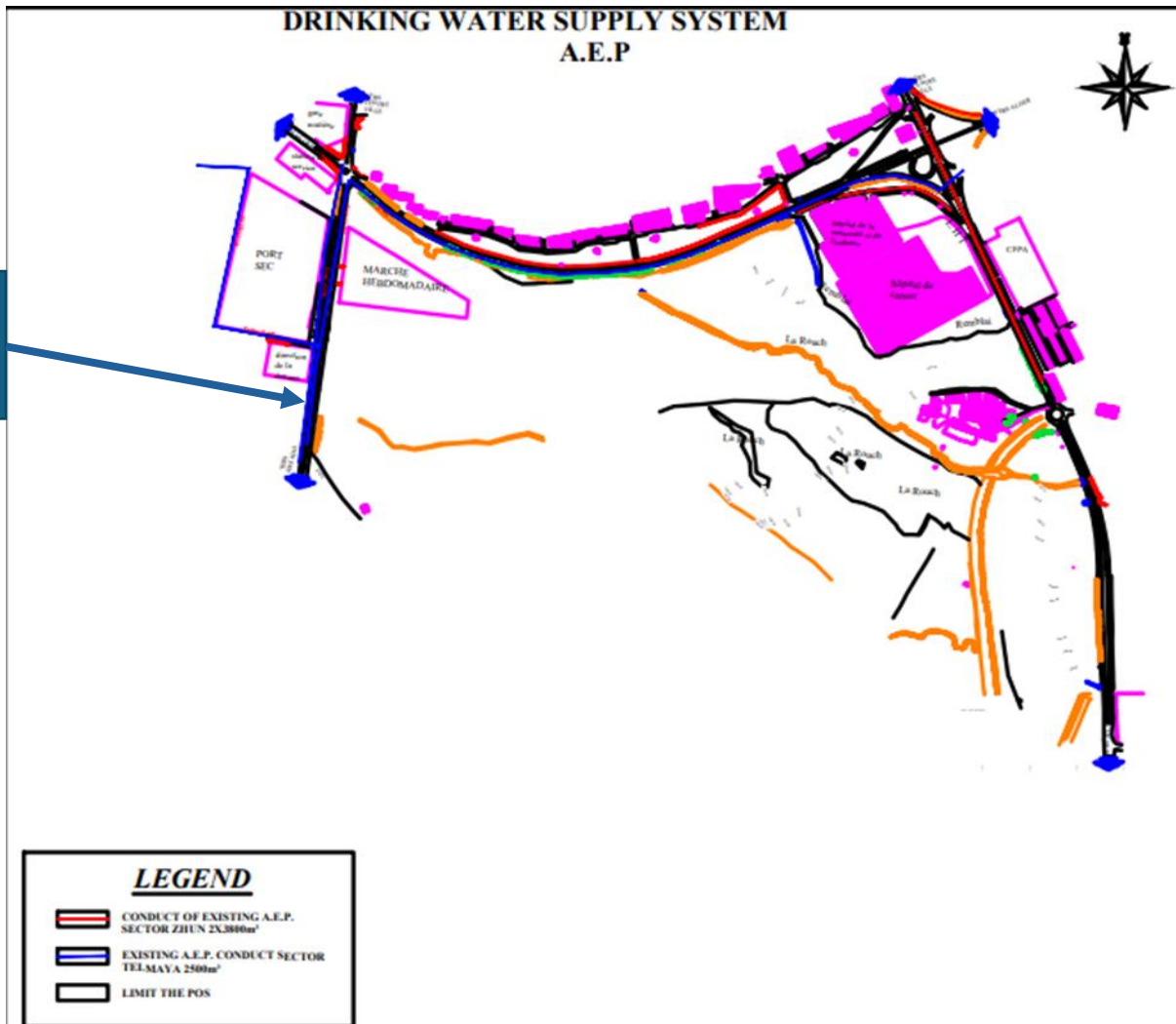
- Presence of EAC and state property.
- Swampy terrain in places.
- Presence of high- and medium-voltage power lines

