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Institute of Architecture and Urbanism

Architecture Master's thesis

Urban Architecture

**Requalification of the south part of Rouiba town's urban
centre**

The renovation operation of the 800m² Plot.

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Dedication :

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Abstract:

The urban changes in today's cities are creating a dynamic of surface sprawl within the production areas of the city. The crisis that the city is encountering nowadays causes the loss of the idea of urban centrality, of the richness and building identity of modern productions. The sprawl of cities towards their peripheries leads to the marginalization of urban centres and the populations that occupy them, causing circumstances of uncertainty and socio-urban discomfort. Recovering these centres is in this manner a need of urban arrangement in arrange to make strides the social and urban circumstance. The urban project provides us with the operational instruments to carry out renewal operations that guarantee the reconstruction of the city on itself and the renovation of the existing system with a view to densifying and reclaiming the urban downtowns by giving a more pleasant living environment that can assume the part of centrality.

Keywords: Urban sprawl, downtowns, urban renewal, co-ownership , urban project.

ملخص

التغيرات الحضرية في مدن اليوم تخلق ديناميكية من الامتداد في مناطق إنتاج المدينة. وتسبب الأزمة التي تواجهها المدينة في الوقت الراهن فقدان فكرة المدن المركزية وثوراء الإنتاج الحديث وبناء هويتها. فتوسع المدن إلى محيطها الخارجي يهملش المراكز الحضرية والأشخاص الذين يشغلونها ، ويخلق ظروفًا من انعدام الأمن والاضطرابات الاجتماعية- الحضرية. وعلى هذا النحو ، يتطلب إصلاح هذه المراكز اتخاذ ترتيبات حضرية لاتخاذ خطوات هامة في الظروف الاجتماعية والحضرية. المشروع الحضري يوفر لنا الأدوات التنظيمية لتنفيذ عمليات التجديد التي شملت إعادة بناء المدينة على نفسها وتجديد نظام استصلاح المناطق الحضرية وسط المدينة من خلال جعله بيئة مريحة أكثر للعيش فيها التي يمكن أن تحمي الجزء المركزي للمدينة

الكلمات المفتاحية: الامتداد الحضري , وسط المدينة , التجديد الحضري , المشروعة الحضري , الملكية المشتركة .

Résumé:

Les changements urbains dans les villes actuelles créent une dynamique d'étalement de la surface dans les zones de production de la ville. La crise que traverse la ville aujourd'hui provoque la perte de l'idée de centralité urbaine, de la richesse et de l'identité de construction des productions modernes. L'étalement des villes vers leurs périphéries conduit à la marginalisation des centres urbains et des populations qui les occupent, ce qui entraîne des situations d'incertitude et de malaise socio-urbain. La récupération de ces centres est ainsi un besoin d'aménagement urbain pour faire progresser la situation sociale et urbaine. Le projet urbain nous fournit les instruments opérationnels pour réaliser des opérations de rénovation qui garantissent la reconstruction de la ville sur elle-même et la rénovation du système existant en vue de densifier et de récupérer les centres urbains en donnant un cadre de vie plus agréable qui peut assumer le rôle de centralité.

Mots-clés : Étalement urbain, centres-villes, rénovation urbaine, copropriété, projet urbain.

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CHAPTER -01-

**INTRODUCTORY
CHAPTER**

I-1- Introduction to the general theme of the master ‘ARCHITECTURE AND URBAN PROJECT ‘.

The general problematic of the master 'Architecture and Urban Project' is part of the studies concerning the control of the transformations of the urban form, within the morphological approach to the city and the territory.

It is part of the broad corpus of critical urban planning research on the control and production of urban forms in response to the functionalist approach to the production of the city in the 1950s and 1970s, which resorted to the models of modern urban planning.

It focuses on the territorial fund as the basis for the planning of urban ensembles and as a support (reservoir, matrix affected by multiple structures) to define and orient their development: the natural forces that have in the past ensured the organic development of cities will be highlighted to provide the necessary framework for understanding the relationship between these cities and their territory.

Drawing on the considerable capital of knowledge produced and accumulated over time by urban research, urban planning research is currently investing, in a particular way, in the field of new practices and new project instruments as well as new means of controlling urbanization and its forms.

In this vast field (of control of urbanisation and its forms), the master's degree 'Architecture and Urban Design' raises in particular the specific problem of the capacity of the normative and regulatory urban planning instruments in force to formulate and produce adequate urban responses to the transformations that cities are undergoing in their centres and peripheries.

The practices of operational urban planning (with a strictly programmatic and functionalist purpose) require a critical attitude on the part of those involved in the city: it is the urban project that will constitute the architect's specific contribution to the plural practice of urban planning, corresponding to a new way of thinking about urban planning. The urban project then becomes a possible response element for the reconquest of the fabrication of the city in the face of the crisis of the architectural object and the crisis of urbanism, which has become too regulatory.

More than a concept or a historical reading of urban phenomena, the notion of the urban project was in the 1970s the expression that "crystallized the various aspects of the critique of functionalist urbanism, and simultaneously, that which expressed the architects' demand for a return to the field of operational urbanism"¹.

During the following decade, among the various authors and theorists of the urban project, Christian Devillers distinguished himself on the architectural scene as the author - and actor - whose epistemological contribution to the theme of the urban project was the most significant².

¹ Bonillo J. L., Contribution to a critical history of the architectural and urban project, Thesis of H.D.R., INAMA Laboratory, E.N.S.A.Marseille, (March 2011)

² Devillers, Ch., « Le projet urbain », in Architecture : recherche et action, Actes du colloques des 12 et 13 mars 1979 à Marseille/Palais des Congrès, Paris, Ministère de l'Environnement et du cadre de vie, CERA/ENSBA. Concernant cet auteur, voir également : Devillers, Ch., Pour un urbanisme de projet, mai 1983 ; et Conférences

After recalling the main qualities that make up the city: sedimentation, complexity, durability of forms for new uses, etc., Devillers will develop three aspects³ : the first concerns a theory of urban form, the second deals with the methods of the urban project, while the third tackles the difficult question of institutional and procedural logics. He concluded it by stating that the urban project "is a way of thinking about the recognition of what is there (...) the foundations on which one builds to establish foundations for others that will come after": a conception of architecture in its relationship to place and history, ensuring sustainability and historical continuity.

It is the alternative to urban planning through the notion of the 'Urban Project', which is defined as a filigree of all these remarks that will allow us to build a substitution approach in which history and territory will constitute the essential dimensions.

In fact, the urban project is today a set of projects and practices that manage public and private space and the urban landscape. "Without reflecting a doctrine in the narrow sense of the term, the idea of the urban project nevertheless refers to a doctrinal point of view that we are trying to substitute for another: operational town planning, which can be expressed more or less according to thresholds»⁴ .

It will then be a question, on the one hand, of developing the tools for defining, managing and controlling the urban form and reintroducing the architectural and landscape dimension into the urban planning process, and, on the other hand, of situating the approach of the urban project between continuity with the data of the historic city and reference to the experience of modernity.

In the approach of the master 'Architecture and Urban Project', the analysis-project passage has been a major pedagogical concern in the teaching of the architectural and urban project.

In this respect, Albert Levy and Vittorio Spigai [1989] in their 'Contribution to the urban project', who favour the historical dimension to ensure the passage between analysis and project: historical continuity should allow the 'conformation' of the project to (and in) its environment to be ensured.

This same concern is approached by David Mangin and Pierre Panerai [1999] from another perspective: that of the reintegration of built types, mainly produced by the construction industry, into the fabric logic.

The history of cities, for its part, teaches us the permanence of layouts (roads, parcels of land, etc.) and the sometimes very rapid obsolescence of fabrics. It is therefore advisable to start from today's current production (types, programmes, financing and the usual construction processes of average contractors) to work from a new perspective that integrates, from the outset, a reflection on possible evolutions and transformations, both public and private. This attempt to update the mechanisms and techniques that have made it possible to produce the

paris d'architectes, pavillon de l'arsenal 1994 – Christian Devillers, Le projet urbain, et Pierre Riboulet, La ville comme œuvre, Paris, éd. Du Pavillon de l'arsenal, 1994.

³ Speech by Ch. Devillers in March 1979 at the colloquium entitled Architecture: Research and Action at the Palais des Congrès de Marseille

⁴ Bonillo J. L., morphomogical analysis and the urban project in Intergéo-Bulletin, 1995, n° 118.

cities, leads here to very pragmatic and practical indications (layouts, frameworks, dimensioning, division, terminology...).

The main objective of the master 'Architecture and Urban Project' is part of a theoretical construction which makes the abandonment of the utopia of the functional city of the modern movement and the acceptance of the concrete city inherited from history, the essential reference of the master's approach. The city inherited from history is the obligatory context for the inscription of architecture. In return, architecture...

Builds the city. The return to history does not mean, however, a 'simplistic' rejection of modernity for a nostalgic attitude towards ancient urban production: the architectural and urban productions of the 20th century do indeed require a wider critical evaluation of their models and methods, giving rise to numerous avenues of research.

During the 2019/2020 academic year and among the different perspectives from which the urban project has been approached and developed, three themes have been privileged:

- The Urban Project and Urban Planning Instruments
- The Urban Project in the Historic Centre
- The Urban Project on the periphery

Through the theme of the urban project, the students will then be able to propose a territory for reflection and experimentation on the city.

Dr. Arch. Mr.Zerarka

Holder of the master 'Architecture and Urban Project'.

I-2- General Introduction:

The city is a complex entity, it is daily transformed in search of the necessary balance for the proper functioning of the ancient city, to a modern metropolises, researchers and urban planners are constantly trying to find solutions to repair the problems that are in the city. « The city is constantly changing in detail, we can only partially control its growth and shape. There is never an end result, but only an uninterrupted succession of periods »⁵.

The city has consistently been worked through the intervention of some type of authority, from the standards raised by the lords of ancient Egypt to the great post-war urban plans in Europe. As a matter of fact, if the paternity of the expression "urbanism" is credited to IdelfonsoCerdà in his work The General Theory of Urbanization published in 1867, the city has consistently been an intermittent subject of reflection among scholars. What's more, since the the end of the 19th century, numerous authors have been studying that case, each proposing their own approach: sociological obviously, but also anthropological, architectural, artistic, and even philosophical.

The urban project is one of this a new approaches , a new management of the city that attempts to react to the issues presented in urban areas built according to the principles of modern development, it expects to improve the living conditions of residents on the social, financial and spatial levels

Today in most cities, any large –scale urban project is arranged and overseen by an operational project owner who is directly dependent on the public authorities (commune, community of communes, department, area or State). Along these lines of making the city requires a starter reflection on the aims to be developed in the project, so there are numerous texts expressing the thoughts and principles created around the idea of urban planning.

But for our case,since after the independence of ALGERIA , most of its urban communities still remains relaint on the old core despite all the considerable growth due to the various regional planning policies and the construction of urban areas through housing .Faced with this fact, town planners have consistenly tried to find powerful solutions in order to respond to the concerns of centres and multi-centrality. So it is in this context that our research is directed on the urban renewal of the urban center of Rouïba town.

I-3- presentation of the case study:

Rouibatown is located between two large agglomerations, Algiers and Boumerdes. It is administratively linked to the wilaya of Algiers and located 31Km on the east of Algiers and 25Km to the west of Boumerdes.

It is a city with industrial vocation although more than half of its territory is composed of agricultural land. The town is crossed by major transport infrastructure routes driven by the socio-economic needs of the country and the region.

- The wilaya road CW121
- RN5: ensures the inter-regional link, the very important road traffic.

⁵LYNCH Kevin: "L'image de la cité ", EditionDunod ,Paris 1976, P81

- RN24: this important axis connects the coastal cities to each other

furthermore, with Its historical past, as well as its strong presence in the economy and industry have made it a city like the outskirts of Algiers, and a receptacle of a dense industrial fabric and also a housing program often carried out at the expense of agricultural land, creating a fragmentation of the urban fabric, generating several anomalies something that dictated and motivated our choice making the city a good subject of study.

.I-3-1-presentation of the intervention area:

Our intervention site is located in the urban downtown of Rouïba , on its colonial centre. It is the very first extension of the city and it is composed of :

- A wilaya road and national road, the railway line, a set of wastelands (urban, industrial etc ...), a market, a railway station

1-4- Introduction to the general problem:

Algerian cities continue to grow as a result of the increase in its population, its needs and its economic and technological development.

A housing crisis that calls for urban sprawl to the detriment of agricultural areas degrades the ecological footprint. The city of Rouïba is one of the examples of this state of affairs because of a strong urbanization that comes to support the need of a population in perpetual growth.

This strong increase in the urbanization of our cities in recent years has greatly reduced the agricultural and natural spaces of Rouïba town, a large percentage of the S.A.U (the useful agricultural area) gradually replaced by a residential or industrial tissue.

The position of the city of Rouïba between the capital and the wilaya of Boumerdes has favoured its spreading, its proximity to new infrastructures such as the east-west motorway has redefined its contours and therefore the directives linked to its development. It has always been an active zone for development because of the railway and the industrial zone Rouïba-Reghaïa which has resulted in a pool of employment which has made it possible to make attractive the city of Rouïba, which has become a place of observation of public facilities (APC, daïra, courthouse, etc.)

Urban sprawl can be put in parallel with the development of the car fleet and road infrastructure, industrial and military areas, which require large areas and which are rejected from city centres both because of the cost of real estate and because of the rejection of certain nuisances linked to these activities. The scale of urban sprawl has manifested itself in all urban centres and in their peripheries, which are expanding at an unbridled pace, losing sight of the notion of urban space.

The activity areas (Zs) mainly located in urban areas, in particular the requalification of these activity areas, especially in old structures, also represent real land opportunities.

The current challenge is to promote a dense, mixed city, pleasant to live and structured around different networks in common, this reorganization of the urban space guarantees a management economy in resource and space, it is also about thinking of returning to the city and building the city on itself "Rebuilding the city on the city" in order to eliminate urban sprawl to preserve agricultural land and strengthen the downtown of Rouïba.

Faced with this critical situation, our problem is mainly expressed by the following question:

- **What strategy was adopted to build the city on the city from its existing fabric at the city centre level?**
- **How to guarantee the consolidation of the city centre of Rouiba town?**

1-4-1. Presentation of the general problem:

Yesterday as today our cities are something like personalities of individual living systems whose relationships and functions are constantly changing. To this day, no village and no city looks completely like another. The city is a place of exchange, a node of flows of people, capital, goods, cultures, information, and ideas. It is the fundamental element of the organization of space, because it maintains relationships and exerts an important influence on the space that surrounds it. It is an engine for both economic and social progress. From a small agricultural village to an urban centre which provides services activities such as commerce, administration and place, it is industrialized with the establishment of the railway network, the development of trade, rural exodus and population growth.” In the Netherlands, the number of people living in urban areas has increased. At this state of affairs the cities are found saturated, suffocated. Many consequences face social life, mobility and environment.”⁶

Algerian cities have undergone significant functional and spatial changes that have characterized them; through the establishment of large peripheral industrial areas, such as the industrial area of ROUÏBA, REGHAIA and SIDI MOUSSA in the plain of MITIDJA(known for its Algerian lands).

In order to meet the new needs of the population in housing and services, the authorities are beginning to nibble the land, this gives rise to the phenomenon of urban sprawl; where urbanisation is uncontrolled and anarchic; Let’s say that the instruments of planning and urban development in Algeria are characterized by their failures and their mismatch with reality. They are often overwhelmed at the time of their completion. This ends by transforming them from urban management and regulation tools into management and regulation tools.

“This is the result of contradictions between often abstract planning choices that prove incapable of containing reality. Resulting from a failed urbanization therefore a poor socio-spatial quality. The Urban Project as an alternative to urban development instruments and as a tool for mastering urban sustainable development, has tried to solve problems that affect the comfort of cities.”⁷New development measures have taken place such as: urban renewal, urban restructuring, urban renewal, rehabilitation, etc. etc.

“The city that is the object of urban planning is not ‘one’. It is a difficult phenomenon to grasp, changing forms and content according to places and historical circumstances, constantly evolving, we must see each city as a special and unique case.”⁸. Mr SAIDOUNI.

⁶Icomos city and architecture “city architecture and public space”, page 1/9.

⁷Urban project: between innovation and tradition in urban action Ecoled'architecture, MARNE-LA-VALLEE

⁸Book Éléments d'introduction à l'urbanisme casbah – 1999 by Saidouni Mouaouia (Author)

Rouïba town is considered as an articulation of two national poles (Algiers and Boumerdès), which represents a particular problem in the plain of Mitidja. From an agricultural village to a colonial urban centre to an industrial town in Algiers has experienced an imbalance due to the population explosion and the rural exodus, the need for housing has made of it a machine of massive production of housing without architectural or urban characters neglecting the services of accompaniment, which results from urban, social and environmental dysfunctions. This calls for the phenomenon of urban sprawl extension of the city to the detriment of agricultural land.

Rouïba town suffers from several problems which can be summarized as follows:

- Construction to the detriment of agricultural lands 'urban sprawl'.
- Military zone at the entrance of the city, which breaks between the old colonial core and the new West extensions.
- Nuisance caused by the industrial area (pollution, noise etc.).
- Urban landscape poverty.
- The bad state of some buildings in the centre

I-5-Presentation of the specific problem:

The general problem of urban sprawl on agricultural land, the densification and suffocation of the city centre by the rupture between the latter and the new extensions, the poor urban structure (viary structure: traffic on the RN 05, boulevard Arbi Khaled without end, functional structure: military zone that makes the break between the city center and these new North-West extension, etc.), the bad state of some buildings in the center and along the way to the railway station , plus an absence of any coherence between the buildings, and an indisputable loss of the city's collective identity(urban facades).

The latter has grown very rapidly in recent years on agricultural land. This phenomenon will lead to urbanisation that is not planned and does not meet the needs of the population (quantity without quality).

On the basis of this observation we tried to: Restructure some buildings in the Rouïba town centre and along the way to the railway station, also we tried to get back the old buildings (vertical extension or rehabilitation) or to replace them with new buildings.

Based on the following questions:

- Can the urban tissue be sewn together and its coherence strengthened?
- Can we stop urban sprawl on agricultural lands, and benefit from sustainable development that meets the needs of the future inhabitants of the city?
- How can we involve our urban project in the growth of the city by preserving the agrarian land?
- How can we get back the bad state old buildings to rebuild the city on itself?
- What project should be adopted to strengthen and consolidate the city centre of Rouïba town?
- How to reinforce the centrality of the colonial core of Rouïba while preserving its balance and its harmonious and sustainable development?

I-6- Hypothesizes:

In an attempt to address our problem, we have submitted the following hypotheses:

- Application of sustainable urban development, by projecting the green belt and the agricultural farm allows the preservation and protection of agricultural land and ensures an urbanization associated with nature while stagnating urban sprawl.
- The urban project through these different modes of action: urban requalification, urban restructuring and urban redevelopment, etc., provides solutions to the shortcomings of urban planning instruments while ensuring homogeneity in cities.
- "Before expanding outwardly, one must strengthen inwardly" - Victor Hugo. Returning to the abandoned land "urban wastelands, military ... etc." allows us to create the city within the city by giving new functions, activities that revitalize it.
- Sustainable urban development ensures a certain balance between industrial zones, nature and urbanisation in the heart of the city, where all urban intervention is linked to the whole structure of the city and its environment.
- - The restructuring and redevelopment of the urban centre enhances the value of the city.

I-7- Research objectives:

The far objective of our research is to propose and find suitable solutions for the recuperation and restructuring of the old urban fabric of the Rouïba town. To do this, we will be aiming to:

- Find the most appropriate approach to balance the old and the new.
- Create a functional mix in the center core.
- Understanding the need to adapt to one's environment as well as the spirit of urban continuity.
- To animate Colonel Amirouche Street and the main roads to reduce the intensity of traffic on the main Boulevard next to the RN5.
- Revitalize the city by reclaiming urban wastelands, which allows the city to rebuild itself instead of spreading out.
- Recovering empty land and old abandoned buildings that will be used as sites for new facilities projects.

1-8-Methodological approach:

This present study is part of a field of research related to the urban renewal of the city of ROUIBA through an urban project of requalification and densification aimed at revaluing the urban landscape of the city, as well as promoting its dynamic and attractive character. Its purpose was to improve the urban quality and the living environment, which are nowadays in perpetual deterioration. This research orientation is explained by the desire to give a new image of urbanity to our city.

The thesis will therefore be structured in three distinct parts:

The 1st part: it is the introductory part, focused on approach, which provides clarification on the trends on which our research is oriented, and on the targets of these trends. It is a part of the figure of the introduction to the general and specific themes in which our study takes place, so we find our problematisation, the hypotheses relating to it. It is a very useful part to become familiar with these terms but also to avoid any confusion in the subject under discussion.

The second part: this part, called "state of the art", is a theoretical approach based on the evolution of the concepts related to the research theme, both through the analysis of examples related to and illustrating our research theme, similar situations and similar projects in the world. The reference works will also confirm and complete the factors retained in the example studies.

The 3rd part: it is the case study, the application of the results and observations noted in the previous parts, which constitutes a verification and application of the recommendations to solve the difficulties identified on the intervention site, to improve the spatial quality of the latter as well as its attractiveness.

1-9-Succinct presentation of the case study: Rouiba town.

Chapter 01: Introductory Chapter.

1- Introduction to the general theme of the master: The Urban Project.

2 - Introduction to the research theme (intervention theme): Urban Renewal of Urban downtown.

3 - Brief presentation of the case study: City of Rouïba

4 - General Problematic.

5 - Specific problematic.

6 - Hypothesizes.

7 - Research objectives.

8 - Succinct presentation of the case study: Rouiba town.

9 - Methodological approach.

Chapter 02: State of the Art in relation to the theme developed.

1- Introduction (it's about putting the point on the publications & the works that treat the same thematic).

2- The development of key concepts

- The urbanproject.

-The urbansprawl.

- Urbanrenewal.

- The co-ownership.

3- Exemples analysis that are in relationship with the developed thematic

Chapter03: The case study of this chapter consist of a written part and a graphic part.

1- Introduction.

- 2- The case study analysis with the application of the chosen methodological approach plus the project presentation and the general conclusion.
- 3- This chapter is composed of two parts: - the written part.
- graphics part.
- 4- Conclusion

CHAPTER - 02-

**STATE OF
THE ART**

Introduction:

The first part of this chapter will define the conceptual framework that covers the entire theoretical part. It will be a question of developing the knowledge related to the previously mentioned theme, through all our readings (articles, books, journals, Magisterial theses and doctoral dissertations ...etc.) in order to respond to the general problematic related to the dysfunction of the urban fabric of the urban centers .

However, it seems inevitable, when dealing with issues related to the concerns of the urban disciplinary field, that strategies such as :

The Urban Project, Urban Renewal, Urban Sprawl and the co-ownership.

In this case, our analysis will focus on some definitions and examples that have allowed us to illustrate these terms and give rise to the essential principles to carry out our development plan with similar objectives, and to be able to come out with an adequate project.

II.2. THE URBAN PROJECT:

II.2.1. the notion of urban project:

"...the urban project does not reveal a profession but a competence, it is not a procedure but an approach ... it is a thought of the recognition of what is there, of the traces, of the substratum, a recognition of the movement of the flow in which we are situated, of the foundations on which we rely to establish foundations for others that will come after. ."¹⁹

The urban project is also a new approach to spatial intervention, concerned with integrating the different dimensions of the planning and the city. It integrates several actors in the urban production at the same time. The urban project had appeared as an urbanistic instrument of urban architecture following the crisis of the contemporary city and it is presented as an attempt to ensure continuity and articulation between the city, the district and the architectural project by returning

¹⁹DEVILLERS, Christian, 1994 : The Urban Project, du Pavillon of l'ARSENAL editions, Collection LES MINI PA, Paris, 1994, pages 12-13.

to the history of the place and taking into account its heritage and the opinion of its inhabitants.

II.2.2. . Definition: The urban project can be defined as:

A strategy of thinking and designing the city, it is an urban expression of shaping the city and a tool for the production and organization of space, through the imposition of well-defined spatial ordering rules. It carries social, urban and territorial stakes.

« The urban project is like a response that connects the building and the city, between architecture and town planning.»²⁰

According to MaouiaSaidouni in his book "Introductory elements to urban planning", *"the urban project is determined as a work designating agglomerations, cities or parts of cities," In this case, it is not a question of describing the "urban fact" in itself (which is regularly done by urban economics, geography, history or sociology), nor by formulating typologies of cities, but of creating a project integrated into its environment and characterized essentially by its urban and then architectural aspect, nor by formulating typologies of cities.»*²¹

The urban project now takes the form of a process of global reflection on the city that takes into account the connection of spaces as well as the memory of place, as Christian Devillers defines it: *"The urban project is not a return to the old city, but a proposal for the modernization of the apparatus of production of space, it is in fact a proposal for the recomposition of the sectoral logics that normally govern the production of the modern city through the division and specialization of tasks. »*²²

II.2.3. The scales of intervention:

²⁰PatriziaIngallina, "What do I know? Le projet urbain", February 2001, Paris, edition: Presses Universitaire de France, p

²¹*Introductory elements to urban planning; History, methodology, regulations; MaouiaSaidouni; Kasbah edition 2000*

²² *Public spaces and urban culture (CERTU collection),p48*

The latter a strategic vision of space that sometimes allows us to move from the global to the local scale. is *"There is no size to an urban project. An action of limited size can have a major impact on the territory's future."*²³

- This diagram taken from Ingalina's²⁴ book illustrates and schematizes the hierarchy of its scales

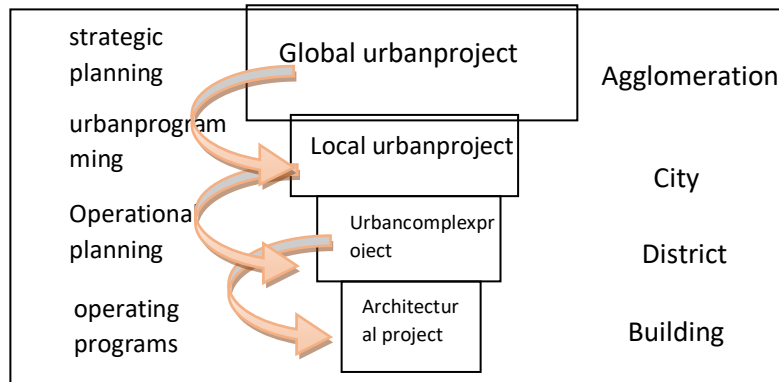


Figure 1: diagram explaining the scales of the urban project. **Source:** "Book "The Urban Project", Ingalina

II.2.4 Urban project principles:

- 1-the urban project is thought of both as a process and a result, and not as a result without its process (its means and paths).
- 2- The urban project is thought with the existing city, as a reproduction of the city on itself, not as a growth or spreading of the city.
- 3-The urban project is conceived in a balance between the short term and the long term, and not in an emergency or utopian context (seizing the opportunities of the moment without compromising the resources of the present for the needs of the future "sustainable development").
- 4-The urban project is conceived as an open, adaptable, (and not closed, definitive) device.
- 5-The urban project is thought in relation to the tone of the actors of the city (including the inhabitants, and not outside or against them).
 - common interests rather than the public interest
 - consensus rather than imposition or conflict
 - partnership rather than the addition of disjointed initiatives
- 6- The urban project is designed as an acceptable, feasible, therefore adjustable and reversible device.

