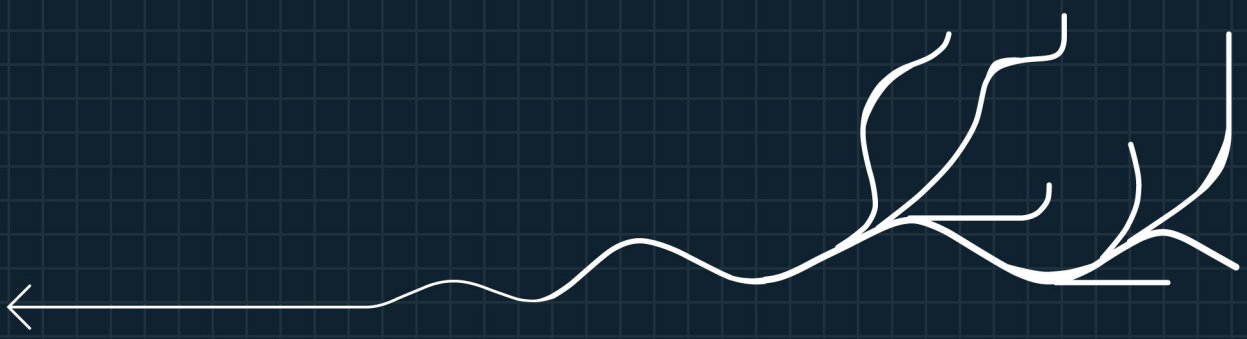
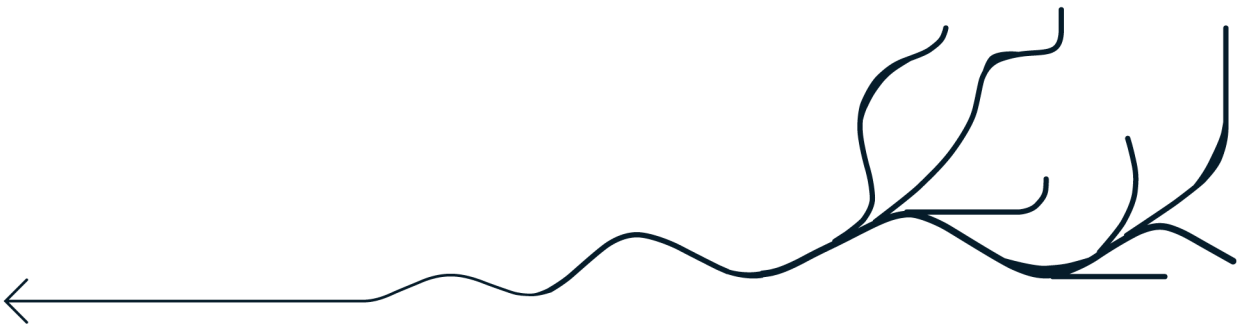


Back to **L'Horta.**

Urban revitalization of La Patacona based on the recognition of the agricultural past and current context.

Lucena, Katherine
Rossetti, Alejandro



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Lucena, Katherine
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UNIVERSIDAD CENTRAL
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VNIVERSITAT POLITÈCNICA
VALÈNCIA
EX TECHNICA PROGRESSIO

Politecnico di Torino

Back to L'Horta. Urban revitalization of La Patacona based on the recognition of the agricultural past and current context.

Tesi di Laurea Magistrale
Architettura per il progetto sostenibile

Politecnico di Torino
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Más que un documento, es un legado que dejaremos en vida, es el fin de una etapa y el inicio de otra, definitivamente un logro. Un logro alcanzado gracias a un equipo perfecto en el que cada integrante puso en la fórmula algo que lo hizo posible. Gracias a Dios, el responsable de darme el equipo que sin escogerlo, él lo fue armando en el camino.

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Alejandro Rossetti

Hoy soy lo que soy gracias a ustedes, este logro también es suyo.

Abstract

Since the end of the 20th century, the periphery has begun to be seen as an opportunity to build the contemporary European city, recognizing a distinct order, logic, and identity from the traditional city and solving the functional problems that avoid dependence on other urban areas.

The present case study is based on the recognition of La Patacona as a periurban area without identity, as a result of the development of sectorized and divergent urban plans and, in addition, of the physical and functional segregation with the urban area of Alboraya. This condition is detrimental to the development of social dynamics and leads to dependence on the Metropolitan Area of Valencia.

In order to solve the problem, the urban and historical context of La Patacona was analyzed, identifying La Huerta de Valencia as agricultural, historical and cultural, heritage, being the starting point of a process of urban regeneration that recognizes the agricultural past and reinterprets it in the contemporary context. To recover the lost or unrecognized identity, the urban intervention is based on a system of public spaces through adaptive reuse strategies that promote socio-cultural and economic development and enhance the site's intrinsic values and heritage assets.

Key words: *periurban area, identity, urban regeneration, heritage, agriculture, adaptive reuse.*

Summary

Introduction

Back to L'Horta arises from the interest in the peripheral areas of the contemporary city, defined since their origins by degradation, dependence, and lack of identity as a consequence of their inherent functional, social and infrastructural problems.

Although since the end of the 20th century, the peripheries have begun to be the object of intervention in response to accelerated population growth, these transformations are tightly linked to real estate speculation intended to occupy suburban land without adequate and coherent urban planning.

Consequently, higher-quality housing is built, although the proper facilities and infrastructure to satisfy the needs of this new population are scarce, forcing them to depend on the services of the surrounding urban areas. La Patacona is a suburban neighborhood in the Metropolitan Area of Valencia that functions as a heterogeneous and incomplete urban space due to the lack of adequate services and connections.

Now, starting from the contemporary paradigm that proposes the periphery as a space of transformation from recognizing its intrinsic and extraordinary characteristics and values, the research questions derive: *How to recover the identity of a periurban area from the recognition of its past? How to regenerate it by enhancing its heritage assets and its context?*

Therefore, the urban transformation of La Patacona is guided by a complex and extensive urban analysis that allows the recognition of its agricultural past and its current context demarcated physically and symbolically by the figure of L'Horta de Valencia a as a system not only agricultural and productive but also social and cultural. Through this link, the focus of the urban proposal is physically limited to the surface of the Patacona but aims to contribute to a scope beyond the local.

Thus, the thesis is developed in six sections ordered from macro to micro. First, chapter 1 examines the phenomenon of suburban areas, their characteristics, weaknesses, and opportunities. Then,

chapter 2 analyzes the municipality of Alboraya as a periphery of the Metropolitan Area of Valencia and how its agricultural influence determines its urban development. Thus, chapter 3 focuses on the role of the L'Horta de Valencia as a periurban Horta of the Mediterranean and its regional, national and global importance, which deserves recognition and protection. Subsequently, chapter 4 describes and analyzes the urban development of La Patacona, identifying its opportunities as an area of intervention.

Finally, Chapter 5 comprises the urban and architectural scale case studies. Finally, Chapter 6 develops the proposal that combines the urban analysis of La Patacona with the reinterpretation of its agricultural past at different scales.

General objective

Revitalize La Patacona based on the recognition of its agricultural past and its current context.

Specific objectives

Analyze the development and urban planning processes of La Patacona in relation to the municipality of Alboraya and the Metropolitan Area of Valencia.

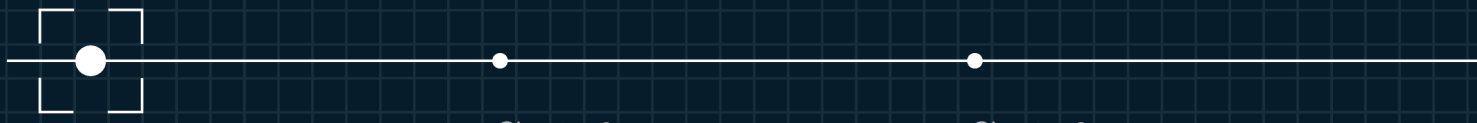
Recognize the intrinsic assets and values of La Patacona and its immediate context.

Determine the needs of the population for an urban program that favors social consolidation on a local and metropolitan scale.

Identify abandoned and/or underutilized spaces that serve as a starting point for urban intervention.

Chapter 1

Peri-urban areas in the contemporary city.



Chapter 2

Alboraya as a peri-urban municipality of agricultural base.

Chapter 3

Peri-urban agriculture.

Chapter 4

L’Horta - urban area relation:
La Patacona.

Chapter 5

Cases studies.

Chapter 6

Back to L’Horta as an answer.

Urban growth and the periphery

The concept of suburbanization as a process of urban expansion towards the periphery is not understood as a new process in European cities since it has been a constant in the urban development of our cities. However, from the Industrial Revolution onwards, new settlement forms began to develop, related to the emergence of metropolitan areas, when cities began to expand beyond their walls in response to demographic and economic growth.

Therefore, it is possible to determine that the periphery as a concept is born from the contemporary city, understanding it as a territorial aggregation in relation to the center of an urban structure, with urban characteristics but built with a different logic from the traditional one as an alternative to post-industrial urban agglomerations, and differentiated, according to Mas (2005) between suburban areas, of older formation, contiguous to cities and with intensely urbanized land processes, and peri-urban areas, more distant and with less urban pressure and less space consumption. (Figure 1)

At first, these forms of suburban conformation originated from the

decentralization of the traditional compact city, are characterized by three main variables: distance from a center, dependence as a consequence of the predominance of a residential character absent of services, and deficiency, since most of them are marginalized areas both physically and functionally, forcing their populations to be in constant relation with the central city.

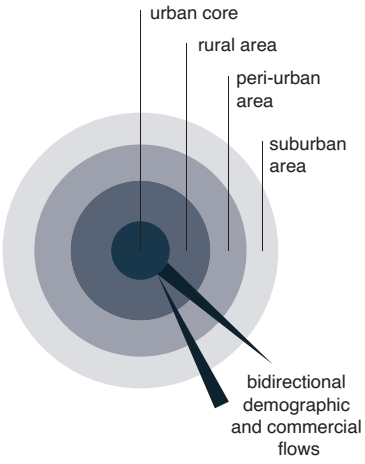


Figure 1. *Classification of the peripheral spaces* (Entrena, 2005)

Although it was not until the economic recovery after the postwar period that peripheral growth became significant in European cities, in Spain, it coincided with the "developmental Francoism" that produced a tremendous economic and social transformation. In this case, the physical changes of the Spanish city defined by Moneo (1982) referred to the development of large-scale road infrastructures, the construction of institutional buildings in the peripheral areas, the formation of industrial areas on the access roads to the cities and, finally, the growth on the suburbs of the large cities as areas of second residence.

As a result, the formerly degraded peripheries improved in building quality due to the increase in land and the preference of the middle class for the suburban habitat. The old self-built neighborhoods and public housing polygons were replaced by single-family homes and open-plan housing blocks that gave way to urban services and facilities, resulting in areas more autonomous to the metropolitan center.

Nevertheless, being areas in the consolidation process, the periphery maintains its condition of being an unstable place with frequent changes in land use and built space since it absorbs the transformations that the urban core, due to its consolidation, cannot allow. As a result, new ways of occupying the territory develop new urban fabrics and typologies that try to solve the accelerated urban expansion.

Hence, it is logical to conclude that the concept of the periphery in the contemporary city is in a constant process of transformation in social, economic, and urbanistic terms, showing itself as places that demand an understanding and an intervention adequate to their needs.

Peripheral expansion models

Based on the definition of suburban areas, according to Arteaga (2005:102), it is possible to identify three models of metropolitan periphery:

The industrial periphery: due to the expansion processes derived from the Industrial Revolution, characterized by the configuration of areas between agricultural fields and old settlements around traditional urban centers, which derive in residential occupation around the industry and existing communication routes.

The residential periphery or "dormitory-neighborhoods": originated by both the public and private sectors around severe land speculation that leads to the development of incomplete urban spaces characterized by social segregation and deficiencies in the accessibility and services.

The dispersed periphery: originated from the economic recovery of the 20th century, the technological advances in industry and road infrastructures, characterized by the dispersed and intentional occupation based on the physical and environmental qualities that the center does not possess.

For this thesis, it is helpful to point out that **the phenomenon of the residential periphery is the most coherent with the urban development of Mediterranean Europe** in the second half of the 20th century, developing in considerable urban areas that form and dominate the suburban landscape.

Challenges of the periphery and strategies for urban regeneration

Although the peripheral areas of contemporary cities have undergone significant urban transformations, the standard criterion of the periphery as hostile and degraded space, a misunderstood place that seeks recognition in contemporary times, is still maintained.

In addition, the evident absence of spaces for socializing makes mandatory the constant linkage with the city center.

On the other hand, this model of diffuse urbanization characterized by the segregation of human activities generates an extensive occupation of the land, both due to the occupation of the settlements themselves and to the need for infrastructures that allow the connection between areas, which results in the waste of environmental and economic resources and directly affects the conservation of natural, agricultural and forest areas of considerable ecological value.

Consequently, the periphery can be seen as a social, urban, and environmental problem, or on the contrary, it can be seen as an opportunity to build the current city (Solá-Morales, 1997). This last one refers to a contemporary paradigm considered since the end of the 20th century, accepting the periphery as a space with an order and a logic different from the traditional city, a space that already exists and deserves to be treated with its own identity, independent of the central city.

As Dematteis (1996) states, *"from the Industrial Revolution until today, the periphery has been the space of creation, invention, and change, but only nowadays it is being given that vocation, becoming a positive value for its definition and intervention."*

In this order of ideas, since the 1980s, urban interventions in contemporary European peripheries have focused on the resolution of functional problems to avoid dependence on other urban areas; structural, to solve the lack of adequate infrastructure; and environmental, to stop the degradation of the rural landscape.

In this way, **the urban periphery evolves to be considered a transforming space** that allows the regeneration of fragmented spaces, changing the already built space and taking advantage of the underutilized space to solve the functional unbalance and dependence on the central urban areas.

In this order of ideas, *Renzo Piano and his G124 work team* for the urban regeneration of the Italian suburbs define the “repair” of the periphery in six essential points:

1. *The suburbs must have a generational, economic, ethnic, and, therefore, functional mix.*

2. *They must be fertilized through the diffusion of public buildings, services, schools, universities, libraries, civic centers, cultural activities, places for people to meet and share.*

3. *They must be connected to the center without using the car, increasing public transport.*

4. *They must have green areas as a connective fabric, a filter limiting land consumption between the city and the countryside.*

5. *In building reuse, scientific diagnosis is essential, allowing surgical intervention with light works that do not displace inhabitants.*

6. *Participatory processes must guide actions between the architect, the community, companies, and financiers.*

Figure 2. *Analysis of the actual situation: physical separations in the urban fabric.*

Figure 3. *Project: a new path inside the area.* The graphic shows the pedestrian reconnection path. The magenta line represents the lay of the path that reconnects the three urban compartments

(G124, 2015) Giambellino, Milano

The areas of intervention are those parts of the city where regulatory plans have failed, where the relationship between services and people has been broken or has never existed, and spaces intended for socialization have been filled with marginalization and abandonment over time.

So, it is a matter of transforming the suspended spaces where services malfunction into urban peripheries where people can live better through squares, parks, small spaces that can trigger urban and social regeneration.

The urban regeneration project developed by the G124 team in Giambellino, in the southwest periphery of Milan, began by connecting all levels of urban life, from the individual apartments to the parks and services, to the connection with the city. Giambellino is a popular neighborhood built in the 1930s that stands out for its inhabitants' activism and participation, considered a starting point to develop an inclusive project of the different social components of the neighborhood.

The first scale of intervention, the neighborhood, is developed in the common courtyards, originally divided between residential blocks. The proposal breaks the fragmentation of public space through a new path that links housing and urban facilities, market, library, kindergarten, laundry, and senior center. In addition, small architectural interventions give prominence and dynamism to these

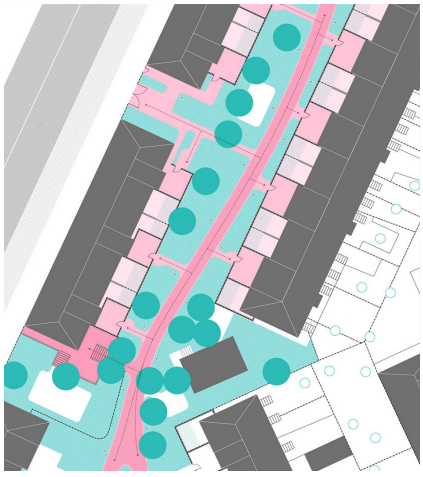


Figure 4. *Actual situation: green space delimited by fences*

Figure 5. *Project: permeability as an opportunity for courtyard regeneration*

(G124, 2015) Giambellino, Milano

social meeting spaces. (Figures 2 and 3)

On the other hand, the courtyard-plaza, the housing model of the residential blocks of Giambellino, were scenarios of socialization until being affected by the heterogeneity of its population that leads to close the spaces. Therefore, the proposal considered the courtyard as an urban unit through the design of different scales of privacy and coexistence and a line axis that articulates the organization of the different social functions. (Figures 4 and 5)

In this context, it is about the adaptation of traditional urban planning strategies, that is, the improvement of the quality of life of the inhabitants through adequate housing and service infrastructure, the intervention of the urban space through the refunctionalization of public spaces and green areas, and, at a system level, the integration and articulation with the general urban structure in order to improve the current situation before proposing new models of urban expansion that continue to occupy rural land.

In conclusion, **the periphery must be identified with its unique morphology as an urban area with its own logic and structure.** At the same time, it must be recognized its place and the characteristics of the urbanization process that help define its identity. From there, urban regeneration systems that respect and revalue the intrinsic conditions of the place must be projected.

Urban development of the Valencia Metropolitan Area and the theoretical growth model

Comunitat Valenciana
5.057.353 inhabitants

Valencia province
2.591.875 inhabitants

Valencia city
800.215 inhabitants

Figure 6. *Geographical location and population* (INE, 2020).

In Spain, the urbanization process resulting from the economic and demographic expansionism of the late 20th century has intensified in the last two decades, leading to an urban system in which large metropolises stand out, especially in the Mediterranean regions. Moreover, the processes of urban diffusion, both residential and economic activities, have increased, giving rise to polycentric metropolitan structures (Valenzuela and Salom, 2008).

Following Madrid and Barcelona, the Metropolitan Area of Valencia is the third most populated metropolitan area in Spain, with 1.581.057 inhabitants (INE, 2020). This Mediterranean urban network spreads around the urban fabric of all the municipalities that formerly integrated the historical region of L'Horta de Valencia. For this reason, its growth and urban expansion are causing the loss of a traditional intensive agricultural space (L'Horta) of remarkable environmental, landscape, economic and cultural value (Romero and Francés, 2012).

Now, the city of Valencia was founded by the Romans in 138 BC and conquered by the Muslims in 711 until 1238 after the Christian victory of Jaime I. From there, it is possible to observe (Figure 8) the historical context, highlighting the city's establishment as a metropolitan category, until its designation as the capital of the Valencian Community in 1982.

As for its urban development, the first records of its axial growth date from the early eighteenth century, being executed the first expansion in the last decades of the nineteenth century, after several

unapproved expansion projects. From the 20th century onwards, the urban expansions extend towards the north side of the Turia River, which determines the concentric growth of the city. (Figures 9 and 10)

In 1946, the first urban plan "P*lan General de Valencia y su cintura*," was developed with polycentric planning criteria. After the great flood of Valencia in 1957, the Plan Sur was projected with the objectives of diverting the course of the Turia River to the southern periphery and to address the economic, demographic, and urban growth that substantially transformed the city and its metropolitan area in the period 1960-1975 (Sorribes, 2007).

From then on, **urban development was characterized by the polycentric urban segregation of the city on the agricultural belt,** initiating the progressive destruction of L'Horta from fragmented suburban settlements that followed the principal communication axes up to more than 20 kilometers from the urban center (Rosselló et al., 1988), leading to the conurbation between most of the municipalities of L'Horta Nord, L'Horta sud and the city of Valencia.

As a consequence of this significant urban growth, since 1979, the urban land has been designated as a protection strategy for L'Horta de Valencia. However, urban expansion has continued to appropriate a significant amount of agricultural land that was no longer considered a protection zone in subsequent plans.

For this reason, in 2004, the l*aw 4/2004 on Spatial Planning and Landscape Protection* was enacted, acknowledging L'Horta as an area of recognized historical, environmental, and cultural value that the Valencian spatial plans must protect.

In 2018, the law derived in the theoretical proposal in the *Plan de Acción Territorial Metropolitano de Valencia* of 2018 in the "**Metropolitan tertiary-industrial model maintaining a competitive agricultural base**" as the desirable scenario for the preservation and revitalization of L'Horta as an innovative agricultural space and generator of added value.

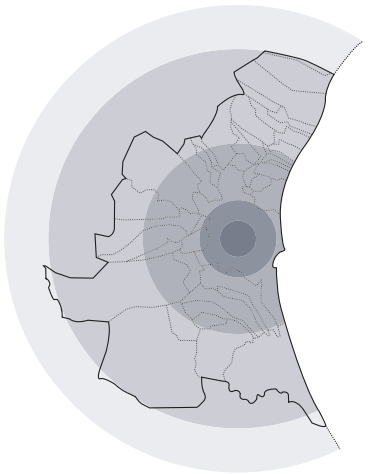


Figure 7. *Metropolitan scope and equidistances.*
(Generalitat Valenciana, 1988).

Historical context of Valencia

Valencia was founded by the consul of Hispania Décimo Junio Bruto, by the name of Valentia (Bravery), its first inhabitants must have been Italian legionaries licensed from the wars.

Cesar Augusto brought peace to Hispanic lands as well as to the rest of the Roman Empire. Rebuild Valentia, the city grew and developed

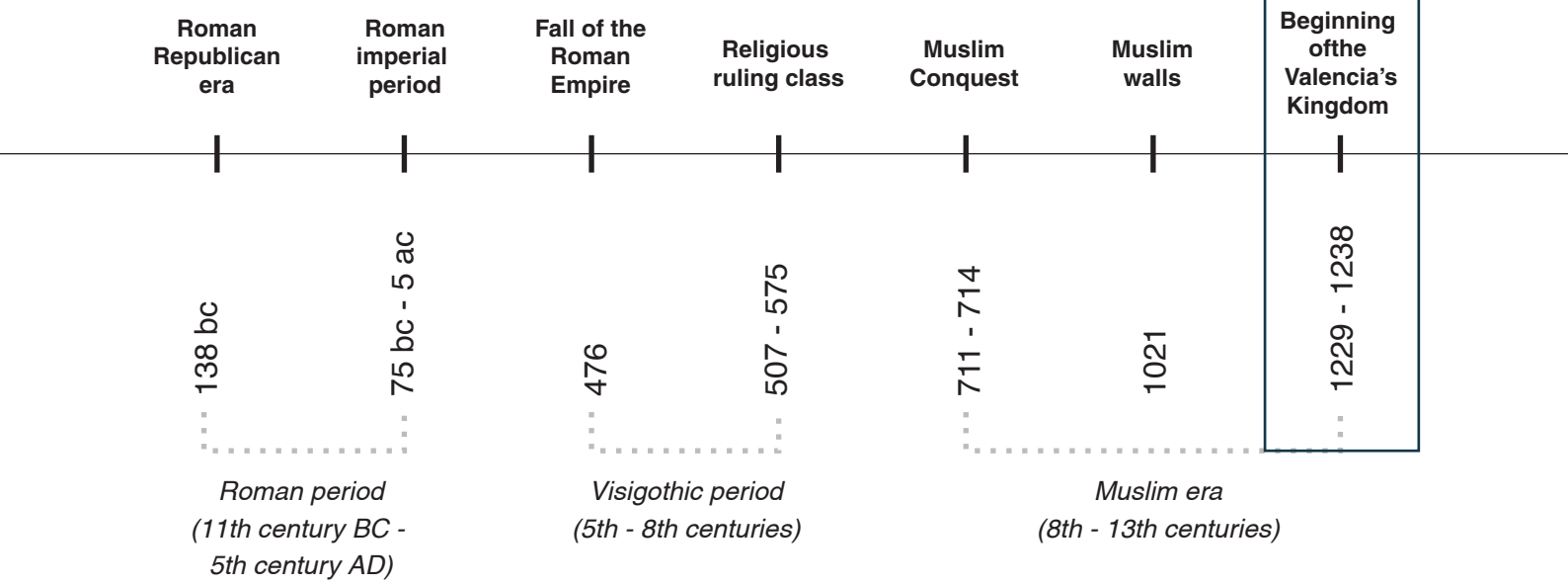
The barbarian tribes dethrone Romulus Augustulus, (the last Roman emperor).

The city was firmly controlled by the Arian Goths who exercised their control from their capital Toledo.

The city is incorporated into the Valiatus of al-Andalus, dependent on the Caliphate of Damascus, now called Balansiya.

He was named Abd al-Aziz ben Abí Ámir. During the 40 years of his rule, one of the most peaceful and prosperous times was lived.
A new walled enclosure was built, a milestone in history.

The King of Aragon, Jaime I, conquers Mallorca and it is from this moment that he fixes his attention on the Valencian taifa, conquering it on September 28, 1238.



The city is destroyed during the Sertorian war. When General Pompey defeated Sertorio, in the so-called "Battle of the Turia".

Is elected the king of the Visigoths and establishes the capital of his kingdom in Barcelona.