- **A.E.P. surveys and assainissement:**

- A.E.P



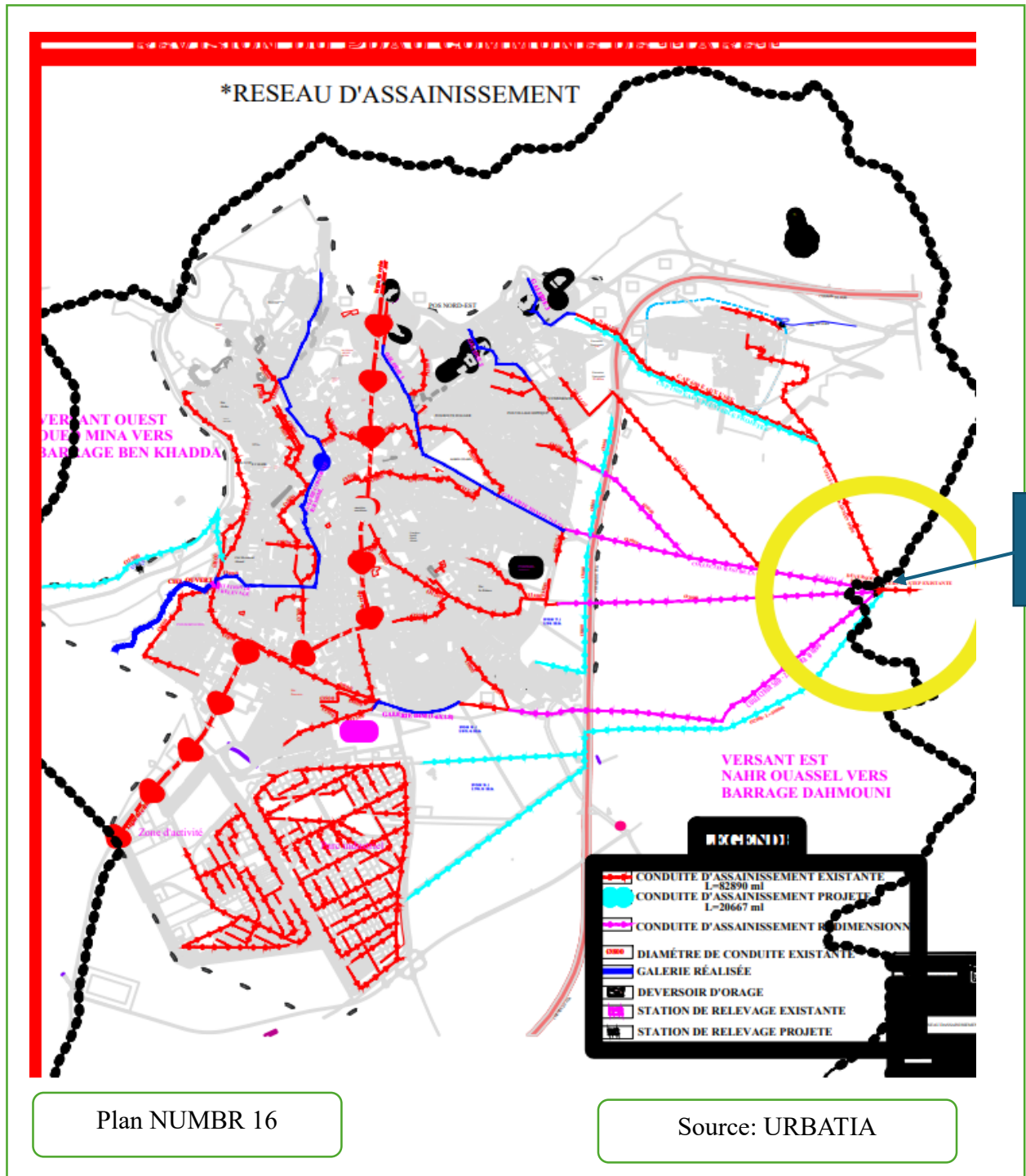
Aep reservoirs telmya zaaroura



Plan NUMBR15

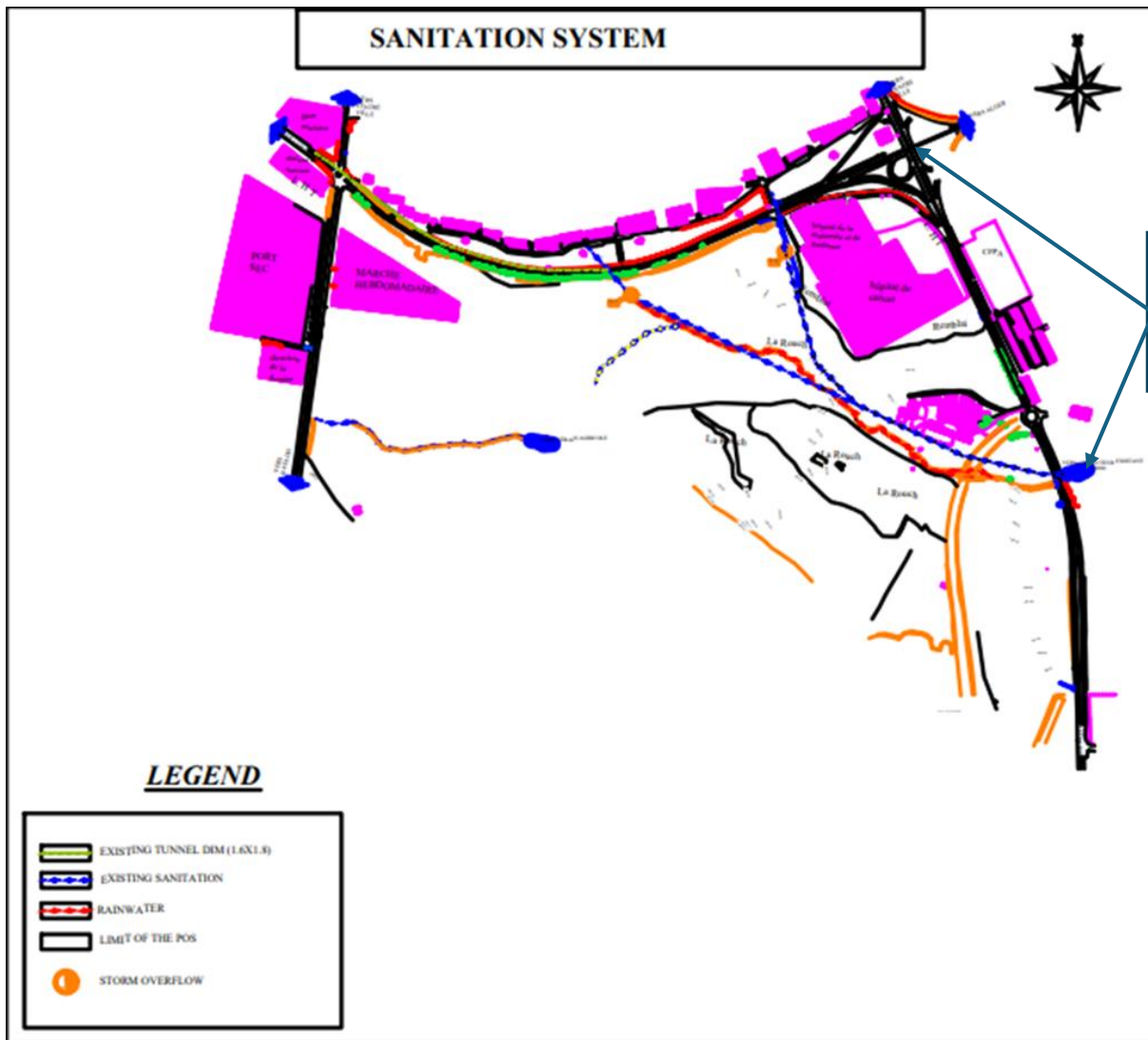
Source: prepared by student relying on the PDAU

-Sanitation:



To Operation Station (Step) Route bouchakife it allowed to clean up the sewage before their discharge to the Baradj. River Aux Oued

Detaille: pouring of two main pipes by the wilaya of Tiaret diameter 800Ø after diversion 600Ø



Plan NUMBR17

Source: prepared by student relying on the PDAU

-Orientations for the revision OF THE PDAU:

The main town of the municipality of Tiaret has undergone very specific development despite:

- The age of the town center, which needs to be restored.
- The availability of land.

The dynamics of urbanization in the chief town depend on two essential parameters:

- The settlement of the main town.
- The establishment of an urban structure.

-Actions to be taken in the development:

- Satisfying the population's need for housing and amenities.
- The site's morphology has led to urban sprawl to the south, resulting in conurbation with the secondary towns of Karman and Senia.

-Planning directions:

An urban extension of the town of Tiaret, it is a limited space between the RN 23 and the siding.

-Program:

Group Residential, Residential estate, connecting roads, and sanitary facilities to be developed:

| Nmbr: | OBJECT | AREA (HA) | TERMS | NMBR OF RESIDENTIAL | EQUI | CES | COS |
|--------|---|-----------|-----------|---------------------|-----------------------|-------------|------------|
| POS:08 | Planning the necessary residential and equipment Accessibility for all (pedestrian walkways, mechanical walkways, bicycle paths, paths for the disabled), Introduce renewable energy into development and design urban forests. | 182.8 | 2018-2023 | 10833 | According to the need | 0,4<CES<0,8 | 0,4<COS<16 |

Analyze the planner:

Embellish the city of TIARET by:

Enhancing all access points to the city by planning appropriate development and modernizing access roads;

-Encouraging property development and promoting the housing program within the urban fabric.