²³ PANERAI, Philippe and MANGIN, David: *Projet urbain*, 1999, Éditions Parenthèses, Marseille.

²⁴ Scale of the urban project. Source: "The urban project" book, Ingalina.

-in terms of political and economic feasibility and not just technical feasibility

-in terms of technical solution (transformability, reversibility ...)

II.2.5. The Dimensions of the urban project

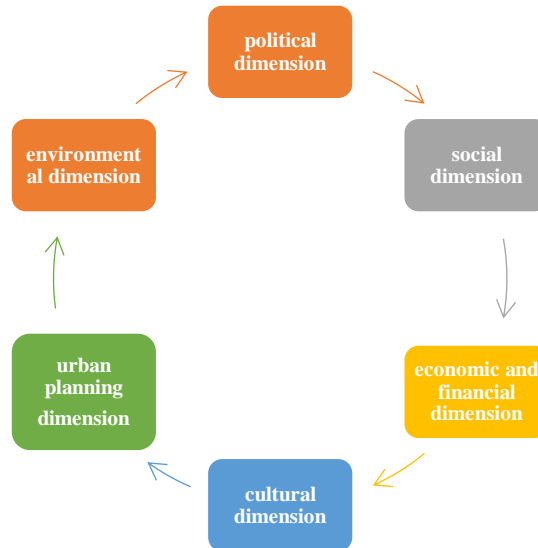


Figure2: Diagram explaining the dimensions of the UP Source: author 2020

II.2.6. The Stakes of the Urban Project:

- Improves the quality of life.
- Integrates consultation and negotiation.
- Offers concrete and operational solutions.
- Optimizes the internal management of collectives.
- To be a strong vector of development
- Attracts companies.
- To better serve the citizens.
- Promote local economic development.

II.1. Urban sprawl:

II.1.1. Definition:

Urban sprawl can be defined as the urbanization of areas on the periphery of major urban centres, which creates urban agglomerations.

The Urban Planning and Development Dictionary (2005) defines urban sprawl as urbanization. The term “urbanization” has two distinct meanings. Sometimes it is rare in French, but more frequent for its Spanish counterpart, for example, the action of urbanising, creating cities or expanding urban space. More frequently, it is the increasing concentration in cities (formerly) and in urban agglomerations.»²⁵

II.1.2. The impact of urban sprawl:

²⁵DICTIONARY OF URBAN PLANNING AND DEVELOPMENT. 2005. P.

The negative impacts of urban sprawl are numerous: economic, environmental and social. The problem of pollution caused by the increase in travel, transport and the size of the cities accentuates the environmental footprint of the cities. This urban sprawl also causes the loss of land for agriculture production support essential to the activity. So the management of urbanization is vital in order to curb the consumption of agricultural land, natural areas and to limit the environmental impact of cities.

In addition, it is essential to preserve agricultural land to cope with the increase in global food demand.²⁶

II.1.3. Reasons for urban sprawl:

1. Desire to access the property (of a house with garden)
2. Price of the land cheaper than in town
3. Want to be in the countryside and have the services of the city
4. New transport infrastructure (road, railway station, airport)
5. Better quality of life/ less population concentration

II.1.4. Consequences of urban sprawl:

- The Rurbanway of life
- Distance from places of residence to places of work
- Increase in common transport and network infrastructure
- Increasing the impact of pollution
- Conflicts between farmers and new rural areas
- Landscape destruction/biodiversity reduction
- Destruction of agricultural land

II.3.1. Urban renewal: *«The term "renewal" refers to an in-depth recovery of the existing urban fabric and is close to the term "renovation". The term requalification characterizes an action that restores quality and demonstrates a willingness to develop the built heritage.»²⁷*

- **Definition:**

²⁶Canalblog, urban sprawl, May 19, 2014, available at: <http://urbanisation.canalblog.com>

²⁷ Gilles Novarina and Paola Pucci, *Renewal in France Requalification in Italy. Recent public-private partnership cases*, 2004.

Urban renewal is an approach to city development without spreading it out, by exploiting empty pockets, or reclaiming urban wastelands, it is a type of recycling of an urban entity.²⁸

Urban renewal aspires to the reconstruction of the city on itself and the revitalization of dilapidated neighbourhoods, thus « it is taking to the notions of Restructuring and urban regeneration, but also encompasses the notions of rehabilitation and renewal»²⁹

Through the actions it undertakes in terms of production and reproduction of the city on itself, sometimes through heavy demolition-reconstruction operations, it is to be considered and envisaged in the long term..³⁰

II.3.2. Urban renewal objectives : Urban renewal implies a critical situation, it is not only a sign of the renewal of urban areas through the revaluation of the built and socio-economic framework.

But it also expresses the willingness of public authorities to renew their methods and approaches to dealing with certain aspects of the city. Among the major objectives of urban renewal we can cite the following³¹ :

- **Modernization** of the built-up frame by massive operations, in some cases of the demolition-reconstruction operations of severely degraded neighbourhoods, in order to construct new buildings that better meet the new requirements urban, whether stylistic, ecological, social or other.

- **The economic development** that can be offered by the renewal and rebirth of a neighbourhood through the possibility of injecting wealth-creating activities and jobs into a more attractive framework for investment.

- **Mixity** in terms of urban functions through the injection of activity in monofunctional areas, on the one part, and social mix to take care of the most deprived populations, on the other part.

II.3.3. Urban renewal actions:

Urban renewal includes a range of multiple actions, but their objectives remain the same, focusing on four main strands:

- **Modernization of the built-up park:** Intervention actions on pre-existing real estate that are sometimes radical.

- **Integration into the city:** This begins with work on the urban grid, which is obvious for large plots.

- **Renewal of urban functions:** An enrichment of the local urban functions, as on a square involved.

²⁸ definition of urban renewal: <http://www.developpement-durable.gouv.fr>

²⁹ BENAMEUR A. H op.-city

³⁰ BERBAR, A., op.-cité, p 32

³¹ BENAMEUR A. H. , op.-city.

- **The banalization of urban management:** Any process of project must lead to manageable achievements, in the will to banalize urban management.

II.3.4. The Modes of Intervention of the Urban Project and Urban Renewal

- Urban renovation.
- Urban planning.
- Urban redevelopment.
- Urban reorganisation.
- Urban rehabilitation.

But It is all about Urban Restructuring , Requalification and Reconstruction :

- **Restructuring:** Restructuring is the reorganization of an isolated building or an entire neighbourhood by modifying its structural elements. In fact, restructuring introduces a new configuration of heterogeneous urban entities, degraded by reshaping them through a fairly extensive radical change, both in its layout and its built environment.

- **The reconstruction of « city on the city»:**

It is one of the most effective alternatives that can help to stop urban sprawl. However, this revaluation of neglected fabrics in the heart of towns and cities is by no means a spontaneous process. « It implies the emergence of a project dynamic, making it possible to overcome the obstacles inherent in this type of operation and to federate the public and private motivations necessary for its implementation. »³²

- **Urban requalification:** Requalification is defined as "the action of giving a new qualification" is "the attribution of a quality, "³³ From this we can deduce that requalification is carried out with a view to improvement or adjustment in order to meet expected criteria.

The urban project and urban renewal are strategies to solve the anarchic urbanisation of cities such as zoning, urban sprawl...etc, and to build the city on itself through the recuperation of wastelands.

II.4.1. The Urbanconsolidation:

The urban development mode put forward in recent decades to generate urban forms that are spread out, not very economical in terms of territory, monofunctional and generating considerable collective and individual costs. The consequences of urban sprawl are now well understood, but the strategies used to curb it often remain

³² Emmanuel REY Density and quality of housing: the problem of urban wastelands Study day - Ed VLP - ASPAN / Lausanne / 10 septembre 2003 - p 1/5

³³ In le Roberte de la langue française ,2003 and Larousse on line ,2009

incomplete. Urban consolidation and densification are two modes of urbanization that capitalize on opportunities for development or redevelopment within urbanized areas.

II.4.2. Definition:

Urban consolidation consists of reshaping or patching a deteriorated urban tissue, or optimizing the use of underutilized space, in order to ensure the maintenance of qualities and the sustainability of the occupation of the environment. Consolidation may, for example, involve the redevelopment of open spaces (streets, squares, parks, etc.), the rehabilitation of abandoned buildings, the subdivision or expansion of existing residences, the integration into the urban tissue of buildings similar to those already present, or even more important interventions.

More specifically, urban consolidation consists of optimising the use of the territory in order to ensure its profitability, to retain or attract new activities and to take advantage of the qualities of an already inhabited living environment (shops, public transport, mature trees, etc.). Public space improvement projects, modifications to existing buildings, including architectural recycling, as well as insertion and densification projects ensure the sustainability and prosperity of the environments thus consolidated.³⁴



Figure 3: Consolidation and densification of fabric **Source:** Living in the city, adapted by the authors.

Available at: <http://collectivitesviables.org/articles/consolidation-et-requalification-urbaines.aspx>

II.4.3. The objectives of urban consolidation:

The consolidation of urbanised environments seeks to optimize the occupancy of space and the use of infrastructure, equipment and public services, by the (re) development of more compact neighborhoods, supporting a diversity of activities and modes of transport. By building on the qualities of already urbanized environments, they seek to exploit them and put them to use for a greater number of people. They can, among other things, contribute to the strengthening of agglomeration and local centralities, make urban infrastructure and public transport profitable, and facilitate access to shops, services and equipment for the whole population.

³⁴living in the City, URBAN CONSOLIDATION, available at: <http://collectivitesviables.org/articles/consolidation-urbaine.aspx>

II.4.4. A diversity of interventions to consolidate living environments:

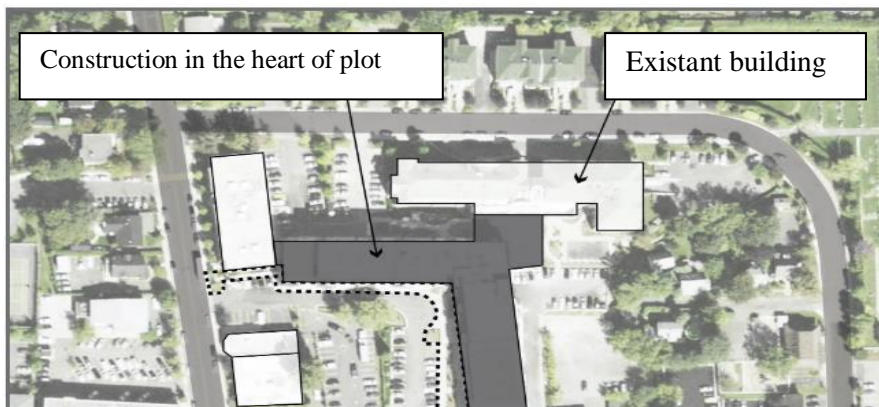


Figure 4: Consolidation of a main street **Source:** Living in the City, adapted by the authors, **available at:** <http://collectivitesviables.org/articles/consolidation-et-requalification-urbaines.aspx>

Rebuilding the city on its own is the result of a combination of varied interventions. The improvement of the open space, modifications to existing buildings and the insertion of buildings in the existing frame

(see the table below) are different ways of consolidating and requalifying the urbanised environments. Implemented with a sensitivity to the host environment, on an ad hoc or grouped basis, these interventions have the potential to structure, connect and intensify the environment.

Reinventing public space and interfaces	Optimize existing buildings	Completing the built-up framework
<p>Strategy 1: Protection of natural and agricultural environments</p> <p>Strategy 2: Permeabilization of the environment</p> <ul style="list-style-type: none"> *Creation of pedestrian and bicycle connections *Restructuring of the road network *Requalification of linear infrastructure *Networking of public open spaces <p>Strategy 3: Creation and improvement of public spaces</p> <ul style="list-style-type: none"> *Redevelopment of open spaces without vocation *Redistribution of road space *Establishment of shared streets 	<p>Strategy 1: Subdivision of existing buildings.</p> <p>Strategy 2: Adaptation to buildings for additional floor space and occupants.</p> <ul style="list-style-type: none"> *Raising of buildings. *Enlargement of building with change of the right-of-way on the ground. <p>Strategy 3: Recycling of buildings with change of use .</p> <ul style="list-style-type: none"> *Recycling for institutional, commercial and office use *Residential Recycling 	<p>Strategy 1: Building Replacement for Densification.</p> <p>Strategy 2: Addition of new buildings.</p> <ul style="list-style-type: none"> *Construction on parcels of land resulting from a reconfiguration of the road network. *Construction of sites resulting from parcel fragmentation. *Construction on vacant parcels and surface parking areas. *Ensemble projects.

Table 01: Diversity of urban consolidation interventions **Source:** Living in the City, adapted by the authors, **available at:** https://vivreenville.org/media/441285/vev_croitre_sans_setaler1_extrait.pdf

II.5.1. An overview on the integrated housing in general:

Before moving on to the presentation of integrated coastal habitat, a brief overview of integrated habitat in general is necessary and important.

The integrated habitat is the habitat or the housing function is dominant, it is associated with the establishment of economic, commercial activities, services and equipment, the objective of the integrated habitat is justified by various arguments, it improves the proximity offer for the inhabitants, creates and reinforces the centralities of neighborhoods, promotes the creation of jobs, the development of entrepreneurship and the attractiveness of territory, the strengthening of economic sectors through the establishment of activities.

The integrated housing makes it possible to obtain, within an island, a programmatic mix (fig.5), functional (offices, equipment, businesses, etc.) and social (assisted or free housing, etc.), to pool certain spaces such as car parks.



Figure 5: Integrated housing; a programmatic mix, made by the author.

II.5.2. Programmatic mix:

1-Functional mix:

The concept of functional diversity is now more suited to a city where economic activities are dominated by tertiary activities. This theme is mobilized to strengthen the attractiveness of investments in the housing sector compared to investments in the sector of activity, and also when it comes to contributing to the economic revitalization of certain residential areas and where the establishment of new businesses and the creation of new jobs for the inhabitants of these areas must be encouraged. The search for diversity is linked to the quest for a diversified economic function and multicultural and multifunctional environments.

The establishment of a functional mix requires a more global approach to housing policy that is consistent with the needs of urban and economic development, while promoting diversification of activities and housing with a view to consistent growth of habitat, employment and trade. In addition to its own economic role, it is a major element in the attractiveness of a region. It provides a range of services for households as well as an animation for neighbourhoods, towns and their centres.

2. Integrated housing:

A multi-functional building encompasses the functions the main aspects of human life «work, housing, relaxation, traffic, leisure ...)

It creates a framework in which the various uses of it complement each other so that all of them benefit from Mutual Multifunctionalsthat makes the urban space more pleasant and diversifying in its use. Drawn on an urban scale (meeting, chatting, walking) and they give the city itscontemporary dimensions.

3-Social mix:

And for social mixity, it is used several times to meet a "Solidarity Requirement", imposed as one of the priority objectives of housing policy.

The notion was developed in response to the concentration of populations in difficulty in disadvantaged areas, particularly social housing districts, which results in exclusionary logics. Mixity is conceived as a means of fostering social cohesion by making diverse social categories coexist in the same place. Mixity is not a one-way street; it is also envisaged through the settlement of modest families in "common law" neighbourhoods by ensuring a balanced and diversified distribution of housing supply between neighbourhoods.

Ultimately, social mixing consists in developing a neighbourhood as a future place for living and meeting people, for exchanges between inhabitants of different geographical and cultural backgrounds and different standards of living, by implementing living and housing conditions that promote social cohesion and avoid or eliminate segregation. This policy must make it possible to integrate each district into the city and to ensure a shared social life in each agglomeration.

II.6.1. CO-OWNERSHIP:

Co-ownership is a legal situation where the same property is subject to competing property rights. The Co-Owner is each individual (moral or physical) holder of these same rights.³⁵. «In the field of real estate, according to Art. 743 of the Algerian Civil Code, co-ownership is the legal situation of a built-up building or a group of built-up buildings whose ownership is divided, between several persons, by lots each comprising a private part and a share in the common parts».As a result, each owner has full and exclusive ownership of these private portions and of the common portions as undivided property.³⁶

II.6.2 Between common areas and private areas³⁷ :

Co-ownership is therefore based on the principle of a private lot in an indivisible common whole. The private portions being what is reserved for the exclusive use of a

³⁵ <https://www.consortium-immobilier.fr/guide/achat-vente/1/3/7/55/15/>

³⁶ <http://pointdroit.com/definition-copropriete/>.

³⁷ People's Democratic Republic of Algeria, Civil Code " Art.744. Art.745. Art.745.", 2007 Jora

specific co-owner. The common portions being the portions that each co-owner may enjoy.

II.6.3. Indivision, a binding co-ownership:

Undivided co-ownership, or indivision, is a provisional legal situation where, unlike co-ownership, the same property is subject to equal property rights between all the co-owners, regardless of their shares.³⁸

In fact, indivision implies the same rights between the co-owners who hold rights of the same nature over the same property without any of them individually and autonomously holding exclusive rights over the said property.³⁹ These rights relate not only to the ownership of the property but also to its occupation. The undivided ownership of a property thus gives rise to a number of management constraints. First, any decision relating to the management of the property must be unanimous and without controversy between the co-owners, which is possible if there is a good understanding between the various parties. Unanimity in decisions represents a major constraint in the case of bad relations between the different owners of the undivided property leading to its paralysis and its unprofitability. On the other hand, and in the case of a property, its occupation can only be effective by one of the co-owners if it is permitted by all of them. By its definition, indivision makes all the co-owners of the property joint owners of the

In the absence of subdivision, indivision implies the absence of any notion of private portions in a situation where each co-owner has the same rights over the whole property as any other co-owner.

II.6.4. From indivision to co-ownership:

The situation of indivision of a property between two or more owners gives free rein to the emergence of disputes between these co-owners as well as to the complexity of the management of the property and its exploitation. In order to avoid the appearance of these management and exploitation problems, being defined as a provisional legal situation, the legislation offers three possibilities to remedy them.

II.6.4.1. The Convention:

The formulation of an undivided co-ownership agreement, which may not be valid for more than five years, by a notary and its signature by all the co-owners to set the conditions and operating rules of the undivided co-ownership. The same agreement must be filed with the land registry of the place where the property is located in order to be enforceable in the event of non-compliance by one of the parties. The notarized document must deal with the various aspects of this undivided co-ownership, in terms of the charges incumbent on each co-owner, the projected sharing (occupation of the property or its use), the rights of the various co-owners and their obligations in the management, preservation and use of the property. This agreement leads to a sharing

³⁸People's Democratic Republic of Algeria, Civil Code, Art.713. 2007 Jora

³⁹<https://www.consortium-immobilier.fr/guide/achat-vente/1/3/7/55/15/>

Provisional in physical lots for the occupation of a part of the property on a permanent basis or in time-lots if they agree to benefit from the whole of the common property each of them for a period relating to their shares.⁴⁰

II.6.4.2. Sharing:

The sharing of the undivided property (in the case of a real estate property) goes through the creation of lots of which each co-owner will be the sole owner in the case of a bare land and the creation of lots constituting private parts as well as the designation of the common parts in the case of a building or a real estate complex. This division will thus lead, in the case of a permanent property, to the formation of a co-ownership, by the formation of lots as private parts and common parts (stairwell, big building, facade walls ...), which will be governed by the condominium regulations present at the level of the Algerian regulations. This sharing can be done in an amicable way in the case where all the co-owners decide to start the legal procedure of an undivided property sharing by calling upon a notary and different trades including an expert geographer. Another possibility, much more costly in terms of time and costs, of initiating the partition procedure in the event that unanimity is not reached, is offered to the various co-individuals who wish to share the undivided property. The possibility of partition by judicial⁴¹ means by bringing the other co-owners before a court that will designate one or more experts who will divide the property into lots of which each of the former co-owners will take exclusive possession according to his shares.

II.6.4.3. Sale or licitation:

This possibility, like the previous one, is confronted with two cases, the agreement between the co-individuals or the judicial procedure. The agreement between all these individuals concerning the recovery of their assets according to their shares leads to a private sale between all the owners of the undivided property and the purchaser whoever he may be (natural person, legal entity or a group of persons wishing to acquire the undivided property). This procedure saves time and costs, unlike a judicial licitation procedure, induced by the impossibility of dividing the said property, which means into property lots⁴².

This licitation implies the sale of the undivided property by public auction. The acquisition of the property by a new owner potentially implies its division into building lots in the case of bare land or individual lots (premises, apartment, offices ...). In this document we will only consider this possibility because it is the only one that can be envisaged in an urban densification procedure with a view to reducing urban sprawl, or the non-profitable use of a property (in particular the construction of low-density single-family houses) goes against the regulations on the fight against urban sprawl.

⁴⁰People's Democratic Republic of Algeria, Civil Code, Art.713. 2007 Jora

⁴¹People's Democratic Republic of Algeria, Civil Code, Art.724. 2007 Jora

⁴²People's Democratic Republic of Algeria, Civil Code, Art.724. 2007 Jora

The final result of these three possibilities is a return to a system of co-ownership where management benefits from better regulations structuring the rights and obligations of each co-owner, defining the different common and private parts as well as the prescriptions for their management and maintenance and the charges that falls to them.

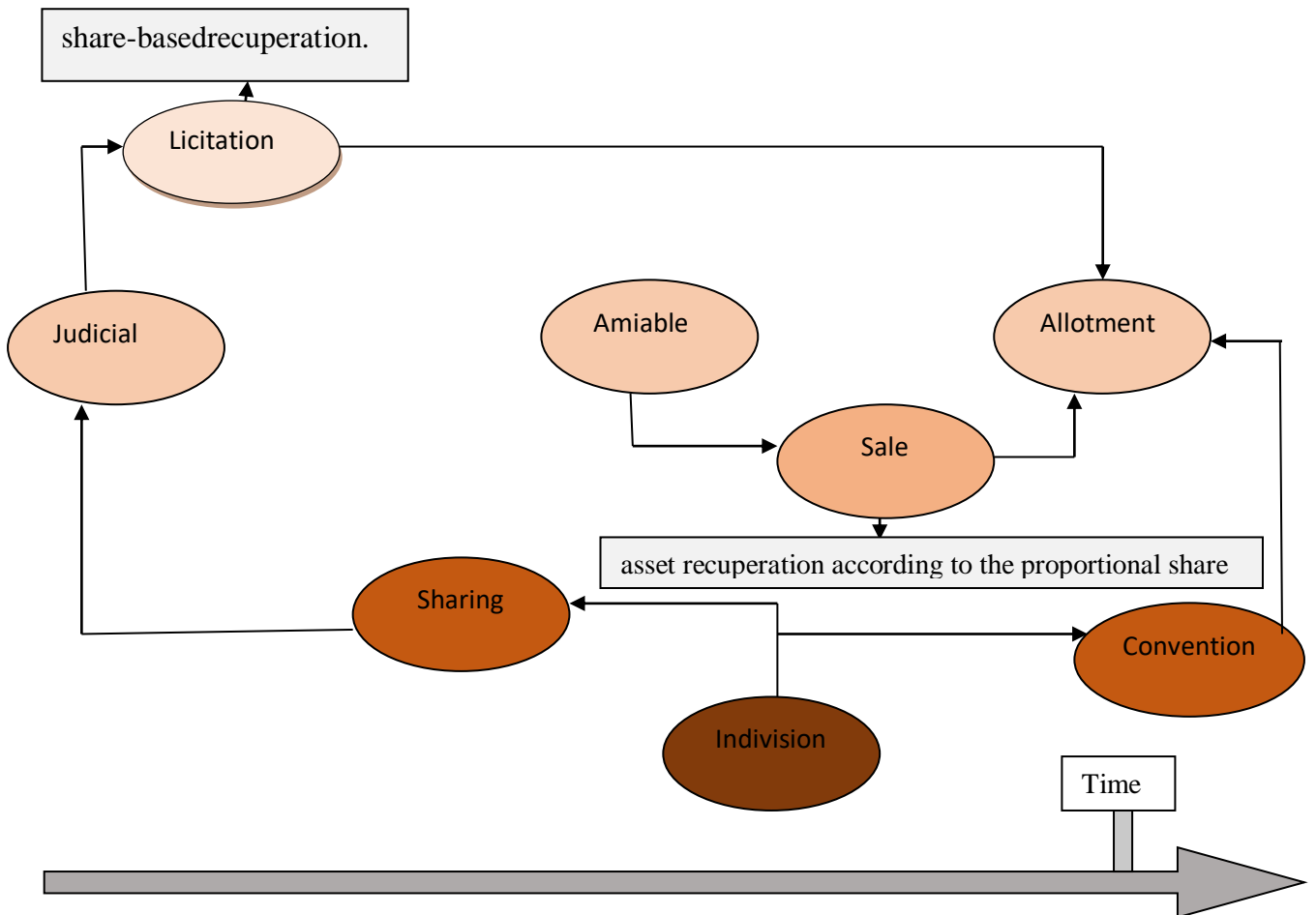


Figure 6: summary diagram of the transition from undivided to individual subdivisions in a co-ownership with a temporal notion of the duration of the different procedures.

II.6.5. Management of the co-ownership:

The management of co-ownership represents a major issue in the success of our study, in order to bring the project to fruition and provide the potential co-owners of the projected properties with a socially healthy living environment and a pleasant built environment. In this study, it is necessary to establish the basic functioning of the management of a condominium property and to highlight the different foundations and mechanisms of a properly managed property.

II.6.5.1. Rights and obligations of owners:

Each owner has the right to use his property and the private parts belonging to him and to dispose of them as he sees fit in the context of a sale or rental or in the event of

a change of disposition within his lot. However, it is limited by the condition that it shall not affect the rights of the other owners, the purpose of the building or the solidity of the building. By extension, he also has the right to enjoy a pleasant environment due to the respect of his own rights by the other owners.⁴³

In return, the owner has obligations in terms of maintenance costs and peace and quiet of the building. Each owner has the duty to assume the expenses of maintenance⁴⁴ of the common spaces according to his share as well as the operating expenses which include the management costs. The owners of premises and stores may not, under any circumstances, carry out activities that present risks of explosion or fire or that could inconvenience the occupants of the building due to noise and odors.

II.6.5.2. Charges:

The charges which are the responsibility of the co-owners and occupants are divided into two categories according to article 750 of the Algerian civil code.

a. 1st category charges:

They are involved in the day-to-day management and minor repairs of the common areas. These expenses must be assumed by all the occupants of the building and are divided equally. They include

- The administrator's remuneration and the salaries of the staff likely to be hired by the administrator (caretaker, gardener, security agent ...) as well as the operating costs of the administration.
- The payment of gas, electricity and water bills for the common areas as well as the maintenance costs of common equipment (booster station for example, collective heating ...).
- The purchase of maintenance products for the common areas.
- The expenses and operating costs of the collective heating system.
- The costs of minor repairs to the common areas.

b. 2nd category loads:

They relate to major repairs to the building, its maintenance and the safety of the occupants. These charges are the sole responsibility of the co-owners of the building. These charges include

« The costs of repairs of all kinds relating to the large walls, roof, terrace, facades, chimney heads, various rising and falling columns, drain connections, rainwater drainage pipes, entrance doors, hallways, staircases, stairwells, landings and any other premises assigned to the exclusive service of the building. »⁴⁵

- Repairs of the clogged pipes.

⁴³République Algérienne Démocratique et Populaire, code civile, Art.749. 2007 Jora).