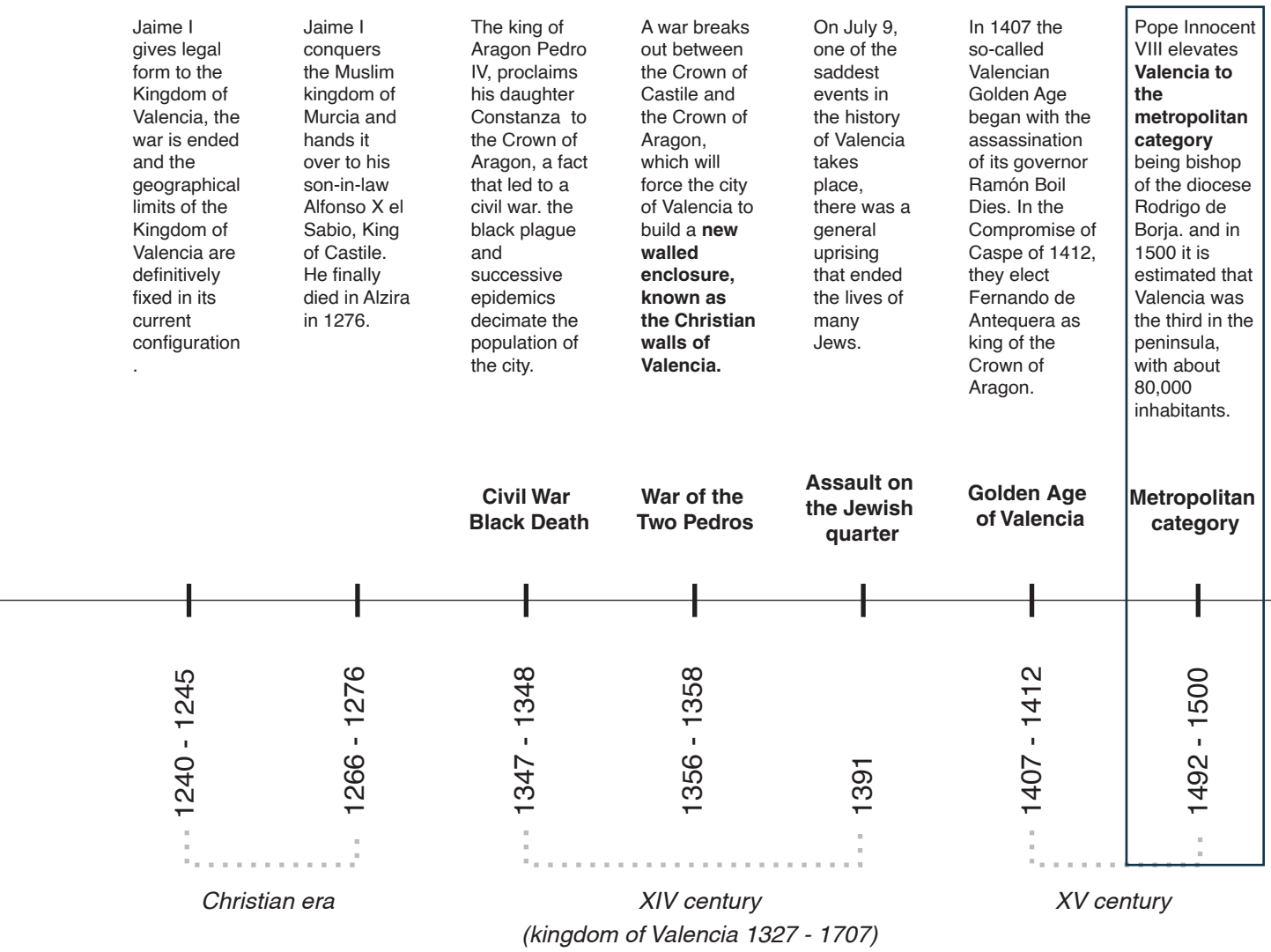
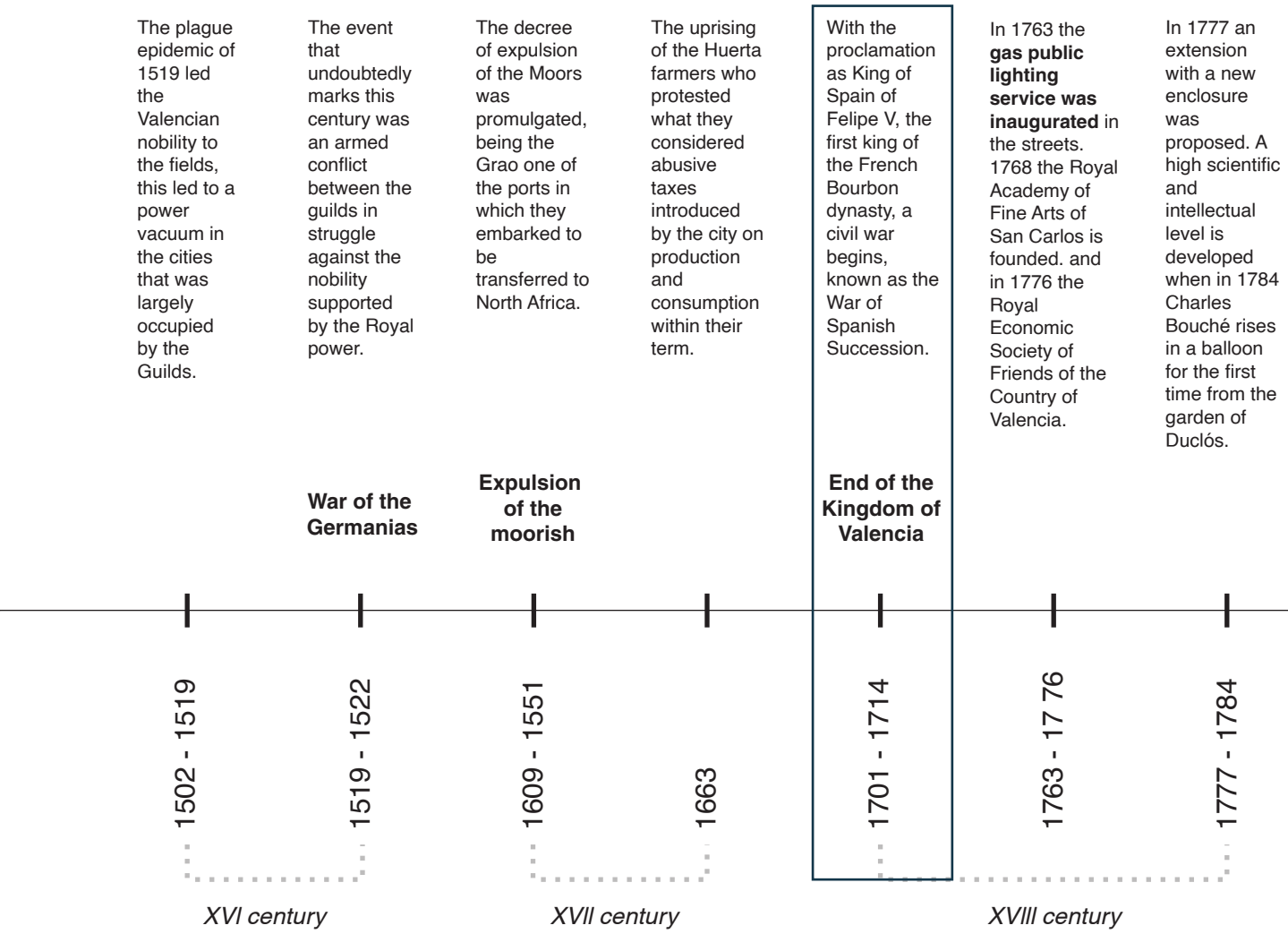


Figure 8. *Historical context of Valencia.* Own work



The University of Valencia is founded under the name of General Study. First document issued from the Chancellery of the Royal Palace of Valencia, written in Spanish.

Successive plague epidemics were added (the most serious in 1647 and 1652) that reduced the population by a third, and a calamitous flood of the Turia in 1651.

The Madrid uprising took place against the French who had invaded the peninsula. Valencia resisted until the conquest by Marshal Suchet, the city was once again free of French oppression.

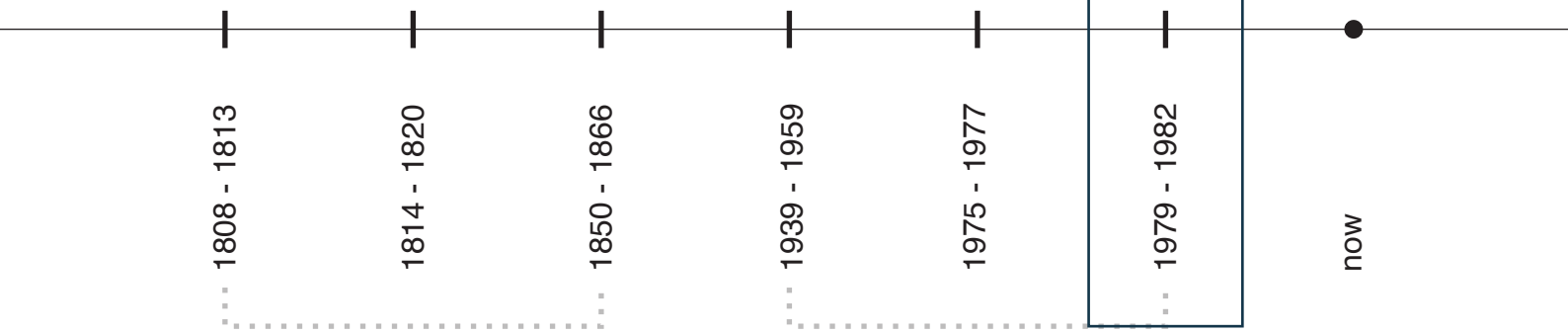
With the withdrawal of the French, General Elío in Valencia, organized a military revolt that served to restore Fernando VII to the throne of Spain, and initiate the Absolutist six-year term.

In 1850 the **installation of the potable water network** was completed, and from 1866 on, a large part of the old Arab **city walls were demolished** in order to facilitate its urban expansion.

Valencia surrendered and General Franco's troops. After the autarkic hiatus, the city's society and economy began to show great dynamism during the late Franco regime.

In 1975 after the death of the dictator Francisco Franco and the subsequent proclamation of Juan Carlos I as King of Spain, in 1977 **the first democratic elections** were held.

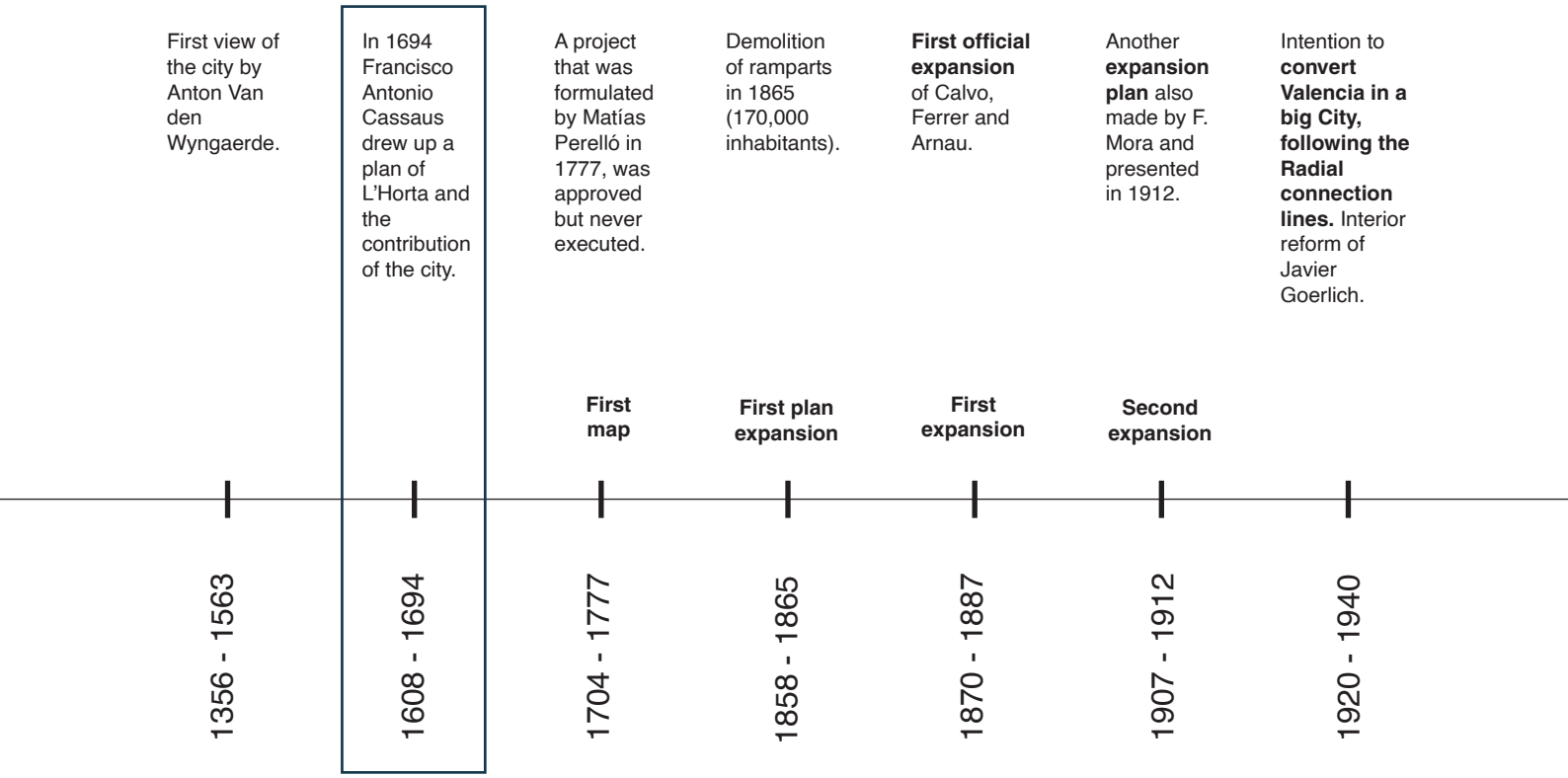
The mayor of the city develops **the first General Urban Plan.** Valencia is formally constituted as the capital of the Valencian Community.



19th century (The French war)

XX century

Urban development of Valencia



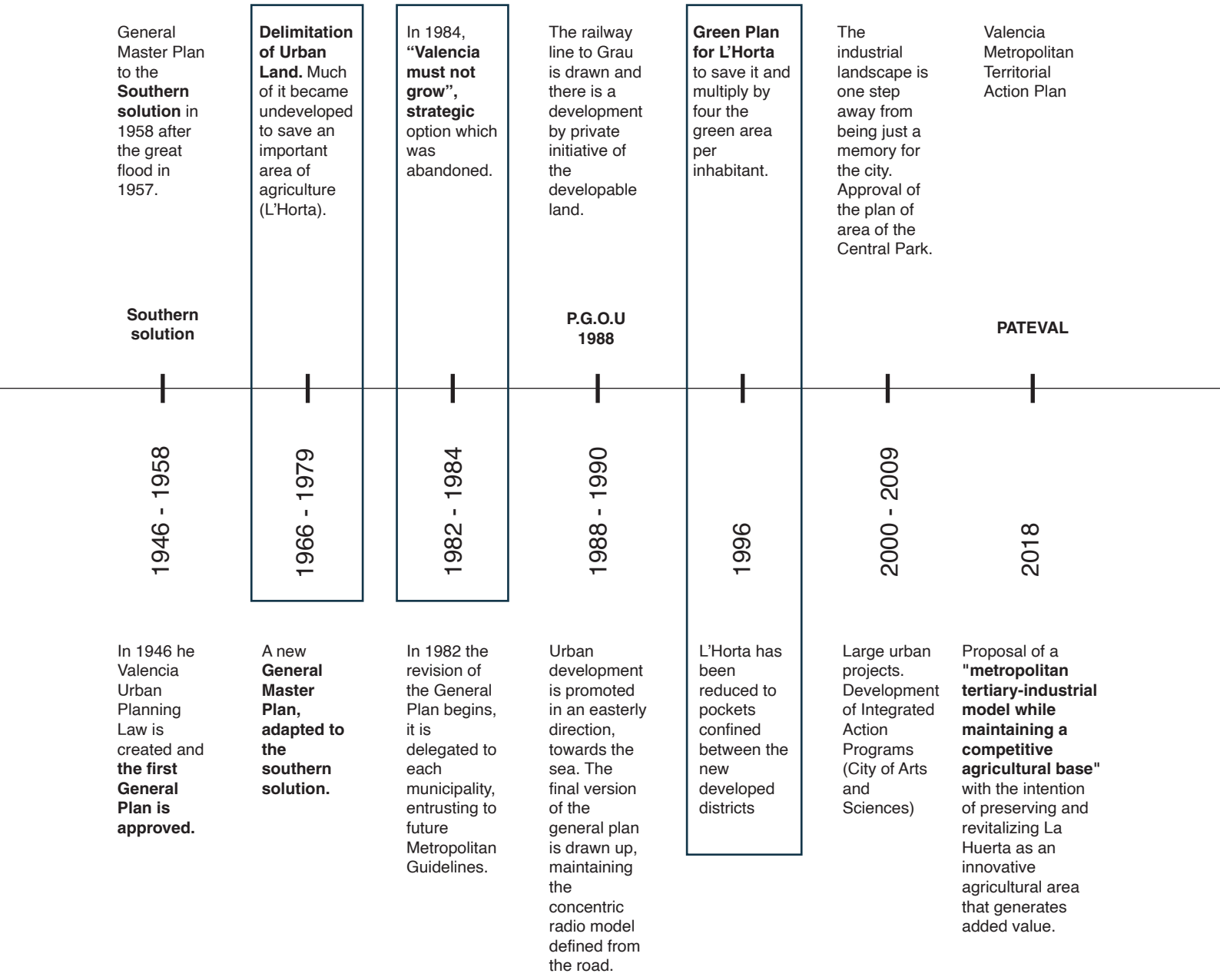
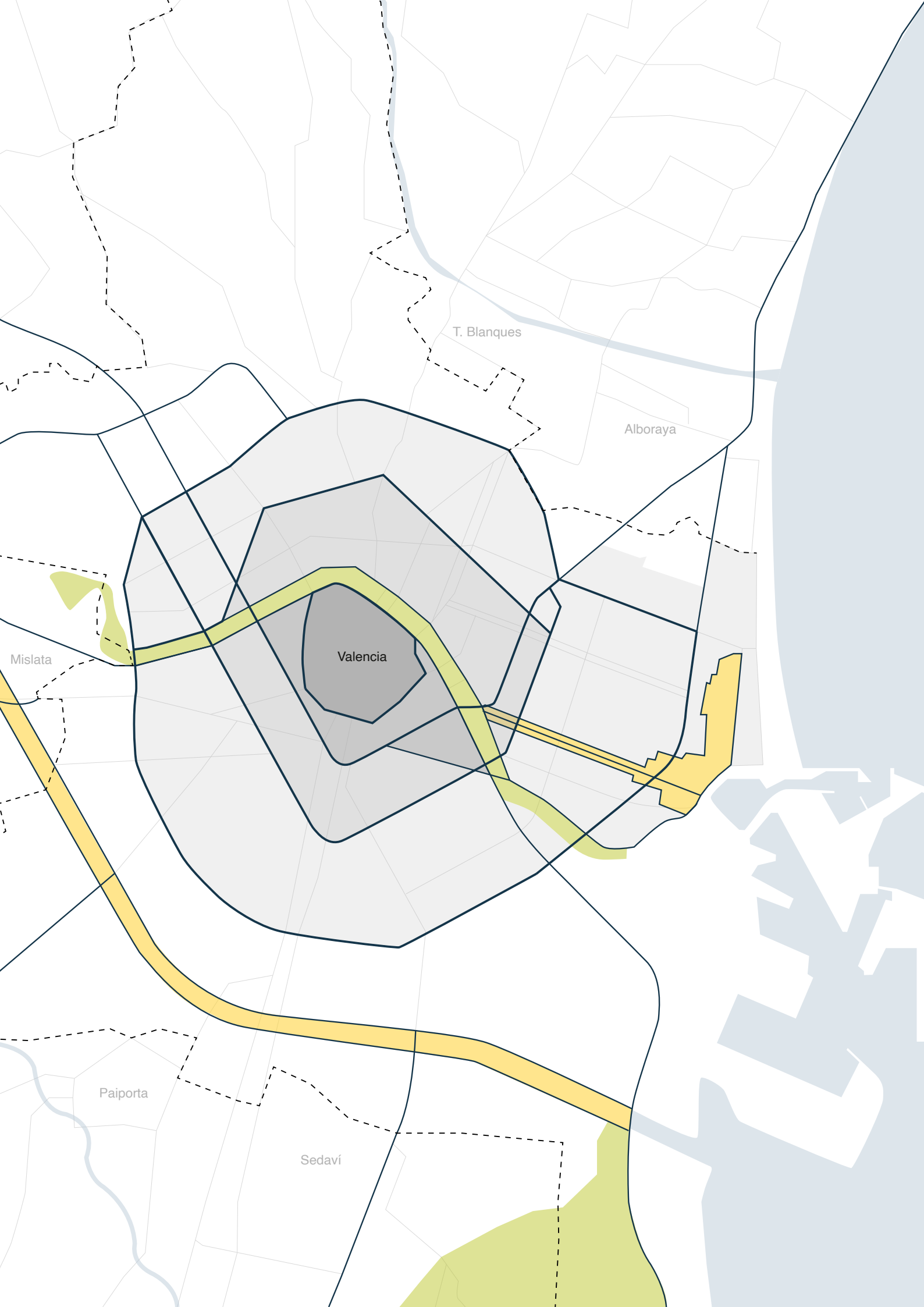


Figure 9. *Urban development of Valencia.* Own work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Paiporta
Sedaví

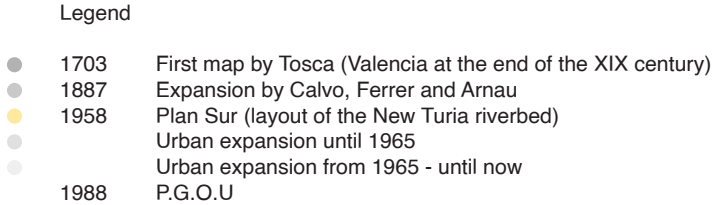


Figure 10. *Urban expansion of the Valencia city over the years.*
Own work

Chapter 2

Alboraya as a peri-urban municipality of agricultural base.

Chapter 1

Peri-urban areas
in the contemporary city.

Chapter 3

Peri-urban agriculture.

Chapter 4

L’Horta - urban area relation:
La Patacona.

Chapter 5

Cases studies.

Chapter 6

Back to L’Horta as an answer.

L'Horta de Valencia

L'Horta Nord

Alboraya

Figure 11. *Geographical location of Alboraya*

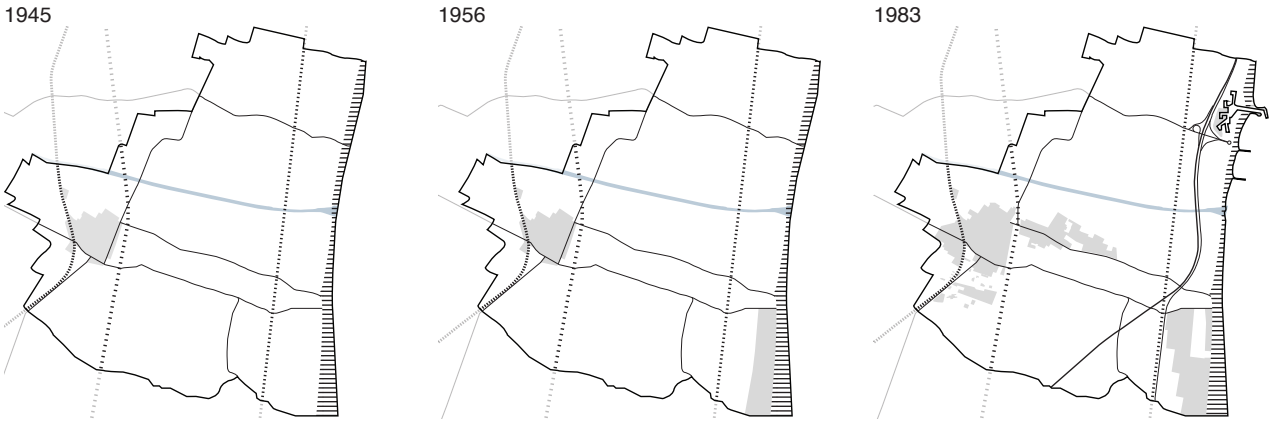
Origin and urban evolution of Alboraya

After knowing the urban development of the metropolitan area of Valencia and its process of urban expansion that led to small suburban cores within the agricultural fabric, Alboraya is a municipality located in the region of L'Horta Nord, with a population of 24,454 inhabitants (INE, 2019) in an area of approximately 8.3km2, within which about 70% corresponds to cultivated land.

The traditional urban center of Alboraya **derives from a population of Islamic origin eminently agricultural** that generated a compact growth around its center due to the richness of its land.

Subsequently, urban growth was defined by two physical barriers, the first, the route of the Aragon railroad established in the 1885 (from the late twentieth century Paseo de Aragon and Via Xurra), conditioning the development to the east, and the second, the Trenet railroad (from 2015 part of lines 3 and 9 of Metrovalencia) that from 1893 limited the growth of the city to the west. (Figure 12)

In the 20th century, the residential occupation became consolidated



between these east-west limits, while descending towards the south (today's Avenida de l'Orxata), industrial buildings and warehouses were developed, many of which have been replaced by high-density residential buildings. In addition, stores were incorporated on the ground floor.

These transformations originated a new urban centrality towards the south of the municipality, a condition reinforced by the development of the Alboraya-Palmaret Metrovalencia station and the public space Parc del Palmaret.