-Reintroduce the "old railway" axis into the city's overall development.

-Doubling the siding leading to ORAN.-Modernizing and upgrading CW 11 to a 2×3.5 m dual carriageway with shoulders.

-Satisfy the needs of the population in terms of housing and facilities.

-The morphology of the site has led to urban sprawl towards the south, resulting in conurbation with the secondary towns of Karman and Senia

-Conclusion of the chapter two:

Through our analysis of the city of Tiaret, we conclude that:

- a) The city occupies a privileged position as a link between the different parts of the country.
- b) The city of Tiaret went through three phases, which led to a change in the urban fabric (Rostami era, Occupation phase, after the occupation to till the current day).
- c) The capital of the commune of Tiaret is at the crossroads of several nationally important communication routes
- d) Climate study helps us to select sewerage networks that suit the city's situation.
- e) The shape of Tiaret's expansion is closely linked to natural obstacles.
- f) The city of Tiaret has witnessed a significant increase in population density, which has led to a high demand for housing and a shortage of real estate space.

The conclusions of this analysis should provide the knowledge and guidance required for the future development of TIARE.

- a) The land occupation plan is located in a semi-isolated area from the city and the direction of expansion towards the south (adaptation and connection with the urban fabric).
- b) The project Land belongs to the state with some private properties
- c) The presence of natural and artificial obstacles.

CHAPTER THREE

PROGRAMMING

Introduction:

The POS 8 TIARET is a projected extension within the framework of the 2nd revision of the PDAU of the municipality of Tiaret; to respond to the problem of the housing crisis as well as the equipment of accompanying and structuring through an intervention of urban space organization that allows to manage and satisfy the needs of the current and future population.

Principles initialization:

- The structural plan is based on the main axis linking the two national highways, the RN23 and RN90, via a horizontal axis with nodes to ensure urban continuity and reinforce the new extension in order to create an attachment to the town.
- The second planned axis runs parallel to the main axis, separating our POS8 from POS11 and making our site accessible to all.
- Projected vertical axes of organization give us a checkerboard layout that ensures a balance in modes of travel through the hierarchical organization of the road network, which is necessary given the structuring and supply of different networks.
- Introduction of a local administrative facilities zone in the center of the study area, to be accessible and close to every corner of our POS

-STRUCTURING OPTION:

This is characterized by a high density of multi-family housing, as well as supporting and structuring facilities to meet the needs of the future population.

-Urban programming:

The programming process is one of the most important processes in urban projects, as it helps to optimize the use of land and space.

and rational utilization of land and space, as well as the materialization of the plan followed in the projects.

Through this process, we will try to provide and cover a percentage of the city's housing needs in the medium term, as well as the rational utilisation of space, which is evident in the planning process by taking into account the following parameters:

The data:

-Area: 182.8 ha

- Occupancy rate: 6

-Oued: Easements 6m

-Medium voltage power line:

Easements 6m (4 lines)

-High-voltage power line: Easements 14m (2lines)

-The railway: Easements 72m

Calculating the barrier area:

High-voltage:

$2344 \times 2 = 4688 \text{ m}$

$4688 \times 14 = 65632 \text{ m} = 6,56 \text{ ha}$

Medium voltage:

Line01: $2344 \times 6 = 14064 \text{ m} = 1,4 \text{ ha}$

line02: $1144 \times 6 = 6864 \text{ m} = 0,68 \text{ ha}$

Line03: $483 \times 6 = 2898 = 0,28 \text{ ha}$

Line04: $337 \times 6 = 2022 \text{ m} = 0,20 \text{ ha}$

Oued:

$$1747 \times 6 = 10482 \text{m} = 1,04 \text{ha}$$

The railway:

$$930 \times 72 = 66960 \text{m} = 6,69 \text{ha}$$

Barrier space=16,85ha

The area of existing equipment:

-Health pole: 9.5HA

-Market: 4HA

-The Diwan: 1HA

$$9,5 + 4 + 1 = 14,5 \text{ha}$$

Calculating the intervention space:

$$182,8 - (14,5 + 16,85) = 151,45 \text{ha}$$

Note:

3.3 hectares of easement could be reclaimed for a secondary road

$$151,45 + 3,3 = 154,75 \text{ha}$$

Calculate the various different constituent areas of the project :

The residences are proposed as follows:

80 % of the area allocated for collective residences

20 % of the area allocated for individual residences

Calculating the areas for each type of housing

Area for collective residences:

$$S_c = 154,75 \times 0,8 = 123,8 \text{ha}$$

Area of individual residences :

$$S_c = 154,75 - 123,8 = 30,95 \text{ha}$$

Calculate the number of collective residences:

$$123,8 \times 80 = 9904 \text{logts}$$

Calculate the number of individual residences:

$$30,95 \times 30 = 929 \text{logts}$$

Total residences: $9904 + 929 = 10833 \text{logts}$

Selecting the type of equipment since the population of the city of Tiaret is 236090 N; the equipment suitable for the study site is within the fourth category according to the theoretical equipment network model.