⁴⁴People's Democratic Republic of Algeria, Civil Code, Art.750.2007 Jora).

⁴⁵ Official Journal of the Algerian Republic No. 14, Executive Decree 14-99, p. 25.

- Facaderestorationcosts.
- Maintenance costs of premises included in the common areas.
- Repairs to elevators and heaters and their accessories.
- Collection of taxes to which things in the common areas are subjected.
- Propertyinsurancecosts.

The expenses are thus divided into two categories, operating expenses which are the responsibility of all the actual or not actual occupants of the building and maintenance expenses for equipment and structural work which are only involved for the co-owners.

II.6.5.3. The Decisions:

The establishment of the different rights and obligations incumbent upon each co-owner, the charges for which he is liable to the co-ownership as well as the entire management of the property, is not done without the direct involvement of the owners.

The administration and conservation of the building as well as the management of the common areas is the responsibility of the community of co-owners and occupants which is constituted in an assembly⁴⁶, which in turn must elect an administrator of the building by a two-thirds majority⁴⁷, or the appointment of a property administrator, whose activity constitutes a regulated profession, by means of a contract⁴⁸. The administrator in question is, as his appointment indicates, the person in charge of the administration of the immovable and responsible for the execution of the decisions taken by the meeting and the provisions of the co-ownership by-laws.

The decisions taken at the meeting are made by vote of the co-owners and occupants present or represented at the meeting⁴⁹. Each renter has one vote concerning decisions relating to 1st category charges while the co-owner has a number of votes equal to the number of lots he owns. The majority required to take a decision differs according to the nature of the decision itself⁵⁰.

The simple majority of votes: is involved in matters relating to the application of the co-ownership by-laws, modification of the distribution of charges, authorization for a member to carry out work affecting the common areas.

A two-thirds majority of the votes: relates to decisions concerning the appointment or dismissal of the administrator, as well as the improvement, fitting-out or creation of premises for common use.

⁴⁶People's Democratic Republic of Algeria, Civil Code, Art.756 bis 2. 2007 Jora

⁴⁷Official Journal of the Algerian Republic No. 14 of 16 March 2014, "Executive Decree No. 14-99 of 4 March 2014", p.22.

⁴⁸ Executive Decree 97-154 of 10 May 1997, Art.2

⁴⁹People's Democratic Republic of Algeria, Civil Code, Art.764. 2007 Jora

⁵⁰Official Journal of the Algerian Republic No. 14 of 16 March 2014, "Executive Decree No. 14-99 of 4 March 2014", p.22.

The unanimity: is necessary for decisions relating to the creation of new premises, the raising of a building or any other major modification of the identity of the building itself.

The management of a real estate property remains an activity requiring certain skills in this field and difficult to be insured by the sole co-owners, if they have no knowledge in the real estate field. Added to this are the functions of building administrator which imply a great availability towards the co-owners in order to collect their complaints and to ensure a good management of the co-ownership.

The administrator will also have to devote a significant time budget to the management and administration of the building. The difficulty of management is mainly due to the co-owners' lack of experience and knowledge of management.

This could be achieved by using a certified property administrator to ensure the management and proper functioning of the co-ownership and to create a pleasant living environment within the real estate complex.

II.7. Study of examples of urban projects:

II.7.1. Examples on the requalification of urban centres:

In this phase we will deal with examples of interventions in historical centres which present the same problems and objectives as our case study. In the light of this information, we may have to make the first decisions about our intervention, including the intervention strategy as well as the basic programme.

- **The rehabilitation of the urban center of Bologna:**

Bologna is the capital and largest city of the Emilia-Romagna region in Northern Italy. It is the seventh most populous city in Italy with about 390,000 inhabitants and 150 different nationalities. Famous for its towers, churches and lengthy porticoes, Bologna has a well-preserved historical centre, thanks to a careful restoration and conservation policy which began at the end of the 1970s.



The Problematic:⁵¹

Figure7 : map of the location of Bologna

In the 1970s, the desire to protect the underprivileged social sectors was asserted at the same time as the movement to safeguard Bologna's historical heritage.

This converged with the revision of the urban planning instruments for the protection of Bologna's historical heritage, such as the 1958 PUD, which considered renovation

⁵¹ VIARO A., Bologna: an exemplary urban renewal, in Habitation: quarterly review of the section French-speaking Switzerland for the Association Suisse pour l'Habitat, Switzerland, 2016

and restoration as a means of improving urban mobility and the quality of housing imposed by the features of modernism.

This new PUD of 1969 was an acknowledgement of the historical centre of Bologna because the growth of the city had accelerated due to the migration of citizens towards the periphery, emptying the old districts and leaving room for an intra-urban migration of the inhabitants of the underprivileged social strata and also for land speculation which abandoned the city centre in favour of the increasingly depopulating tertiary sector.

These investments in commercial equipment led to a significant deterioration of the built environment and eventually to the demolition of some of them.

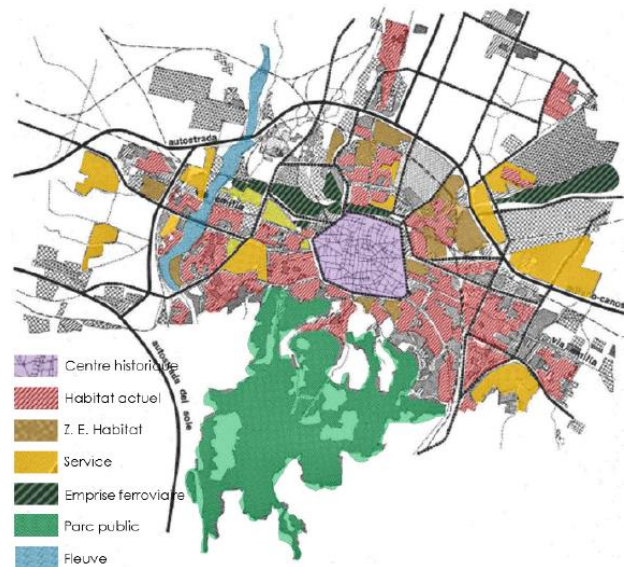


Figure 8: Bologna: General Master Plan.

This rehabilitation was first of all achieved by halting this urban growth in order to keep the inhabitants in their neighbourhoods and then involving them in planning programmes and in the rehabilitation of their own housing through a neighbourhood committee.

- **The requalification of the urban center of IZMIR:**

İzmir is a metropolitan city in the western extremity of Anatolia. It is the third most populous city in Turkey,

after Istanbul and Ankara, and the second largest urban agglomeration on the Aegean Sea after Athens, Greece. The

IZMIR urban project covers 248 hectares. Through a large-scale requalification programme.⁵²





Figure 9 : A view of Izmir from Kadifekale

The problematic:

- The absence of detailed legislative protection for historic city center
- Lack of infrastructure and construction works in urban areas
- Lack of interdisciplinary study
- Wrong planning decisions

⁵²Comparison of Urban Conservation Projects in Historical City Centers: Izmir History Project and Raval Urban Regeneration Project

- Lack of financial resources
- Lack of public participation
- The absence of dialogue between the local administrations and association.

Examples	The requalification of the urban center of IZMIR	The rehabilitation of the urban center of Bologna
<p>The contexte</p>	<p>-The historic centre of Izmir has a diverse cultural heritage.</p> <p>- The city has become very cosmopolitan with the historic centre close to the bay which has caused rapid changes. Today, the population is leaving the old quarter because of an uneasiness caused by a too high concentration of people.</p> 	<p>-In the post-war period, the city of Bologna underwent an urbanization with a view to expansion, the historic centre of the city being left to its own devices in a process of urban sprawl. The degradation of the built environment and the absence of local structures have emptied the centre of Bologna of its population. The authorities in charge of this city then decided to draw up a plan for the regeneration of the historic centre, relying largely on the participation of the private sector and the owners in a partnership framework..</p> 
<p>The objectives</p>	<ul style="list-style-type: none"> • Avoid the departure of the population from the historic downtown. • Stop the illegal constructions that take place because of internal migration. • Enhance tourist attractions with different projects. 	<ul style="list-style-type: none"> • Limit the social deportations. • Involve the public authorities. • Promote the participation of owners and the private sector. • Put in place the necessary facilities for community life. • Provide reception structures/rotational housing. • Limit the development of the tertiary sector. • Define priority intervention zones.


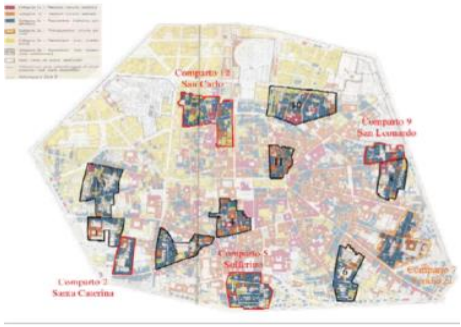
<p>Methodology</p>	<ul style="list-style-type: none"> •The motto that guides the municipal government is: "Izmir is a historical city, but not only for tourism". •To create a private company for the investment of restoration processes and new concepts to strengthen the city's identity. •Promote the work of IZBAN, a subsidiary of the metropolis' suburban train system. •To work between the different departments to initiate collective development policies. 	<ul style="list-style-type: none"> •Limiting urban growth. •Regeneration of the historic centre and renovation of the built heritage. •The permanence of social classes and activities within the historic downtown. •Creation of a functional mixed-use area. •Making consultation a key element of the project. •The creation of a public/private partnership framework. •Realization of a plan for economic and popular construction in the historic centre.
<p>The actions</p>	<ul style="list-style-type: none"> •Renovation of the façades of the buildings of the former Kemeralti Bazaar without changing the commercial character of the area. 	<p>- The renovation of the existing built heritage, starting with the historic downtown area, and the construction of social facilities throughout the urban area.</p> 

Table 02: Thematic examples of urban issues

Synthesis :

The experience of Bologna and IZMIR has shown that urban regeneration can be considered as an alternative and a solution to the depopulation of historical centres, thanks to planning and intervention operations which systematically involve the participation of the citizen at a time when urban development is constantly giving advantage to the existing built environment before planning new urban extensions.

II.7.2. Example on urban renewal:

- **Urban renewal of the Empalot district in Toulouse** ⁵³ :

1. Data sheet of the Empalot project:

Location: Empalot district, Toulouse / France

Surface: 95ha

Start date: 2009

Program: 1500 demolished housing units
3750 housing units built

Owner: Toulouse Métropole

Project management: germ& Jam architectureterritoires



Figure 10:Empalot project ground plan

Source: HDZ / Urban Planners
Architects / Sicoval)

2. The contexte :

- Empalot is a popular district close to the city centre of Toulouse, it was built in the 1950s and 60s thanks to the embankment of the Garonne.
- Empalot has an exceptional metropolitan location allowing to associate renewal and urban development.
- Numerous assets: quality green spaces, the banks of the Garonne, major facilities nearby (Nakache swimming pool, Stadium) and a large number of public services in the district.
- Covering 60 hectares, the Empalot district is home to 5,685 inhabitants (2006 census). Its form as a large complex of multi-family dwellings represents a complete break with the surrounding urban fabric. In addition, some of its housing units have become obsolete in view of the new criteria of comfort and energy performance, and the commercial square in the heart of the district has several dysfunctions.

⁵³Toulouse City Hall website



Figure 11:satellite view of the Empalot district in Toulouse **Source:** Google Earth

3. The project's stakes:

TheEmpalotproject proposes to go beyond the limits of the district and to include urban renewal in metropolitan growth and development with the objective of defining the axes of urban transformation of the district in the medium and long term:

- Building new qualityhousing.
- Opening the district to the city by developing relations with the surrounding districts: the Ramier island, Saint-Michel, Saint-Agne and the future Niel district.
- Take advantage of the presence of the Garonne River to enhance the district.
- Restructuring the shopping centre to make it attractive.

4. The urban renewal of the district :⁵⁴

Following the challenges posed previously, the urban renewal of the Empalot district makes it possible to:

- Transform the neighborhood in stages without breaking with its limits.
- Buildbeforedemolition.
- Develop the public space without waiting for the renewal of the building.
- Preserve the comfort and life of the district throughout the construction site.
- Create a new public space, a new landscape identity.

⁵⁴germ&JAM architecture. Territories, are two associated agencies, one SCM, 25 urban and landscape architects.

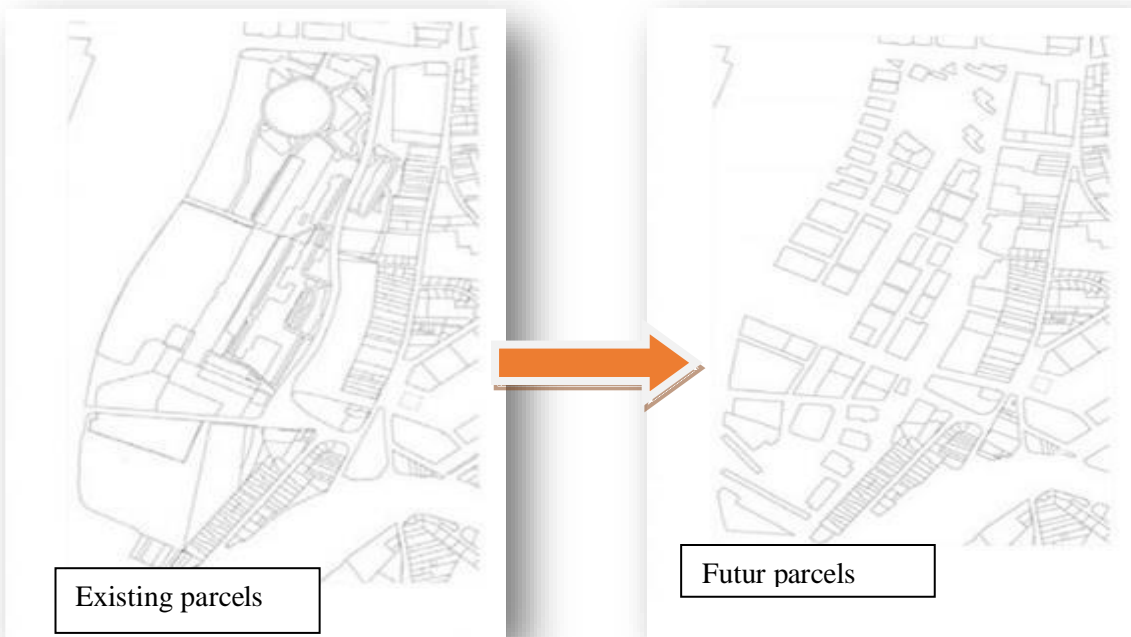


Figure12: Plan for the renewal of the Empalot district **Source:** germe& JAM



Figure 13:Empalot district in 1966 before renewal

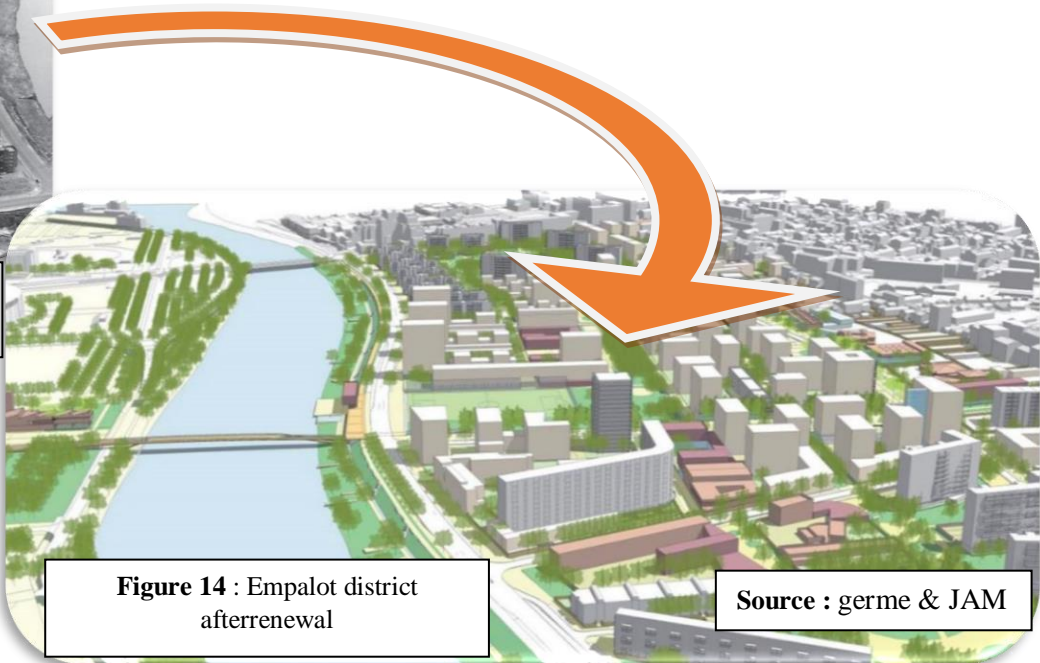


Figure 14 : Empalot district after renewal

Source : germe & JAM

Synthesis :

After the analysis of this example we can conclude that requalification is one of the modes of intervention of urban renewal in order to build the city on itself, therefore this mode of intervention is in fact a form of evolution of the city while introducing the notion of urban mix, sustainable mobility and biodiversity.

II.8.5. Exemple on the integrated housing:

- **63 social housing units in Bagnolet, France :**

1. Technical datasheet of the project

Location: Bagnolet, France

Surface: 4621m²

Start date:2016

Program:63 social housing, offices and shops

Project management:DAQUIN& FERRIERE
architecture

Architect: fabio CIRRINCIONE (winner of the competition launched in December 2016)



Figure 15 : View on the project

2. The description :

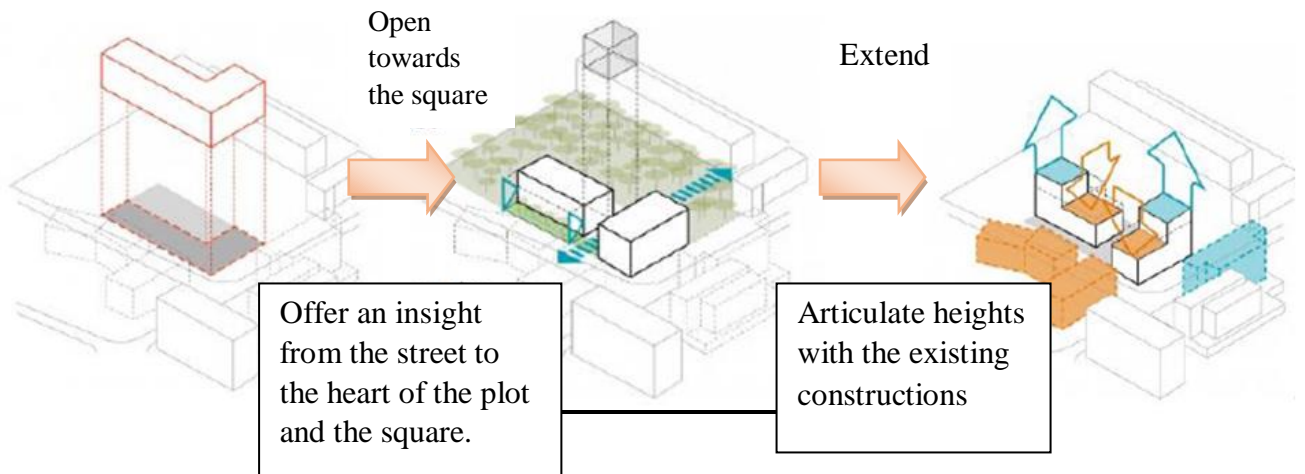
The particular urban situation of the project: the presence of a public square, a square and dwellings, led to the search for the intimacy of the external spaces of the dwellings and to create a singular figure of the buildings. What is justified by the play of templates for a better integration with the existing and volumes to provide views towards the square while maintaining the privacy of users.



Figure 16: Mass lay-out,

Source :DAQUINFERRIERE&ASSOCIATES PDF

3. The form of the project :



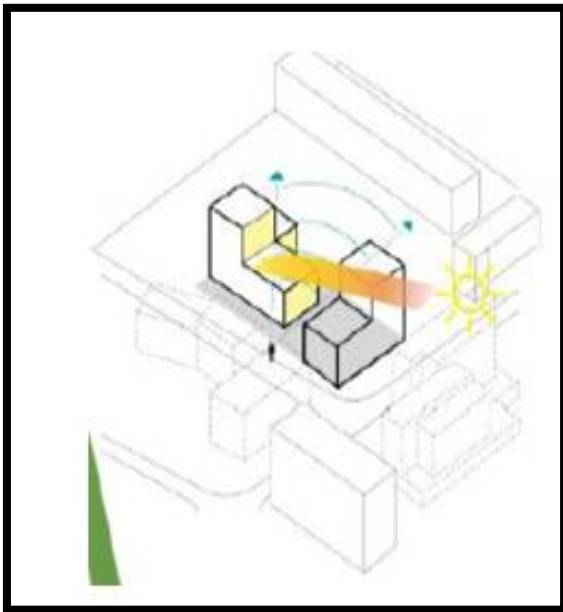
The function:

Constructive system in concrete posts-beams allowing a reversibility of the interior spaces, by the easy modification of the typological distribution of each level of the building.

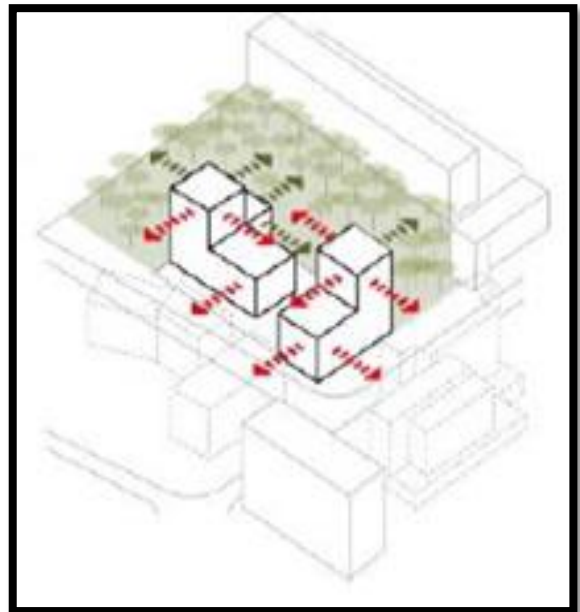


Source : DAQUIN FERRIERE & ASSOCIATES PDF

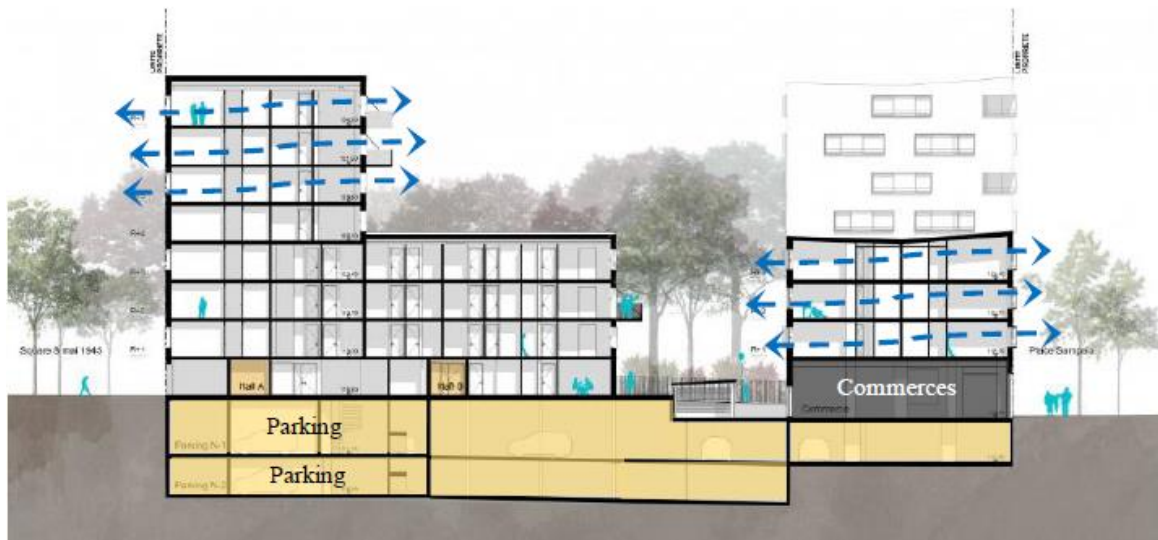
The comfort :



A silhouette that allows to open the heart of the plot to the sun, with an optimal orientation for a good passive strategy.



A silhouette that allowsto open the heart of the plot to the sun, with an optimal orientation for a good passive strategy.



Passive transversal ventilation of the apartments

Synthesis :After the analysis of this example we can conclude that the particular urban situation of the project which is open to a public square and dwellings and how it was integrated in the center of plot is one of the reasons we choose this example to help us in our intervention work that got a similar case to this one .

CHAPTER - 03 -

CASE STUDY

III.1. Introduction:

In order to ensure a complete integration of our urban project to its environment, it is imperative to acquire the necessary knowledge concerning the study area, and collecting informations about its history, plus its structure and its function.

Which drives us toward deep diachronic and synchronic analysis in order to read Rouiba town, our case study and then react in the best way so we will be able to propose the project that will bring a plus and develop Rouiba town in the best possible way.

III.2. Rouiba town presentation:

III.2.1. Geographical data of Rouiba town:

1- Rouiba town location:

a. Territorial location:

The territorial area is limited in the north by the Mediterranean Sea. In the south by Blida, in the east by Boumerdes and by Tipaza in the west.

It occupies a strategic position thanks to its situation between two national attractive poles: Algiers and Boumerdes. Rouiba is located in the heart of the rich flat land of Mitidja, 31km far from Algiers's agglomeration from the east, 7km far from the sea, and 25 km far from the capital of Boumerdes.

Rouiba is characterized by two types of activities, industrial and agricultural ones. It covers a land area of 5325 square km.



Figure 17: Rouiba town location between Algiers & Boumerdes

Source: INCT Staff Card Treated by author.

b. Communal location:

Rouiba town was detached from Boumerdes, to be attached to Algiers in the favour of the territorial reorganisation in May 31th, 1997.



Figure 18: Rouiba town communal location in Algiers

Source: Google image modified by the author.

III.2.2. The delimitation of Rouiba town boundaries:

The delimitation of the study area was based on three parameters:

a. Administrative boundaries:

In the North by: AIN TAYA, HERAOUA & BORDJ EL BAHRI communes.

In the South by: HAMADI & KHMIS EL KHECHNA communes.

In the East by: REGHAIA & OULED HEDDADJ communes.

In The West by: DAR EL BEIDA commune.



Figure 19: Rouiba town Communal boundaries

Source:Administrative division map of the wilaya of Algiers (INCT) Treated by author

b. Natural boundaries:

In the North by: the agricultural lands of Ain Taya.

IntheNortheast by: agricultural lands of Reghaia & Oued Bouriah.

In the Southwest by: agricultural lands.

In the East by: Oued El Biar near the industrial zone.

In the West by: the hydraulic network of Oued El Hamiz &the agricultural lands.