While the urban core was gradually consolidating as a predominantly residential area, with a considerable increase in population and urban development, three built-up areas were formed to the east, the Camí de la Mar industrial area, the Vera industrial area (currently La Patacona), and the Port Saplaya urbanization. The latter two stand out due to their location on the coastal strip between the coast and the road infrastructures (the Valencia-Castellon railroad and the V-21 highway) that separate them from the agricultural territory.

In 1991 the town council of Alboraya developed the *Plan General de Ordenación Urbana* as a primary instrument for the comprehensive management of the municipality, delimiting land for development and land not for development due to its natural, agricultural, landscape, and ecological values, corresponding to the agricultural protection area of the Huerta de Alboraya of more than 600 hectares.

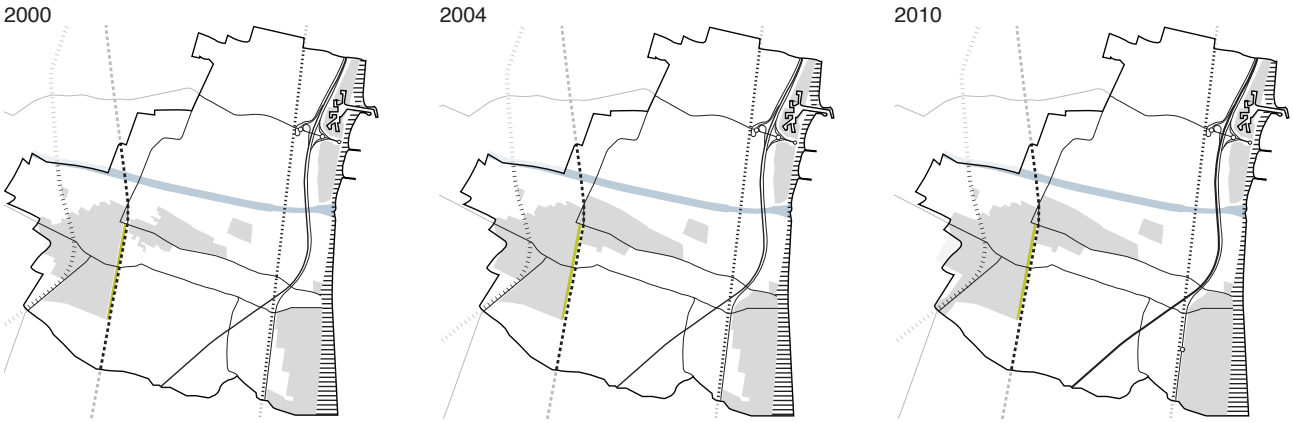


Figure 12. *Urban development of Alboraya.* Own work

Figure 13. *Proposed urban growt in the Alboraya Urban Development Plan 2019.* Own work

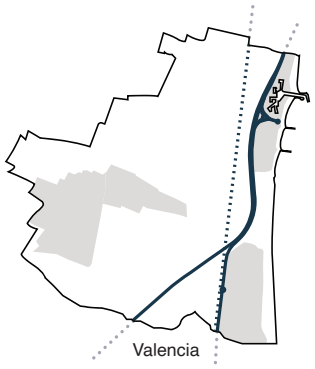
Legend

1 Urban center
2 Industrial area Vera
3 Industrial area Cami de la Mar
4 Port Saplaya (1970)
5 Wastewater treatment plant
Trenet Valencia 1893 - 1998
Valencia - Castellón railroad 1973
Via Xurra (green path) (1985)
Barranco de Carraixet
Paseo de Aragon (linear garden)
New urban areas
Green areas and parks

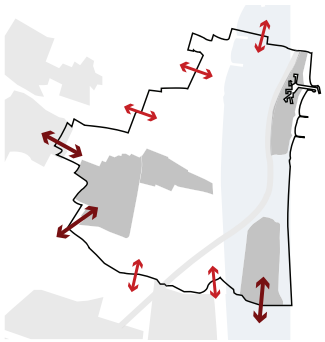
Whereas the physical boundaries of the municipality have limited the urban expansion, the functional development as a suburban area has been lacking in public facilities that allow the independence of its population. Therefore, in 2019 the *Plan General de Ordenación Urbana de Alboraya* aims to develop the facilities lacking in the traditional core and coastal areas and, in turn, limit the occupation of agricultural land for its conservation. (Figure 13)

Conurbation with Valencia city

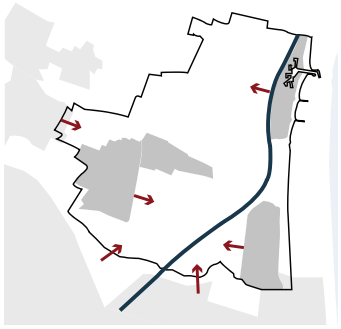
Alboraya is located to the northeast of the city of Valencia, and the main physical relationship beyond its limits is from the **large metropolitan infrastructures that cross the municipality** and give access to Valencia from the north of Spain. Rather than contributing to mobility, these physical barriers have caused the disintegration of the municipality by segregating the territory into areas that are difficult to connect, specifically between the coastal strip and the historic center. (Figure 14)



As a result of population growth, the urban area of Alboraya borders directly with Valencia, where La Patacona is seen as an extension of the Malvarrosa neighborhood (Valencia). In the rest of the area of contact with Valencia, there is an important agricultural area in total productivity, with numerous rural residential buildings, agricultural warehouses, and scattered industrial and commercial facilities. (Figure 15)



The conurbation with the city of Valencia has a substantial impact on the evolution of the municipality since **L'Horta is affected by the dynamics of agricultural land occupation by the real estate sector**, which seeks to implant the population towards the periphery in search of an alternative residential offer. (Figure 16)



Consequently, the 2019 *Plan General de Ordenación Urbana de Alboraya*, besides defining the building land and proposing tertiary developments that favor the social and economic development of the municipality, raises internal cohesion improvements that contribute to the autonomy and the maintenance of the identity of a population with history, culture and an abundant social fabric. (Figure 17)

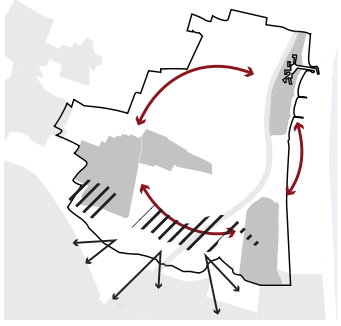


Figure 14. *Road infrastructure as a phisical barriers.*
Figure 15. *Alboraya's relationship with surrounding municipalities*
Figure 16. *Urban pressure of the metropolitan area over Alboraya.*
Figure 17. *Connection between urban centers and separation from Valencia*

(Plan General de Alboraya, 2019)


Valencia city center
UPV
La Malvarrosa
Horta de Alboraya
La Patacona

Relations between Alboraya and Valencia

Urban centers

a. Valencia historical center (Ciutat bella)
b. Alboraya urban center
c. Vera / La Patacona
d. Port Saplaya

Points of interest

		Time / distance by car	Time by public transportation
1	Municipal market of Alboraya	6 min. / 2.8 km.	-
2	Universidad Politecnica de Valencia (UPV)	6 min. / 3 km.	42 min.
3	Ciutat de les Arts i les Ciencies	16 min. / 7.1 km.	56 min.
4	Estació del Nord (main train station)	17 min. / 7.2 km.	53 min.
5	Central market of Valencia	19 min. / 7.9 km.	60 min.
6	Congress Palace of Valencia	18 min. / 8.5 km.	70 min.
7	Mercavalencia / La tira de contar	22 min. / 9.5 km.	70 min.
8	Port of Valencia	24 min. / 10.7 km.	90 min.

Turia river
Turia gardens
Barranco de Carraixet

Public transportation Valencia - Alboraya

Buses
EMT 19
EMT 31
EMT 32
EMT 70
EMT 92
EMT 99

Metro
Line 3
Line 9

Landscape units of L´Horta (PATODHV)

UP.09	**Horta d'Alboraya**	**435 ha.**
UP.10	Horta de San Miquel dels Reis	130 ha.
UP.11	Horta de Petra	68 ha.
UP.12	Horta de Poble Nou	494 ha.
UP.13	Horta de l´Arc de Moncada	754 ha.
UP.14	Horta de Campanar	279 ha.
UP.19	Horta de Faitanar	357 ha.
UP.21	Horta de Rovella i Francs, Marjals i Extremals	278 ha.
UP.22	Horta de la sèquia de l´Or. arrossars de l´Albufera	2208 ha.

Figure 18. *Alboraya - Valencia relations: distances to the main points of interest in Valencia by private vehicle and public transport.* Own work

Urban analysis

Urban cores

Alboraya comprises the urban center and its corresponding historical nucleus (occupying 80% of the municipality's population), by the industrial area Cami de la Mar, and by two areas currently of residential nature, the area of Vera or "La Patacona" and Port Saplaya. The rest of the municipality is the Huerta de Alboraya, occupying more than 70% of the territory. (Figure 19)

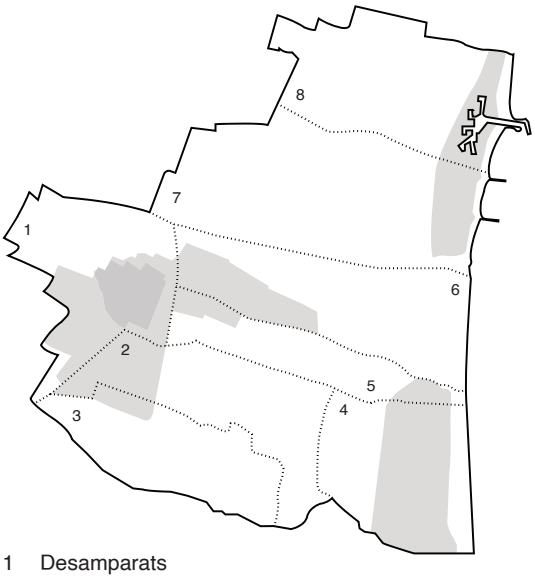
Territorial division

The municipality preserves the agricultural territorial division into eight cadastral divisions: Calvet, Desemparats, Mar, Massamardà, Masquefa, Miracle, Saboia and Vera. (Figure 19)

Mobility

In terms of regional mobility, the main connections between Alboraya and Valencia are provided by local networks, and as regards public transport, the town center is connected by Metrovalencia lines 3 and 9, and a series of bus routes of the EMT of Valencia, linking both the center and the coastal strip, however, travel times are slow as they are very long routes, increasing the dependence of the population on the car.

Regarding the local mobility, there is a network of local roads that organize L'Horta and connect the municipal territory, and a public transport line that connects the urban area with La Patacona and Port Saplaya. (Figure 20)



1 Desamparats
2 Calvet
3 Masquefa
4 Vera
5 La Mar
6 Miracle
7 Saboia
8 Massmardá

Railway
Highway V-21
Highway CV-3115
Main roads
Bus
Metro
Metro stops

Influence of L'Horta de Alboraya in the urban development

Figure 19. *Cadastral division of Alboraya.* Own work

Figure 20. *Main roads and public transportation of Alboraya.* Own work

Representing more than 70% of the territory, **the landscape that characterizes Alboraya is its Huerta**, representing the population's agricultural origins and defining its urban development as a cultivated area of significant heritage, historical, scenic, and cultural value.

L'Horta de Alboraya, according to the *Plan de Acción Territorial de Protección de la Huerta de Valencia* (2010), is an area of high agricultural capacity where horticultural crops are grown over almost the entire area (about 430 hectares) and some citrus species towards the edges. (Figure 21)

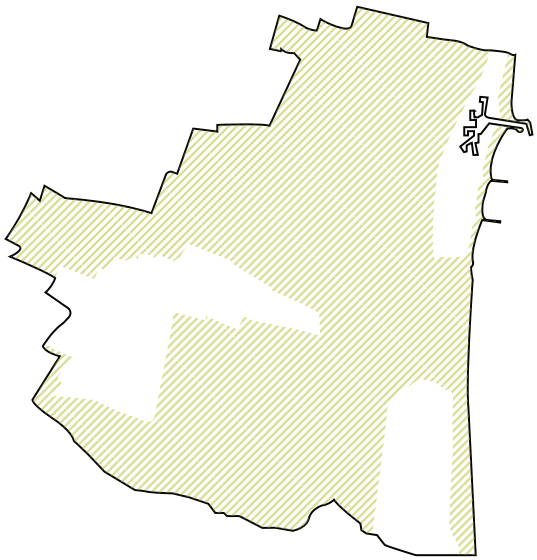


Figura 21. *Horta di Alboraya.* Own work

It is one of the oldest agricultural areas, characterized by the hydraulic heritage of the irrigation system and by a considerable density of dispersed rural habitat (Barracas and Alquerias) that confer an outstanding landscape and heritage value. Its agricultural fabric comprises historical roads and irrigation ditches that organize the landscape in horizontal bands perpendicular to the sea.

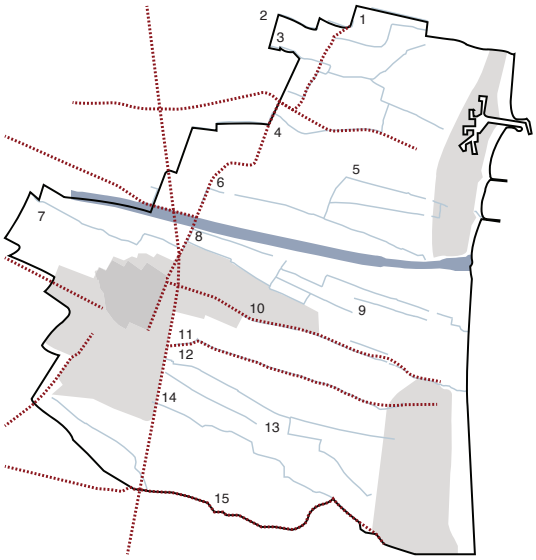
Since it is an agricultural unit with urbanized boundaries, its visual amplitude is conditioned, even though within its predominantly horticultural extension, a large part of the landscape can be visualized. Prior to the urbanization of the coastal front in the area of Vera, L'Horta de Alboraya had the particularity of visual continuity towards the sea. This condition is currently only maintained in the vicinity of the Barranco del Carraixet.

Historical and hydraulic network

L'Horta de Alboraya comprises a complex network of irrigation ditches of Islamic origin that lead the water to the agricultural land.
At the same time, part of the historical routes or royal roads that communicated the agricultural population is preserved.

1 Acequia principal de San Vicente
2 Acequia de Nolla´
3 Acequia de Conilla
4 Brac de Rodrigo
5 Brac de la Reina / Acequia de la Marquesa
6 Brac del Gayato
7 Acequia de Rascanya
8 Brac del Mig
9 Acequia del Anohuer
10 Acequia del Cami Vell de la Mar / Bracet del Sort
11 Acequia del Cami Fondo
12 Acequia Mayor
13 Acequia de Calvet
14 Acequia de Palmaret
15 Acequia de Vera

Figure 22. *Historical roads and irrigation ditches of Alboraya.* Own work



Heritage

The agricultural landscape of L'Horta de Alboraya includes architectural, ethnological and hydraulic heritage elements.

Since the Plan General de Ordenación Urbana of 1991, L'Horta has been considered a protected non-urban land. As a result, the urban growth has been predominantly vertical not to occupy more territory. However, the metropolitan expansion of the city of Valencia continues to be a threat to the conservation of the agricultural land.

× Hydraulic heritage element
× Ethnological heritage element
× Architectural heritage element

Main heritage elements

1 EPH_06.01 Llengües de Miracle - Gaiato
2 EPE_06.02 Ermita dels Peixets
3 EPA_06.04 Barraca Lladró
4 EPA_03.10 Alqueria del Magistre

Figure 23. *Heritage elements.* Own work

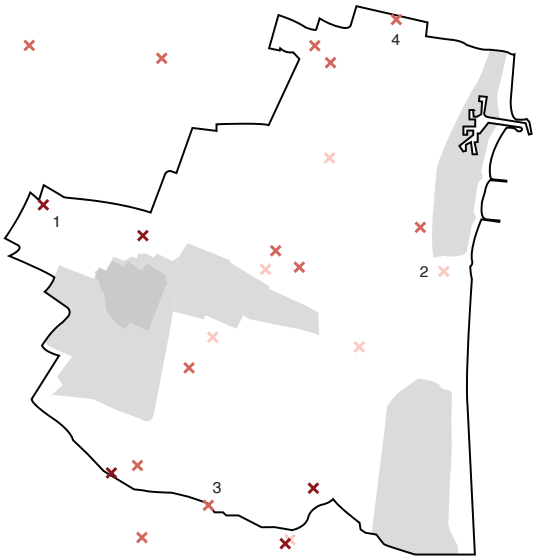


Figure 24. *Ermita dels Peixets*
Figure 25. *Alqueria El Maquistre*
Figure 26. *Molí de l'Ascensió*
Figure 27. *Barracas de Panach*
(UPV, n.d.)

Chapter 3

Peri-urban Agriculture

Chapter 1

Peri-urban areas
in the contemporary city.

Chapter 2

Alboraya as a peri-urban
municipality of agricultural base.

Chapter 4

L’Horta - urban area relation:
La Patacona.

Chapter 5

Cases studies.

Chapter 6

Back to L’Horta as an answer.

Agriculture in Spain and its economic, social, and territorial value.

The beginnings of agriculture as a productive activity date back to the Neolithic, considered the historical moment when the agrarian society was born (leaving behind hunting and gathering). In addition, it also represents an advance for later civilizations, as is the case of agriculture in Spain, which, according to researchers at the *Complutense University of Madrid* (UCM), emerged from the arrival on the Iberian Peninsula of small groups of Neolithic farmers from the Near East who transmitted the new agricultural culture.

From there, Spanish agriculture transited several stages that influenced its position for decades as the primary support of the Spanish economy. First, the conquest of the Roman Empire and the consequent distribution of land; the introduction of new techniques and horticultural practices during Andalusian Spain; the reconquest and distribution of agricultural land that resulted in the marked duality of large and smallholdings; the failed attempts to solve the agrarian inequality from the confiscations to the advances at the beginning of

the 20th century that brought the agricultural revolution, representing a significant period of development for the Spanish economy.

However, parallel to a stage of overcoming national self-sufficiency and the birth of an increasingly extensive market, the industrial sector positioned itself and replaced agriculture as the basis of the Spanish economy, initiating a progressive process of land abandonment that notably reduced the percentage of cultivated land. (Figure 31)

Although, according to Cabanas, Secretary-General of Agriculture and Food until 2018, the Spanish agricultural sector continues to have substantial economic, social, territorial, and environmental importance, mainly due to the diversity and quality of production and the degree of technology of farms.

In this context, it is worth highlighting the **characteristics that distinguish the Spanish agricultural sector.** At first, the topographic variety, the existence of diverse climates, and the significant history of occupation and organization of the rural space derive in a large mosaic of agricultural systems and landscapes, being the most diversified country in the European Union according to the Herfindahl Index (PWC, 2019). (Figure 28)

On the other hand, the diversity of Spanish agriculture is not only due to the physical factors that condition it. The structure of the farms is also quite different between regions, and even in the same region, there coexist situations of smallholdings with large farms in considerable cultivated areas. This territorial duality causes an unbalanced agrarian structure that began after the reconquest and since then has been one of the leading causes of the abandonment of agricultural land. (Figure 29)

Finally, aridity, medium or extreme, is the climatic feature that most limits Spanish agricultural possibilities (González de Molina, 2001), deriving in conditions of low and irregular yields in rainfed farming and, on the other hand, high productivity in irrigated farming, obtained from costly infrastructure works that have converted, especially in the Mediterranean, areas with scarce agricultural potential, into some of the most productive regions of Spanish agriculture. (Figure 30)

Agricultural systems and landscapes

- Agrosilvopastoral systems of humid Spain
- Pasture systems of the western Iberian Peninsula
- Agricultural systems of Sierra Morena and Montes de Toledo
- Agro-livestock systems of the Central System and the Iberian Mountains
- Countryside and agricultural moors of the Cuenca del Duero
- Agricultural plains and countryside of the Southern Plateau
- Countryside of the Guadalquivir depression
- Countryside and plains of the Ebro Depression
- Agricultural landscapes of the Betic Mountain Region and the Sierras of the Balearic Islands
- Forestry and livestock systems of the Pyrenees
- Mediterranean Huertas, Vegas and Hoyas
- Catalan-Valencian coastal mountain systems.

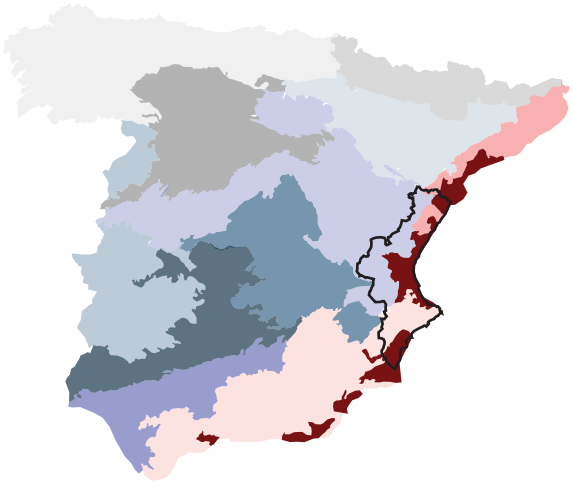


Figure 28. *Agricultural systems and landscapes* (National Geographic Institute, AGE, 2013)

Irrigated areas

- + 20%
- 15 - 20%
- 10 - 15%
- 5 - 10%
- 2 - 5%
- - 2%

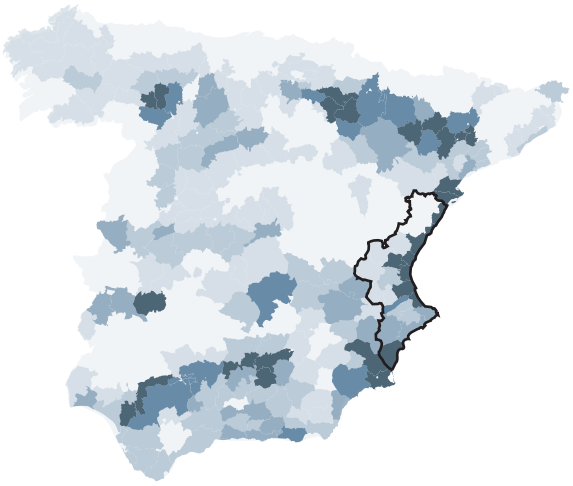


Figure 29. *Percentage of irrigated land of total area by region*. (National Irrigation Plan, 2001)

Distribution of agricultural properties

Large property (+ 100 Ha.)
- + 50%
- 40 - 50%
- 35 - 40%

Medium property (100 - 10 Ha.)
- + 50%
- 40 - 50%
- 35 - 40%

Small property (- 10 Ha.)
- + 50%
- 40 - 50%
- 35 - 40%

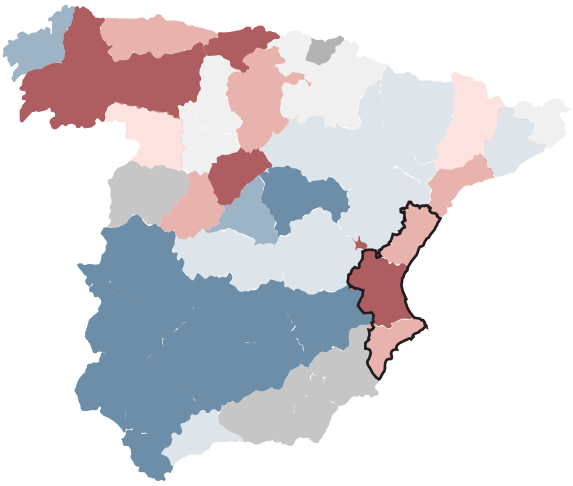
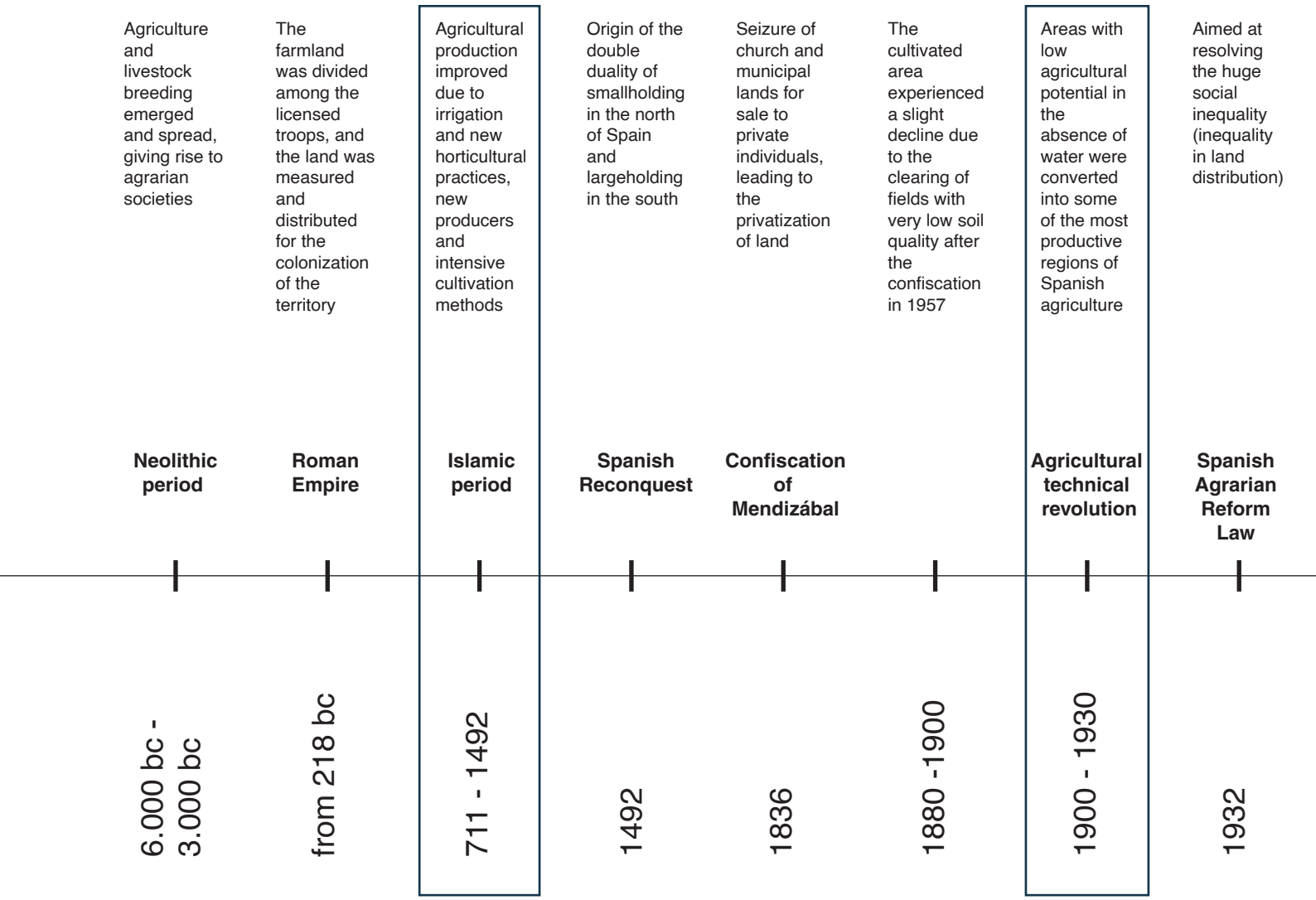