Since the number of residences is 10833, the project consists of 2 quarters, a neighborhood unit, and 2 base units. The quarter contains 3 neighborhood units; each neighborhood unit contains 4 base units.

Calculating the area of equipment:

Neighborhood Equipment Area:

$$2 \times 3,44 = 6,88 \text{ha}$$

Neighborhood Units Equipment Area:

$$7 \times 2,24 = 15,68 \text{ha}$$

Base Unit Equipment Area:

$$30 \times 1,12 = 30,60 \text{ha}$$

Total Equipment Area:

$$S_{eq} = 6,88 + 15,68 + 30,60 = 56,16 \text{ha}$$

Calculate the area of primary and secondary roads:

$$S_{vp+s} = \text{Intervention space } S_f \times 15\%$$

$$S_{vp+s} = 154,75 \times 0,15 = 23,21 \text{ha}$$

Calculate the net residential area S_{rn} of the neighborhood:

Total net residential area:

$$S_f = S_{rn} + S_{eq} + S_{vp} + s$$

$$S_m = S_f - (S_{eq} + S_{vp} + s)$$

$$S_m = 154,75 - (56,16 + 23,12)$$

$$S_m = 75,38 \text{ ha}$$

Net residential area for individual housing:

$$75,38 \times 0,3 = 22,61 \text{ ha}$$

Net residential area for group housing:

$$75,38 \times 0,8 = 60,30 \text{ ha}$$

Calculate the area of neighborhood units and base units for group residences:

The area of 7 neighborhood units are = 60,30 ha

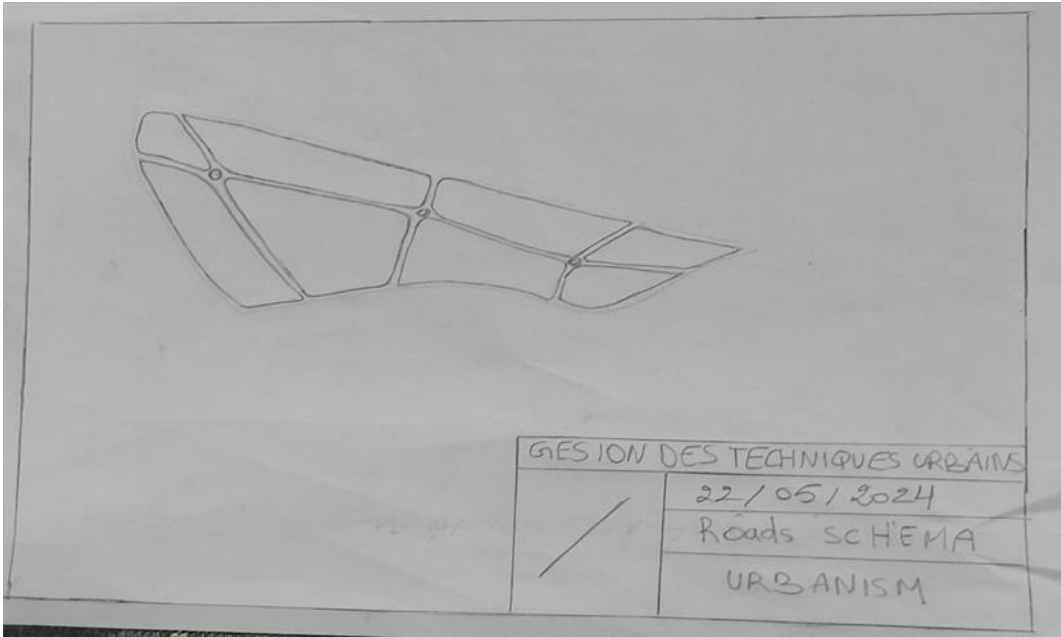
Programmed equipment:

| EQUIPMENT | AREA |
|----------------------|-------------|
| Primary school 01 | 4700 |
| Primary school 02 | 5200 |
| Primary school 03 | 5000 |
| Primary school 04 | 5000 |
| Secondary school | 8300 |
| Secondary school | 8800 |
| High school | 15500 |
| commercial equipment | 5200 |
| commercial equipment | 6600 |
| mosaic | 12300 |
| mosaic | 8600 |
| mosaic | 5157 |
| post office | 1900 |
| covered market | 2600 |
| urban safety | 5146 |
| apc headquarters | 2400 |

| EQUIPMENT | AREA |
|--------------------|-------------|
| cultural equipment | 8600 |
| cultural equipment | 13100 |
| sports facilities | 14600 |
| parking | 5500 |