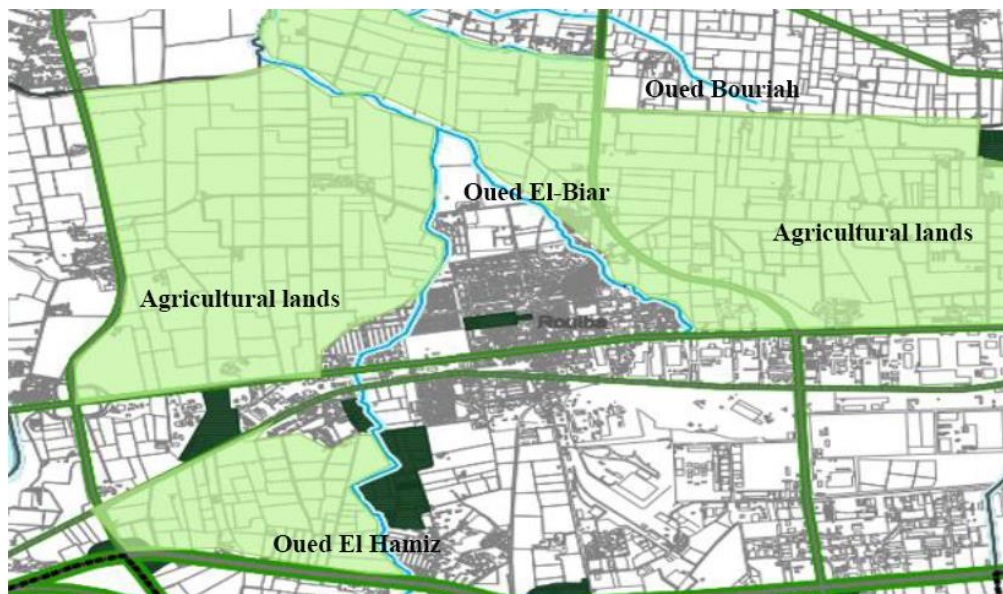


Figure 20: Natural boundaries of Rouiba town

Source: PDAU of Algiers 2015.



Figure 21: Oued El Hamiz



Figure 22: Agricultural lands

Source: Google image

c. Physical boundaries:

In the North by: thenational road N24.

In the Northeast by: thewilayaway N121.

In the Southeast: the industrial zone of Reghaia.

In the Southwest: thewilayaway N149.

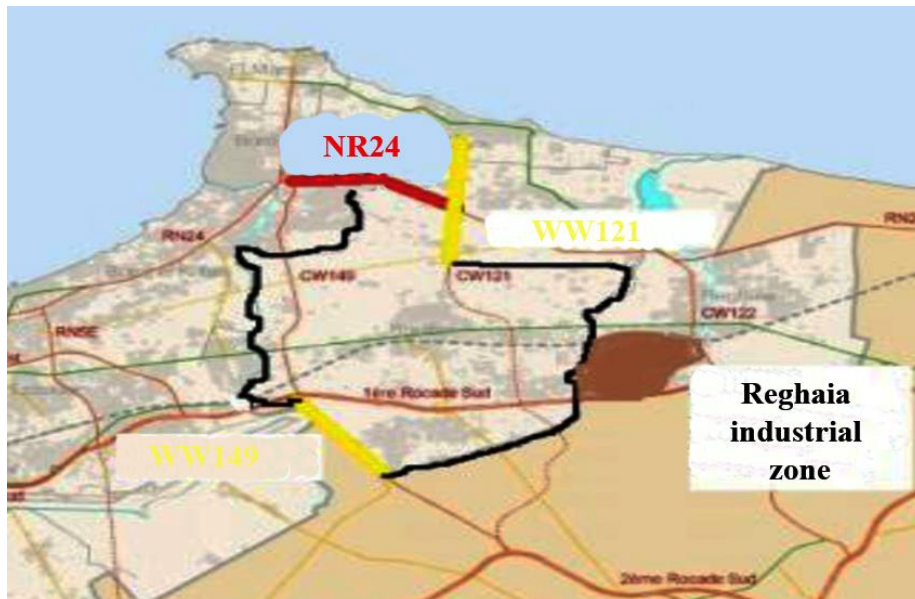


Figure 23: The representation of the Natural boundaries of Rouiba town

Source: map of the PDAU viary system of Algiers 2015.

III.2.3. Accessibility:

The accessibility to Rouiba town is guaranteed by different roads:

- In the North by the W121 that links the commune of Aïn Taya & Bordj El-Bahri with Khmis Khechna.
- Rouiba is traversed by the national Road N5 that links it with Algiers from the west and with Reghaia from the east.
- Also, Rouiba is traversed by the railway line that links Reghaia commune with Dar el Beida.

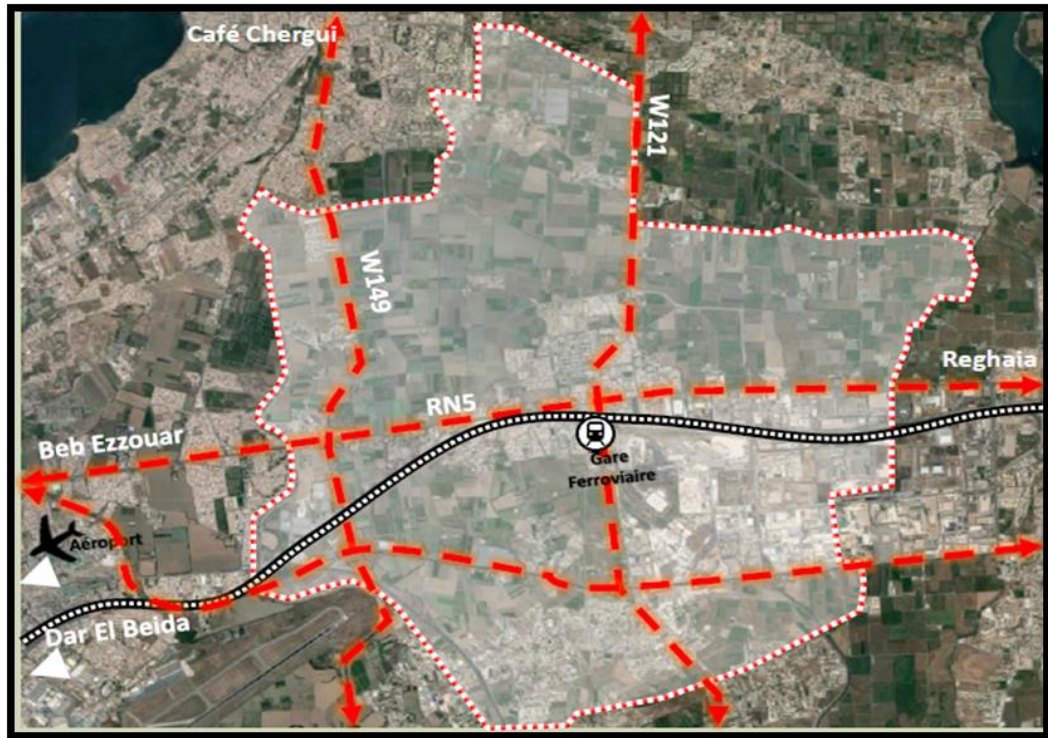


Figure 24: The scheme representing the accessibility to Rouiba town

Source: Google earth modified by the author.

III.2.3. Morphological & topographical data of Rouiba town:

It covers a land area of 5325 square km fully situated in the rich flat land of Mitidja parallel to the Algerian coast.

The altitudes are extremely low between 0.3% and 0.4% in the order of 20 metres.

1. Geological & seismic data of Rouiba town:

The area of Rouiba is classified in Zone 3: High seismicity.

So the seismic factor should be really taken into account in the process of our urban development.

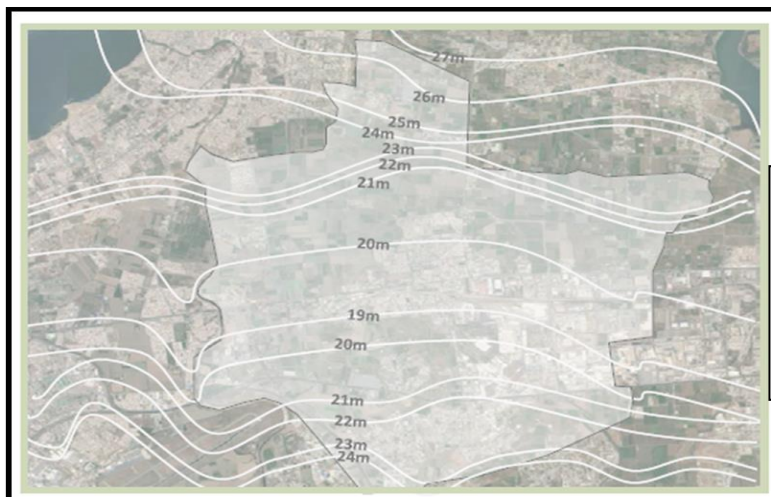


Figure 25: Rouiba town's topography

Source: Google earth modified by the author.

2. Hydrographical data of Rouiba town:

Rouiba is traversed by three Oueds:

- Oued El-Biar: which represents the east limit of Rouiba and starts from the industrial zone Rouiba-Reghaia passing by the commune of Hraoua.
- Oued Bouriah: its source is from Oued EL Hamiz.
- Oued EL Hamiz: that represents the second natural limit in the West.



Figure 26: the location of the Oueds traversing Rouiba town

Source: Google earth modified by the author.

3. Climatic data of Rouiba town:

- Rouiba is characterised by a Mediterranean climate.
- A dry and hot summer season from May to September with an average temperature of about 25.7°C .
- A cold and humid winter season from December to March with an average temperature of 11.7°C .
- The average annual temperature is 18.1°C .
- The dominant winds are the westerly winds and the northeast wind that blows during



Figure 27: the Dominant winds in Rouiba. Source: Google maps modified by the author.

Summer giving a sea breeze.

- The rainfall varies between 600 et 700 mm per year, the humidity is so high, it may reach 94 and varies during the year between 50 % and 90 %.

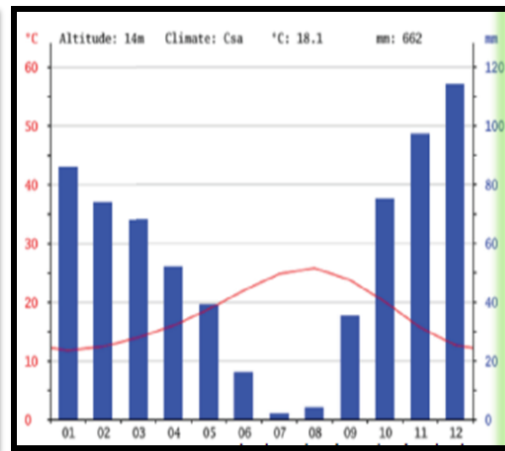
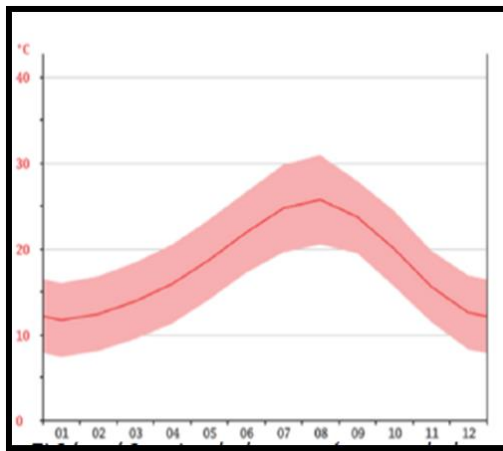


Figure 28: temperature graph of Rouiba

Figure 29: rainfall graph of Rouiba

Source: Taken from document of the town's hall.

4. Rouiba town's demographic evolution:

1987	1998	2008
36 165	49 881	61 984

Figure 30: The table of Rouiba town's Population evolution from 1987 to 2008

Source: Taken from document of the town's hall.

The municipal population has grown from 36,165 inhabitants in 1987 to 61,984 inhabitants in 2008, i.e. an increase of 2.73% per year.

Which means that this phenomenon of urbanization is due to a growth and a spatial extension faster than its capacities, "Namely that 95% of the Algerian population lives in the north of the country on a surface of 350 000 km²".

So consideration should be given to the demographic evolution of this town through our urban project while thinking of the new development plan.

III.3. Territorial reading and implantation logic:

The reading of the territory allows us to reach a level of human settlements understanding; in the cohesion and coherence of all the modalities that man implements in the development of his environment. It involves not only the structures actually built, the built environment that man uses to live in, or the structures that are actually built it includes all the territory that human used to live in.

1. Theoretical approach: Morphological typology

The concept of the method:

Morphological typology is the combination of urban morphology and architectural typology. According to this method, the road and the building generate, in their dialectical relationship, the parts that make up the city.

Morphology: the study of the urban form in its historical development, based on the component elements: - the city map - the layout of the roads - the parts of the city.

Typology: This is the reasoned classification of types, which simultaneously involves, through the analysis of an exhaustive corpus of buildings, working on the basis of criteria: Dimensional. Functional-constructive-aesthetic.

-The elements of the main tissues of the analysis are:

- The viary system
- The parcel system
- Squares (as a particular public space).
- Buildings

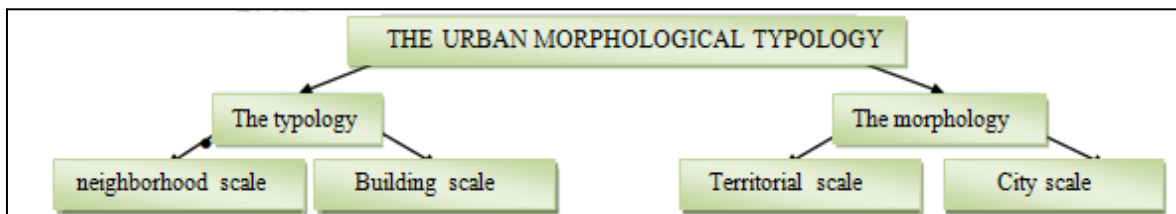


Figure 31: Scale of the morphological typo approach

Origin of the method:

Italian approach, the method appeared in the 60s, the most elaborate theory of which was made by AVEIRO MURATORI.

Objective of the method:

The purpose of this analytical reading is to dissect a historical fabric in order to be able to suggest the most relevant intervention, the adequate functions as well as the architecture in conformity with its location and requirements.

III.3.1. Process of appropriation of the Algerian territory:

a. Phase one:

It coincides with the appearance of the main ridge route, which represents the passage of man from one promontory to another. This route connects the east and west of the capital, and then goes to another ridge route that runs from the north of the territorial unit to another place to the east.



Figure 32 : Scheme of the main ridge route

Source: INCT staff map treated by author

b. Phase two:

This phase is characterized by the appearance of the high promontory settlements connected to the ridge routes by the secondary ridge routes, among these settlements: BOUZAREAH, DELLY-IBRAHIM, CHERAGA, BEN-AKNOUN, SIDI-ABDELLAH, EL-BIAR, HYDRA, BIR-MOURAD-RAIS...etc.



Figure 33: scheme of the secondary ridge route

Source: INCT staff map treated by author

c. Phase three:

This phase is distinguished by:

- The appearance of so-called "exchange" places, for example the communes of: VIEUX KOUBA, EL-MADANIA...
- The appearance of local counter-crest paths which will link the high promontory settlements together.

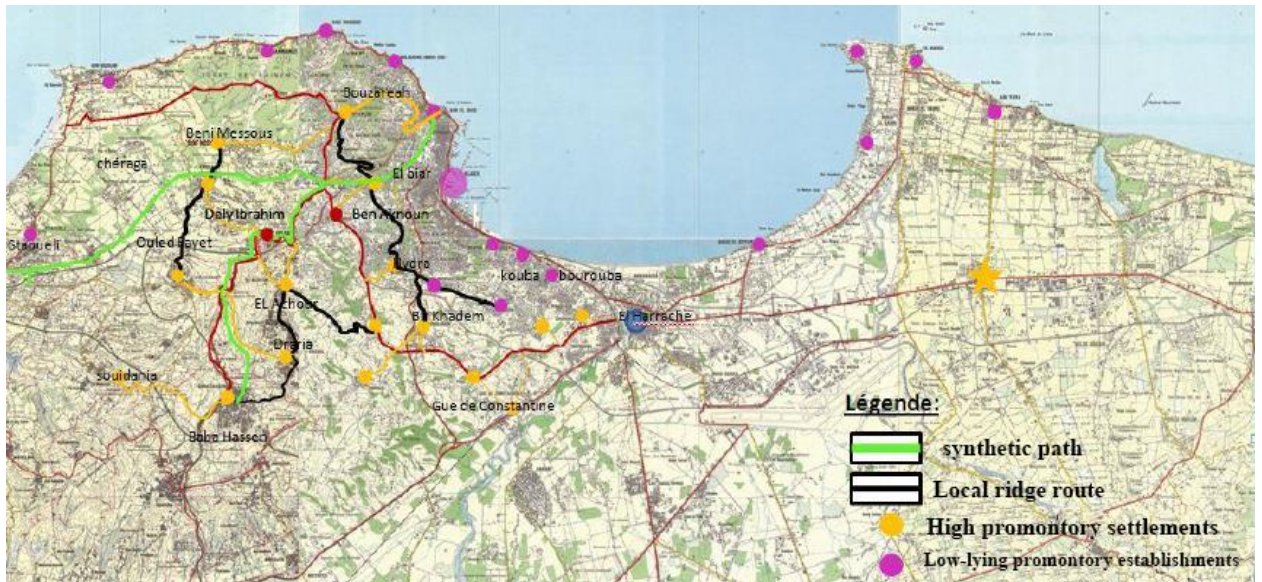


Figure 34: scheme of the local counter-peak path

Source: INCT staff map treated by author

d. Phase four:

It coincides with the emergence of urban cores connected by continuous counter-crest routes. The Kasbah was the elementary nucleus in the Algerian territorial unit and its progressive splitting gave rise to other urban nuclei towards the East.

This phase is distinguished by:

- Appearance of valley bottom trails.
- Appearance of the Mitidja Plain settlements among these settlements Rouiba.

It represents the cycle of consolidation, which refers to the colonial period or assists in the consolidation of the territorial routes, the creation of the village of Rouiba and the railway.



Figure 35: scheme of the continuous counter ridge and valley bottom

Source: INCT staff map treated by author

III.3.2. Rouiba town's establishment's logic:

Rouiba is a human settlement created on the plain of Mitidja between the cities of the Sahel and those of the Piedmont and also close to the road between Algiers and Dellys which gave it a strategic situation with a good accessibility.

The settlers found that the village of Rouiba left by the Turks has vast lands for the development of a city. Added to this, the good quality of its agricultural products intended for export making it a very rich locality.

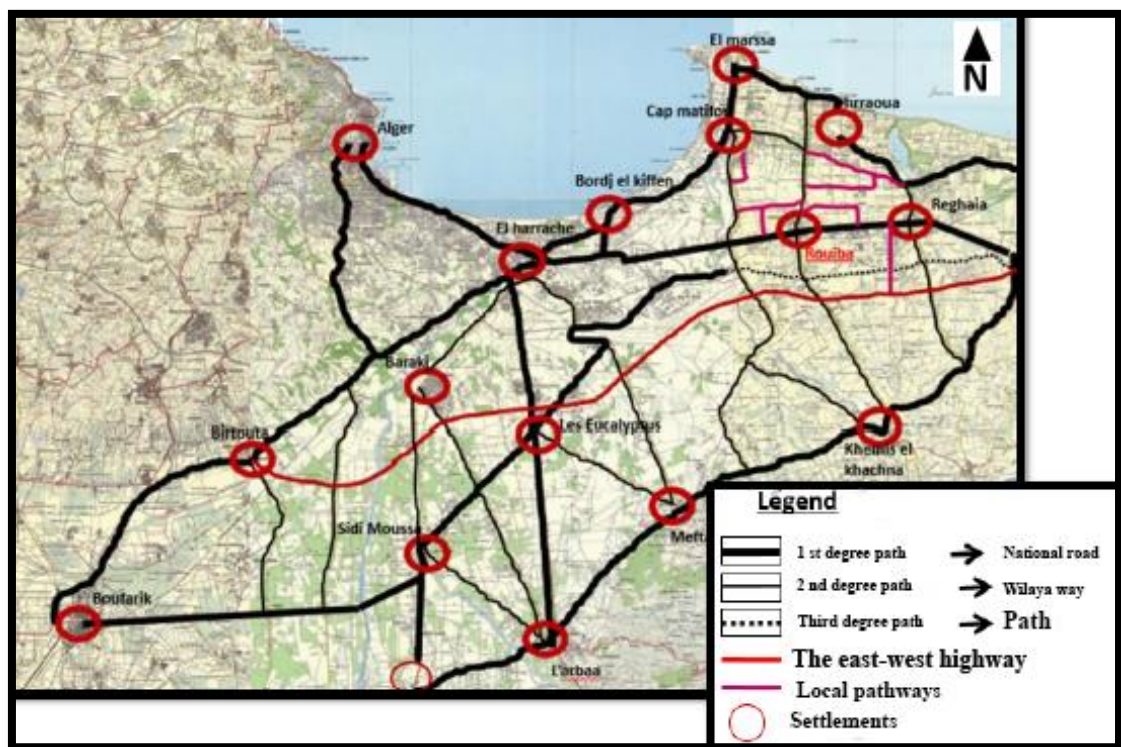


Figure 36: Rouiba town's territory reading synthesis Source: INCT staff map treated by author

III.4. Diachronic Reading of Rouiba Town:

According to A.ROSSI:

*"To master the future, we must understand the present and therefore study history"*⁴⁵

III.4.1. Toponymy:

"Rouiba" is the diminutive of Raba (Ghaba)⁴⁶, which is a deformation of "petit bois" according to Commander Niox.

Another denomination that dates back to the Ottoman period, from which Rouiba comes from the word "raiebe" which means curdled milk⁴⁷.

III.4.2. Historical study of the city of Rouiba:

Every city has a history that reflects its identity and its evolutionary dynamics.

The commune of Rouiba has gone through 3 main phases in its history:

- The Ottoman period (before 1830).
- The colonial period (1830-1962).
- The post-colonial period (from 1962 to the present day).

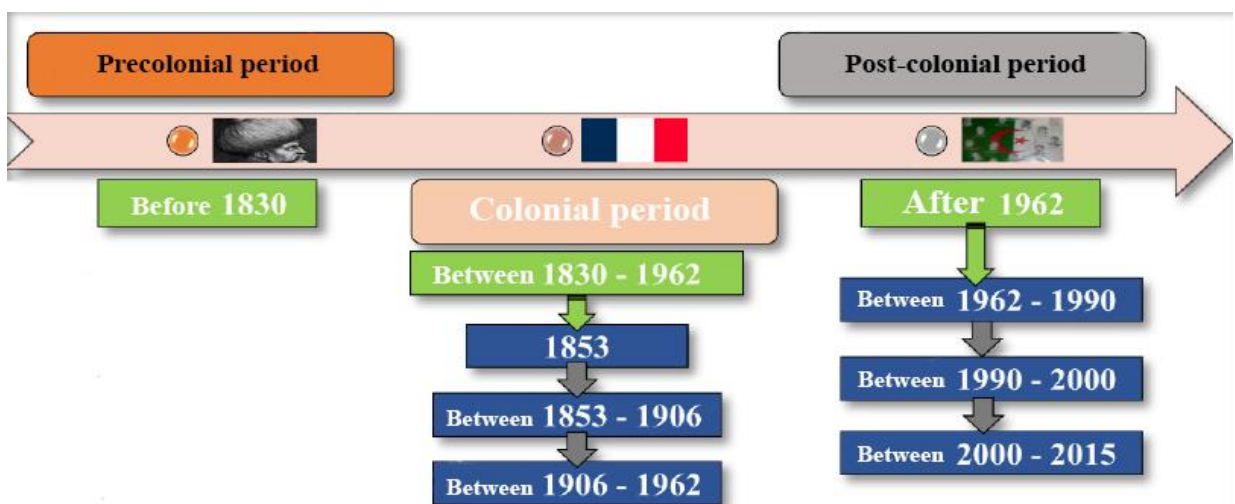


Figure 37: Historical axis of Rouiba town

Source: Authors work.

III.4.3. The chronology of Rouiba town development:

1. Pre-colonial period: before 1830(Ottoman Era)

⁴⁵C. Aymonino, M.Brussati, G.Fbbri, M.Lens, P.Levero, S.Lucianetti, A.Rossi - La citta di padova-Roma.1999

⁴⁶Monographie de la ville de Rouiba et les nombre de service d'urbanisme de l'APC de Rouiba

⁴⁷document "Algérie, Géographie physique", le commandant Niox Page 418

Rouiba town dates back to the Ottoman era, at that time the province of ALGIERS had 5 cities: ALGIERS-BLIDA-DELLYS-KOLEA-CHERCHEL. And 12 Outhans: Benikhelil-Benimoussa-Khachna... Rouiba was part of outan El Khechna. -There were 19 haouch (farms) owned by the Dey, among them Haouch Rouiba.

It was a haouch that was used to shelter cattle, to store grain and an advanced point of defense to better dominate the agricultural wealth of Mitidja.

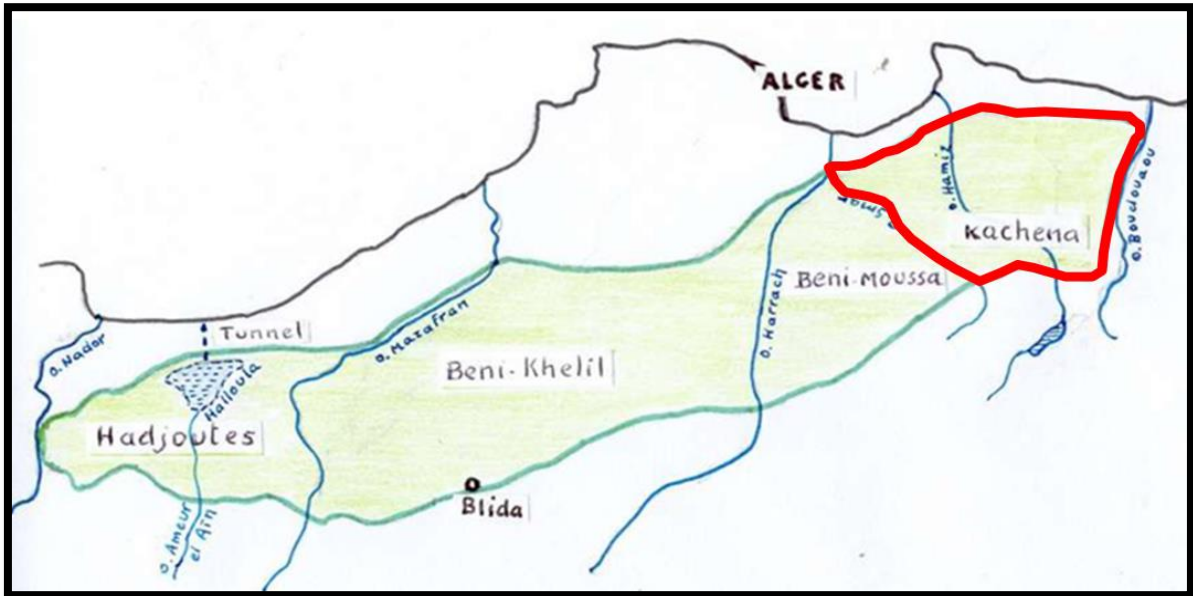


Figure 38: map of the province of Algiers during the Ottoman period

2. Colonial period:

a. Phase 1: ROUIBA before 1853: The creation of the town:

- In 1842 Rouiba was a peripheral area of the city of Algiers
- As early as 1844 some concessions of 100 to 150 ha had been offered or sold to Europeans.
- In 1846 under king LouisPhilippe, obtained for this indigenous territory reserved for the aribs tribe, this territory was integrated into the commune of la Rassauta.
- On August 11, 1853, under Napoleon III, the government council considered the project of founding a centre on the Algiers-Dellys road at the junction of the Ain-Taya road. On October 31, 1853, it was decided, under the reign of Napoleon III, the creation of the
- population centre named Rouiba,
- composed of 22 fires on a territory of 358 ha.