Figure 30. D*istribution of land property by provinces*, (Agricultural Statistics Annual Report, 2001)

Development of agriculture in Spain



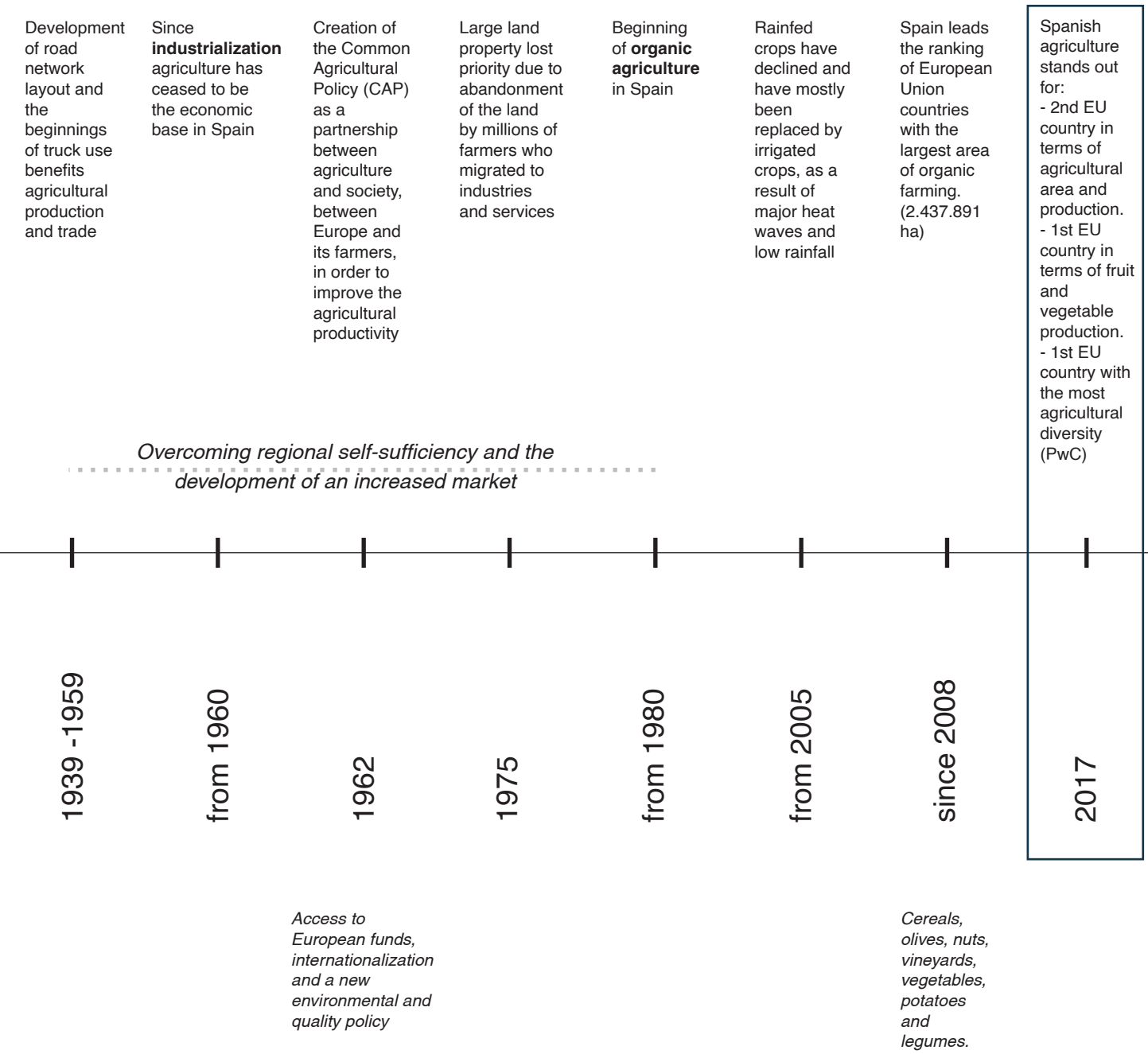


Figure 31. *Historical evolution of agriculture in Spain*. Own work

L'Horta de Valencia as a peri-urban agricultural area of the Mediterranean

Among the agricultural diversity, Mediterranean Spain stands out for its Huertas and intensive Mediterranean crops, agricultural landscape units characterized by their close link to a city, in this case, understanding the history of L'Horta de Valencia closely related to the history of the city of Valencia and its metropolitan area.

L'Horta de Valencia is a peri-urban agricultural area of about 13,000 hectares of non-development land, located around Valencia and its surrounding municipalities. Since medieval times had acted as the city's economic driver, until the mid-twentieth century when the urban development of the metropolitan area began to pose a threat to its conservation, reducing its size and losing economic and social weight.

L'Horta is a concept of universal scope to designate a **peculiar irrigated landscape based on specific criteria of social organization and water distribution** based on collective rights over it, as well as its proportional distribution among irrigators (Plan de Acción Territorial de Ordenación y Dinamización de la Huerta de Valencia, 2018).

This irrigated landscape was born in the Middle East, spread from the Arab expansion in the Iberian Peninsula during the VIII century, and began to develop in the current Valencian Community long before the conquest of Valencia by Jaime I in the XIII century. Its evolution occurred during three crucial historical periods: *the medieval period, the feudal conquest, and the bourgeois revolution.* (Figure 33)

The arrival of the Muslims in the eighth century meant two fundamental contributions to the configuration of L'Horta. Firstly, the introduction of new vegetables from Asia and knowledge of hydraulics, based on which they designed systems for the collection, transport, and distribution of water from the Turia river.

Comunitat Valenciana
233.000 ha.

L'Horta de València
63.400 ha.
(extended scope)

Agricultural area
22.900 ha.
(strict scope)

Figure 32. *Geographical location and area* (Plan de Acción territorial de Ordenación y Dinamización de la Huerta de Valencia, 2018). Own work

Secondly, the irrigation system was developed from a model of social organization based on the proportional and equitable distribution of water, with a coherent organization between residential and workspaces (Barceló, 1995).

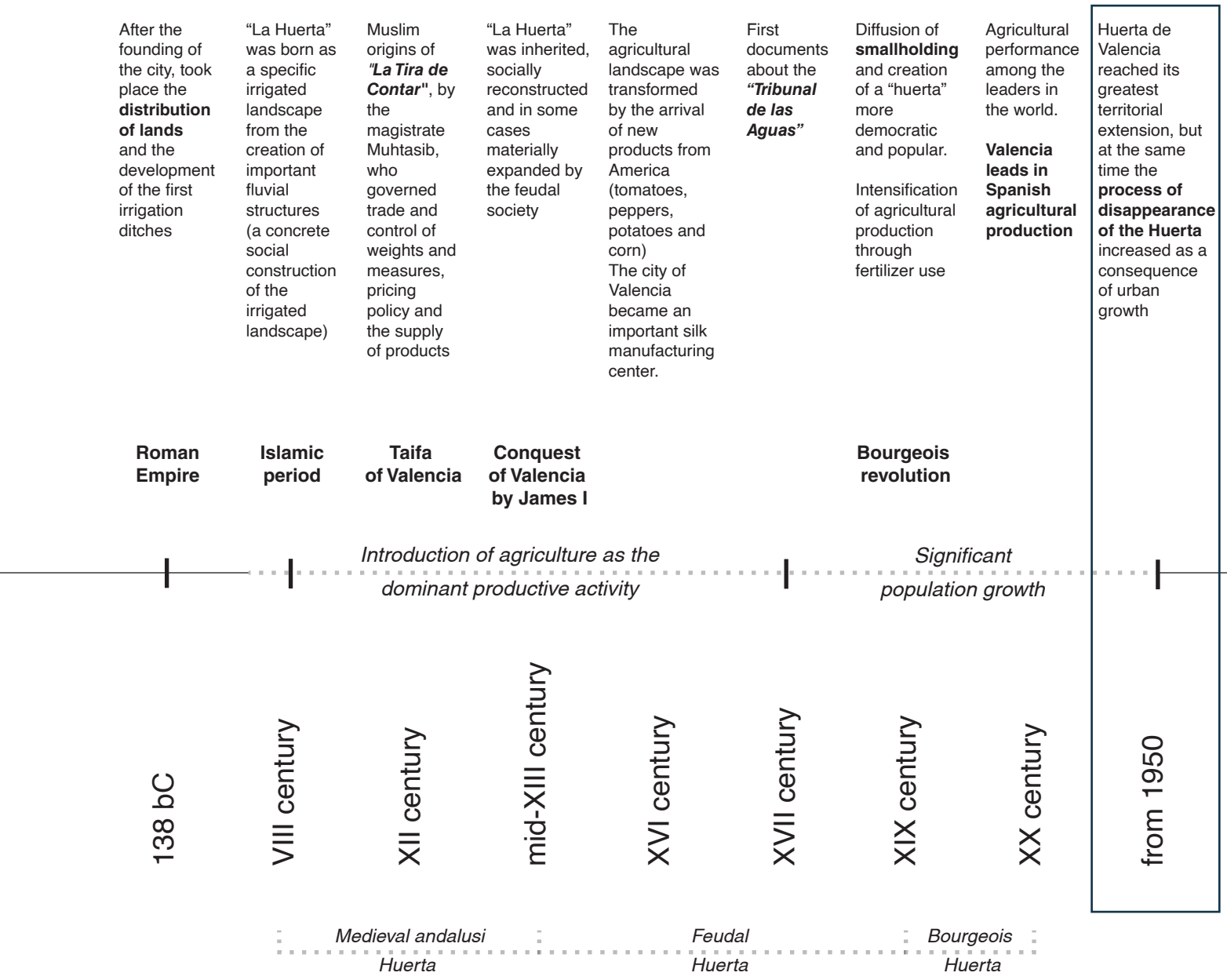
Thus, the irrigated landscape was shaped by a network of canals, irrigation ditches, and irrigation channels originating in the Turia River and a succession of Huertas for each farmhouse in a settlement unit generally aligned along the central canal or irrigation ditch.

After the conquest of Jaime I, although the feudal inherited the distribution systems, a social transformation occurred in the control and management of water, modifying the irrigation communities and the physical organization of the Huertas. In addition, new complementary hydraulic systems were built and new crops were introduced, such as rice, tomatoes, peppers, potatoes, and corn (from America), and the mulberry tree in response to the growing demand for silk for the textile sector.

Finally, **the bourgeois Huerta** began during the first half of the 19th century, characterized by the transformation of land ownership through the extreme fragmentation of plots, disappearing large properties, and developing a more marketable and smallholding agriculture based on more popular and democratic intentions.

During the first half of the 20th century, L'Horta de Valencia reached its greatest territorial extension, and Valencia was the leader in Spanish agricultural production. Nonetheless, with the city's industrialization and urbanization process, the disappearance and territorial degradation of the Huerta and its condition as a functional agricultural space began.

Therefore, it is possible to infer that the layout of L'Horta in the metropolitan territory shares the problems of peri-urban agriculture, defined by the OECD in 1979: pressures/competition over land, water, and labor, progressive marginalization of agriculture in the economic and socio-political system, aging of agricultural holders, smallholdings, low agricultural profitability, among others.


After the founding of the city, took place the **distribution of lands** and the development of the first irrigation ditches
"La Huerta" was born as a specific irrigated landscape from the creation of important fluvial structures (a concrete social construction of the irrigated landscape)
Muslim origins of ***"La Tira de Contar"***, by the magistrate Muhtasib, who governed trade and control of weights and measures, pricing policy and the supply of products
"La Huerta" was inherited, socially reconstructed and in some cases materially expanded by the feudal society
The agricultural landscape was transformed by the arrival of new products from America (tomatoes, peppers, potatoes and corn)
The city of Valencia became an important silk manufacturing center.
First documents about the ***"Tribunal de las Aguas"***
Diffusion of **smallholding** and creation of a "huerta" more democratic and popular.
Intensification of agricultural production through fertilizer use
Agricultural performance among the leaders in the world.
Valencia leads in Spanish agricultural production
Huerta de Valencia reached its greatest territorial extension, but at the same time the **process of disappearance of the Huerta** increased as a consequence of urban growth
Roman Empire
Islamic period
Taifa of Valencia
Conquest of Valencia by James I
Bourgeois revolution
Introduction of agriculture as the dominant productive activity
Significant population growth
138 bC
VIII century
XII century
mid-XIII century
XVI century
XVII century
XIX century
XX century
from 1950
Medieval andalusi Huerta
Feudal Huerta
Bourgeois Huerta
Cereals (wheat rye and barley), vegetables and fruit trees occupied small plots or the margins of the fields.
Dominated by mulberry trees, American products and orange trees.
The crisis of the silk industry caused the progressive disappearanc e of the mulberry tree.
Horticultural crops dominate, the most demanding in terms of water and labor.
Reintroduction of orange tree cultivation.

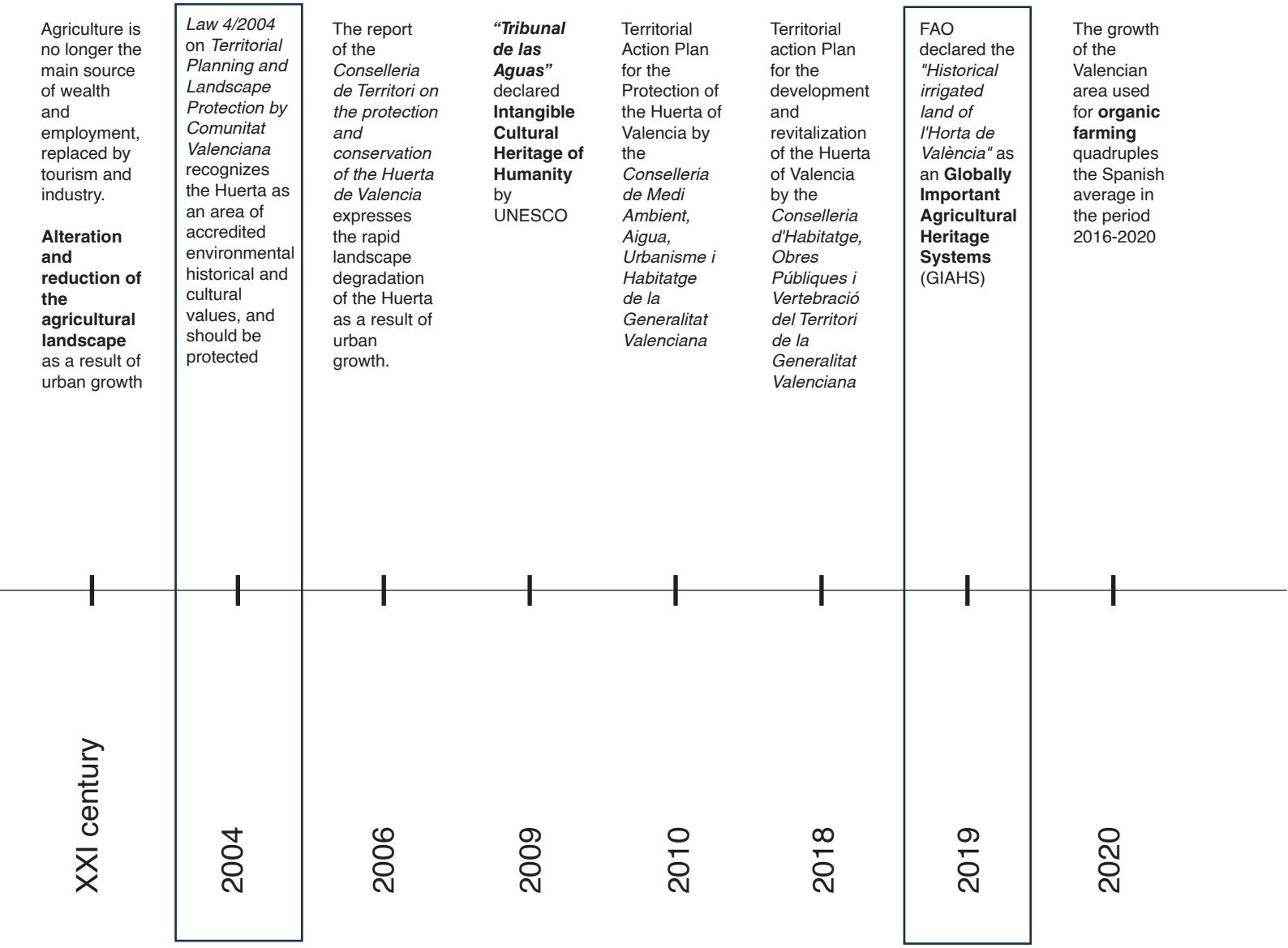


Figure 33. *Historical evolution of L'Horta de Valencia.* Own work

L'Horta as an agrarian system and social organization

Characteristics of the agrarian system

As an agricultural system, the Huerta de Valencia has specific characteristics that remain despite the transformations during its different periods. First, **intensive and commercial agriculture**, where the horticultural sector has traditionally dominated. Second, it is characterized by an **accentuated smallholding** of feudal origin, caused by the subdivisions of inheritances from the fragmentation of the property, and, lastly, in correspondence with the intensive and smallholding character, it is carried out based on a **family organization of work.**

Spatial organization

From its beginnings, the landscape of the Huerta de Valencia has been shaped by a series of structuring elements:

a. the network of irrigation ditches that conduct and distribute irrigation water to the fields and settlements,

b. the road network or network of royal roads that communicate between the different Huertas,

c. the agricultural plots formed by small productive units of no more than one hectare defined from the mother irrigation ditches and their branches as axes, and finally,

d. the location of the settlements, which can be concentrated or dispersed.

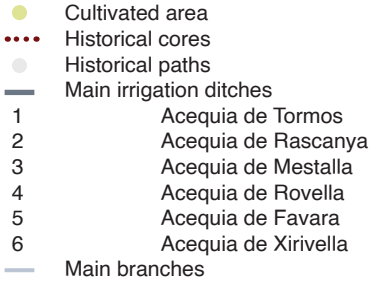
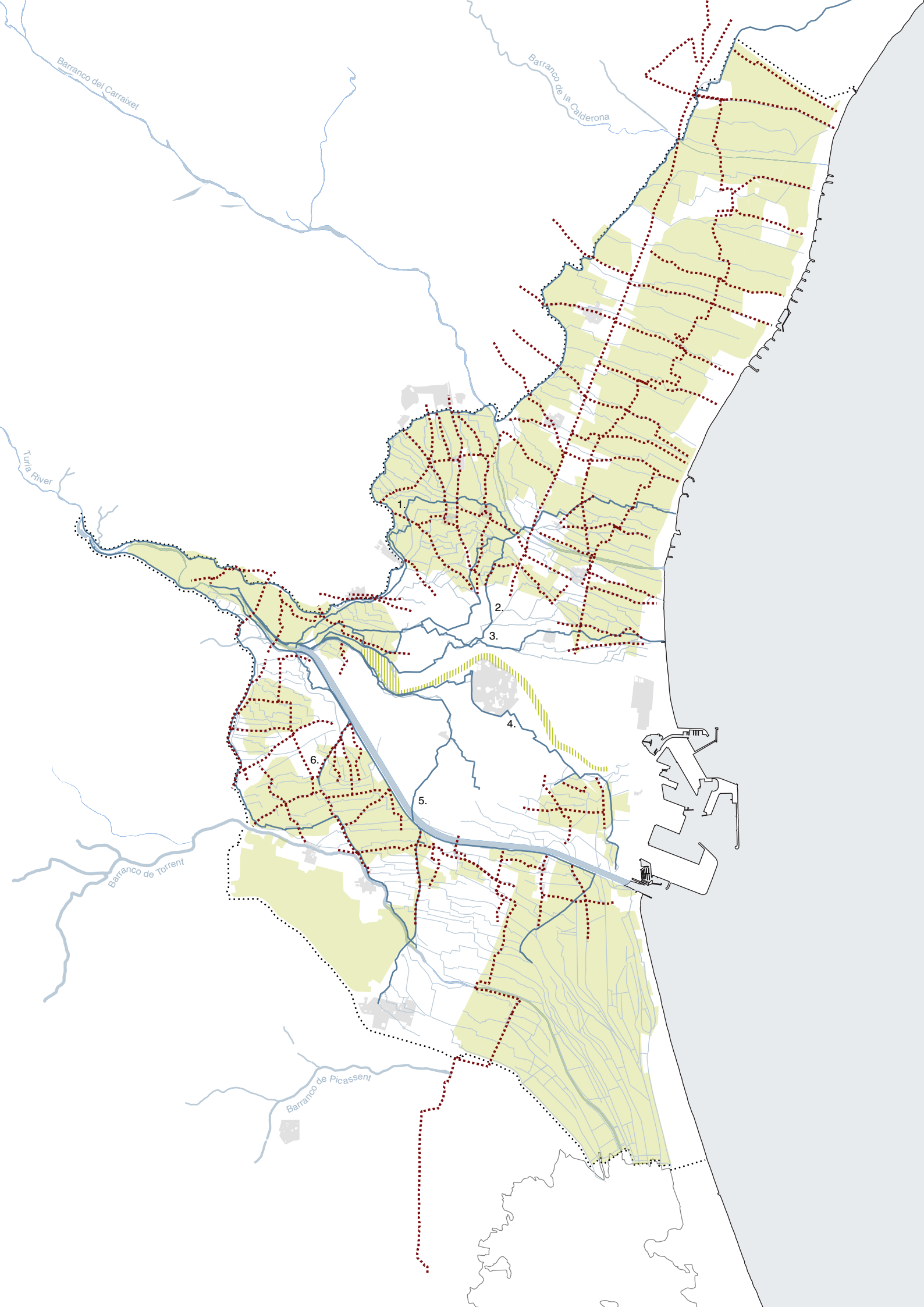


Figure 34. *Main elements of the spatial organization of L'Horta de Valencia.* Own work


Barranco del Carraixet
Barranco de la Calderona
Turia River
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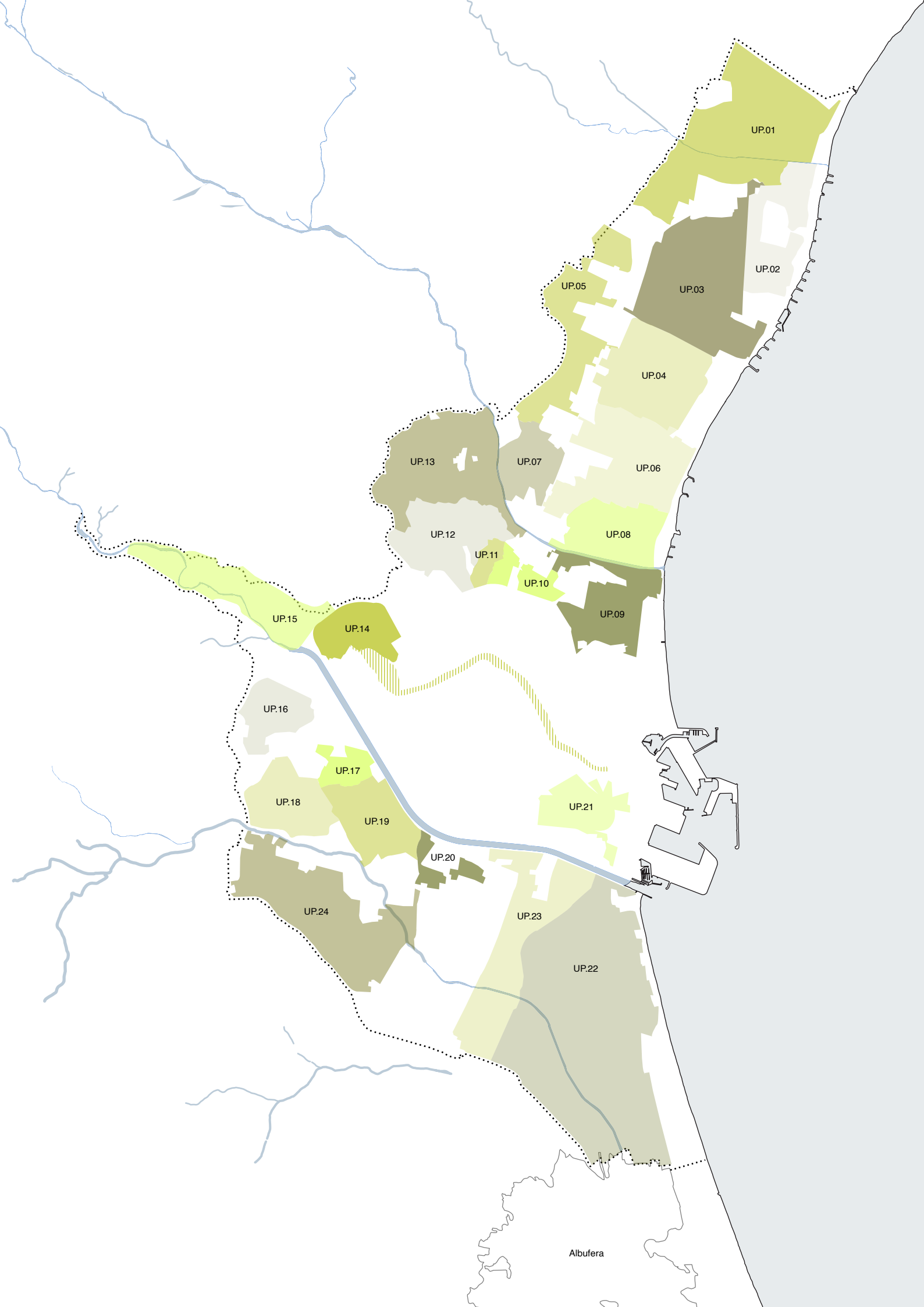
Barranco de Torrent
Barranco de Picassent


UP.01
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UP.23
UP.24
Albufera

Landscape units

L'Horta de Valencia comprises agricultural and urban centers defined by the irrigation ditches. It includes 44 municipalities, and based on them, 24 landscape units have been defined that correspond to the different Huertas, each of them with a value according to their landscape quality for environmental, social, cultural, and visual reasons.