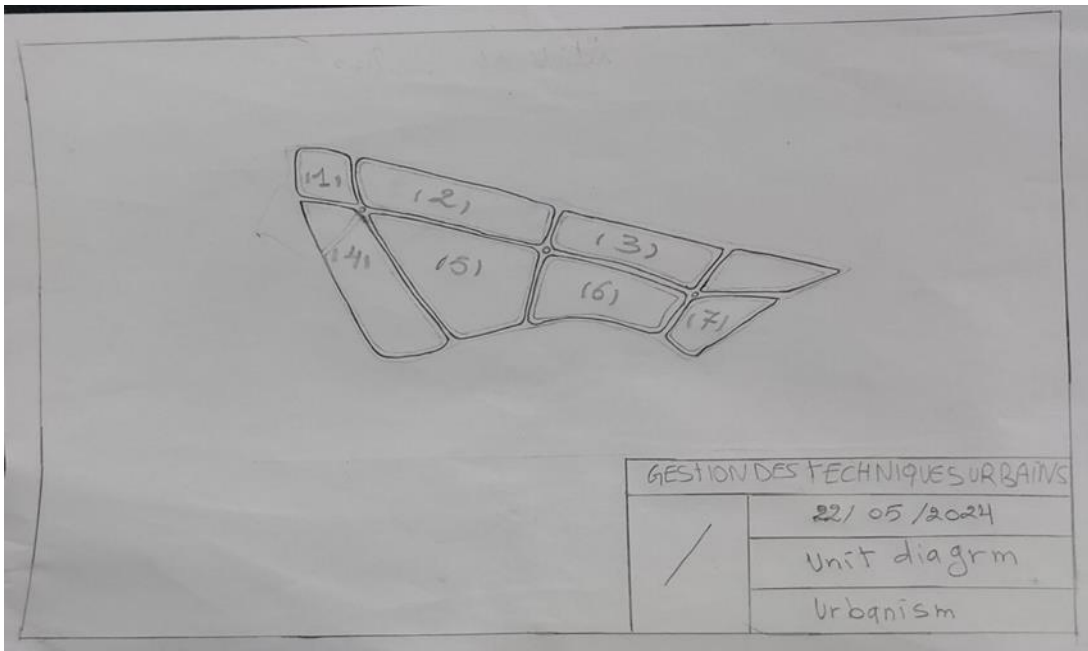
Source: Prepared by students based on the book
Theoretical Network for Equipping (CNERU)

THE FINAL SCHEMAS:



PICS16: Reads

Source: by



PICS17: Unit Diagram

Source: by

Final Management Plan

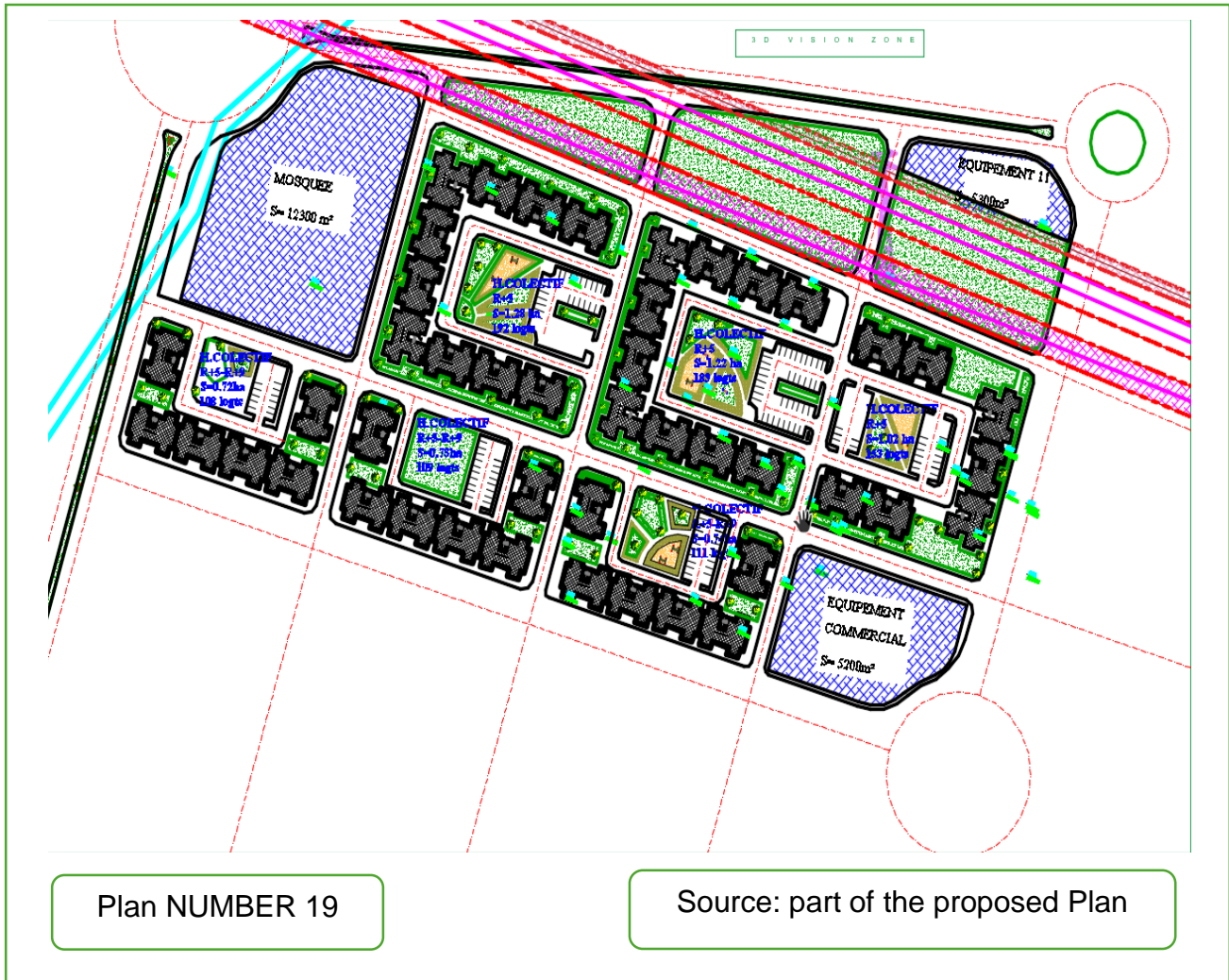


Plan NUMBER 18

Source: proposed Plan realized by students

3D vision:

We choosed a Zone from the STUDY POS to create 3D vision:



3D vision :



Picture number 18



PICS number 19



Picture number 20



Picture number 21



Picture number 22



Picture number 23



Picture number 24



Picture number 25



Picture number 26



Picture number 27



Picture number 28



Picture number 29



Picture number 30

The conditions book

Introduction:

The importance of the condition book lies in the application and respect of the laws and legislation related to urban planning stipulated in Law 29-90 of 14 Jumada I of 1411, corresponding to 1 December 1990 on planning and construction, which defines the standards for the development of public and urban spaces and land use and regulates the stages of implementation of various development projects to ensure the achievement of national economic, social and environmental objectives within the framework of sustainable development. In this regard, we have carried out this project related to the urban planning of the land occupation scheme No. 08 of the city of Tiaret, which is owned by the state, which aims to reduce the pressure.

The importance of the configuration workbook:

- ❖ Quality assurance: Ensures that projects are carried out to the required standards.
- ❖ Organization: Facilitates the organization of work and the distribution of tasks between different parties.
- ❖ Transparency: Clarifies all terms and conditions upfront to avoid disputes.
- ❖ Legal compliance: Ensures that the project complies with local laws and regulations.

-Based on this, **we proposed the following articles:**

Article 01: Earth property:

The land of the project is located on the southeast side of the main assembly of Tiaret. It is all over space 182.8 hectares, property of land belonging to State property.

Article 02: The project area has been divided into:

- ✚ Residences
- ✚ Equipment
- ✚ Green spaces
- ✚ Play Spaces

- ✚ Entrances and parking areas

Article 03: Residences

- ✚ Buildings should be as close to each other as possible (the principle of neighbor lines).
- ✚ The height of buildings in the built-up parts of the municipality shall be the average height of neighboring buildings.

-Article 04: Equipment

- ✚ Accompanying and necessary equipment in the area can be programmed within the framework of the development plan.
- ✚ They should be able to build blocks that respect the urban economy when they are located within the municipal perimeter.

-Article 05: Green spaces

- ✚ Plant species adapted to the local climate must be planted.
- ✚ A minimum distance between trees and buildings must be respected.
- ✚ The national standard must be respected when programming green spaces 7 m² per person

- Article 06: Play Spaces

- ✚ Play areas should be realized so that they are as close to the children as possible
- ✚ The design and furnishing of play areas should take into account the safety of children.