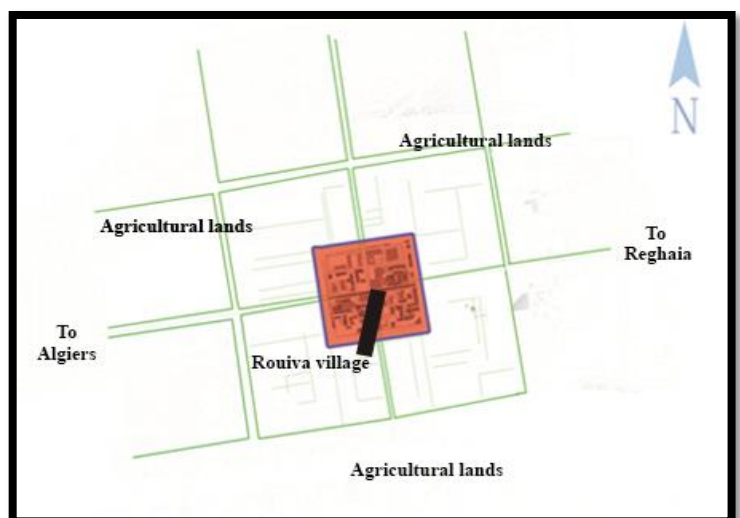


Figure 39Rouiba town initial state**Source:**Cadastral map of Rouiba treated by author

b. Phase 2: Rouiba between 1853 and 1906:

- Between 1862 and 1868 the formation of the colonial core of the city centre began. An important flow of population settled, the number of inhabitants increased from 204 to 2300 people, an increase of 2096 new individuals 11.27% more.
- In 1867 modifications of the boundary of the commune of Rouiba extended over 5153ha.
- In 1887 the realization of the railway in the south.
- In 1869 was the construction of the town hall, in 1876 the church, in 1900 the covered market, and in 1906 the post office.
- Before 1906 the realization of the national road number 5.

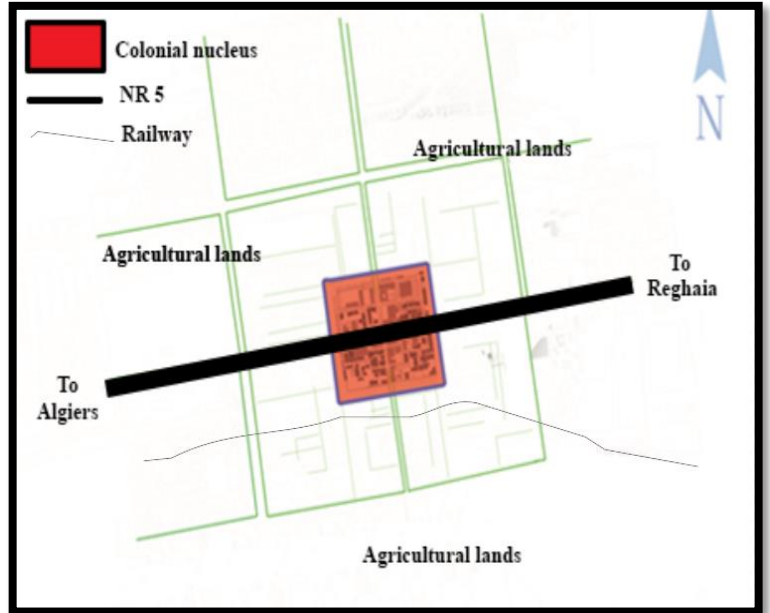


Figure 40: Map of central core formation
Source: cadastral map of the region of Rouiba



Figure 41: Church of ROUÏBA



Figure 42: monument square

Source: Alger-roi.fr



Figure 43 : The main road



Figure 44: the village town hall

c. Phase 3: Rouiba between 1906 and 1968:

- The creation of the military base in the southwest.
- Industrial activities are beginning to take hold in the southeast of the city. The industrial zone has recruited the manpower to cope with the additional demand from the inhabitants, which has resulted in an acceleration of urbanization during this short period which has allowed the blossoming and the extension of Rouiba town around the core of the city.
- Housing needs are beginning to increase and are becoming more and more differentiated by the implantation of cities (cité de la gare, cité 20 Aout, cité Metidja 1 and 2 ...) in the South to the detriment of the North.
- In the north: The city of Merdja (1958-1962) As for the southern part there was the creation of: - The city of August 20, 1968 plus The hospital of Rouiba and The creation of the industrial zone of Rouiba (Z.I.R) as mentioned previously.
- The appearance of the sanitary equipment sector located in the eastern part of the city centre.
- The increase in population which went from 12,289 inhabitants to 21,223 inhabitants between 1954 and 1966, an increase of 8,934 individuals (72.69%).

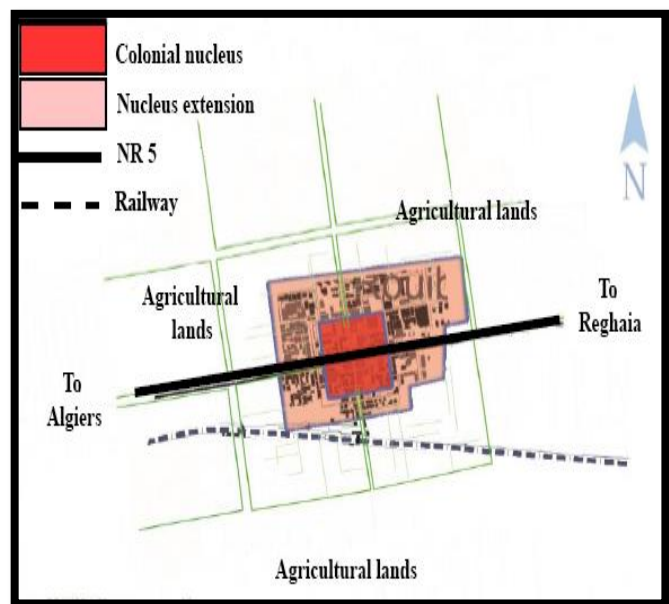


Figure 45: Central nucleus extension
Source: state Source: Cadastral map of Rouiba treated by author



Source: Alger-roi.fr



Figure 46: The village hotel

Figure 47: General view of the village

3. Post-colonial period:

a. Phase 1: Rouiba between 1969 and 1990:

- The continuation of the extension of Rouiba town and other housing operations have continued to take place in the city to meet the growing need for housing: The City of Police in 1980, the city of 80 housing units in 1983, the city of the 200 housing

units INFORBA in 1983, the 500 housing units city plus the 50 housing units in 1989.

- In addition to the housing operations this period was characterized by the creation of specialized equipments along the national road number 5 south-west side (S.N.T.V , INFORBA and Military Barracks)
- At the end of the 90's, was the launch of the Omni Sport Park project.
- Which led to the saturation of Rouiba town.

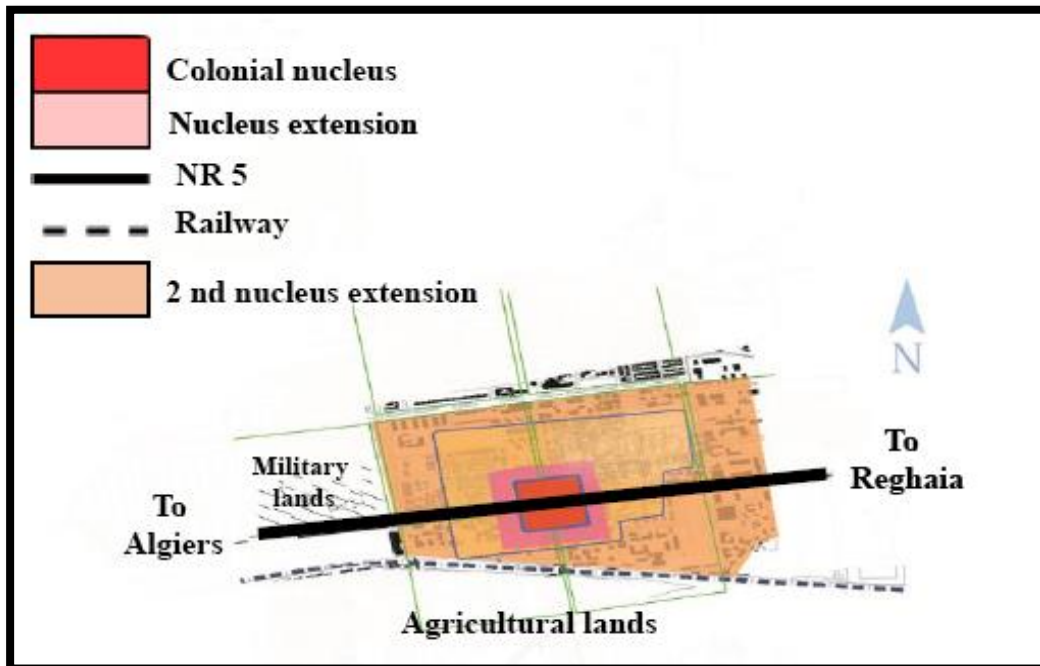


Figure 48: the 2 nd extension of the central core
Source: Cadastral map of Rouiba treated by author

b. Phase 2: Rouiba between 1991 and 2000:

- Between 1990-1994: for this period there was only one project of 70 housing units created by the O.P.G.I., with other projects on an individual basis. This evolution of housing only covers the main town of the municipality. Concerning the secondary agglomerations, there has been a galloping evolution during the last decade that was materialized in the creation of 530 E.P.L.F. housing units in 1986, the restructuring of the shantytowns of HAI ENASR 1984, plus the development of illegal individual constructions on agricultural land, and the realization of collective equipment.
- In July 1997 Rouiba became part of the wilaya of ALGIERS thanks to the administrative division of the wilaya, which is explained by its land reserve and the importance of its industrial zone,
- Rouiba has experienced an urban dynamic through the construction of (high school and El Merdja housing estates), major facilities have been built (banks, hotels, leisure facilities, plus the resumption of work on the Omni Sport Park).
- Rouiba which was for a long time spared by the urbanization process ended up becoming a simple land reserve of the capital.

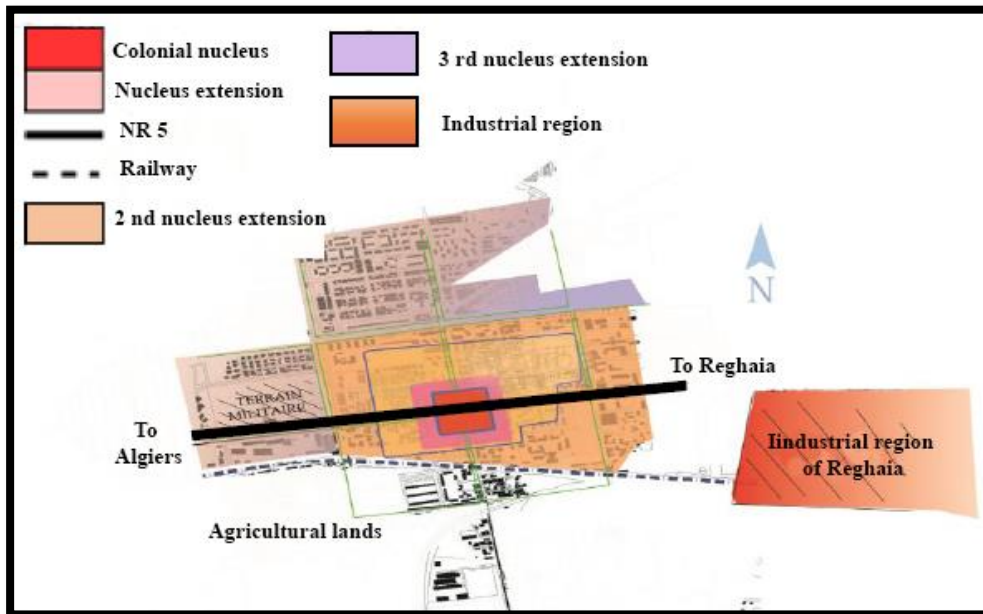


Figure 48: City development map Source: Cadastral map of Rouïba treated by author

c. Phase 3: Rouïba between 2000 and 2015:

- Rapid and uncontrolled urban sprawl is leading to saturation of the city.
- Industrial and commercial activities make up the bulk of the commune's income.
- In spite of this, the city has adopted a strategy of occupation of virgin land located in the old urban fabric and proceed with densification following the example of the AADL project. In addition, the will to build administrative facilities, the Palace of Justice and the headquarters of the Daïra, the demolition of colonial houses and the reconstruction of villas in their place has faded the ardour of developers in search of land that can be urbanized at any cost.

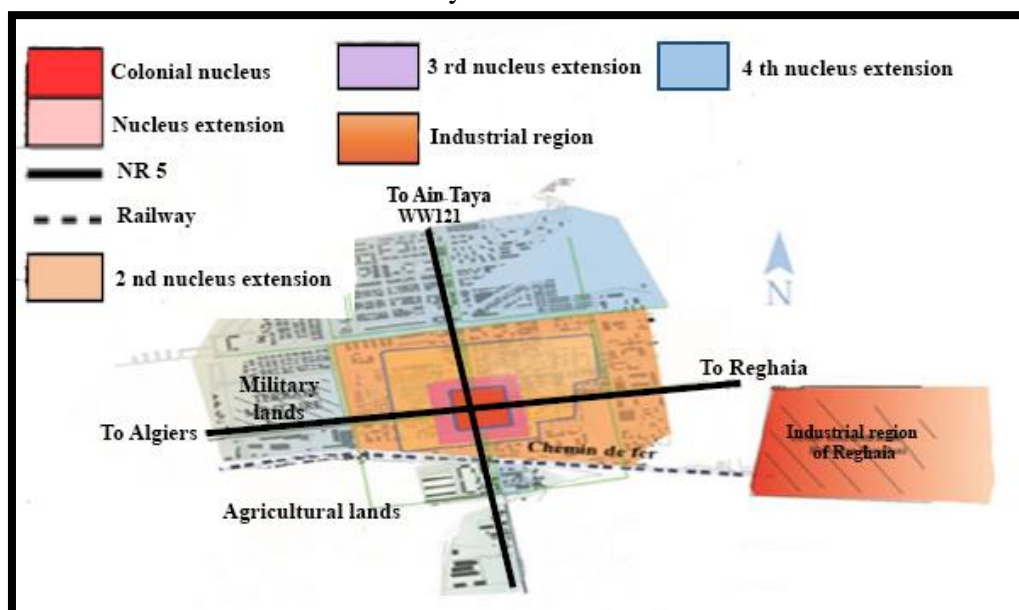


Figure 49: The current state with some transformations (creation of a new establishment) Source: Cadastral map of Rouïba treated by author



Figure 51: the hospital area



Figure 52: Seat of the daïra

Figure 53:the city's center
Square

Source: photos taken by
the author.



III.4.4. Diachronic reading conclusion:

The history of Rouiba cannot be dissociated from the rest of the cities of the Mitidja. Even if this city has kept older urban characters. It is considered as a colonial creation. It has gone through several stages, since its creation, which has guided its development, from a centre of indigenous population, to a small town with a colonial layout. Rouiba has gone through several stages, each of which has, directly or indirectly, oriented the development of the city, attributing to its multiple vocations: agricultural, as it is located on the rich plain of the Mitidja, industrial, commercial and economic: as it contains an important industrial zone that spreads out towards Reghaia.

-The diachronic reading of the city of Rouiba has allowed us to better understand the logic of implantation and development of the city and its evolution throughout the history of Algeria.

-The growth of the city of Rouiba is bounded by military zones, industrial zones and agricultural lands which are the barriers of urban growth.

Urban sprawl towards agricultural land has also been noted in recent years.

1/-Colonial period:

It is characterized by:

- Division.
- The plot.
- Densification of the plot.

2/-Post-colonial period:

- Evolution of the islands.
- Accelerated Urbanization.
- Consumption of Agricultural land.
- Urban sprawl.

3/-Current period

- New extensions.
- Breaking with history.
- Incoherence of the Urban structure.
- Urban sprawl.

The extension of the city of Rouiba was made in the profile of time by a radio concentric duplication ratio, its centre is the colonial nucleus and its rays are the national road number 5 and the CW121.

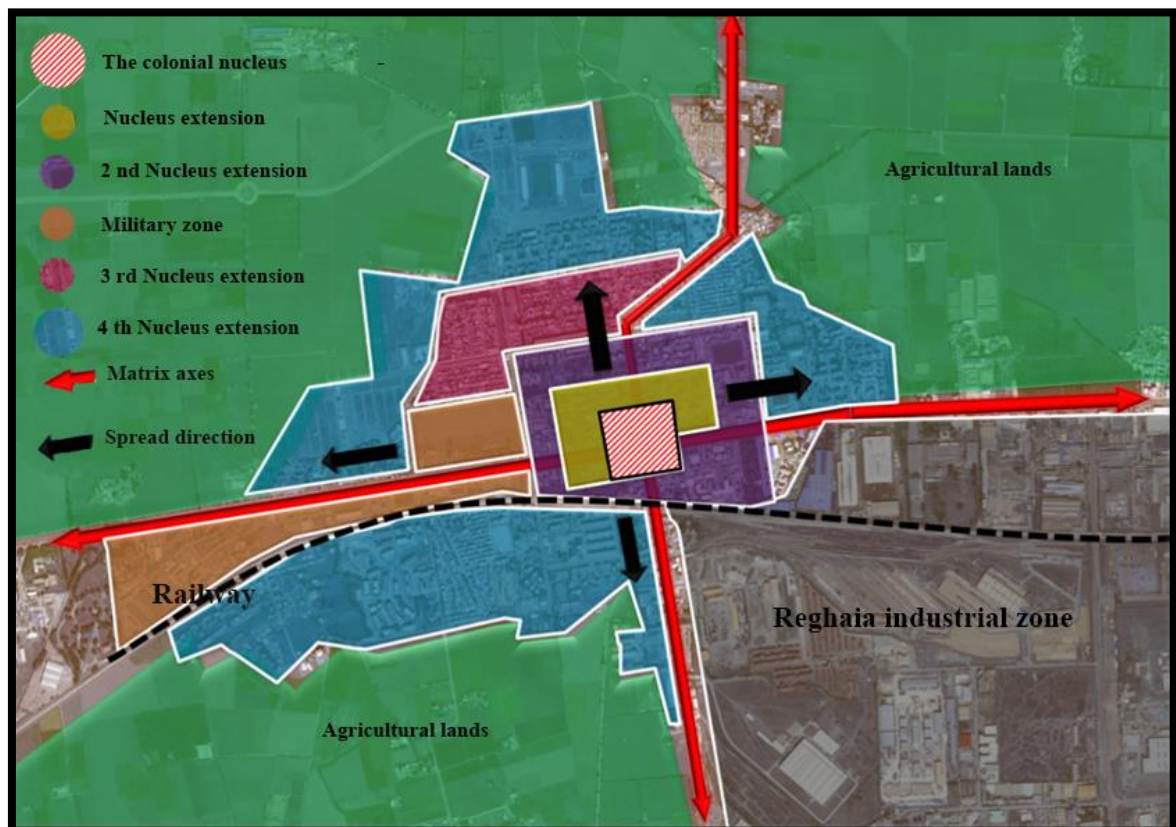


Figure 54: Diachronic reading synthesis

Source: Google Earth treated by the author.

III.5. Synchronic Reading of Rouiba Town:

III.5.1. Rouiba town's urban fabric:

The town plan is represented by a regular structured checkerboard layout. It is organised around a core surrounded by old farms that have now become rural settlements. It follows an orthogonal grid consisting of a square module of 650 m on each side, whose origin probably dates back to the agrarian parcels of land.

Nevertheless, the grid seems to shift towards the south of the town by a half module including military land and the railway. The latter divides the grid in two parts, so the city presents a break between its northern and southern parts. The plan is represented by a regular checkerboard layout structured along two main axes:

- The old road ALGIERS - DELLYS (called road N 5)
- The road ROUÏBA - AIN TAYA link perpendicular to the road N 5

The intersection of these routes marks an important building materialized by a square of regular shape that is limited by small lanes forming a square.

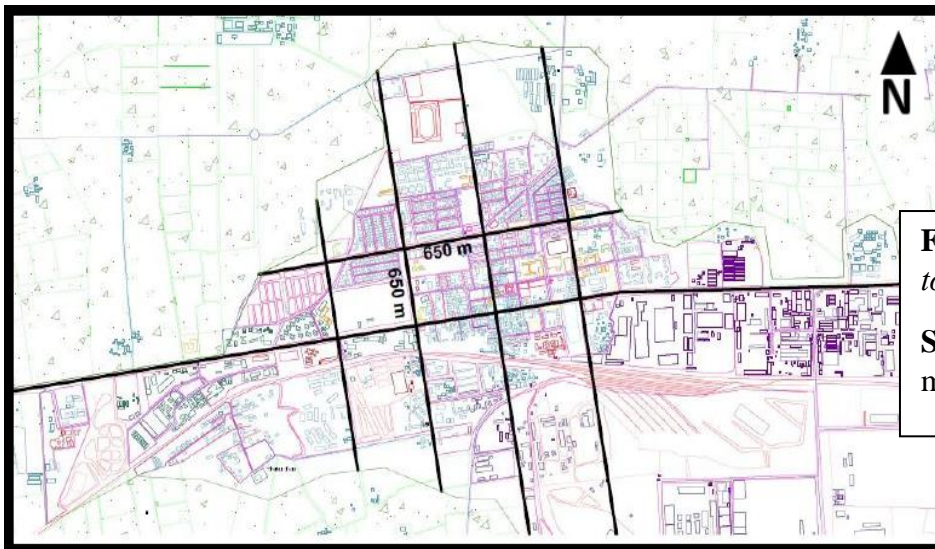


Figure 55: *Rouiba town's urban fabric*

Source: PDAU 2015 modified by the author.

III.5.2. Hierarchy of Paths:

The road network of Rouiba town is characterized by a regular and hierarchical orthogonal grid, a structure which is based on important axes:

- a. The old Algiers - Dellys road (called NR5 which dates back to 1850).
- b. The road Rouiba - Ain Taya perpendicular to the RN5 (called the WW121).
- c. The new siding line to the north-west.
- d. The railway in the south of the town.

We notice that the main roads parallel to the RN5 lead nowhere, and are not connected to the city's road system which means that the structure frame is interrupted.

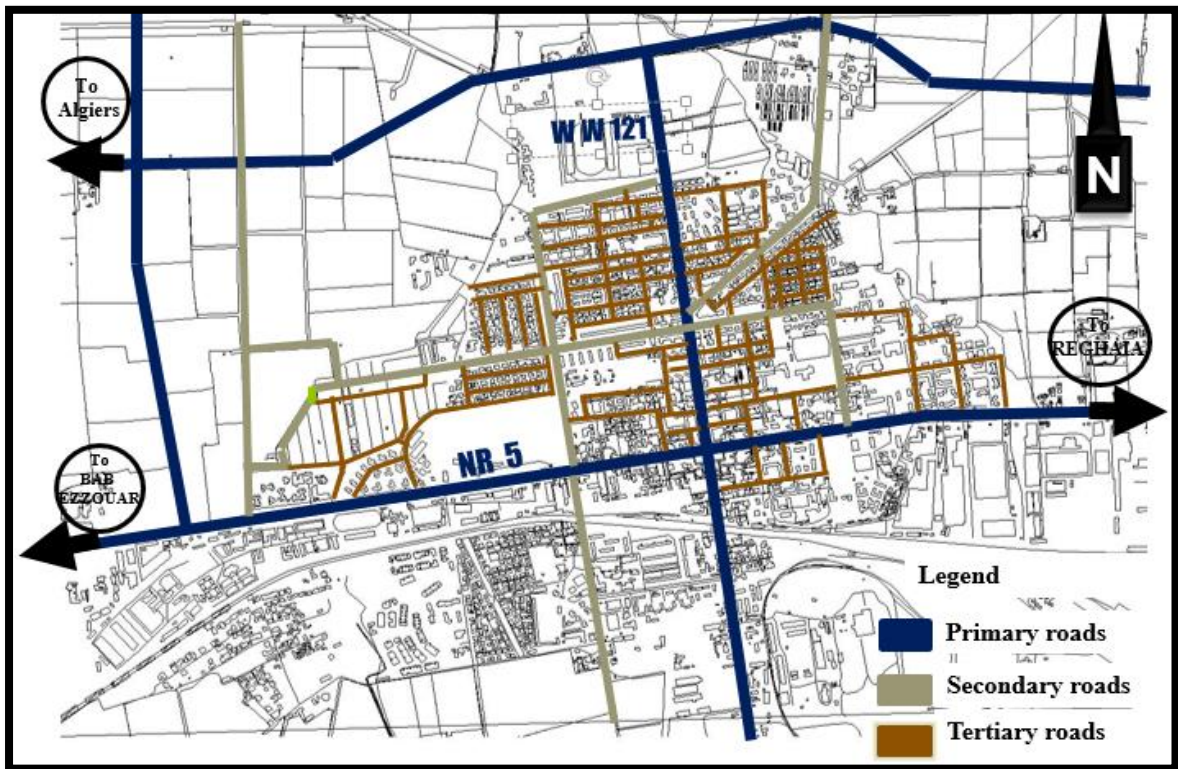


Figure 55: Hierarchy map of pathways source: Cadastral map treated by the author.

III.5.2. Reading of the parcel:

The city of Rouïba is organised according to a 650m*650m grid, was divided into small regular square and rectangular plots.

- The central island (mixed island or integrated housing) well-structured square plots
- Block facing a public space (integrated housing block); rectangular plot of land
- The island on the periphery (residential island), irregular grid.