Legend

UP.01	Horta final de la Real Acequia de Moncada	1125 ha.
UP.02	Horta dels Extremals del Puig i Pobla Farnais	478 ha.
UP.03	Horta de la zona central de la Real Acequia de M.	858 ha.
UP.04	Horta d'Albuixech i Massalfassar	581 ha.
UP.05	Horta dels alters de la Real Acequia de Moncada	567 ha.
UP.06	Horta de Meliana	783 ha.
UP.07	Horta de Vinalesa, Bonrepós i Mirambell	273 ha.
UP.08	Horta d' Almàssera	376 ha.
UP.09	Horta d'Alboraya	435 ha.
UP.10	Horta de San Miquel dels Reis	130 ha.
UP.11	Horta de Petra	68 ha.
UP.12	Horta de Poble Nou	494 ha.
UP.13	Horta de l´Arc de Moncada	754 ha.
UP.14	Horta de Campanar	279 ha.
UP.15	Horta del riu Túria	531 ha.
UP.16	Horta de Quart - Aldaia	268 ha.
UP.17	Horta de Xirivella	127 ha.
UP.18	Horta de Bennàger	353 ha.
UP.19	Horta de Faitanar	357 ha.
UP.21	Horta de Rovella i Francs, Marjals i Extremals	278 ha.
UP.22	Horta de la sèquia de l´Or. arrossars de l´Albufera	2208 ha.
UP.23	Horta de Castellar - Oliveral	645 ha.
UP.24	Horta de Picanya i Paiporta	832 ha.
	TOTAL	12155 ha.

Figure 35. *Landscape units of L'Horta de Valencia.* (Pateval, 2018) Own work

Importance of L'Horta and its agricultural, historical, social, and landscape heritage.

According to the 1998 *Dobris Report of the European Environmental Agency*, L'Horta de Valencia is one of the last six historical Mediterranean Huertas in Europe, each of them currently threatened with extinction. Therefore, the importance of L'Horta is universal. Beyond its significance as a peri-urban productive system of Valencia, its intrinsic value lies in the environmental, cultural, and heritage elements that compose it due to an extensive and complex agricultural and social history. (Figure 36)

In 2019, L'Horta de Valencia was included among the Important *Globally Important Agricultural Heritage Systems (GIAHS)*, managed by FAO. Its recognition is based on the particularity of its water distribution system and traditional knowledge, transmitted from generation to generation ensuring the availability of water throughout the year and soil fertility. In addition, this irrigation system has allowed the development of sustainable and self-sufficient agricultural techniques.

In turn, L'Horta has a vital environmental function as it is a space free of buildings and asphalt that prevents natural hazards. Also, the irrigation ditches act as flood mitigators during episodes of torrential rains (Carmona, 2007). At the same time, the cultivated area acts as a green infrastructure and ecological connector besides being a food production area.

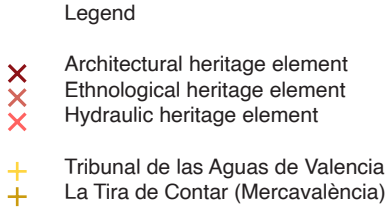
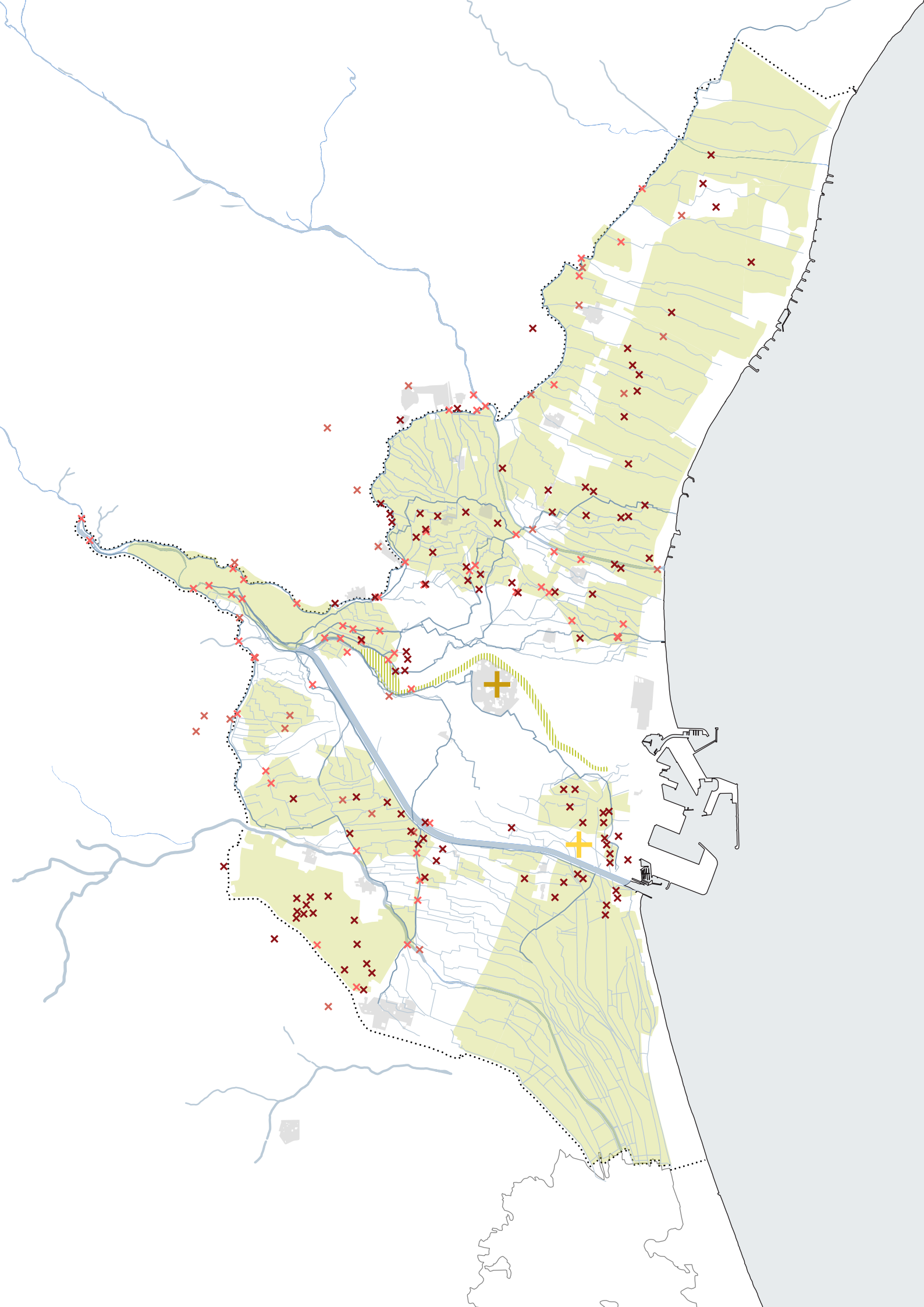


Figure 36. *Heritage elements of the Huerta de Valencia according to the Catalogue of Protected Assets and Rural Spaces.* Own work



In another vein, the *Plan de Acción Territorial de Ordenación y Dinamización de La Huerta de Valencia* (2018) developed the Catalog of Protected Assets and Rural Spaces, which recognizes the **hydraulic, architectural, and ethnological heritage** that comprises the landscape of L'Horta

The **hydraulic heritage** is based on the hydraulic system of Andalusian origin, from the collection and regulation of water through dams, "goals," and beacons to its conduction and distribution through irrigation ditches, branches, tongues, rolls, and dividers. (Figure 40)

Besides, the agricultural space is closely associated with a group of constructions for both labor and residential use that makes up the **architectural heritage**. First, the architecture of dispersed habitat is made up of traditional dwellings of medieval origin, which can be barracas (family housing typical of smallholdings) or alquerías (small villages) that control a larger land area cultivated. Secondly, water architecture is made up of mills used for the energetic use of the flow of water that circulates.

Finally, the catalog defines the **ethnological heritage** elements with significant architectural and historical value, mainly consisting of the hermitages in the agricultural landscape and the recognition of knowledge, traditions, and trades that characterize the historical, social organization of L'Horta.

Figure 37. *Irrigation ditch.* (Plan de Acción Territorial de Ordenación y Dinamización de la Huerta de Valencia, 2018)

Figure 38. *Irrigation ditch.* (Plan de Acción Territorial de Ordenación y Dinamización de la Huerta de Valencia, 2018)

Figure 39. *Llengües to divide the riverbed and distribute the water.* (Plan de Acción Territorial de Ordenación y Dinamización de la Huerta de Valencia, 2018)

1. Azud: point of water catchment / derivation

Initially: branches, wood, cane and stones.

16th century: masonry walls and large ashlars.

1.1 Gola: water volume regulation.

2. Mother irrigation ditch: basic and functional skeleton that supports the irrigation / canalization and water conduction systems.

2.1 Llengües water supply corresponding to a specific area / dividing the water flow in two parts.

2.2 Water mills: energetic use of the water flow.

3. Branches: water conduction to each of the plots.

Initially: digging of a channel in the ground)

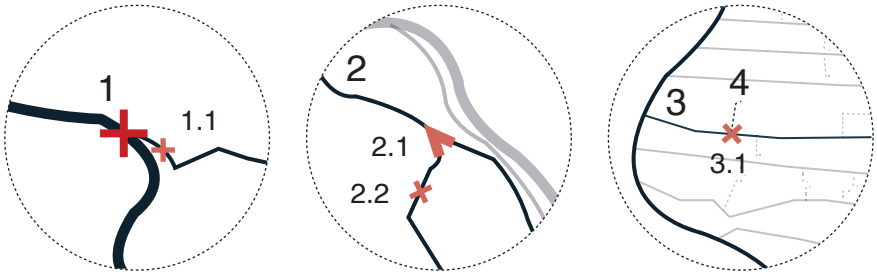
20th century: mortar and/or concrete walls.

3.1 Rolls: open or close the water flow.

3.2 Quadrat: retain the flow of water until it rises to a sufficient quota to irrigate the fields that are higher than the irrigation ditch.

4. Irrigators: water conduction to specific fields.

Hidraulic system of L'Horta de Valencia



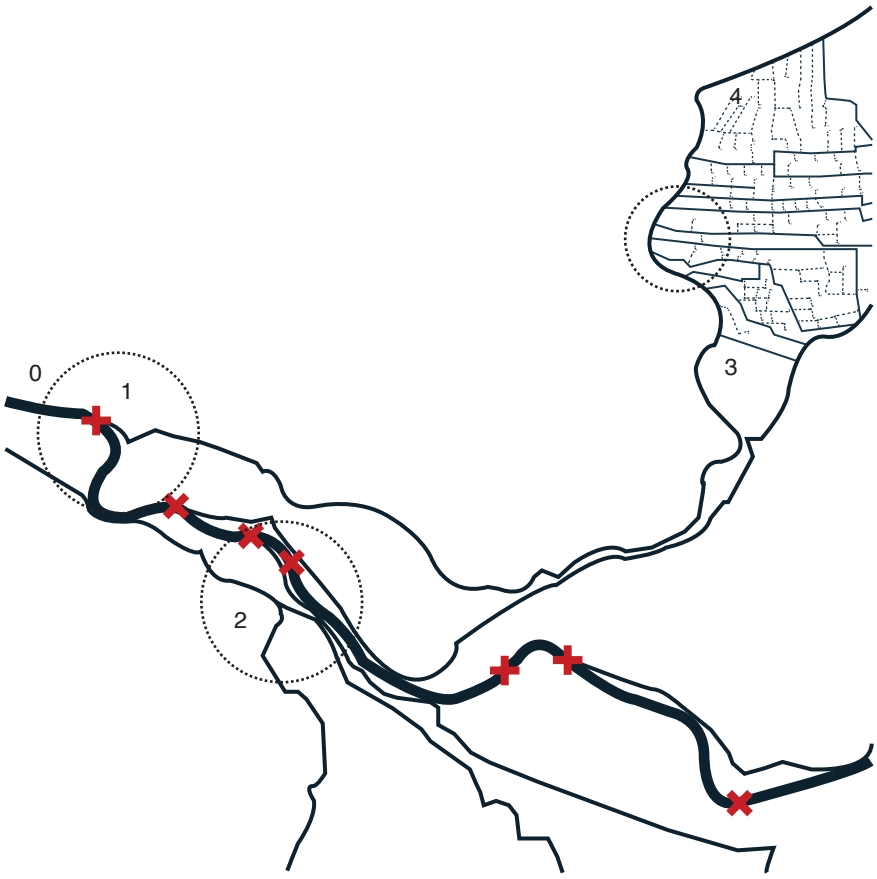


Figure 40. *Components of the hydraulic system of L'Horta de Valencia.* Own work

Tribunal de las Aguas

At the same time, L'Horta de Valencia, apart from being made up of eight central hydraulic systems, its social organization is defined by irrigation communities that are governed by the Tribunal de las Aguas, the oldest institution of justice in Europe, responsible for resolving conflicts arising from the use and exploitation of irrigation water among farmers.

Its figure has its origins in medieval times and was preserved after the conquest as a non-permanent institution that takes place only once a week, every Thursday outside the Cathedral of Valencia (Figure 40). It is attended by the trustees of the eight Irrigation Communities who decide how the water will be distributed, the state of the irrigation ditches, and possible damages to the system. It works as a social agreement between each community without the intervention of any state or municipal power.

Figure 41. *Tribunal de las Aguas de Valencia* (Bernat Ferrandis i Badenes, 1885)

Its figure has its origins in medieval times and was preserved after the conquest as a non-permanent institution that takes place only once a week, every Thursday outside the Cathedral of Valencia. It is attended by the trustees of the eight Irrigation Communities who decide how the water will be distributed, the state of the irrigation ditches, and possible damages to the system. It works as a social agreement between each community without the intervention of any state or municipal power.

As a result, the Tribunal de las Aguas stands as one of the most representative and valuable manifestations of the culture of the Valencians, symbolizing a form of popular, expeditious, and direct justice that enjoys a wide degree of local, national, and international recognition. In 2006 it was declared an A*sset of Cultural Interest* (BIC) in the *General Inventory of Valencian Cultural Heritage*. As a result, in 2009, *UNESCO* determined the status of *Intangible Heritage of Humanity.*

Figure 42. *Meeting in public session of the Tribunal de las Aguas in the Puerta de Los Apostoles in the Cathedral of Valencia* (Las Provincias, 2017)

La Tira de Contar

Based on the commercial nature of L'Horta as a food production system, the 12th century introduced La Tira de Contar, a historical tradition through which f**armers sell their fresh produce directly from the Horta to the city,** recognizing the importance of agriculture in the lives of Valencians and highlighting the value of the farmer's trade. It is a direct marketing channel for fresh, quality, and proximity fruit and vegetable products.

The Tira de Contar has its origin during the reign of the Taifa of Valencia prior to the reconquest of Jaime I, which in 1238 consolidated the practice and to this day, almost eight centuries later, continues to develop, currently in Mercavalencia.

(Figures 41 and 42)

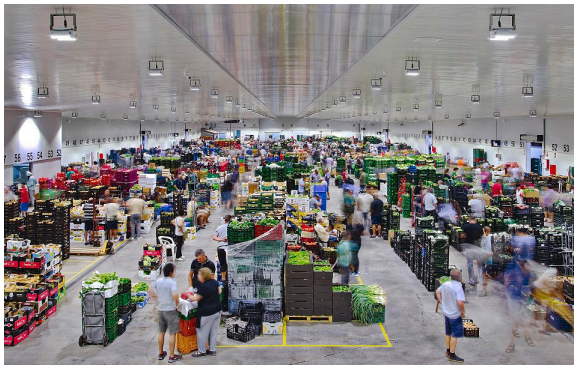


Figure 43-44. *La Tira de Contar in Mercavalencia, "La Tira de comptar, els actors de l´agricultura de proximitat*" (José Luis Iniesta, 2017)

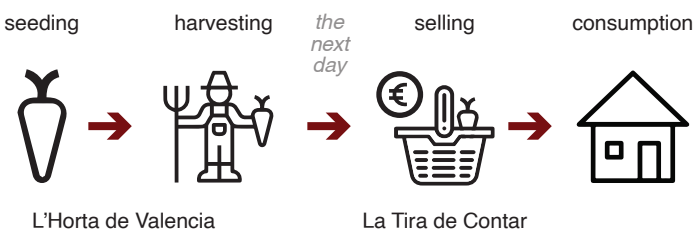


Figure 45. *Scheme of direct-sales system of La Tira de Contar.* Own work

"La Tira is the center of everything and everything else starts from it. What happens on La Tira is the result of what happens outside of it."

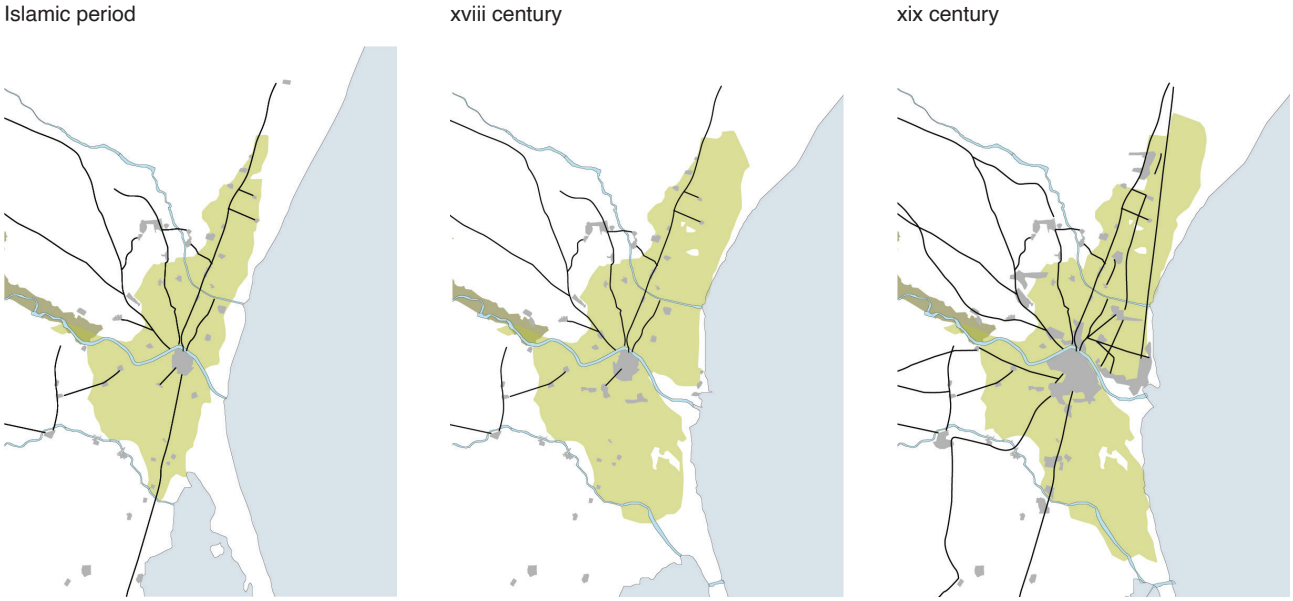
"La Tira de comptar, els actors de l´agricultura de proximitat", José Luis Iniesta.

L'Horta as an object of protection and active conservation.

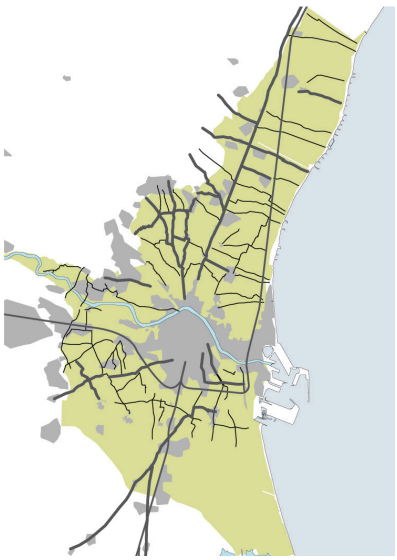
Since the end of the 20th century, when urban growth began to affect the agricultural landscape significantly, the urban development plans of the Metropolitan Area of Valencia have addressed strategies for the conservation of L'Horta. However, these have been unsuccessful, with the agricultural extension being considerably reduced and losing economic and social weight.

Consequently, in 2004 the *Territorial Planning and Landscape Protection* approved the *law 4/2004* to recognize L'Horta as a territory of accredited environmental, historical and cultural value that must be protected. In response, the *Plan de Acción Territorial Metropolitano de Valencia* directs the implementation of the *Plan de acción territorial de Protección de la Huerta de Valencia*, approved in 2010 as "a comprehensive territorial strategy and a protection model to preserve the historical, cultural, scenic, productive, ecological and recreational resources to improve the quality of life of all citizens while enhancing sustainable economic and urban development."

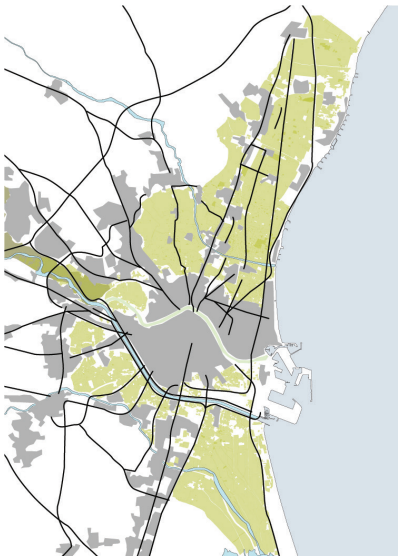
Figure 46. *Evolution of the historical Huerta and urban settlements* (Plan de Acción Territorial de Protección de la Huerta de Valencia, 2018)



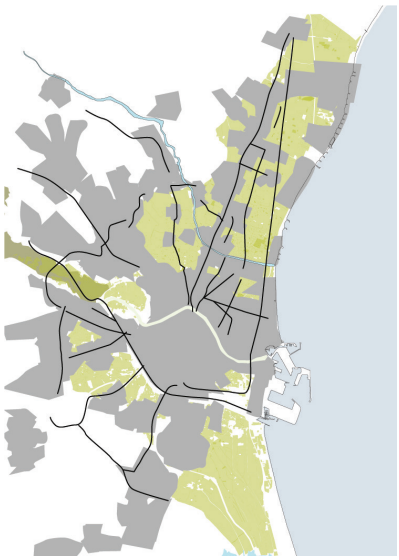
1950



2007



2030 hypothesis



Subsequently, the *Conselleria d'Habitatge, Obres Públiques i Vertebració del Territori of the Generalitat Valenciana* develops in 2018 the *Plan de Acción Territorial de Ordenación y dinamización de la Huerta de Valencia*, redefining the areas worthy of protection and the corresponding urban planning measures that promote the enhancement of L'Horta and its functional and landscape integration in the populations of the metropolitan area.

Now then, L'Horta de Valencia heritage recognition comes both from urban planning and civil society and public and private institutions through the development of academic studies and programs that aim to revalue the agricultural system and the cultural landscape built over the years.