-Article 07: Entrances and parking areas

- ✚ Entrances should be connected to roads in a progressive manner to facilitate travelling from residential areas.
- ✚ Parking lots should have adequate lighting.
- ✚ Parking should be programmed next to residences and facilities while respecting the local car ownership rate.

-Article 08: Roads and various networks

- ✚ Secondary roads are 12 meters wide and tertiary roads are 7 meters wide
- ✚ All facilities and residences must be connected to the various networks

-Article 09:

- ✚ The municipality shall carry out various maintenance works necessary for urban furnishings, green spaces and lighting

-Article 10:

- ✚ Involve neighborhood residents in the development process and take into account their opinions and wishes.

-Article 11: Obstacles and easements

- ✚ Respect the easements of electrical lines and valleys as well as gas and water networks

-Article 12: The waste

- ✚ Waste should be placed in the designated areas.
- ✚ Participation of project beneficiaries in keeping the surroundings clean by raising awareness.

Conclusion of the chapter:

Based on the results of the study, the degradation of the land of the project and of the adjacent area that helped us guide the operation of the project has led to the development.

Intensification, we've embarked on the last phase of the blow-out project, which is considered the last station.

-It contains three basic processes:

- a) Urban programming is a transformation of needs into areas and areas.
- b) Principles of preparation that give a preliminary picture of what will be going on the project.
- c) Respect and preserve the structure of residence and programmed equipment as well as general space.

A plan was created in an attempt to develop a project that would suit the characteristics of the area and the surrounding environment.

In order to ensure the realization of the objectives set in the field and to define the formulas and duties that must be respected during construction and management.

it was necessary to support these processes with a term book, which is a legal document that follows the proposed project and controls the project to ensure the application of legal specifications and legislation.

Accordingly, the desired objective of adapting and integrating Land Occupation Scheme 08 functionally and spatially with the existing fabric has been realized

List of reference:

BOOKS:

- ❖ Alberto Zuchelli, introductiona l'urbanisme opérationnel et a la -1 composition urbaine. EPAU vol 2-3,1993, p38-50.
- ❖ Compatibility between environmental factors and urban design, 2008, p.13.
- ❖ Dr. Khalafallah Boujema, Al-Umran and Al-Madinah, Dar Al-Huda for Printing, Publishing and Distribution, Ain Mellila, 2005, p09.
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- ❖ Ebenezer haword, garden cities of tomorrow, DUNOD,1976, P21-

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- ❖ Compatibility between environmental factors and urban design, 2008, p13.
- ❖ Hamia Amara Master's thesis Ecological improvement of collective residential neighborhoods, 2000, University of Mesila.

The websites:

- ❖ GOOGLE EARTH PRO
- ❖ WWW.INGDZ.NET
- ❖ WEKIPIDIA

Legal References:

- ❖ Ordinance No. 29/90, dated 1 December 1990, 15 Jumada I 1411H. Containing the Law on Planning and Reconstruction, Official Gazette of the People's Democratic Republic, No52. p1654
- ❖ Ordinance No. 29/90, dated 1 December 1990, 15 Jumada I 1411H. Containing the Law on Planning and Reconstruction, Official Gazette of the People's Democratic Republic, No52.p1656

The presentations:

- ❖ Khalafallah Boujmaa: Strategy for the Development of Informal Housing Areas in Messila, Algeria, Symposium Middle East and North Africa Regional Urban Development Strategy Seminar - Manama, Bahrain - Manama, Bahrain.31-29 March 2009.

Résumé général :

Le succès de toute intervention urbaine nécessite une étude complète de l'environnement urbain afin de comprendre l'évolution du tissu urbain.

Comme aboutissement du travail que nous avons réalisé (l'adaptation du plan d'occupation des sols n° 08 et son intégration dans le tissu existant), et dans une tentative de notre part, en tant qu'urbanistes, de diagnostiquer la situation existante afin de prendre en compte les besoins et les potentialités et d'y répondre.

Cette étude a été réalisée en raison de la grande importance du sujet, surtout à l'heure actuelle.

En effet, la plupart des villes algériennes souffrent d'un manque de planification et d'aménagement, en plus de la forte augmentation de la demande sur le foncier urbain

Sur la base des résultats de l'étude analytique qui nous a aidés à orienter le processus de facilitation, atteindre l'objectif souhaité et En parvenant à un plan qui montre le projet d'une manière qui assure son intégration spatiale et fonctionnelle.

THANK YOU