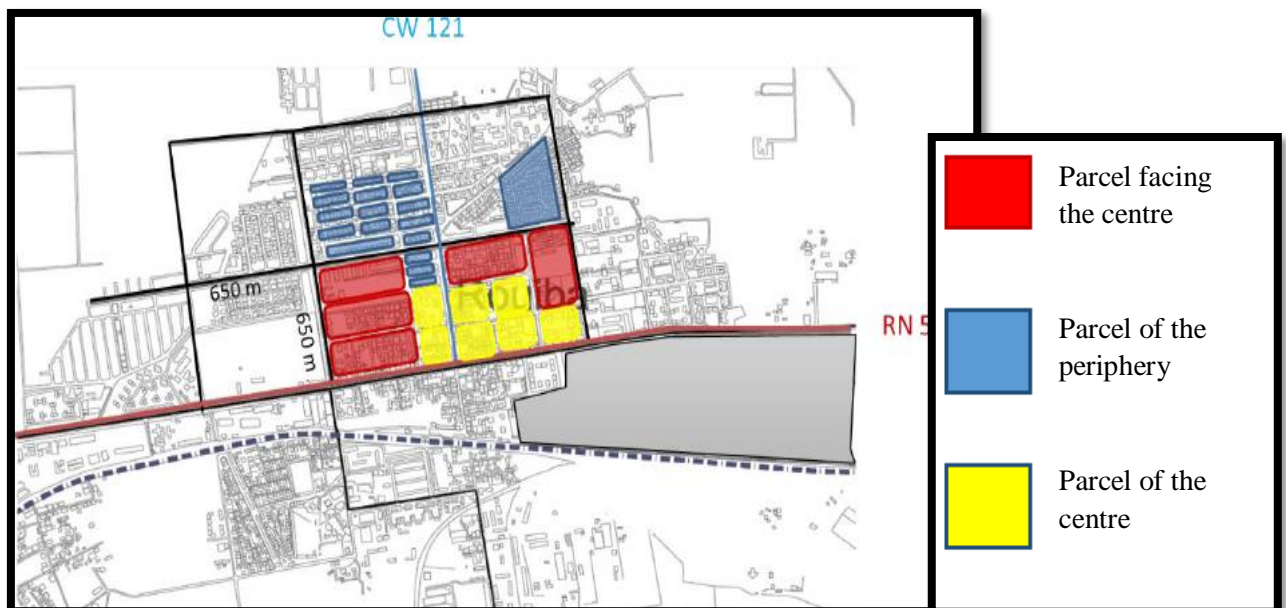


Figure 56: Parcel of the city of Rouïba source: Cadastral map treated by the author.

a. Northern parcels :

b. Parcels of the western extension :



Figure 57: Parcels of the northern extension



Figure 58: Parcels of the western extension

Regular rectangular parcels (housing estates) containing individual houses and a few collective dwellings.

Parcels built without a specific shape contain collective houses and peripheral dwellings.

c. Parcels of the eastern extension:

Rectangular built-up parcels with different sizes containing individual and collective dwellings.



Figure 59: Parcel of the eastern extension **source:** Google earth treated by the author

Synthesis:

We notice that the historical centre of the town is well structured with parcels that have the same size and division, while the new extension parcels are anarchic, causing the city to lose its structural layout.

III.5.6. Typology of the building

-It is noticeable that the city has a residential character of the type (individual and collective), the educational and sports facilities are in line with the quantitative needs of the city.

-The presence of other support facilities is reduced.

-A large surface area occupied by industry and safety equipment

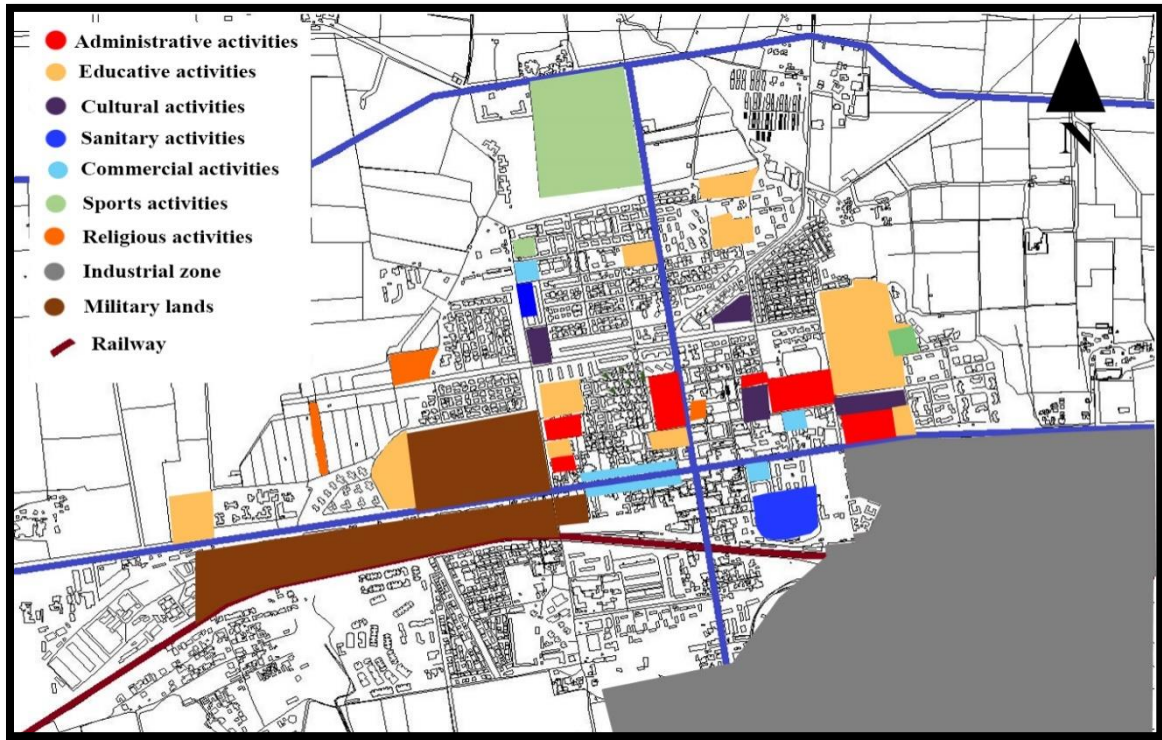


Figure 60: Rouiba town functional structure **Source:** cadastral map treated by the author.

- **The city's facilities:**

Educational facilities	<p>At the city level:</p> <ul style="list-style-type: none"> - Military school (INFORBA) has a nationwide reach, for the training of state executives. - National Institute for Development, Promotion and Continuing Education. <p>The neighbourhood scale</p> <ul style="list-style-type: none"> - Training and apprenticeship centre - Training centre for girls, training institute (SNTV). -Lycée Abd el moumen, CEM Taleb Abderehmane, CEM Ould Sidi Cheikh, CEM Ibn el katib, CEM Mohamed el kabir ben rabi, Ishak Mohamed primary school, El kabir school, Adb el Madjidalahoum school, nursery.
Commercial equipment	Market, shopping centre, commercial enterprise.
Service equipment	: APC, daïra headquarters, PTT, tax department, Court, BDR, CPA, BEA, BNA.
Sanitary equipment	Hospital and polyclinic.
Sports and leisure facilities	Cultural centre (youth association), youth centre, 2 stadiums, 2 sports halls, public garden, park, Emir square, bomba square.
Security equipment	Security, transmission barracks, military barracks
Religious facilities	Two mosques.

1. Façade typology (façades reading):

1.1. Colonial core façades reading:

- In the colonial core the city still keeps its colonial rural aspect with the alignment of its façades and its R+1 template.
- The façades of the colonial core are divided in two:

a) Façades of colonial style.

b) Neoclassical style façades.

- The façades of the colonial core that face the aligned street are endowed with a principle of architectural composition. This façade is subdivided into three elements:

1. 1. The base (ground floor): It articulates the public space with the private space (housing on the first floor) through its allocation to activities related to the city (trade ...).

2. The body (floor): It is composed of openings arranged in a regular rhythm allowing for a repetitive order, and balconies all along the facade.

3. The coronation (cornice): The roof is either sloping, with red tiles, or as an accessible terrace, the façades are ordered according to a principle of symmetry.

- The neoclassical style is characterized by the frame horn, the R+1 template and the alignment of the façades.

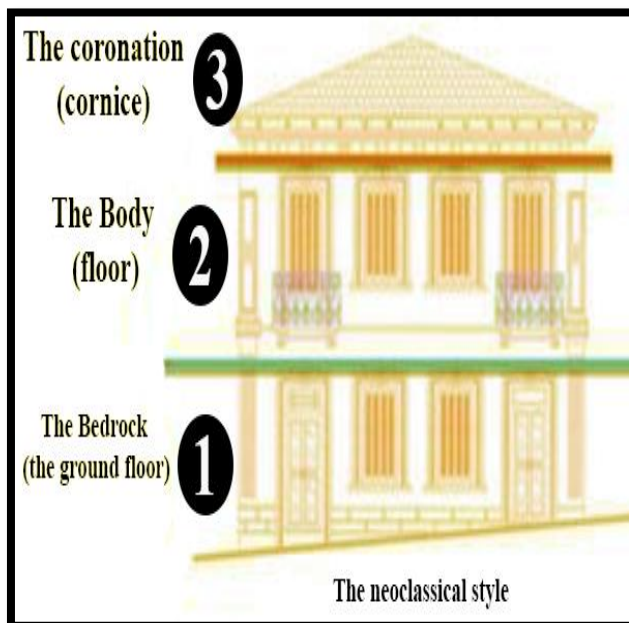


Figure 61: Neoclassical style facade

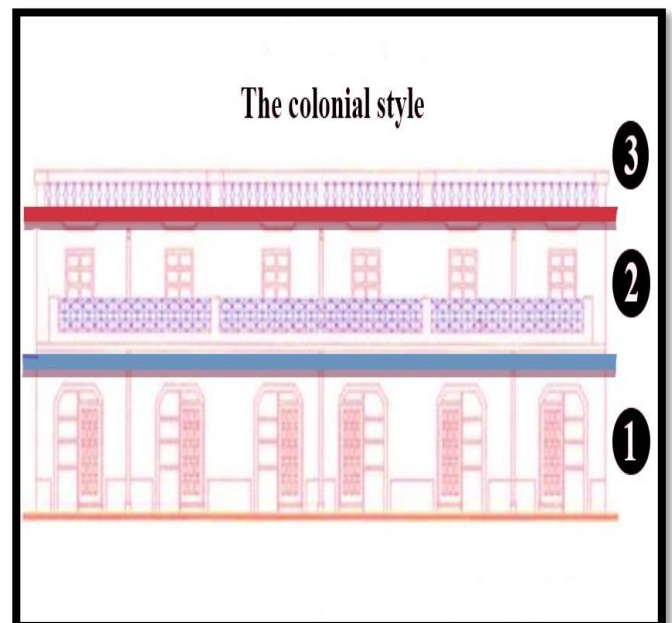


Figure 62: Colonial style facade



Figure 63: Example of Colonial style facade



Figure 64: example of neoclassical style façade in Rouiba

Source: Photos taken and treated by the

Figure 65: Example of neoclassical style facade (the Ministry of Labour)



1.2.The new extensions facades reading:

We notice in the new extensions:

- A change in the typology of the facades.
- A break in the alignment of the templates and a break in the alignment of the levels.

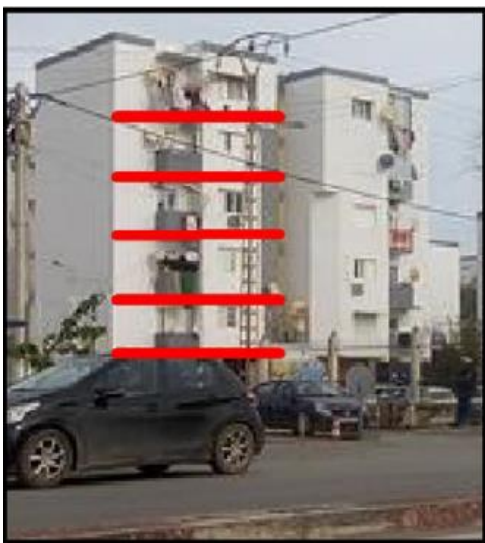


Figure 66: Example of new extensions facade



Figure 67 : Example of new extensions facade

1.3.urban facades : Appendices p18

6.3. Synthesis:

- The facades of the colonial fabric respect a certain number of elementary rules, which are:
 - Alignment of the construction on the street.
 - Building adjacency.
 - Certain regularity in the heights.
 - Its composition reflects the interior distribution and functional differentiation of the floors.
- The new extensions of the city did not fall back on the homogeneity of the elements city such as facades, templates, style or architectural type.

III.5.9. Rouiba town current structure scheme and state of plays:

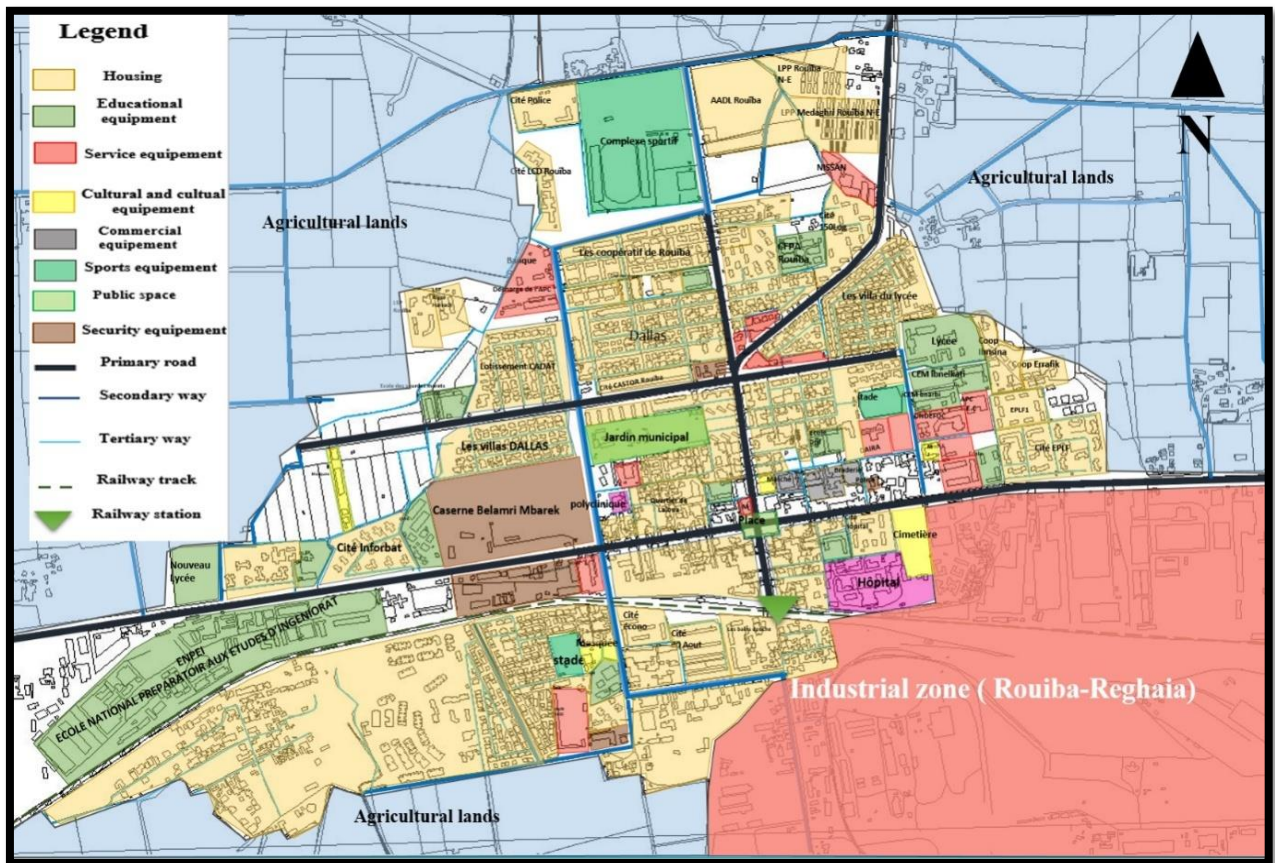


Figure 68: Rouiba town current structure scheme and state of plays **source:**Cadastral map treated by the author.

III .6.Conclusion of the diachronic and synchronic reading:

The diachronic and synchronic reading allowed us to understand the historical process of the creation, extension and urban organization of the city of Rouïba, in order to bring out the great problems it is experiencing today, to elaborate strategies and urban proposals that can make Rouïba a city of tomorrow, green and self-sufficient and that offers the comfort of living for its inhabitants.

III.7. Critique of the instruments:

III.7.a. Proposal for the PDAU of Algiers 2015:

Concerning the city of Rouïba, the PDAU of Algiers 2015 proposed a set of urban action, in the most essential site:

According to its Vision 'Algiers Eco metropolis of the Mediterranean', the city of Rouïba is classified as an agricultural reserve for the city of Algiers.⁴⁸

1-Mobility:

Its objective for Algiers in general and for Rouïba in particular: is to master in place a multimodal, functional, integrated and efficient urban transport system, in order to meet the mobility and accessibility needs of the entire city while ensuring a sustainable development of the agglomeration by contributing to the improvement of the quality of life of its inhabitants and a forward-looking management of its environment.

Action: Restructuring of the city's road system by: the tracing of the CW121 out of the urban center

- Develop the public transport system by: integrating the tramway on CW149.
- Equipping the traffic axes with aisles reserved for public transport.

2-Environment:

Its objective: It is to enhance the ecological living environment of the districts of the city of Rouïba, while carrying out a natural purification of the area and water.

- Fight against the spread of construction and protect agricultural land that will be used for vegetables crops.
- Requalification of former colonial farms and improvement of workers' housing and storage conditions.
- The development of the city wadis and the Agri Park.
- Encouraging the densification of the city's urban perimeter and safeguarding the historic centres.
- Harmonize the relationship between the urban space and the countryside and also contribute to the stability in time and balance between these two spaces.
- To promote the collection of rainwater.

3-Economic:

- Enhance the industrial zone of Rouïba and develop the food-processing industry, by the
- Proposal for the installation of a centralized site for the conservation and distribution of food products.⁴⁹

⁴⁸ PDAU of Algiers, orientation report, Chap 01: strategic vision page 44

⁴⁹ PDAU of Algiers, orientation report, Chap 01: strategic vision page 40

III.7.b. Criticism of the PDAU:

After a reading of the strategic visions of PDAU of Algiers, and from the point of view of urban planning specialists: The PDAU of Algiers 2015, despite its study and organisation process, has elaborated a superficial study of the common areas of the city of Algiers, whereas it was based on its bay and its surroundings where the major development projects of the Algerian agglomeration are concentrated.⁵⁰

This is confirmed on our part by our case study of the city of Rouïba, or by noting that its orientations are on a global scale and do not take into consideration the specific capacities of Rouïba.

For example: the projection of the tramway on CW149, as a means of urban transport, raises the following question:

-What can it give to the city of Rouïba out of its projection on agricultural land?

Referring to the point of view of urban planning specialists, its installation on agricultural land will encourage urban sprawl, since the citizens seek occupied the most accessible places is equipped with means of transport.

III. 8. Urban proposal on the city scale :

1. Limits urban sprawl:

- Renewal of the urban centre (recovery of urban wastelands)
- The proposal of the agricultural green belt around the city of Rouïba which will make the relationship between the urban and the peri-urban through temporary developments and some connection projects.
- Opening of entrances to the main roads and reduction of dead ends and dead-end roads leading to agricultural land (example of the northern Menouar axis).
- Strengthening North-South connection.
- Limit displacement by creating nearby facilities.
- Limits mechanical traffic in the downtown area by proposing a number of evasive measures.
- Providing underground parking and parking spaces along the Mechanical roads

2. Layout :

- Redevelopment of the sports complex
- Consolidate the former national road by converting it into a boulevard by strengthening its commercial function and embellishing its facades .
- Reclaiming wastelands and developing them into residences, facilities or green spaces.
- Development of green corridors on the city's structural axes.
- Development of a green wall on the periphery of the industrial zone to reduce pollution.
- Creation of an urban park and an eco-farm.
- Restructuring of Rouïbahaouch then to annexed it to agricultural village

⁵⁰Mrs MerouaniHouria (director of the PDAU and POS study service of the CNERU) and the APC urban planning service of the city of Rouïba.

- Marking the city's entrances (East and West) with the development of parking spaces and structured facilities.
- Restructuring, densification and development of the basic facilities in the southern part of the city.
- Integration of new architectural typologies while respecting the identity of the place.

3 .Mobility:

- The integration of a multiple urban transport system based on the use of public transport.
- Tracking of bus lanes for public bus transport to reduce car use
- Integration of soft mobility through the construction of bicycle paths on major roads
- Giving great importance to accessibility for the disabled (creation of ramps, parking lots accessible to the disabled)
- Preserving agricultural land
- Proposal of tramway routes serving the central urban area and some structuring facilities
- Decrease traffic on the national road N°5.

b/ City scale urban proposal scheme :

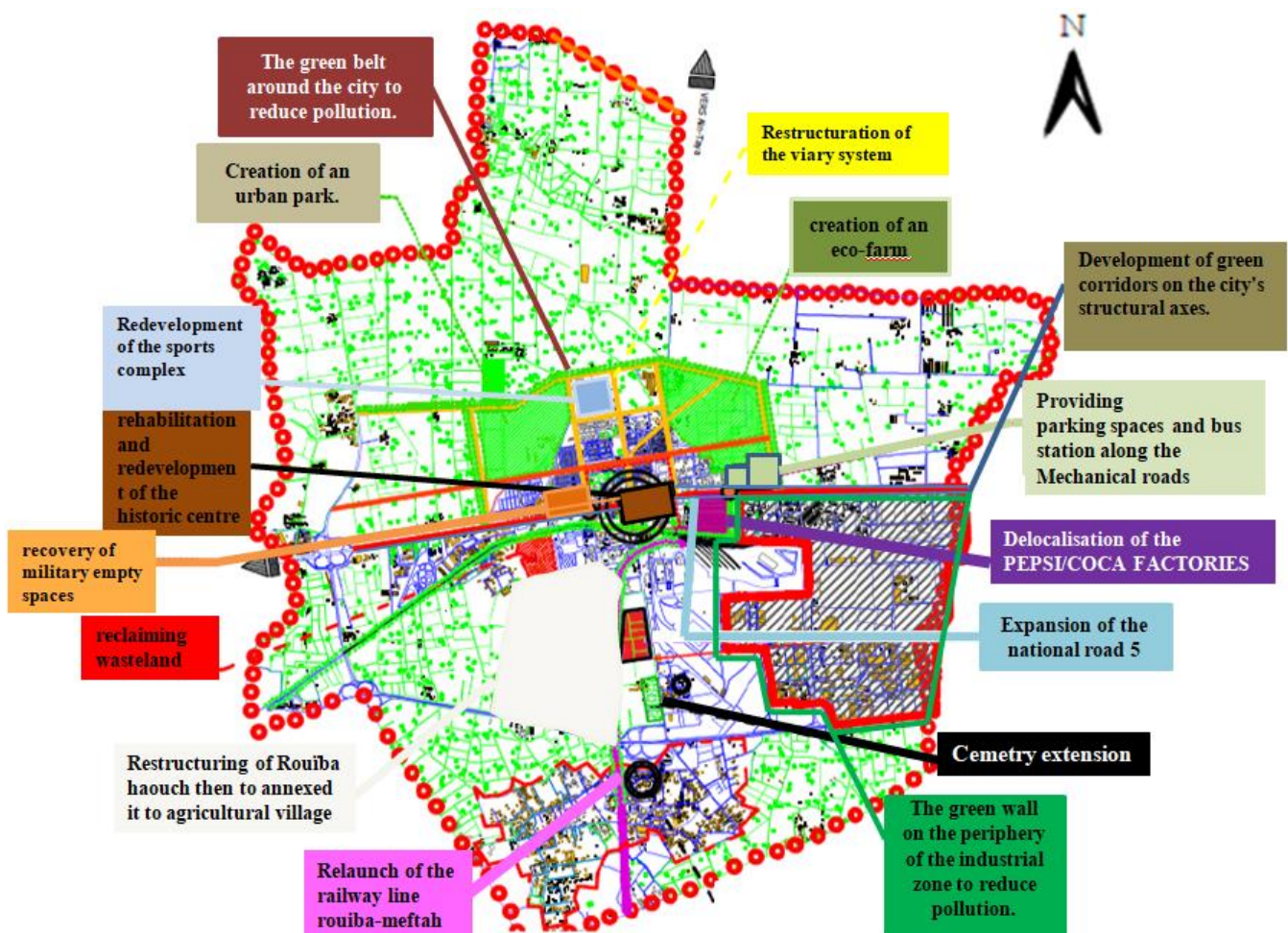


Figure 69:urban proposal scheme, **Source:** Algiers 2015 PDAU Map by author

III.9. Study area analysis:

After studying the city of Rouïba on a regional scale and analysing the rules of its formation and growth, the passage to another scale of intervention is necessary, which is the scale of urban composition and intervention.

III.9. 1.Presentation of the intervention area:

Our area of intervention is located in the city center of the commune of ROUÏBA.

Our intervention site is pierced in the middle by the boulevard colonel Amirouche and the railway station limited by :

- Mohamed tounsi street in the North
- the railway station in the South
- Amirouche Boulevard to the EAST
- Laiachi Ali Boulevard in the West



Figure 70: Intervention area, Google earth treated by the author

III. 9.2. Accessibility:

Our study area is accessible via:

- 1) National road 5
- 2) Colonel Amirouche boulevard
- 3) The railway station



Figure 71: accessibility to the intervention area, Source:Google earth treated by the author

III.9.3. Functional structure:

Our air of intervention is made up of construction for residential use, equipment, shops and services.

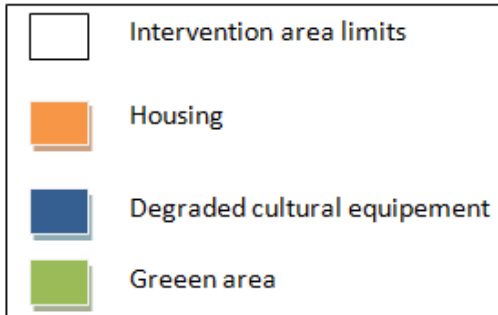


Figure 72: functional structure , Google earth treated by the author



Fig.73: colonial housing + Commerce

Fig.74: Degraded cinema

Fig.75: old town hall

III.9.4. Hierarchization of paths:

There are 3 types of paths:

- **Main path:** The boulevard colonel Amirouche and the street Ahmed Amirouche.
- **Secondary paths:** These are residential streets with integrated shops (e.g. Mohamed Tounsi Street, and Bransi Mohamed centralized 2nd degree path).
- **Tertiary paths:** These are less important service roads than the two types mentioned, they facilitate movement in the districts (3rd degree centralized route).

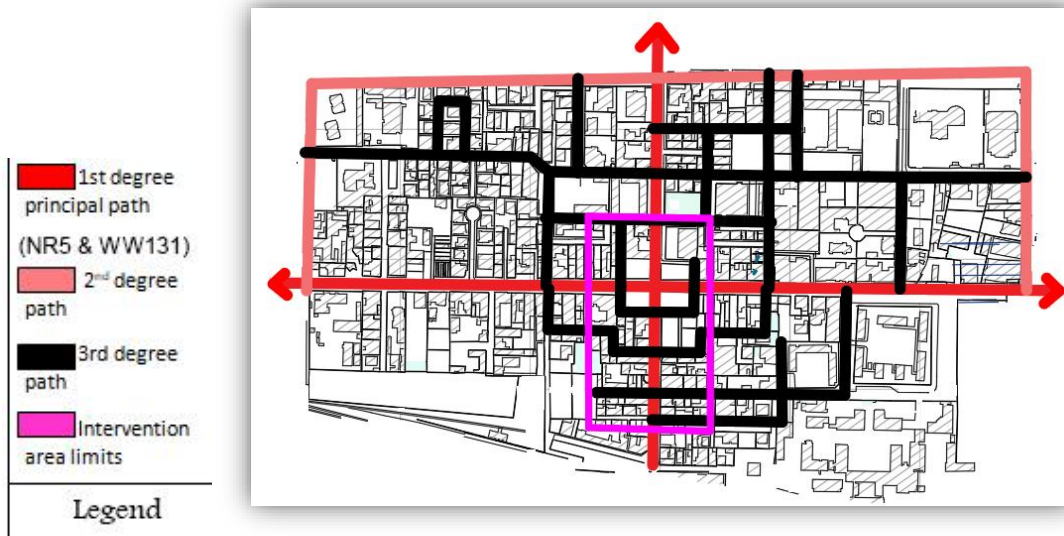


Figure 76: Hierarchization of paths, Algiers cadastre
Source: treated by the author

III.9.5. Study of the state of the buildings:

- **The town hall:** good condition
- **The cinema:** bad condition (needs restoration).
- **Individual housing:** fragmented, of remarkable quality and density, the majority of the houses are in a new state of construction except that the colonial villas that exist there are gradually deteriorating and require restoration to maintain their structures and preserve their architectural style. The size of these houses varies from R+1 to R+3 maximum, an important number of each of them has a private garden.