Such is the case of the *Universidad Politecnica de Valencia* through the development of the *Centre Valencià d'Estudis sobre el Reg,* which since 1998 has as its objective the multidisciplinary research-oriented to the knowledge of Valencian irrigation, in order to provide contributions to improve the efficiency of irrigation. In the same year, the *Agromuseu de Vera Foundation* was born between the old Ermita de Vera and the Molino de Vera (buildings cataloged as an Asset of Local Relevance) to collect, care for, and exhibit historical objects and implements of an agricultural nature donated by private individuals. (Figure 47)

On the other hand, the civil association *Per L'Horta* originated in 2001 as a social movement based on the first Popular Legislative Initiative to preserve l'Horta de València. The aim is to act as a catalyst of actions or policies to protect L'Horta and the citizenship, other associations, and institutions to

Figure 47. *Guided visit to the Agromuseu de Vera and its collection of old farming tools,* (Fundación Agromuseu de Vera, 2014)

Figure 48. *Ecological agriculture practices in the Benimaclet Neighborhood, La Universitat d'Estiu de L'Horta* (Per L'Horta, 2010)

Figure 49. *Route of l'orxata,* (Horta Viva, 2011)

"change the state of disinterest towards agriculture and the patrimonial values of the rural world."

Within its program, *La Universitat d'Estiu de L'Horta* was developed to offer realistic strategies for conserving the agricultural landscape, such as the development of public huertas, leisure huertas and municipal school huertas and agricultural parks (Figure 48). Also, the *Observatori Ciutadà de l'Horta*, a research tool of the situation of the Huerta through the citizenship, associations, and the social fabric, with the intention of "creating a social network, that is the people of the villages who are involved."

In the same line of ideas, *Horta Viva* is a private company created to enhance the environmental, cultural, social, and gastronomic qualities from the development of tourist activities that allow living experiences in L'Horta: guided tours, bike routes, thematic workshops, training courses, and gastronomic tastings (Figure 49). Thus, *Horta Viva* recognizes and invites to know the territory from the respect for the local culture, making the local actors protagonists who benefit thanks to the enhancement of their productive activities.

Through these actions, citizens have been made aware of the need to change perspective in the relationship between man and nature and between the city and its rural landscape. As a result, L'Horta constitutes a fundamental resource to improve the quality of life of the population with such a broad scope that it responds not only to the productive and economic demands of the region but also to the ecological, environmental, and recreational needs of its inhabitants.

Miradors de L’horta is the first festival of design and culture of L’horta. It pays tribute to the orchard, the farmers and the culture that has been born around it.

Turisme Carraixet, 2019.


L'HORTA
ETS TU
YOU ARE
L'HORTA

Chapter 1

Peri-urban areas
in the contemporary city.

Chapter 2

Alboraya as a peri-urban
municipality of agricultural base.

Chapter 3

Peri-urban agriculture.

Chapter 4

L’Horta - urban area relation: La Patacona.

Chapter 5

Cases studies.

Chapter 6

Back to L’Horta as an answer.

Origin and urban transformations

Figure 50. *"Casitas de madera de La Patacona" on the waterfront* (Paco Ferrer, 2003)

La Patacona is a built-up area on the coastal strip that belongs to the Vera cadastral section of the municipality of Alboraya. It has a population of approximately 5000 inhabitants (INE, 2020), representing 20% of the population of Alboraya, in an area of 53 hectares.

Its urban evolution is complex; since its origin, several urban transformations have altered land use. Initially, it was part of the cultivated territory of L'Horta de Alboraya until the beginning of the twentieth century, when the agricultural land began to be occupied. Then, in the 1920s, a series of second homes, *"Las Casitas de La Patacona"*, were built on the seafront as a natural extension of the adjoining neighborhood "La Malvarrosa" buildings, most of which were self-built wooden houses with a particular value for their picturesque organization. (Figure 48)

Subsequently, on the second coastline, the first industrial occupation was implemented, the Papelera La Española, thus determining, and directly related to the Valencia-Castellón railroad, the development

of the Vera Industrial Estate. The industrial sector began to extend towards the north, bordering the east with the railroad line.

However, in the last decades of the 20th century, industrial development suffered a process of obsolescence that led to the introduction of the real estate sector, leading to the transformation of the industrial estate into the Vera Industrial/Residential Area (*Plan General de Ordenación Urbana* in 1991). From there, the reconversion of the area into high-density residential land has been progressive and coordinated from sectorized plans, recognizing only a small sector of land to the north as an industrial area.

In 1995 a *modification of the PGOU* was developed to build the urbanization project "Residencial Vera" on the second line of the coast, with a considerable amount of resident population distributed between residential blocks and attached single-family houses. Then, in 2003, a second massive residential development was executed from the *Plan de Actuación Integral Vera 2*, locating around 1300 houses between the Residencial Vera complex and the railroad lines.

The following year, as part of the *Plan de Reforma Interior "Playa Patacona,"* the traditional second homes on the coastal strip are replaced by tertiary buildings that respond to the sea promenade.
As a consequence of the building consolidation, the P*lan General de Ordenación Urbana de Alboraya* of 2019 defines the urban land as residential, except for the coastal strip, the resort, urban facilities, and Bodegas Vinival, an industrial building cataloged by the *Plan de Ordenación Pormenorizada de Alboraya with partial protection.*

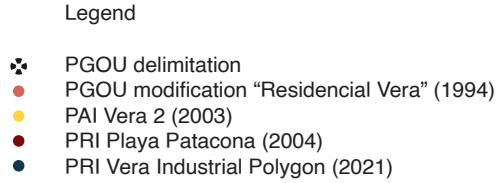
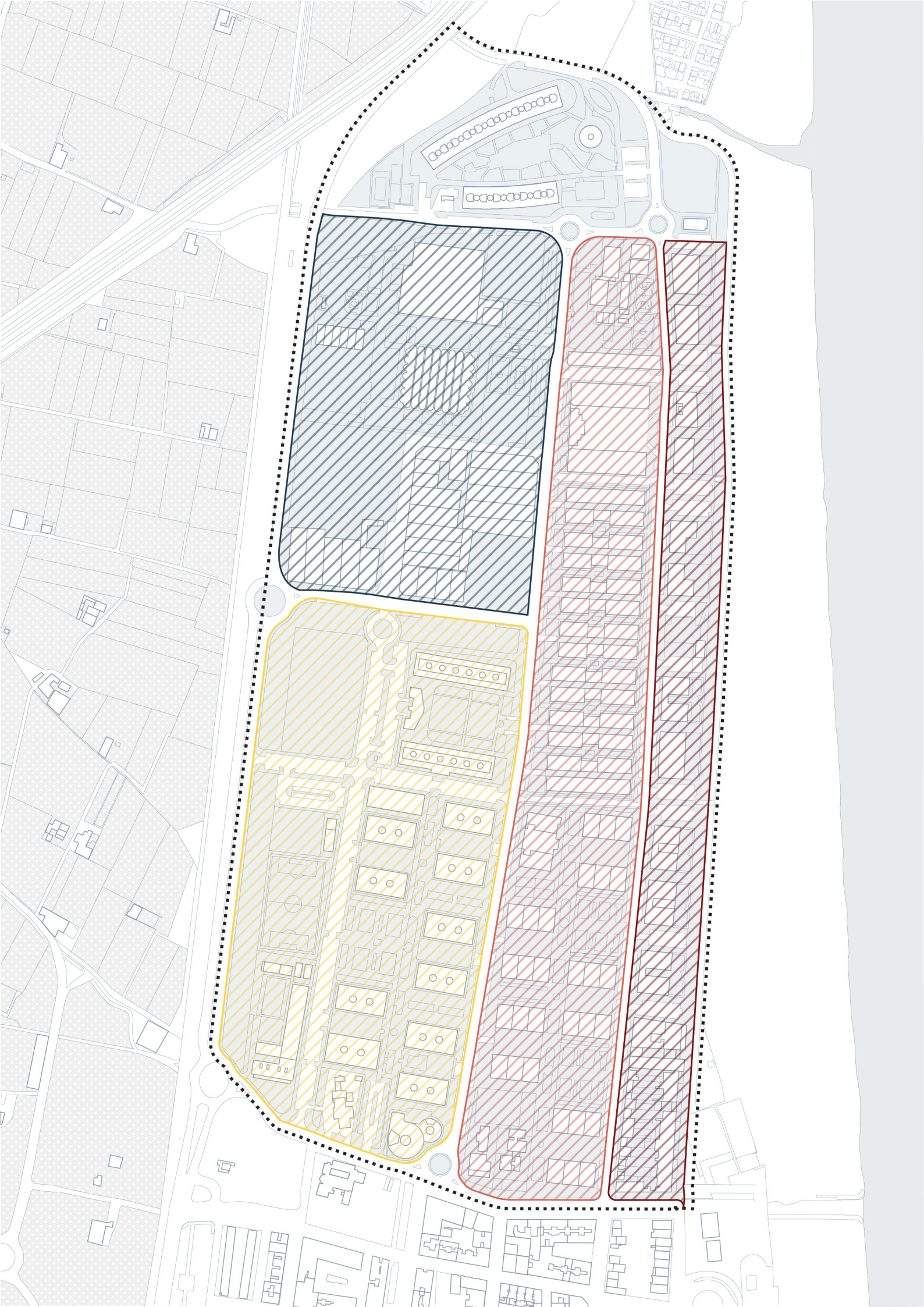


Figure 51. *Transformation areas of La Patacona according to the Urban Development Plans.* Own work



First occupations of the current territory of Alboraya. The initial layout of the urban center follows an Islamic plot conception, with a road network and irregular blocks.

Islamic period

VIII century

Origin of the Alboraya community

Jaime I

1238

Inauguration of the **València-Sagunt** section of the València-Tarragona train line (Actual Renfe line)

1862

Inauguration of the **València-Alboraya** section of the railway line.

1893

First summer houses (Casitas de Madera de la Patacona) as an extension of La Malvarrosa neighborhood.

1920's

Creation of "La Papelera del Grao" and as a result, the origin of the industrial area.

1932

Vera (La Patacona) is **defined as industrial area.**

Valencia PGOU

1946

Construction of the **Bodegas Vinival** complex

1975

Construction of the V-21 highway

around 1980

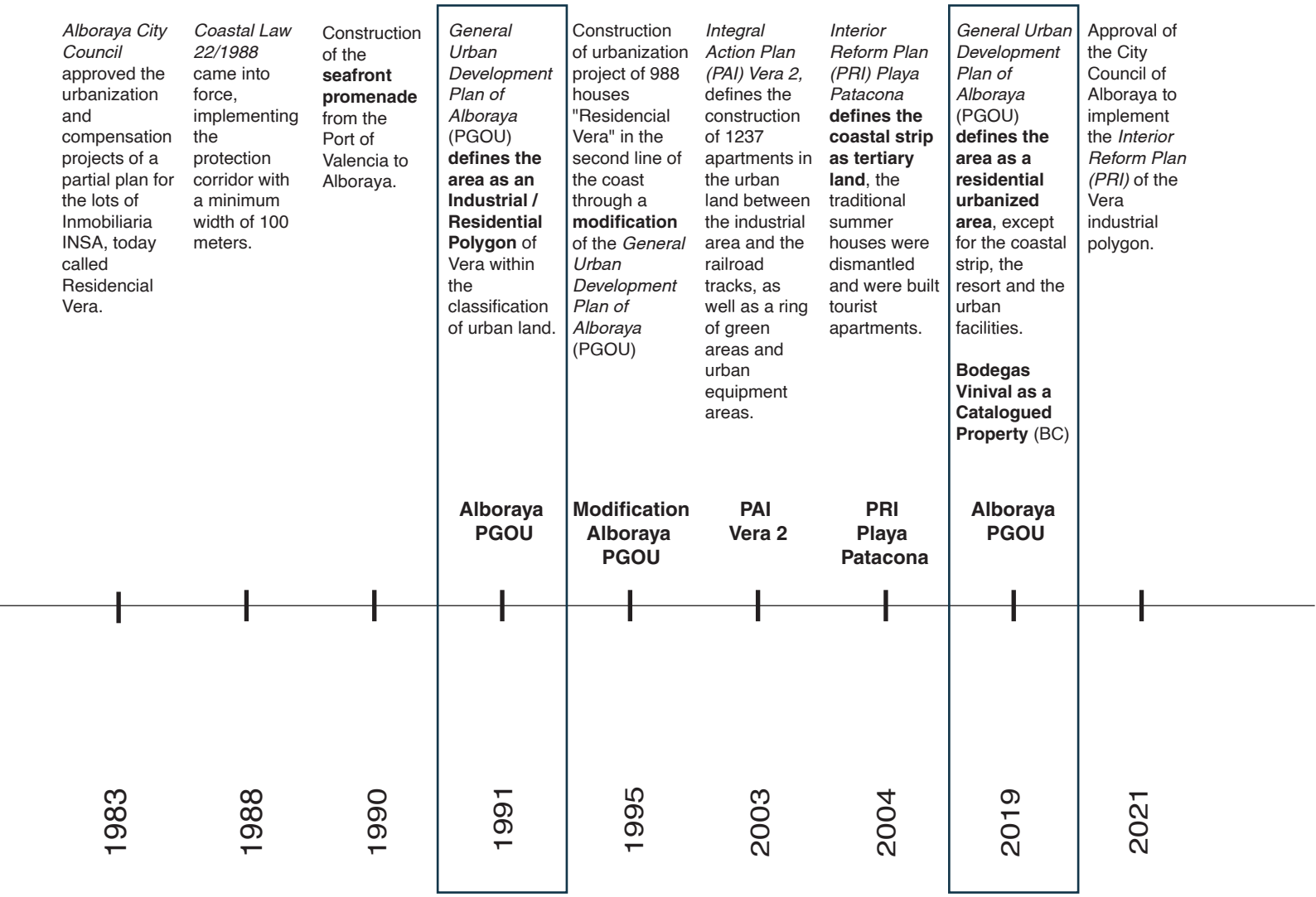
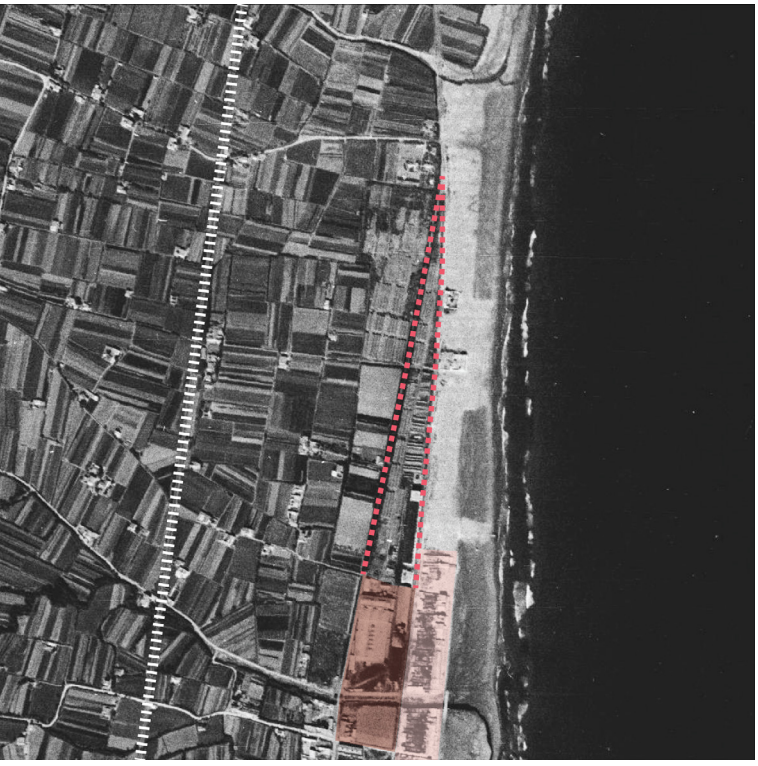


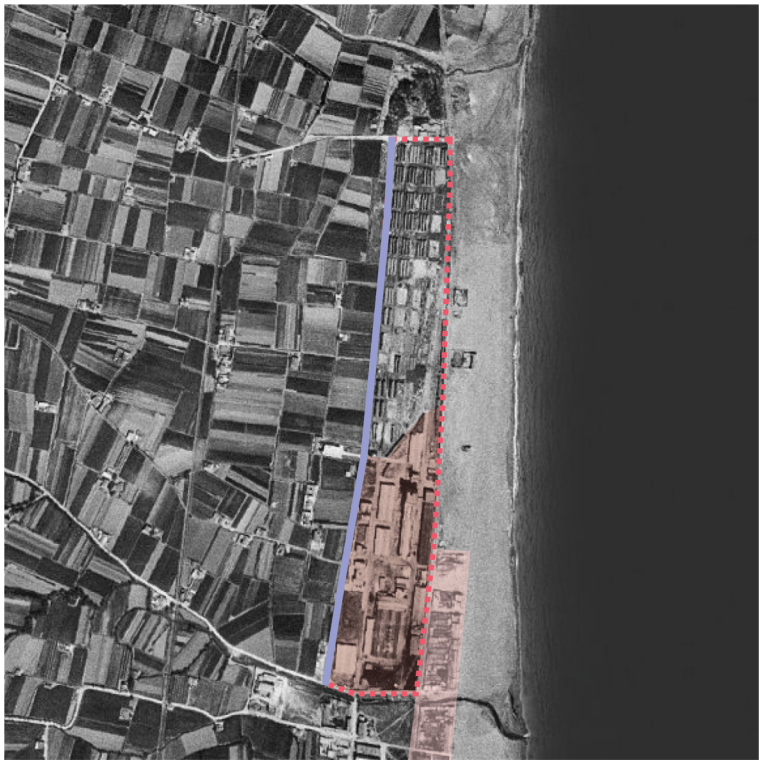
Figure 52. *Historical evolution of La Patacona.* Own work

- Second home buildings on the coastline extending from the Malvarrosa neighborhood
- Industrial area Papelera La Española (1933-1959)
- Valencia - Tarragona train line (from 1893)
- Development of industrial buildings.
- Construction of Vicente Blasco Ibañez Avenue.

1945



1956



Figures 53-60. *Analysis of the historical evolution of La Patacona from orthophotos (from 1945 to 2020) of the Infraestructura Valenciana de Datos Espaciales.*
Own work

- Industrial buildings take up part of L'Horta, with the railroad line as a boundary.
- Construction of the Bodegas Vinival complex
- Second home buildings extend to the end of the coast.
- Construction of the V-21 highway
- Valencia - Tarragona train line electrification (1973)
- Construction of the seafront promenade
- Development of vertical residential buildings on the second line of the coast (Residencial Vera)
- IES La Patacona (Secondary school)

1983

1993

- Resort construction
- Extension of the promenade
- Traditional second home buildings are destroyed (PRI Playa Patacona)
- Extension of Mare Nostrum Av. and Cami Fondo Street)
- Valencia - Tarragona train line by Renfe
- Development of residential buildings (PAI Vera 2)
- Development of terciary buildings on the first line of the coast (PRI Playa Patacona)
- External silos of Bodegas Vinival begin to be disassembled
- CEIP La Patacona

2004

2008

External silos of Bodegas vinival completed disassembled

Vegetation barrier (PAI Vera 2)

Construction of the CV-3115 highway

2010

2020

Urban analysis

After understanding the urban development of La Patacona, the first approach to urban analysis begins with its recognition as an **area with clearly defined urban edges**, segregated from the urban area of Alboraya as a result of the presence to the east of major transport infrastructures (the Valencia - Castellon railroad and the V-21 freeway) that not only separate it from the urbanized area, but also the landscape of L'Horta. Beyond defining urban growth to the north and east, this condition causes La Patacona to be structured as an extension of the city of Valencia, specifically, of the Malvarrosa neighborhood.

Nodes

1 In addition to being the intersection of 3 important roads, different building typologies and dynamics converge, the Patacona resort, the institutional building of the town hall of Alboraya, the access and visuals to the beach through the palm grove and the high school.

2 For its narrowness and framing, the Mar Menor street stands out for its scenographic value in an east-west direction towards the Vinival wineries and west-east towards the Patacona beach.

3 In addition to being the intersection of 4 important roads, converge different representative building typologies, the Hotel Resa Patacona, the Church of Mary Immaculate Vera and Patacova school.

4 The Paseo Maritimo coming from Malvarrosa is offset by the width in the coastal area.

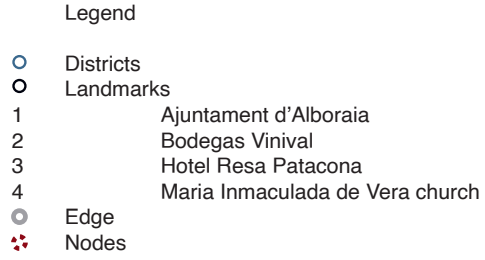
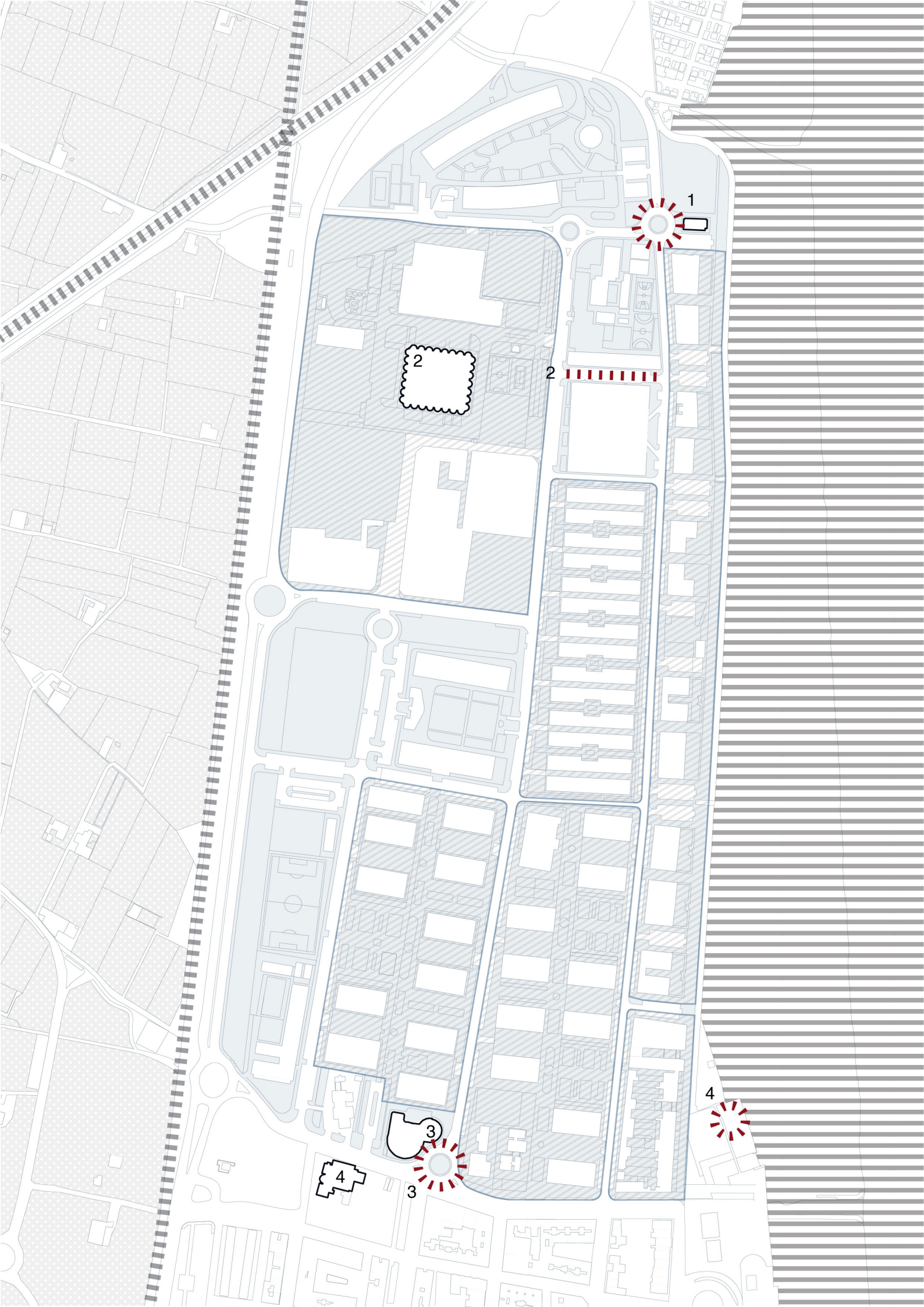


Figure 61. *Analysis of the image of the city based on Kevin Lynch.* Own work.


1
2
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3
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4
4

Urban fabric

The north-south axis predominates in the organization of the urban fabric as a result of the physical edges represented by the coast and transportation infrastructure. In addition, due to the development of long urban blocks resulting from sectorized residential development that originated different high-density housing complexes.

Due to the different transformations in land use, the urban fabric is orthogonal but discontinuous, mainly to the north where the industrial area is located.

On the other hand, the urban fabric presents some relations with the historical layout of the irrigation ditches of L'Horta, highlighting two particular situations:

> Arnaldo de Vilanova street corresponds with the layout of the Acequia de Vera, currently subway, flowing its waters into the sea after being treated in the Emisario de Vera plant.
>
> A section of the Acequia Mayor is located between the industrial plots.