Fig.77: colonial housing + Commerce



Fig.78: Degraded cinema



Fig.79: old town hall

Source: Photos taken by the author

III.9.6. The template:

Most often the template of the constructions in the fabric of Rouïba does not go beyond the two levels, as the majority of these colonial-type buildings (individual houses R+1, R+2).



Figure 77: 3d view of the intervention area.
Source:Google earth treated by the author

III.9.7. Summary:

Our site of intervention is permeable via an axis of national importance connecting the political-administrative center from the commune of Rouïba to the two important poles of Algiers in the West and Boumerdes in the East. This axis is the proximity of the national road N°5 and the railway network.

This accentuated accessibility, allows and gives the possibility to our district to play in the future, a very important link between the different entities of this city and its surroundings.

III.9.8. The legal vocation :

- All public facilities are located on state land.
- All buildings for individual housing are located on private land.

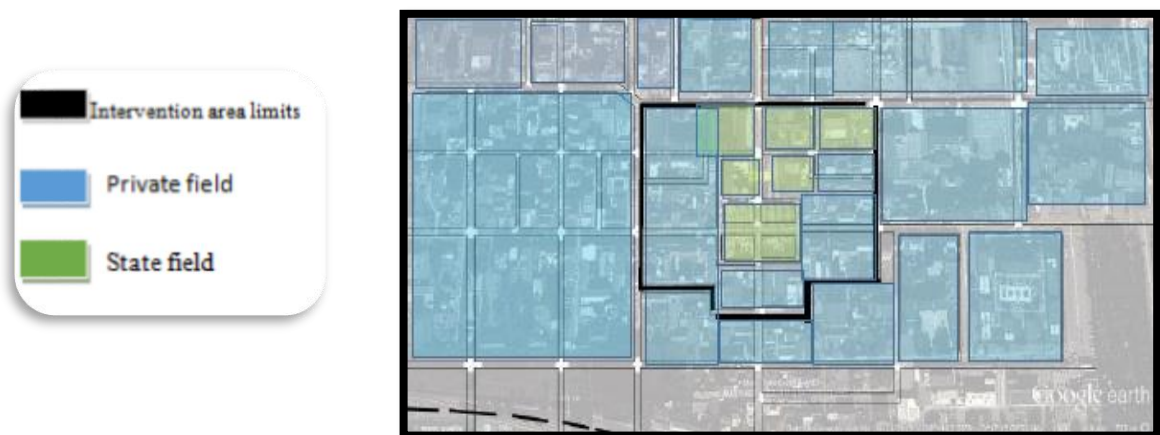


Figure 78 : legal vocation , Google earth treated by the author

III.9.9. Summary:

The success of the project remains dependent on the following actions:

- Consolidation of the relationship with Colonel Amirouche Boulevard as a link axis
- Building different equipments that helps bring the life to the city center and expanding it.

III.9.10. Synthesis of the study area analysis :

ELEMENTS OF THE STUDY AREA	STRUCTUR E	USAGE
A. residential area	saturation of the reception structures in the city centre - presence of unstable housing. -the lack of maintenance of old buildings and the absence of an urban policies -deterioration of its built environment	Young population with 70% under 40 years of age and a considerable active population
	Urban form :old buildings and villas with one floor that are poorly maintained and transforming of the ground floors of some buildings and villas to shops.	
	Most of the template don't go beyond (G+1 ,G+2)	
	-most of the buildings are degraded or old ones that remained since the colonial era	
B. non-residential space	- Degraded cinema that needs rehabilitation	
	Lack of cultural and leisure facilities	
C. unbuilt space	-Lack of developed public spaces.	The study area's social life lacks collective animation.
	Shortage of green spaces, landscaped areas and playgrounds	
D. infrastructure	-Presence of a rather important infrastructure -Traffic problems (traffic jams...) do not allow easy access to the city of Rouïba. -The strategic location of this city needs touristic infrastructure to accommodate tourists and businessmen.	-High mechanical mobility and flow at RN 5.
	Unsupported pedestrian traffic	Lack of soft traffic infrastructure (bicycle path, pedestrian paths and greenways).

III.10. Urban proposal:

In the perspective of the problems of our workshop and according to the choice of our intervention site we found out that Rouïba town's centre and its south part too require an urbanistic vision according to an operation of urban renewal of which our objective is to materialize a very important axis "Colonel Amirouche" that contains cultural and leisure facilities which compose the centrality of this city, through an architectural project that aims to mark the town's centre and its south part as well plus the different actions and operations that will be mentioned in the structure scheme below.

III.10.1. The Proposed structure scheme:

The following operations have been proposed:

- ✓ Redevelopment of the four squares.

- ✓ Construction of a new library after the demolition of an old building that is in bad state.
- ✓ Cinema rehabilitation with the addition of theatre function to it.
- ✓ Construction of new housing building after the demolition of the 800m² block.
- ✓ Creating a new way deviding the 800m² block to 2 parts.
- ✓ Constrction of a new shopping mall facing the 800m² housing after the demolition of bad state buildings.
- ✓ Vertical extension of two colonial buildings that are in good state to keep the colonial aspect traces in the city centre.
- ✓ Renovation and vertical extension of the old hotel facing the 4 squares of Rouiba town.
- ✓ Construction of a bank next to the town hall.
- ✓ Demolition of bad state buildings in the city centre and along the way to the train station, with the reconstruction of new modern housing buildings that respects some aspects of the colonial architecture.
- ✓ Demolition of a bad state building and the reconstruction of a youth house.
- ✓ Construction of a covered market next to the train station plus the put of tents that serve as a flea market or as a seasonal one.
- ✓ Attribution of a space for parking next to the train station.
- ✓ Creation of a cultural pole in order to enrich the cultural factor of the city centre
- ✓ Aerating the city centre by creating public and green spaces for the community (leisure spaces).
- ✓ Strengthening cultural and educational activity
- ✓ Recovery of abandoned lands and equipments.
- ✓ Promote lively and safe pedestrian routes.

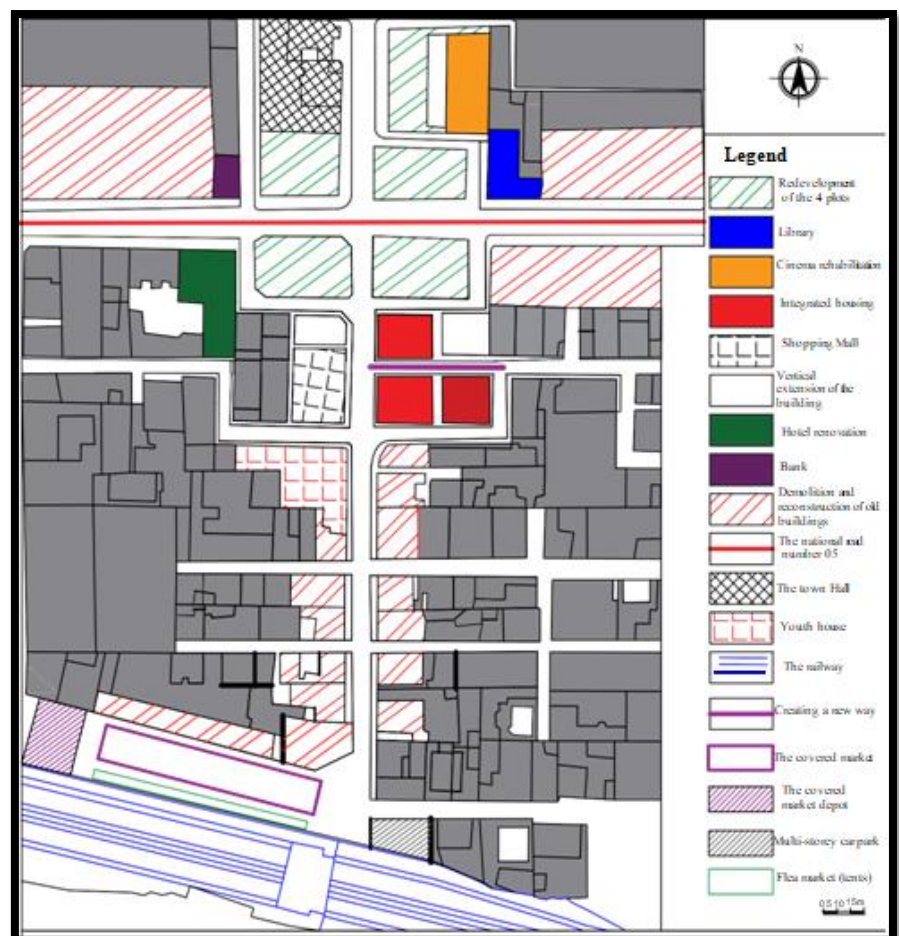


Figure 79: The structure scheme. Treated by the author scale: 1/500

III.10.2. The lotisation plan :

The structuring of our intervention area has allowed us to define two types of plots:

- Medium sized plots: reserved for the development of equipment, designed with the aim of animating the national road n °5 axis .
- Small blocks: Reserved for housing programmes.

A repetitive module of 4*4 was proposed for residential + commercial buildings.



Figure 80: The lotisation plan. Treated by the author



Figure 81: composition plan, treated by the author

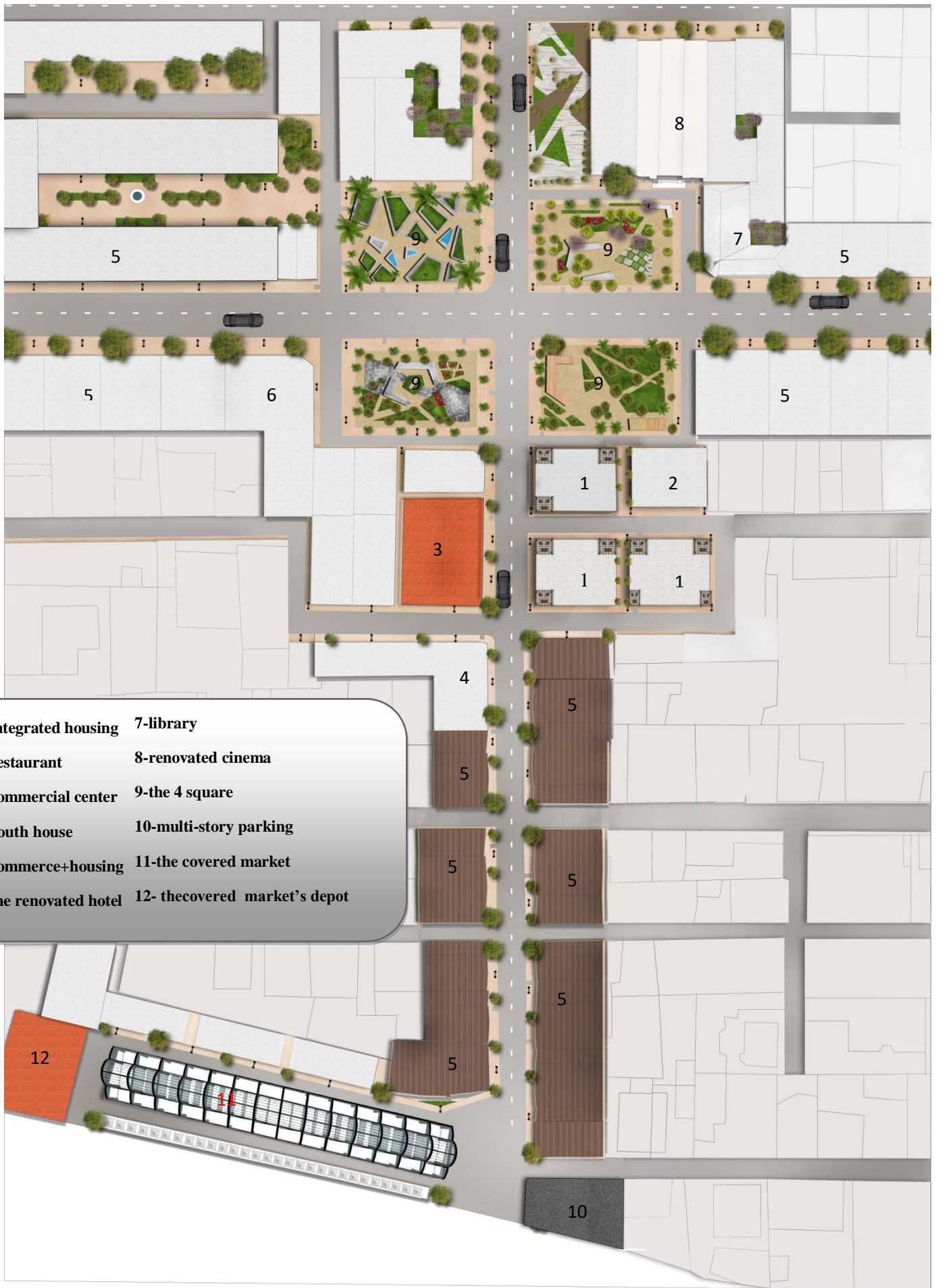
III.10.3. Composition plan:

Subdivision allows the beginning of an urban composition to be identified.

It represents an initiative reflection on the land occupation by each plot.

The full in relation to the ground plan is the built environment as well as the proposed facilities. The empty is the unbuilt spaces, and in our case we have the public square and the parking area as well as the pavements.

III.10.4. The redevelopment plan :



- 1-integrated housing
- 2-restaurant
- 3-commercial center
- 4-youth house
- 5-commerce+housing
- 6-the renovated hotel
- 7-library
- 8-renovated cinema
- 9-the 4 square
- 10-multi-story parking
- 11-the covered market
- 12- thecovered market's depot

Figure 82 : The redevelopment plan

III.11 Architectural intervention:

Integrated housing:

III.11.1 Project presentation

In this phase we will go through the study more in-depth, with the architectural project.

The project presents two operations, the first one is located on a private block of 800m² that belongs to the heirs Koudrihamoud ben Lakhdar. The second one is located on a private parcel of 286 m².

The 800 m² block contained 2 buildings one of g+1 plus another one of g+2; both of them were in a bad state that they were lately demolished.

While the 286 m² parcel contains a mechanics garage, that we proposed to transport to a further location from the city centre.

The integrated housing project consists of three buildings, two of them on the 800 m² block and the other one on the 286 m² parcel.

The three buildings aim to provide a more pleasant living environment as well as the contribution of a better situation of financial sustainability through the integration of a commercial space in the ground floor plus an office space for the practice of a liberal profession and this in accordance with the recommendation and decision taken during the urban phase, also the 3 buildings share a wide underground floor parking space that will provide the inhabitants and the workers to park their cars inside plus a common way between the buildings that will facilitate the circulation and the access to the underground parking.

So as a conclusion this project is the realisation of an operation to develop a block of land of 800m² and a parcel of 286 m² into integrated residential housing.

The 800 m² project data sheet:

Situation: Algiers, Rouiba town, train station Street.

Vocation: Integrated housing.

Number of buildings: 2 buildings.

Number of floors: the two buildings contain a G+4+an underground parking floor.

Size of the buildings: the two buildings fit into a volume of 16m x 20m x 17m.

Parking capacity: 40 underground parking spaces.

The 800 m² block is 20 m deep and 40 m long having 3 facades on the street, the western limit gives on train station Street, while the northern limit gives on Rouiba town's plot (square) and the southern one gives on a tertiary way.

The 286m² parcel project data sheet:

Situation: Algiers, Rouiba town, train station Street.

Vocation: Integrated housing.

Number of buildings: 1 building.

Number of floors: the building contains a G+5 + an underground parking floor.

Size of the buildings: the building fits into a volume of 16m x 17.6m x 20m.

Parking capacity: 40 underground parking spaces.

The 286 m² parcel is 16 m deep and 17.6 m long having its southern and eastern facades on tertiary roads, while the western one gives on the 800 m² with the northern one giving on a private building (maestro restaurant building).

III.11.2 Project genesis :

Project genesis

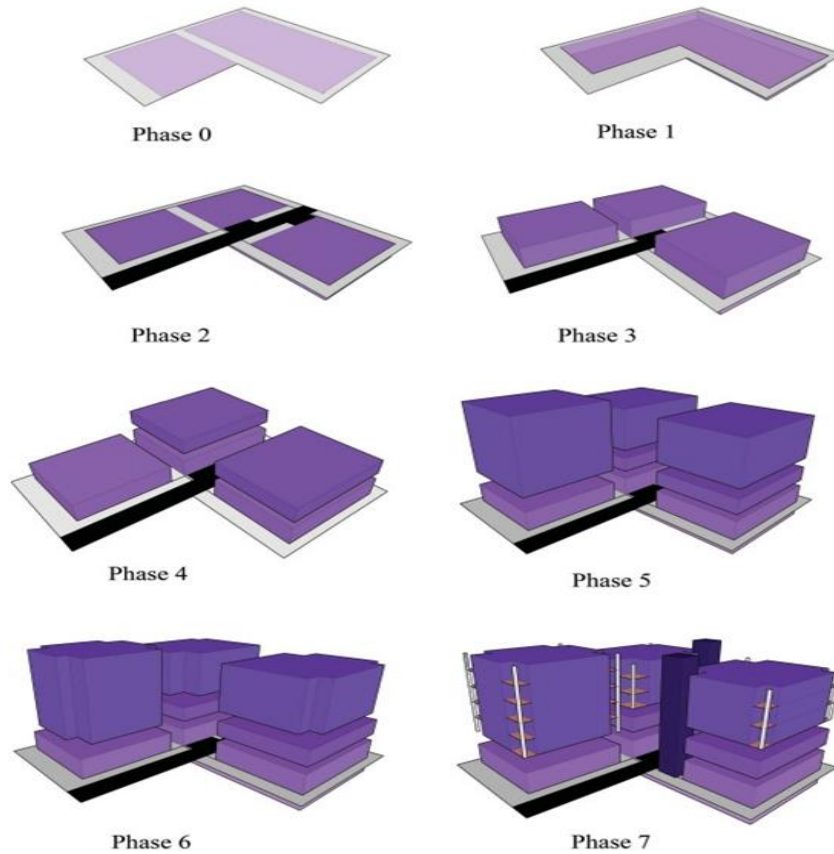


Fig 83:project genesis. **Source:** treated by the author

Phase zero:represents the initial state of the project site.

Phase one:consists of the occupation of the wholebasement surface of the two sites by an L shape volume constituting an underground car park.

Phase two:the next phase consists of creating a path that passes through the middle of the 800m² plot of land and continues up to the intersection with the existing tertiary path plus creating the two ramps that lead to the underground car park.

Phase three:this one consists of placing threeparallelepipedic volumes occupying each entire plot, constituting the ground floor for each building of the three intended for commercial use.

Phase four:consists of placing two other parallelepipedic volumeson top of the previous ones,constituting the first floor for the two 800 m² buildings intended for the services activity.

Phase five:this phase consists of the placement of two volumes ofthree (3) levels concerning the 800 m² two buildings and a volume of five (5) floors concerning the 286 m² building constituting the blocks that will accommodate the residential flats.

Phase six and seven: the two final phases consist of placing the vertical volumes intended for the vertical circulations (stairs) plus the balconies on each building.

III.11.3 Spatial organisations & circulations :

The basement is intended for parking the vehicles of the occupants of the residential flats and the employees, with two accesses from the new created way between the buildings. The basement constitutes a total floor area of 1150m².

The ground floor benefits from a commercial surface and a traffic area that provides the circulation between the two buildings of the 800m² plus the ramp on the two buildings that provides the vehicles to enter the basement car park.

The 286 m² building benefits from a commercial ground floor with several commercial shops. The 800 m² two buildings benefit from a services floor while the rest of the floors are all dedicated to the residential flats in the 3 buildings.

Stairwells connect all levels of the constructions linking the ground floor to the top level.

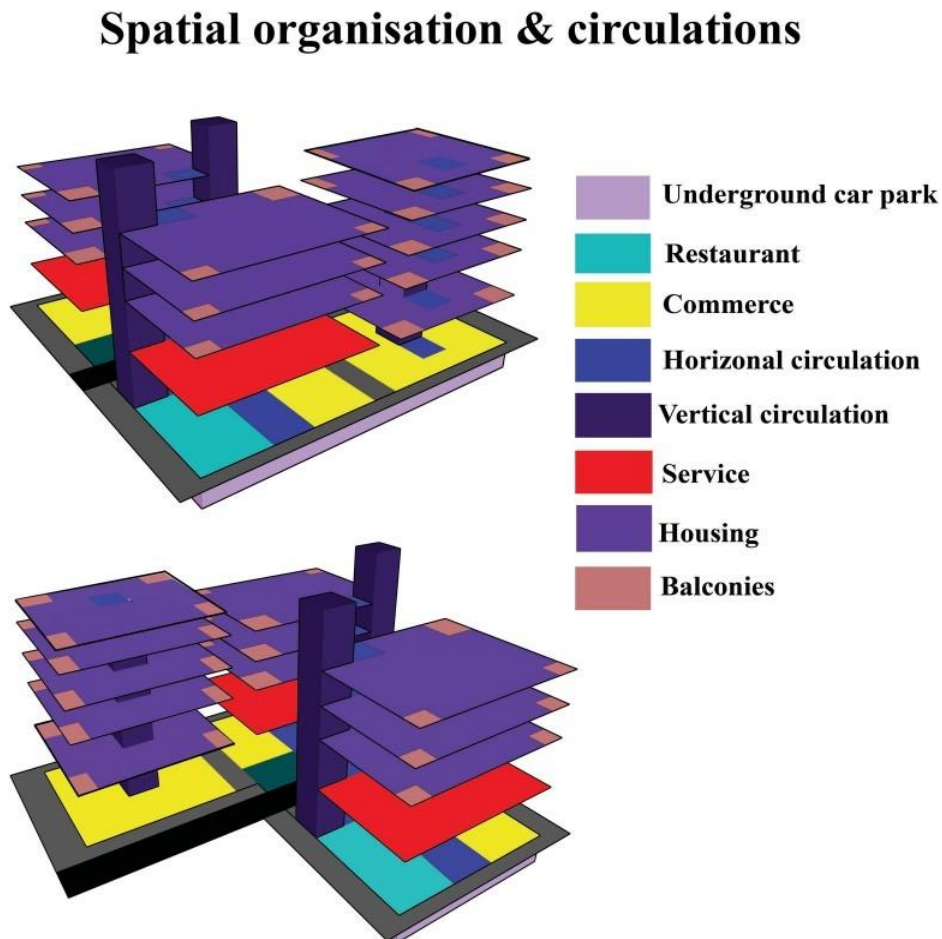


Fig84: spatial organisation and circulations **source:** treated by the author

III.11.4 Programme:

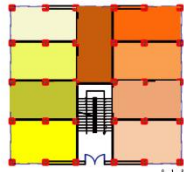
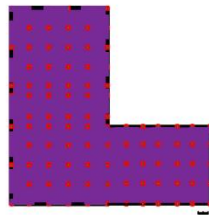
- The 800 m² two buildings programme:

The two buildings are identical so they share the same programme for the different floors.

We have two types of flats repeated on each building (f4 flat type 1 and f5 flat).

Fig85: the 800 m² two buildings programme

Source: treated by the author



The programme for the 286 m ² parcel building	
Spaces	Surfaces
Underground parking (Underground floor)	1150 m ² Parking capacity : 40 places
Commercial activities (Ground floor)	206 m ²
	Commercial space 1: 28 m ²
	Commercial space 2: 25 m ²
	Commercial space 3: 25 m ²
	Commercial space 4: 22 m ²
	Commercial space 5: 27 m ²
	Commercial space 6: 23 m ²
	Commercial space 7: 26 m ²
	Commercial space 8: 26 m ²
	Commercial space 9: 29 m ²
Housing (from 1 st to 5 th floor)	Type 3: F4 flat type 2
	Living room: 19m ² Balcony 1: 9 m ²
	Kitchen: 13 m ² Balcony 2: 6 m ²
	Chamber 1: 13 m ² Bathroom: 6 m ²
	Chamber 2: 15 m ² WC: 2 m ²
	Chamber 3: 17 m ² Entrance: 2.7 m ²
	Distribution hall: 7.8 m ²

The 286 m² building programme:

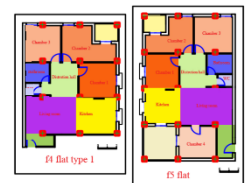
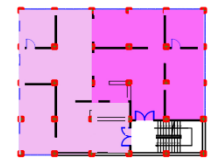
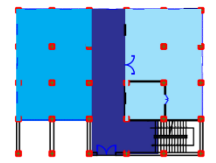
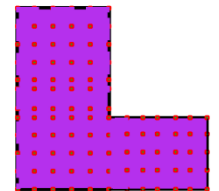
The same type of flat is repeated on the two sides of the building so here is the programme for each space.

The type of flat that we have is an f4 flat type 2.

Fig86: the 286 m² building programme

Source: treated by the author.