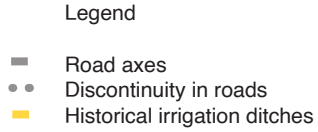
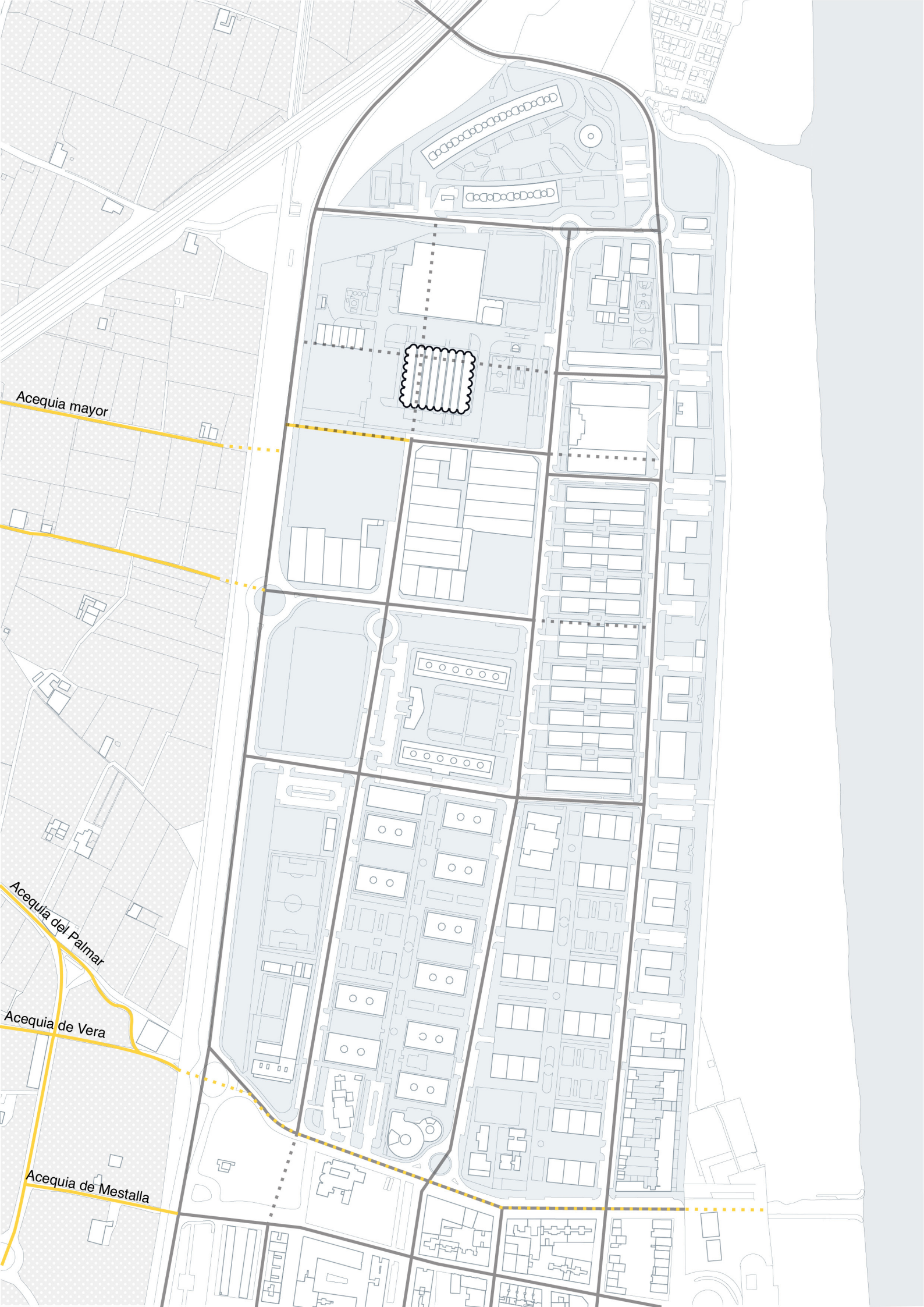


Figure 62. *Analysis of the urban grid.* Own work.


Acequia mayor
Acequia del Palmar
Acequia de Vera
Acequia de Mestalla

Land use and building typologies

Land occupation is predominantly residential, occupying a small part of the coastal strip and the second and third strips almost entirely. Nevertheless, different building typologies are developed, traditional single-family townhouses facing the coast, a complex of single-family townhouses in the second strip, and the rest, sets of residential blocks with two categories: ground-floor commercial (mainly restaurants) or parking basement.

The coastal strip is occupied by tertiary buildings, luxury apart-hotels with ground-floor retail. In addition, the area has a recently renovated hotel and a resort with views of the beach.

The northeast edge of La Patacona stands out for its industrial use, identifying two typologies: the first, industrial warehouses, some renovated and others in disuse, and the second, the Bodegas Vinival complex, comprised of a principal building with an evident architectural value, and a set of secondary warehouses.

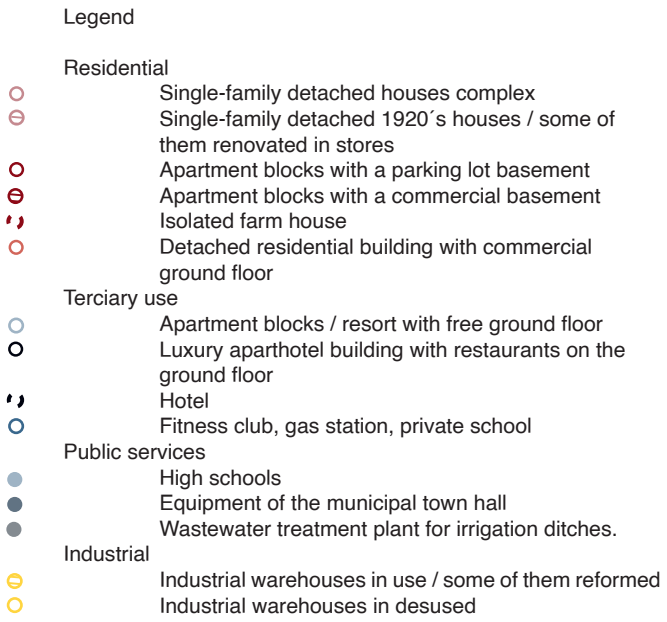
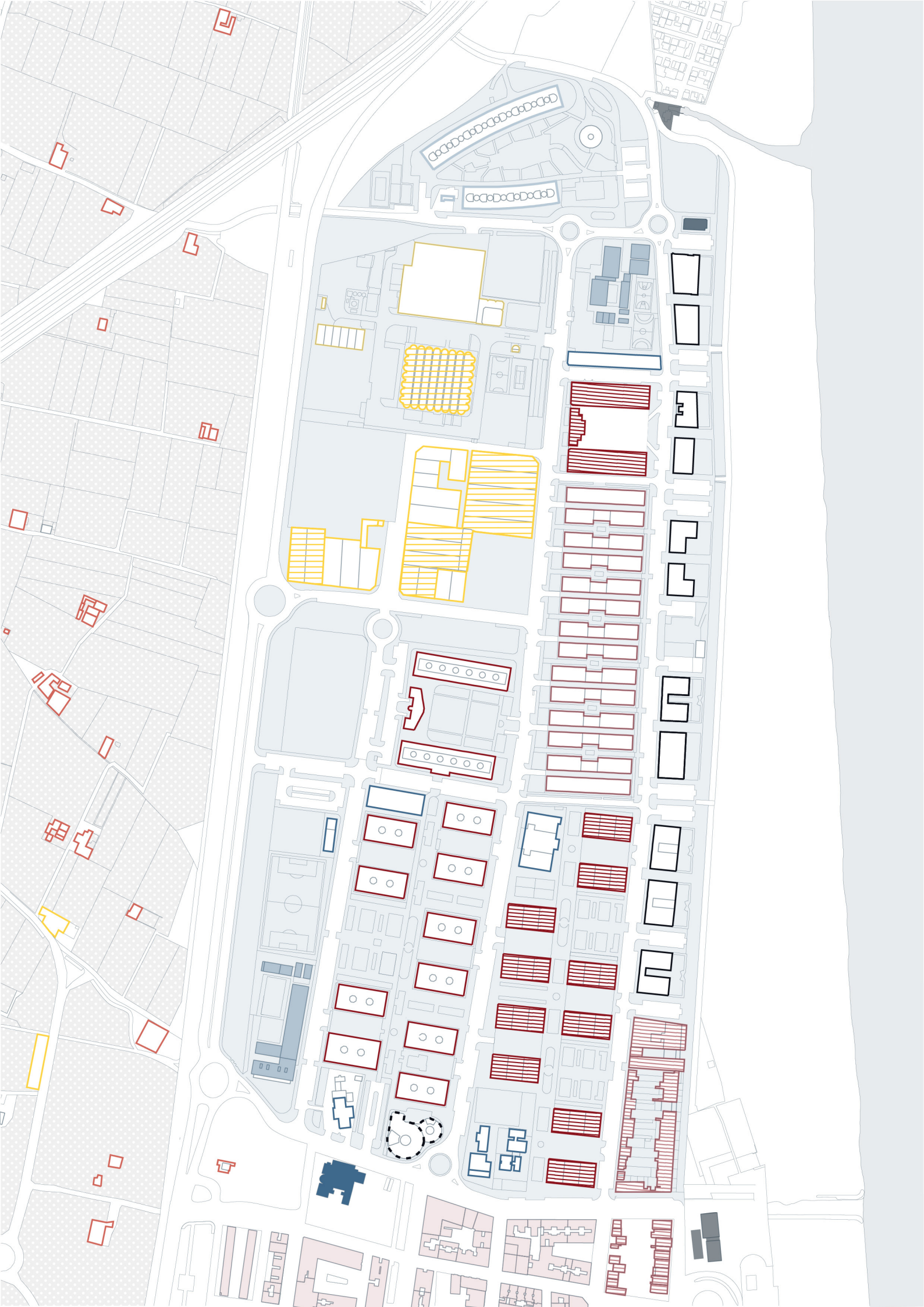


Figure 63. *Analysis of the land use and urban typologies.* Own work.



Legend

Residential
1 Single-family detached houses complex
2 Single-family detached 1920´s houses / some of them renovated in stores
3 Apartment blocks with a parking lot basement
4 Apartment blocks with a commercial basement
5 Apartment blocks / resort with free ground floor
6 Isolated farm house
7 Detached residential building with commercial ground floor

Private services
8 Luxury aparthotel building with restaurants on the ground floor
9 Hotel
10 Fitness club, gas station, private school

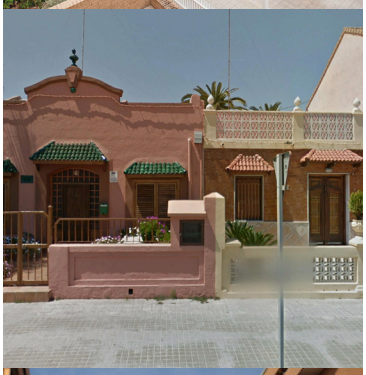
Public services
11 High schools
12 Equipment of the municipal town hall

Industrial
13 Industrial warehouses in use / some of them reformed
14 Industrial warehouses in desused

Green areas
15 Public green areas

1

2



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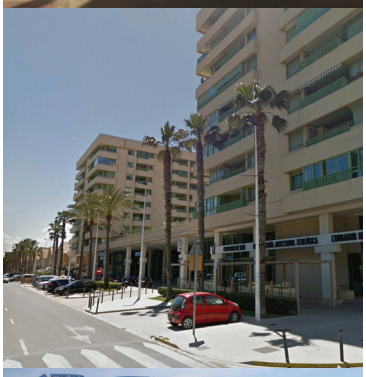

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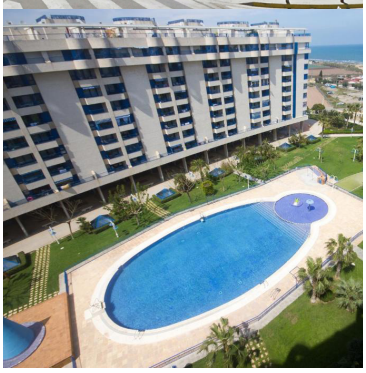

Figure 64-78. *Photographs of the site analysis* (Google maps, 2020)

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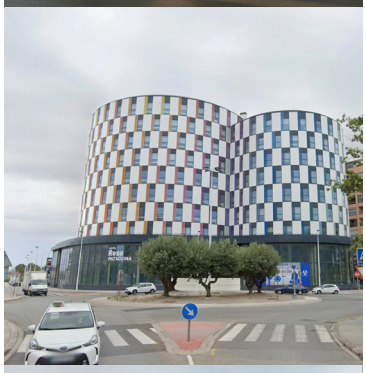
8



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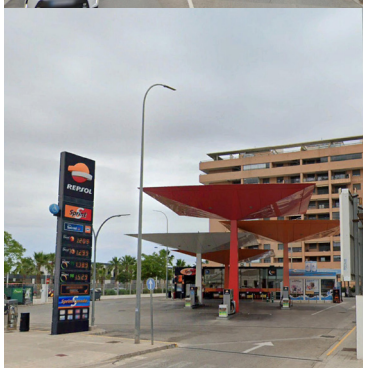

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Urban equipments

The area has two public educational facilities (primary and secondary education) and a private nursery school in terms of urban facilities and services. On the other hand, La Patacona only has a small public clinic and a small private medical center.

As for sports facilities, there are several sports courts and a gymnasium, all of which are privately owned.

Other public facilities include the Maria Inmaculada de Vera Church and a small town hall where community meetings are held.

As far as public spaces are concerned, most of the public green areas of La Patacona are in a state of deterioration or underutilization, with the largest green area being the linear border at the eastern end, and the dog park in deplorable conditions.

There is a lack of cultural facilities, depending on those located in the urban center of Alboraya and food supply facilities, with only two small mini-markets.

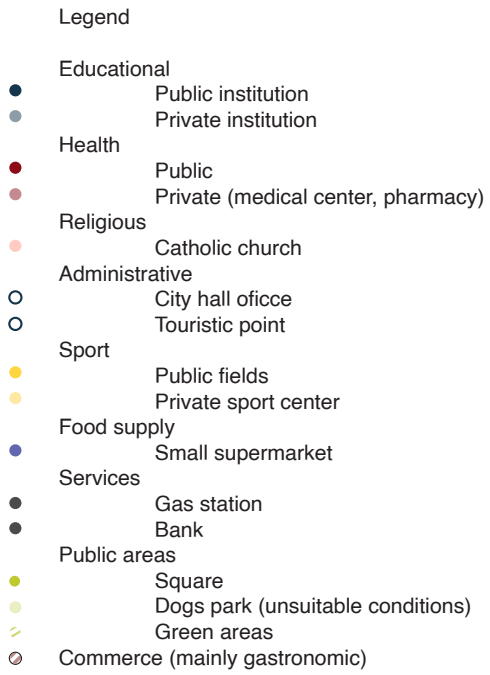
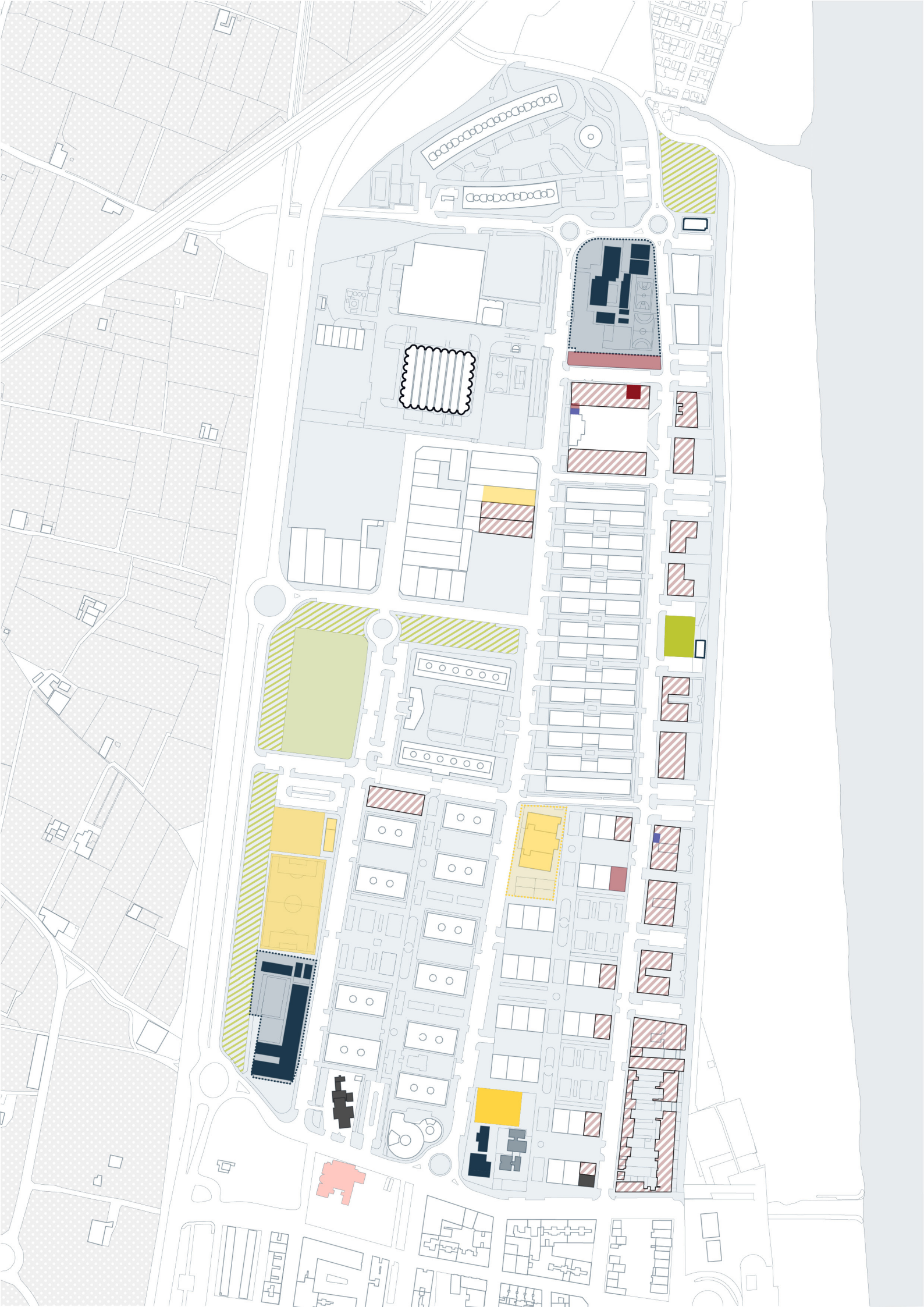


Figure 79. *Analysis of the urban equipments.* Own work.



Mobility

The main problem of mobility lies in the large transport infrastructures at the eastern end of La Patacona, which act only as physical barriers since they do not meet the connection needs of the population. Moreover, the lack of continuity of the V-21 highway impedes access from the north of the metropolitan area to the urban center of Alboraya, which is done through local roads that cross L'Horta.
On the other hand, public transport is developed from an internal line that connects Alboraya with the two coastal areas (La Patacona and Port Saplaya) and from lines 30 and 31 of EMT Valencia that connects with the center of the city of Valencia.

The bicycle lanes are discontinuous, existing mainly along the seafront and in the surroundings of the residential blocks.

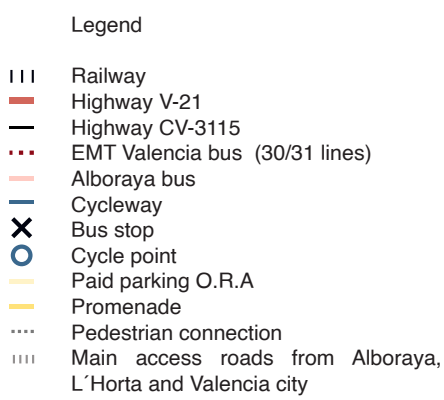
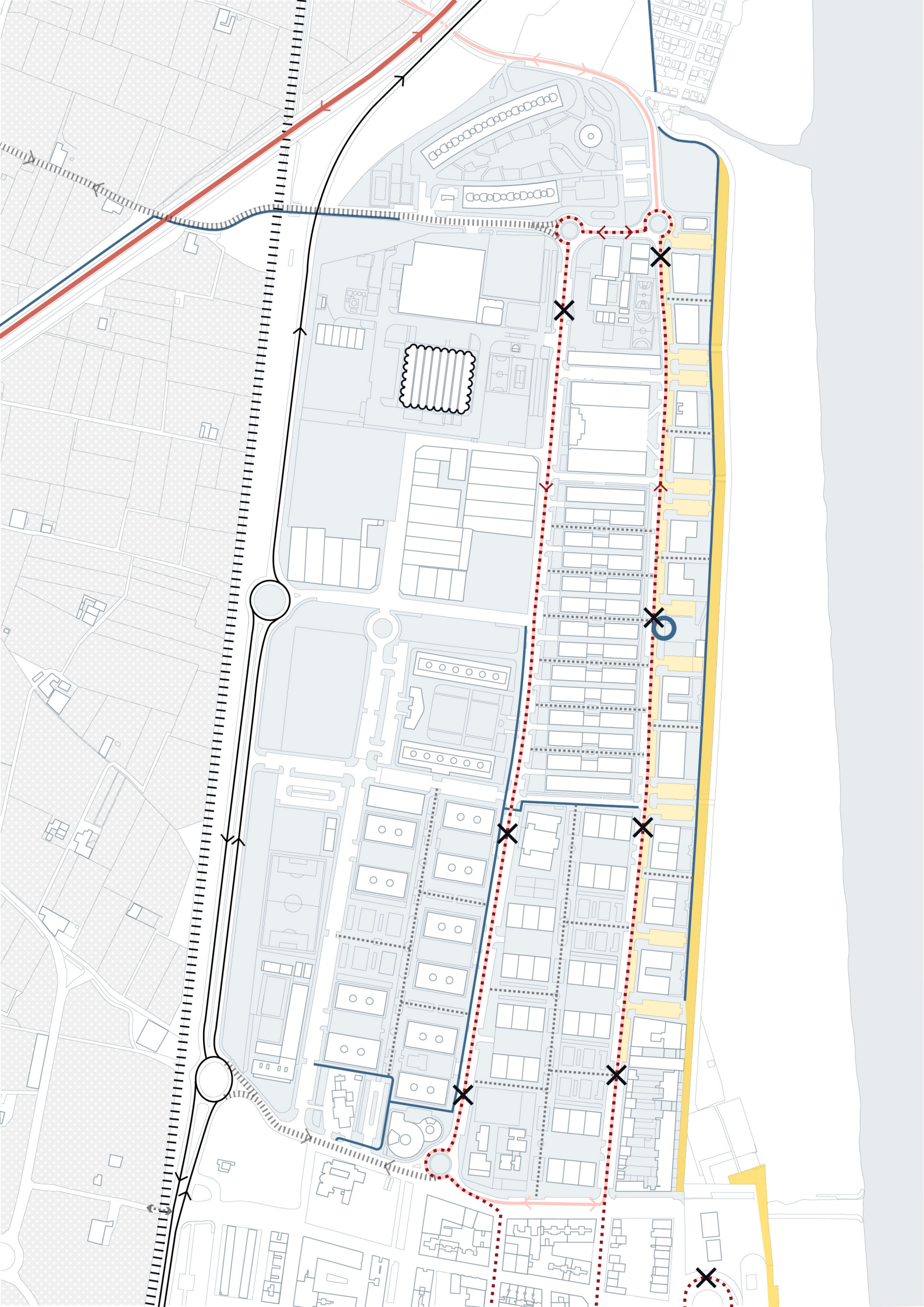


Figure 80. *Analysis of the urban mobility.* Own work.



Disused and underused spaces

Most of the industrial area of La Patacona has been in a state of abandonment and disuse since the beginning of the 21st century, after the relocation of the Bodegas Vinival company.

Furthermore, most of the public spaces in the sector are underutilized due to the lack of urban design. For example, there are long public corridors and squares between the residential blocks that are little frequented because they are generic and repetitive public spaces.

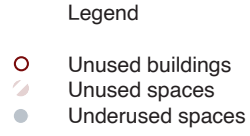
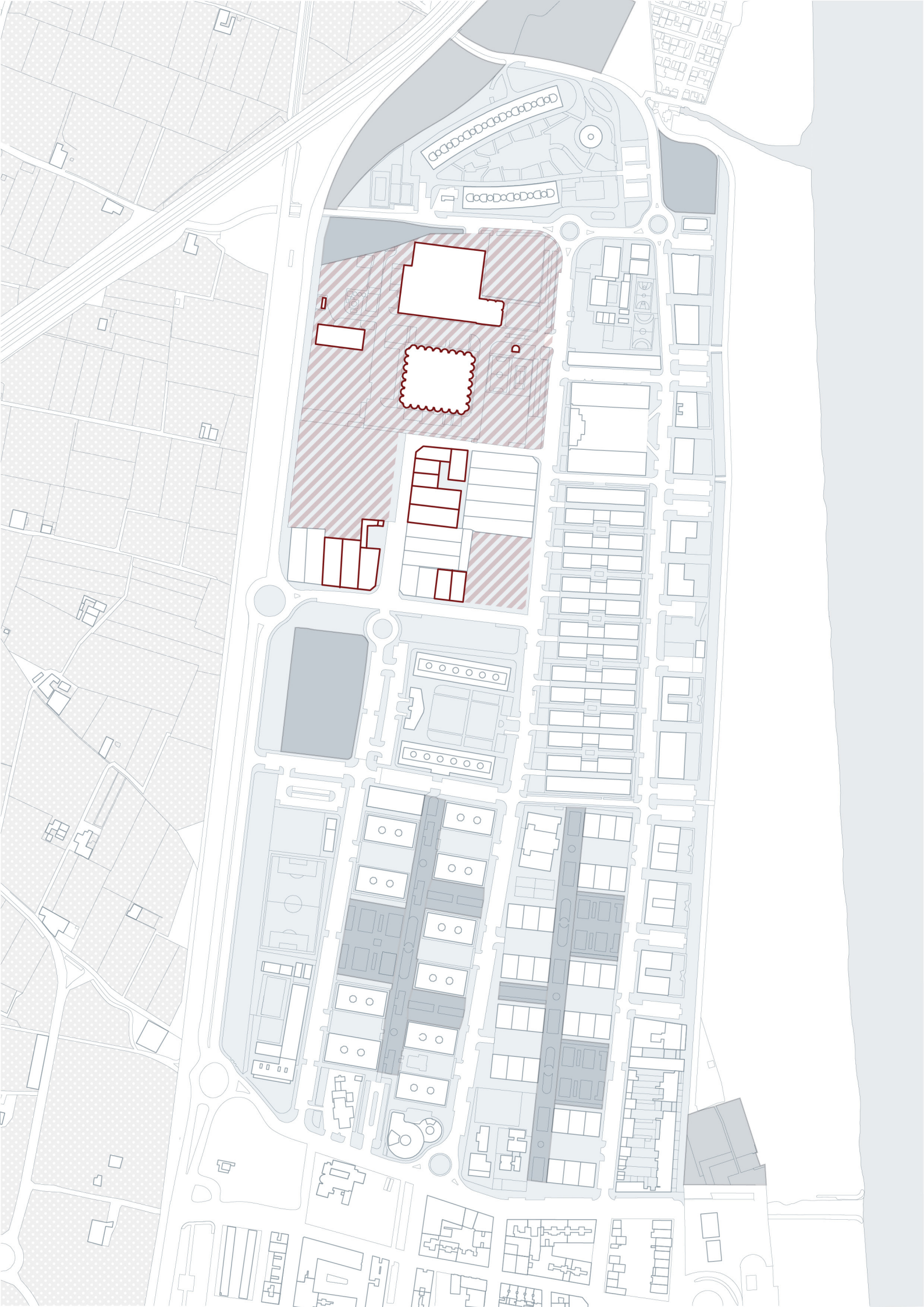


Figure 81. *Analysis of the unused and underused spaces and buildings.* Own work.