The programme for the two identical 800 m ² plot buildings	
Spaces	Surfaces
Underground parking (Underground floor)	1150 m ² Parking capacity : 40 places
Commercial activities (Ground floor)	Supermarket: 100 m ²
	Restaurant: 105 m ²
	Circulation: 60 m ²
Service activity (1st floor)	Service activity space 1: 140 m ²
	Service activity space 2: 148 m ²
Housing (from 2 nd to 4 th floor)	Type 1: F5 flat
	Living room: 21m ² Balcony 1: 4.5 m ²
	Kitchen: 13 m ² Balcony 2: 12 m ²
	Chamber 1: 14 m ² Bathroom: 6 m ²
	Chamber 2: 15 m ² WC: 2 m ²
	Chamber 3: 16m ² Entrance 5m ²
	Chamber 4: 14 m ² Distribution hall: 10 m ²
	Type 2: F4 flat
	Living room: 22 m ² Balcony: 4.7 m ²
	Kitchen: 15 m ² Bathroom: 5 m ²
	Chamber 1: 15 m ² WC : 2 m ²
	Chamber 2: 17 m ² Entrance 3.8 m ²
	Chamber 3: 15 m ² Distribution hall: 10 m ²

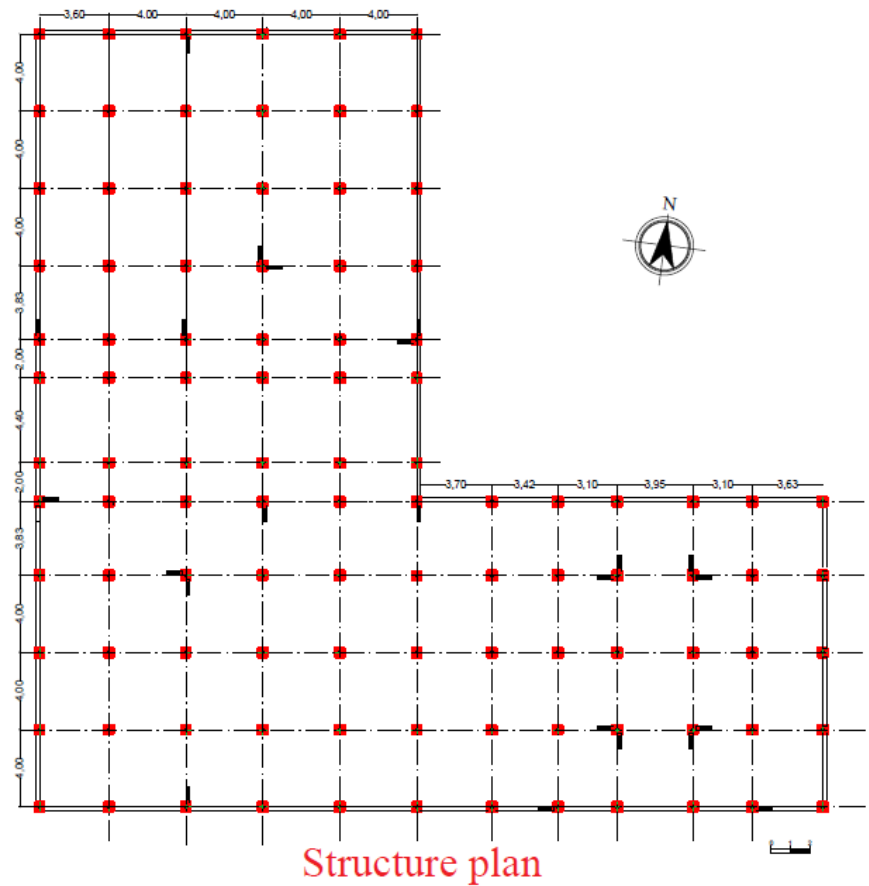


III.11.5 Structure:

The structure is a reinforced concrete column-beam system, braced by reinforced concrete walls to ensure stability against lateral forces.

Fig87: structure plan

Source : treated by the author.



III.11.6 Aesthetic aspect:

Concerning the treatment of the facades of the three buildings, we have tried to distinguish it aesthetically of its environment, with a different treatment and different materials but always respecting the main colonial dimensions of the windows.

The used materials for the facades treatments differs between wood, old brick and glass plus the use of musharabyah.



Fig88: Northern façade of the 800 m² building (Facing the 4 squares of Rouiba town) **Source:** treated by the author

Fig89: Southern main façade of the 286m² building.

Source: treated by the author



General conclusion :

The main objective of all the works elaborated throughout this year is to initiate us to approach the urban with all the aspects and complexity that an existing context can have. Each chapter has been the subject of intellectual reflection, particularly chapter II 'State of the art', which has enabled us to see what is being done here and elsewhere, it is a chapter of thematic research. It can be a source of inspiration and understanding of the different logics of conception, composition and organisation relating to our subject.

For our case study, the urban project has been associated with the renewal of the historic centre of Rouïba, which is the object of a long process carried out since the beginning of the academic year. Several phases structured the work as follows:

Different urban studies and thematic research have formed the basis of reflection for the project 'Renewal of the historic centre of Rouïba', especially 'The South part '.

The project nevertheless managed to find or propose rethinking the problems at different scales, in different cities and in different areas of intervention.

The answers in question are translated into a proposal for a redevelopment plan representing a new dynamic in the city centre of Rouïba, with a programme rich in cultural activists, educational facilities, a public square, etc. to strengthen the city centre.

Development of public spaces as urban beautification to ensure the link between the different spaces of the city, and urban continuity and is presented as a continuous network of spaces.

It enables city dwellers to find their way around and identify themselves in the city, so it should ensure social interaction. It is a place for rest, relaxation, pleasure and also work. In the end, an architectural project (Integrated housing) is developed as a verification and application of the development plan, the choice of which is by no means arbitrary, but on the contrary, it will constitute a synthesis of the objective and the challenge of the urban project.

BIBLIOGRAPHY

Books

1. LYNCH Kevin: "L'image de la cité ", Edition Dunod ,Paris 1976, P81
2. INGALLINA P. Le projet urbain, Presses universitaires de France, 2008, France
3. Saidouni Mouaouia ,Book Éléments d'introduction à l'urbanisme casbah – 1999
4. Michel JULIEN et Bertrand THEYES, DICTIONARY OF URBAN PLANNING AND DEVELOPMENT. 2005.
5. C. Aymonino, M.Brussati, G.Fbbri, M.Lens, P.Levero, S.Lucianetti, A.Rossi - La citta di padova- Roma.1999
6. Patrizia Ingallina, "What do I know? Le projet urbain", February 2001, Paris, edition: Presses Universitaire de France.
7. PANERAI, Philippe and MANGIN, David: Projet urbain, 1999, Éditions Parenthèses, Marseille.

Thesis:

- BENAMEUR A. H., « la résidentialisation : une alternative au manque d'urbanité des grands ensembles », Mémoire de magister, Université Mentouri de Constantine. 2010
- BERBAR, A., « renouvellement urbain dans la ville d'Alger », rapport de master, janvier 2009

Reviews, Articles and Reports :

- DEVILLERS, Christian, 1994 : The Urban Project, du Pavillon of l'ARSENAL editions, Collection LES MINI PA, Paris, 1994, pages 12-13, <http://www.mtaterre.fr/dossiers/le-developpement-durable/cest-quoi-ledeveloppement-durable> ; consulté le 20 aout 2017
- VIARO A., *Bologne : une rénovation urbaine exemplaire*, in *Habitation : revue trimestrielle dela section romande pour l'Association Suisse pour l'Habitat*, 2016, Suisse
- DAQUIN FERRIERE& ASSOCIATES PDF
- In le Roberte de la langue française ,2003 et Larousse en ligne ,2009.
- Icomos city and architecture "city architecture and public space.
- Living in the City, adapted by the authors, available at: https://vivreenville.org/media/441285/vev_croitre_sans_setaler1_extrait.pdf
- Urban project: between innovation and tradition in urban action Ecoled'architecture, MARNE-LA-VALLEE
- germ&JAM architecture. Territories, are two associated agencies, one SCM, 25 urban and landscape architects.
- Comparison of Urban Conservation Projects in Historical City Centers: Izmir History Project and Raval Urban Regeneration Project ,
- Canalblog, urban sprawl, May 19, 2014, available at: <http://urbanisation.canalblog.com>

- *Espaces publics et cultures urbaines*. Actes du séminaire 2000-2003 du CIFP de Paris publiés par le CERTU.
- Gilles Novarina and Paola Pucci, *Renouvellement en France/Requalification en Italie : Formes récentes du partenariat public-privé*
- Emmanuel REY *Density and quality of housing: the problem of urban wastelands Study day* -Ed VLP - ASPAN / Lausanne / 10 septembre 2003 - p 1/5

Laws and decrees:

- People's Democratic Republic of Algeria, Civil Code, Art.764. 2007 Jora
- People's Democratic Republic of Algeria, Civil Code, Art.713. 2007 Jora
- People's Democratic Republic of Algeria, Civil Code, Art.724. 2007 Jora
- People's Democratic Republic of Algeria, Civil Code, Art.756 bis 2. 2007 Jora
- People's Democratic Republic of Algeria, Civil Code, Art.733 - Art.734. 2007Jora
- People's Democratic Republic of Algeria, Civil Code, Art.749. 2007 Jora.
- People's Democratic Republic of Algeria, Civil Code, Art.750. 2007 Jora.
- People's Democratic Republic of Algeria, Civil Code " Art.744. Art.745. Art.745.", 2007 Jora
- Official Journal of the Algerian Republic No. 14, Executive Decree 14-99
- Official Journal of the Algerian Republic No. 14 of 16 March 2014, "ExecutiveDecree No. 14-99 of 4 March 2014".
- Executive Decree 97-154 of 10 May 1997, Art.2

Websites :

- <https://www.consortium-immobilier.fr/guide/achat-vente/1/3/7/55/15/>
- <http://pointdroit.com/definition-copropriete/>.
- <http://www.developpement-durable.gouv.fr>
- <http://collectivitesviabiles.org/articles/consolidation-et-requalification-urbaines.aspx> –
- <http://urbanisation.canalblog.com>
- www.alger-roi.com
- https://www.researchgate.net/publication/322526617_Comparison_of_Urban_Conservation_Projects_in_Historical_City_Centers_Izmir_History_Project_and_Raval_Urban_Regeneration_Project

Photography and cartography :

- Cadastral maps.
- CNERU of Bir Mourad Rais (National Centre for Study and Applied Research in Urban Planning).
- DUAC of Algiers: PDAU of Algiers 2015.
- APC of the commune of ROUIBA.
- Google earth, satellite image and Google image.

Appendices

Graphic file of the architectural project

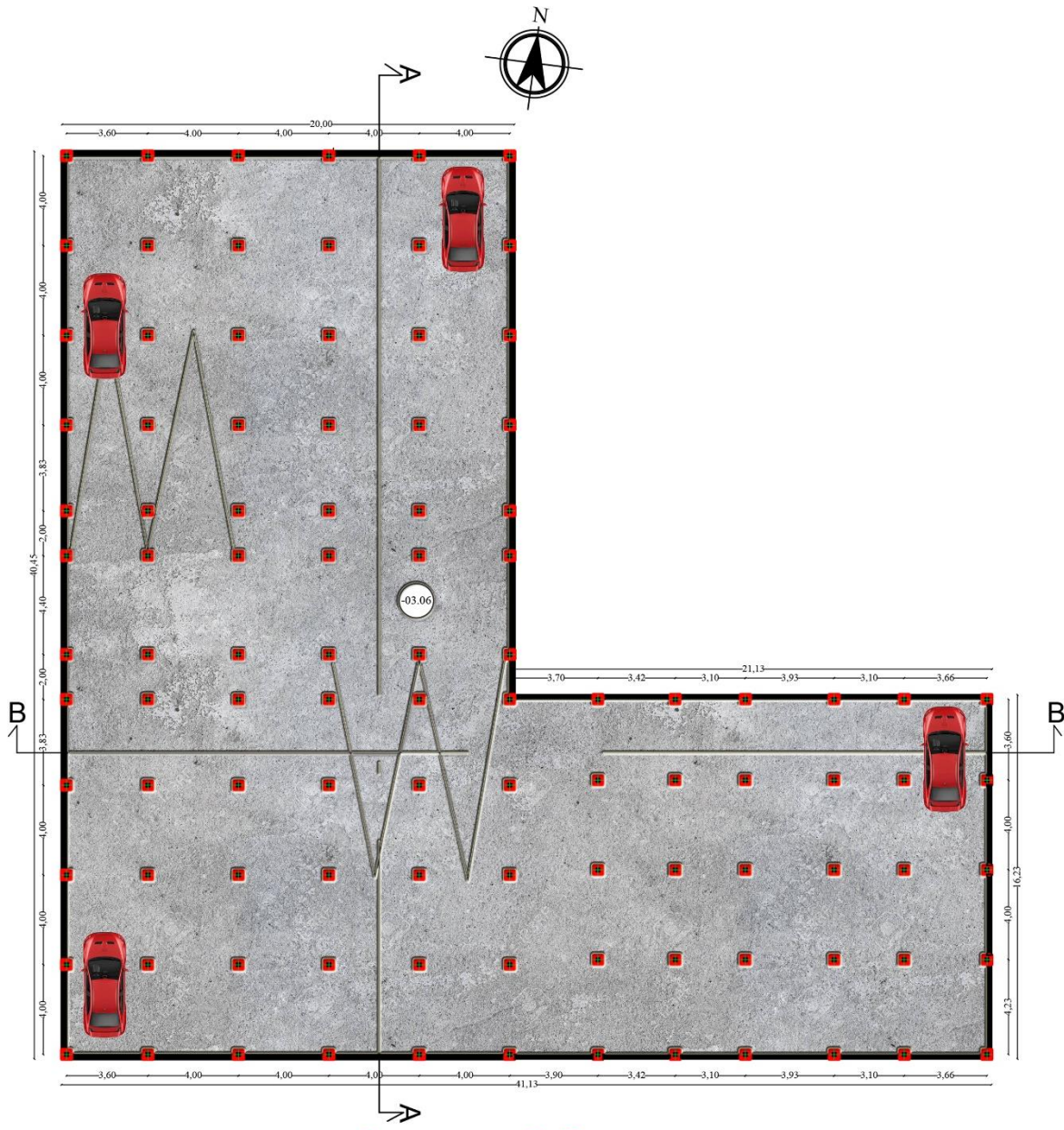
Master plan



master plan

Scale:1/200

Underground floor plan

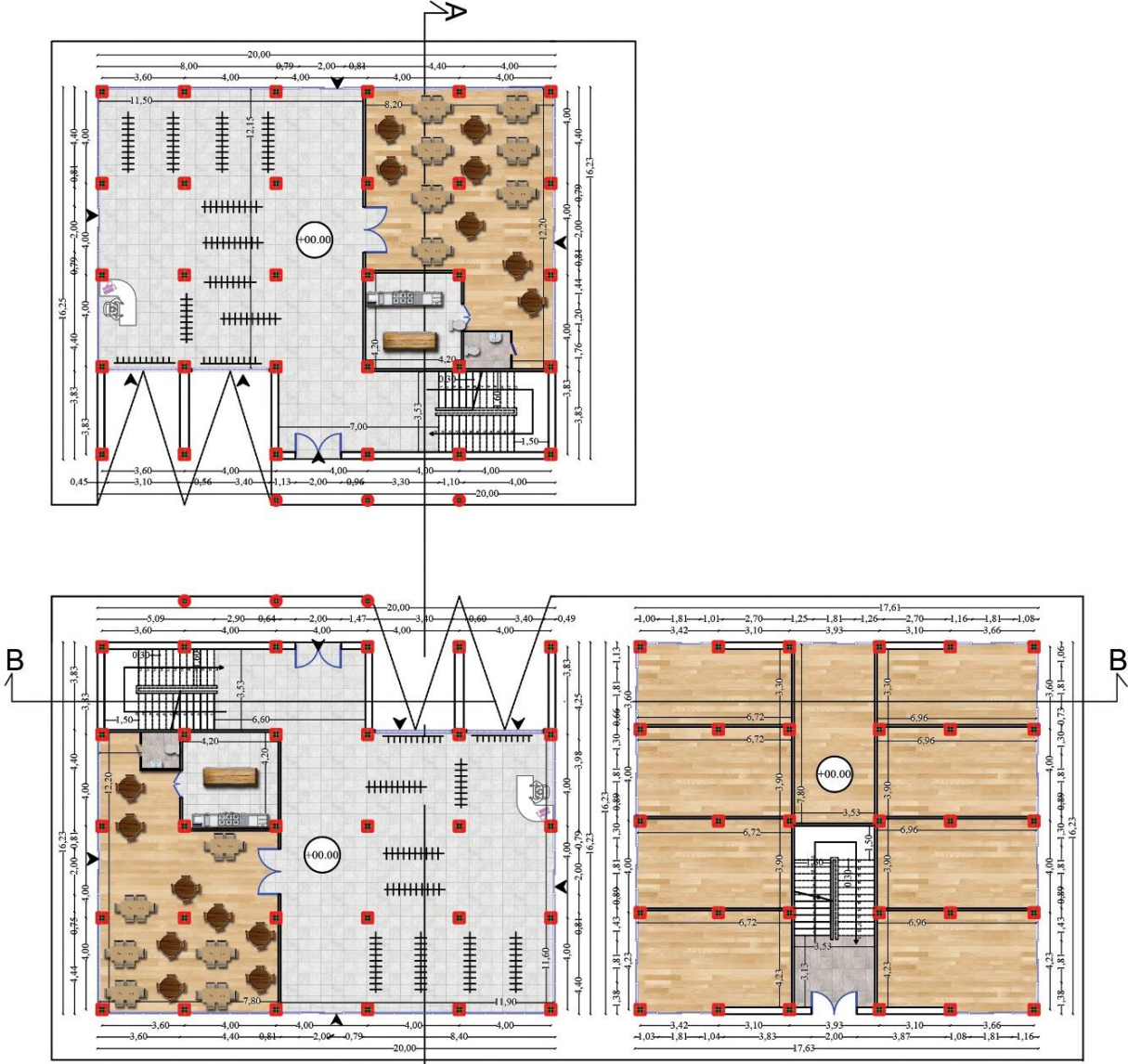


underground floor

Scale : 1/200



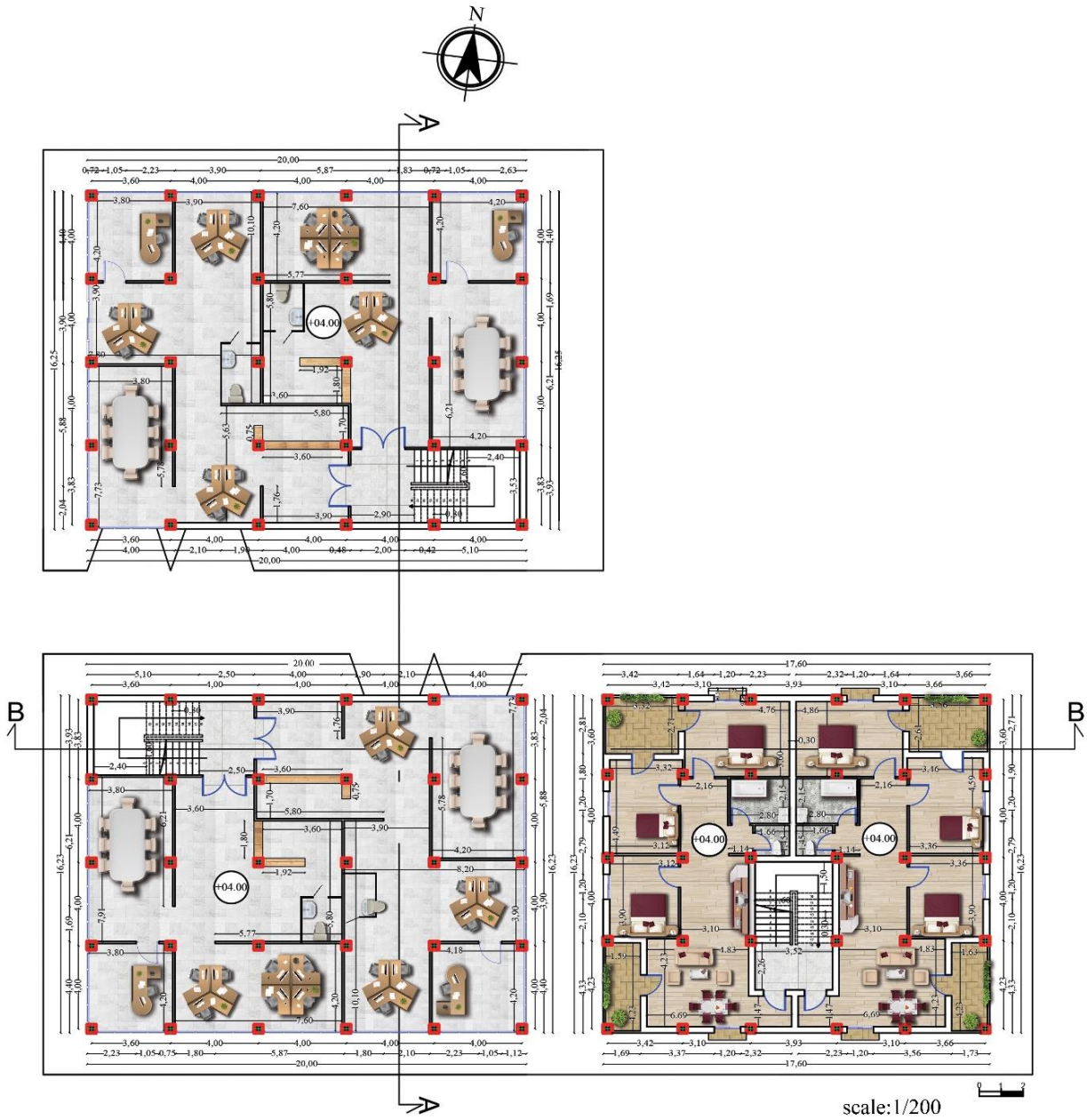
Groundfloor plan



Ground floor plan

Scale: 1/200

1st floor plan :



1 st floor plan

scale: 1/200

2nd and 3rd floor plan



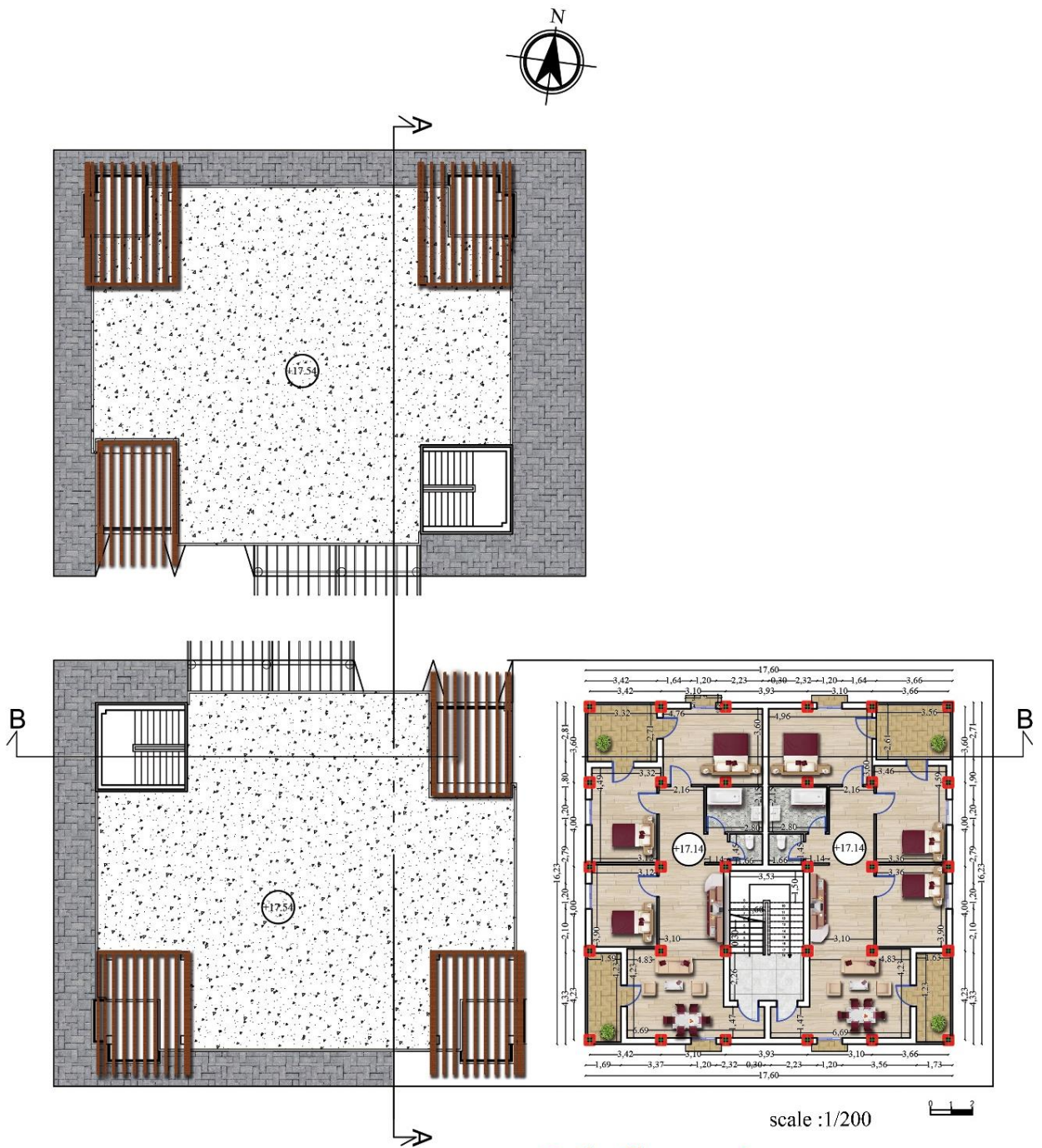
2nd & 3rd floor plan

4th floor plan



4th floor plan

5th floor plan



5 th floor plan

Sections



section AA

Scale:1/200



section BB

scale:1/200



Facades



Northern main facade of the 800 m² two buildings



Southern facade of the 800 m² two buildings



Western facade of the 800 m² two buildings



Western facade of the 800 m² two buildings



Southern main facade of the 286m² building



Northern facade of the 286m² building



Western facade of the 286m² building



Eastern facade of the 286m² building

Rouiba town's 3Ds before the intervention:





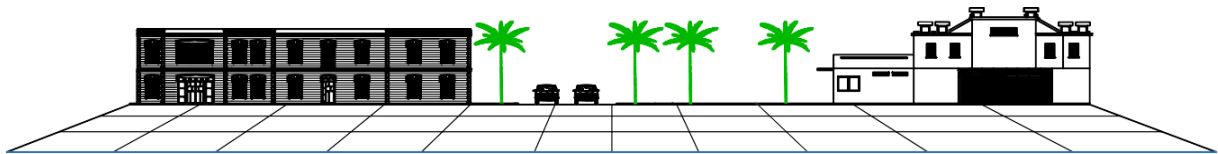




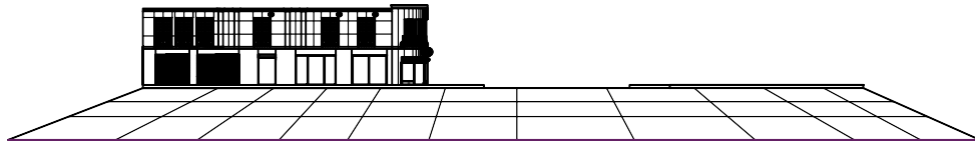




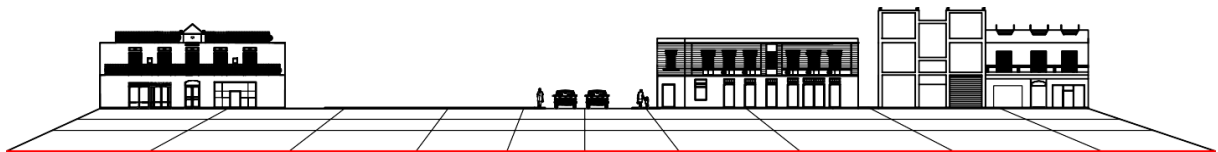
Rouiba town'urban facades around the 4 squares before intervention :



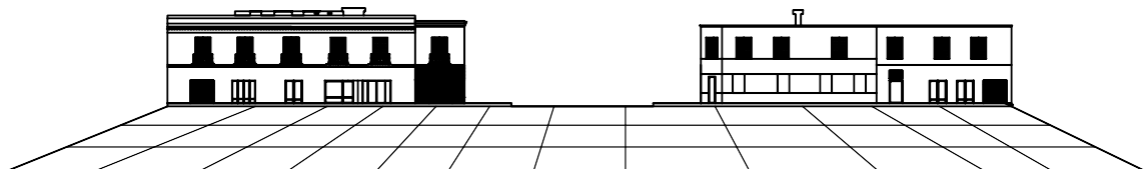
The northern side of the 4 squares



The western side of the 4 squares



The southern side of the 4 squares



The eastern side of the 4 squares