Population

La Patacona represents 20% of the municipality's total population, with an average age of 41.38 years and a predominance of 65.9% in the 18-65 years age group. (Figure 82-84)

Housing

La Patacona highlights its status as a peri-urban area based on its housing occupancy, with only 60% of primary residences. The remainder is divided into 30% vacant housing and 30% second homes. (Figure 85)

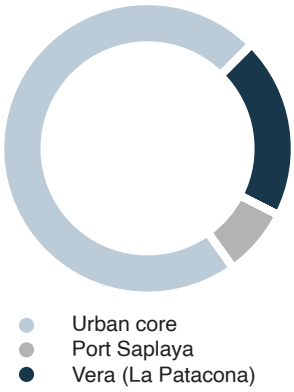


Figure 82. *Distribution of the population of Alboraya* (INE, 2020).

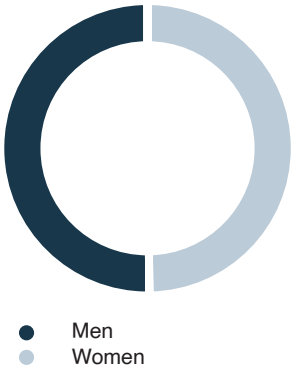


Figure 83. *Population of La Patacona by gender* (INE, 2020).

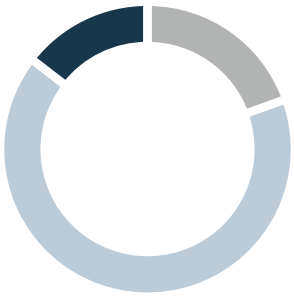


Figure 84. *Population of La Patacona and by age* (INE, 2020).

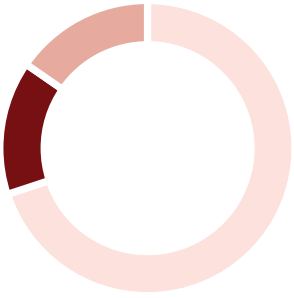


Figure 85. *Type of housing occupancy in La Patacona* (INE, 2011).

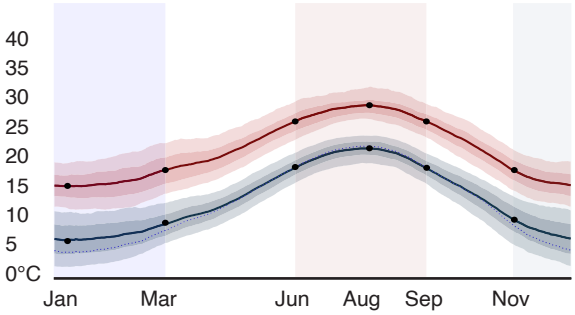


Figure 86. *Average high and low temperature in Alboraya*

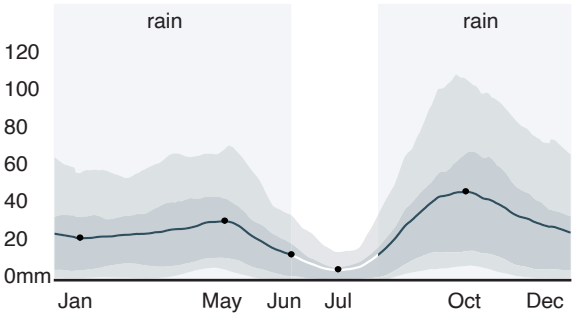


Figure 87. *Average monthly rainfall in Alboraya*

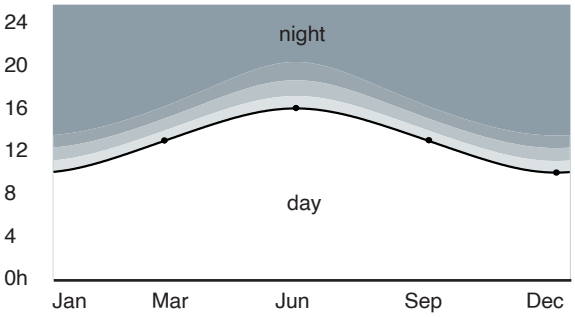


Figure 88. *Hours of daylight and twilight in Alboraya*

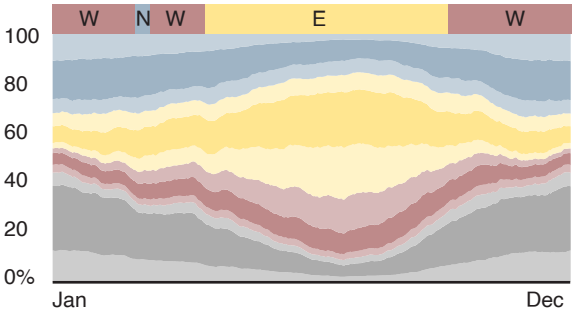


Figure 89. *Wind direction in Alboraya* (www.weatherspark.com, 2021)

Climate

Alboraya, due to its geographical location, has a Mediterranean climate, which is characterized by a temperate climate with an intense and prolonged arid summer period.

Temperatures are moderate, and the annual thermal oscillation is low. The coldest temperatures tend to be in January, around 11°, while the warmest month tends to be August, between 25° and 27°. (Figure 86)

Average annual rainfall varies between 400-600 mm. It has a prolonged dry period, which lasts 4 to 5 months. (Figure 87)

The length of the day in Alboraya varies considerably during the year. The shortest day is December 21, with 9 hours of daylight; the longest day is June 21, with about 15 hours of daylight. (Figure 88)

The average hourly wind speed in Alboraya has slight seasonal variations over the year. The windiest part of the year has average speeds of over 13.6 kilometers per hour, while in the calmest time, the average speed is 11.5 kilometers per hour. (Figure 89)

At the same time, the most predominant wind directions are from the east and west.

Weaknesses and threats

As a result of the different urban transformations and the geographical position as a peri-urban area, La Patacona can be defined as a **sector without identity** that combines wildly divergent scenarios such as:

- *Agriculture* with the presence of L'Horta de Alboraya.
- *Tourism* from La Patacona Beach and, consequently, a considerable percentage of vacation rental homes.
- An *industrial past* marked by the old Industrial Polygon of Vera, conformed by the complex of the Bodegas Vinival and the surrounding industrial sheds.
- The character of *"dormitory neighborhood,"* due to the transformation and urbanization of almost all the urban land, added to the deficiency of tertiary uses that respond to the needs of the resident population.

Urban planning has been sectorized and transformed over the years, resulting in an **urbanism lacking a clear and coherent urban structure**, made up of small districts of residential blocks that live inward, without the presence of public and social dynamics.

Green spaces are primarily private and function as residual spaces between residential buildings, while **public green spaces do not have good urban design and conditions**. At the same time, **socio-cultural, health, and food supply services and facilities are scarce,** depending on the urban center of Alboraya or the city of Valencia.

Regarding mobility, La Patacona is **poorly connected** with Alboraya and Valencia, is accessible only by the regional roads instead of from the main highways (V-21 and CV-3115) due to lack of continuity and connections, both roads acting as a physical barrier.

The **abandonment of the Industrial Polygon** is affecting to the neighborhood's safety because it leads to an atmosphere of deterioration, crime, and garbage.

Strengths and opportunities

La Patacona is a neighborhood with a **rich history,** mainly thanks to the historical L'Horta and its heritage. Additionally, its population remains close to its origins, which favors exploiting the neighborhood's potential.

The proximity to Valencia and the V-21 as an access highway to Valencia from the north favors the possible relations with the metropolitan dynamics. Besides, from the extension of the now discontinued CV-3115 road, the district could be accessible from the north of the metropolitan area and function as a gateway to the city of Valencia.

La Patacona Beach, as one of the most visited beaches in Valencia, attracts visitors throughout the year. Also, the promenade that starts at the port of Valencia and ends at the northern boundary of La Patacona allows the development of a dynamic waterfront promenade that drives the district's regeneration.

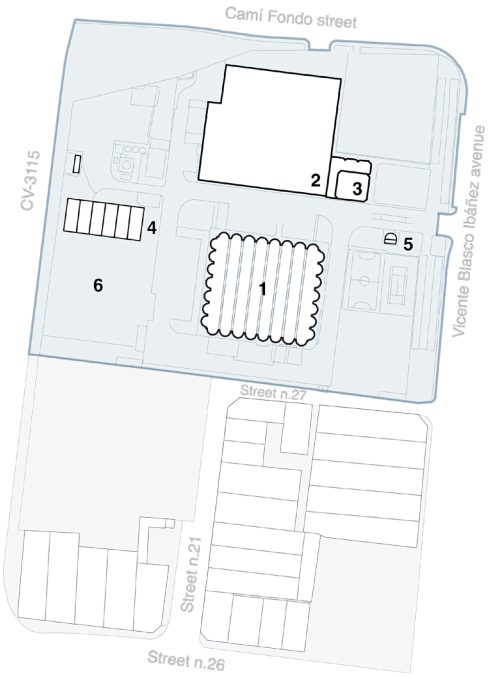
The landscape value, characterized by the views towards L'Norte to the north and west and the coast to the east.

The low level of urbanization on the western edge that borders the highway and L'Horta can be an opportunity for both visual and spatial connection between the rural and the urban through the **Bodegas Vinival complex as a potential space.**


Google Earth
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image Landsat / Copernicus
Image © 2022 Maxar Technologies

Figure 90. *Bodegas Vinival complex plan.* Own work

1	Main building:	
	Wine warehouse	4500 m²
2	Bottling plant	6060 m²
3	Administrative offices	680 m²
4	General services building	1050 m²
5	Reception	45 m²
6	Old semi-buried deposits	
	Plot	55000 m²



Bodegas Vinival as an industrial footprint

Industrial development in La Patacona began in the first decades of the 20th century, with La Papelera la Española as a large-scale and important industry for the country, remaining in the sector until 1959. Subsequently, the industrial buildings constructed mainly were traditional, such as those still preserved at the northern end of La Patacona.

In 1969 the company **Bodegas Vinival was formed as a service company for all wine exporters in Valencia**, choosing La Patacona as its headquarters due to its proximity to the Port of Valencia. The industrial complex began to be built in 1972 and consists of 4 buildings developed in 4 phases, starting with the winery as the main building, the bottling building, the general services building, and, finally, the administrative office building completed in 1997. (Figure 93)

Figure 91. *Pre-opening visit to the Bodegas Vinival* (unknown autor, 1972-1975)

After about 30 years of service, in 2004, the company sold the complex to the real estate company Urbis and in 2008 inaugurated a new headquarters for the winery due to the increase in demand for

wines. Unfortunately, after the sale, it was impossible to dismantle the company since the extraction of the inner tanks required a delicate and costly intervention, being dismantled only the outer silos.

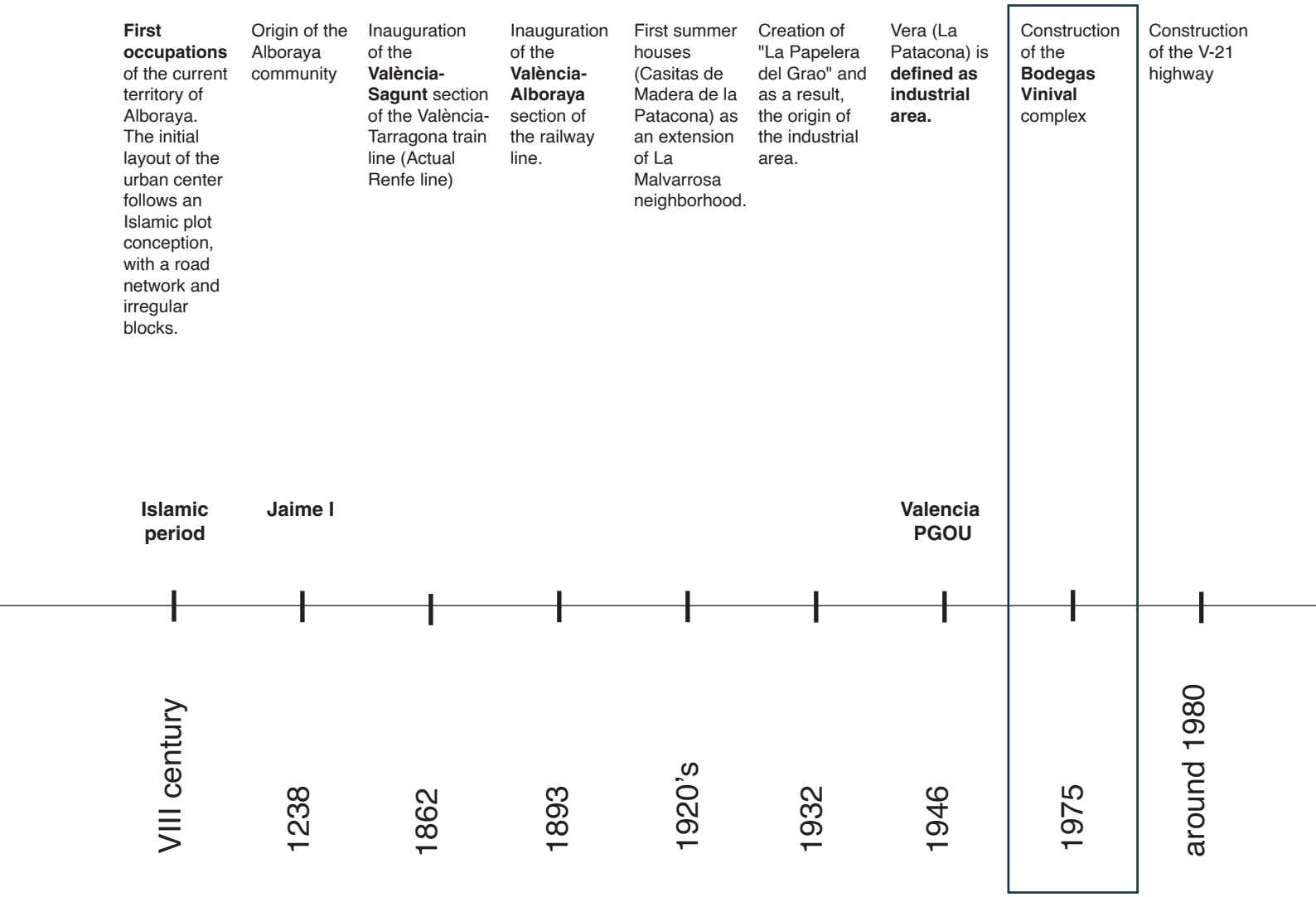
From there, the industrial complex passes to a state of abandonment and deterioration that draws the attention of the City Council of Alboraya as it is conformed by a building of large scale and significant architectural value. As a result, in 2007, a proposal was made to transform the site into a cultural center, and in 2017 the council proposed the building to the European University to develop its new campus. However, unfortunately, neither of the two proposals was put into action.

It is logical that in 2019 the building was included in the Catalogue of Protections of the Plan de Ordenacion Pormenorizada de Alboraya, being recognized as a Bien Catalogado (BC) with partial protection 1 established *"when the values of material character are present in large part of the element or set. In the case of buildings, in addition to the exterior envelope (facade and roof) and the whole of the volumetry, some interior components of the building are of material interest".* (Figure 94)

Therefore, when in 2019, the Plan General de Ordenación Urbana de Alboraya changed the land classification of the plot; the Bodegas building is maintained as the only industrial footprint by its architectural and landscape uniqueness.

Figure 92. *Pre-opening visit to the Bodegas Vinival*
(unknown autor, 1972-1975)

Bodegas Vinival through the years



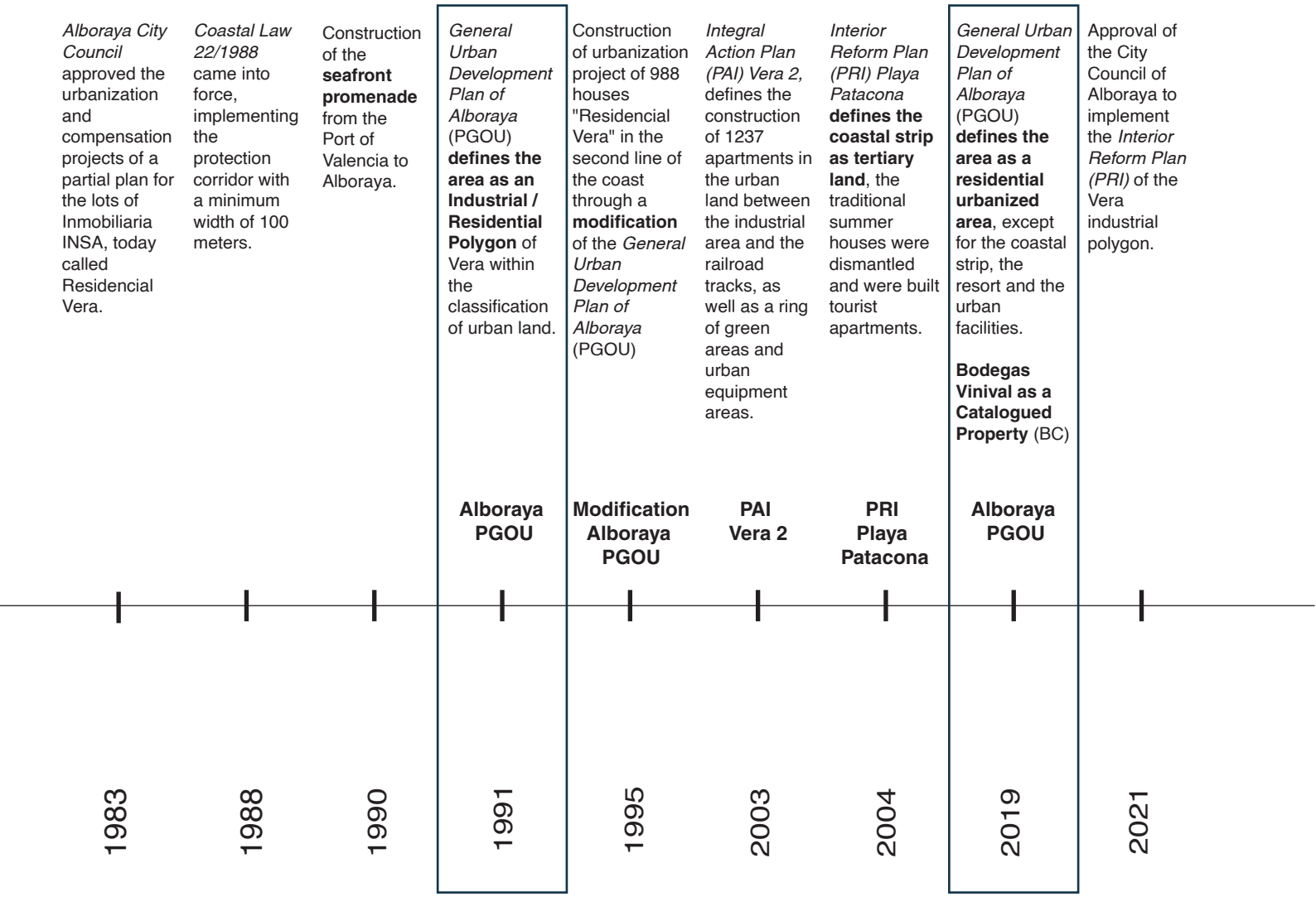


Figure 93. *Historical evolution of the Bodegas Vinival complex.* Own work

A LOCALIZACIÓN

N DE POLÍGONO	PARCELA	DIRECCIÓN POSTAL
98504	02	Partida de Vera, 02

MUNICIPIO
Alboraya (València) - Comarca de L'Horta Nord

B DOCUMENTACIÓN GRÁFICA IDENTIFICATIVA

FACHADA PRINCIPAL

ORTOFOTO

PLANO DE SITUACIÓN

C CATALOGACIÓN

CÓDIGO	SECCIÓN	CLASSE (SUBDIVISIÓN)	TIPO DE CATALOGACIÓN	PROTECCIÓN
CP-274	Cultural y Paisaje	BC	Individualizada	Parcial 1

D DESCRIPCIÓN GLOBAL

DENOMINACIÓN (DENOMINACIÓN SECUNDARIA)

BODEGAS VINIVAL

TIPOLOGÍA	NATURALEZA	CRONOLOGÍA
Silo	Industrial	1969

TITULARIDAD	USO ACTUAL
Privada (1)	_

ESTADO GENERAL DE CONSERVACIÓN
regular-malo

DESCRIPCIÓN

Antiguo bodega del complejo VINIVAL donde se embotellaba y distribuía vino, tanto a España como a Alemania y Suiza. Actualmente está cerrada y sin uso, y su propiedad es municipal. Tiene planta cuadrada (3800 m2 y 18 m. de altura) y su interior dispone de ocho bóvedas de cañón, apoyadas sobre pilares metálicos y perforadas por lucernarios ritmados y próximos entre sí que permiten la entrada de una generosa y particular luz en el interior. Las bóvedas de la cubierta se repiten en las cuatro fachadas con una envolvente de ladrillo. Su construcción fue especial, pues fueron instalados primero los depósitos de hierro para almacenar el vino y, ya en una segunda fase, se levantó la piel exterior de ladrillo con su propia geometría, que alude a la función (silos para almacenar vino) pero sin responder a la forma interior de los propios depósitos. Los arquitectos Juan A. Hoyos Viejobueno y Luis Gay proyectaron en 1969 el conjunto arquitectónico y el ingeniero agrónomo Ángel Argüelles las instalaciones propias del uso como bodega de vino. Su singularidad, arquitectónica y paisajística, ofrece una oportunidad única para dinamizar la zona. (Documentación facilitada por Andrea Torres Astaburuaga, Proyecto Final Carrera de la ETSA-UPValencia)

E COMPONENTES PRINCIPALES

Nº. NOMBRE DEL ELEMENTO (ESTRATEGIA)	CARÁCTER	ACTUACIONES PERMITIDAS	IMPORTANCIA ACTUACIONES	URGENCIA ACTUACIONES	ESTADO DEL ELEMENTO
1. CUBIERTA (Conservación) Cubiertas de bóvedas de cañon.	Material	Mantenimiento; Rehabilitación; Restauración	*Alta*	*No-urgente*	Aceptable

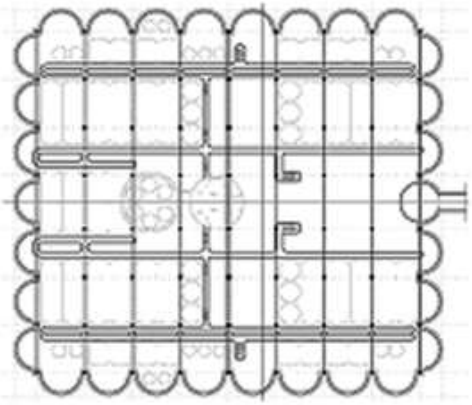
CATÁLOGO DE PROTECCIONES

PLAN DE ORDENACIÓN PORMENORIZADA DE ALBORAIA

F NORMATIVA Y BIBLIOGRAFÍA

Normativa del Plan de Ordenación Estructural	- Normas Urbanísticas del Plan General de Alboraya - Normas Urbanísticas del Catálogo de Protecciones de Alboraya
Normativa específica	- Ley 5/2014, de 25 de julio, de la Generalitat, de Ordenación del Territorio, Urbanismo y Paisaje, de la Comunitat Valenciana. - Ley 4/1998, de 11 de junio, de la Generalitat Valenciana, del Patrimonio Cultural Valenciano (LPCV) y sus modificaciones por la Ley 7/2004 de 19 de octubre y la Ley 5/2007, de 9 de febrero. - Ley 5/2018, de 6 de marzo, de la Generalitat, de la Huerta de Valéncia. - Plan de Acción Territorial de Ordenación y Dinamización de la Huerta de Valencia.

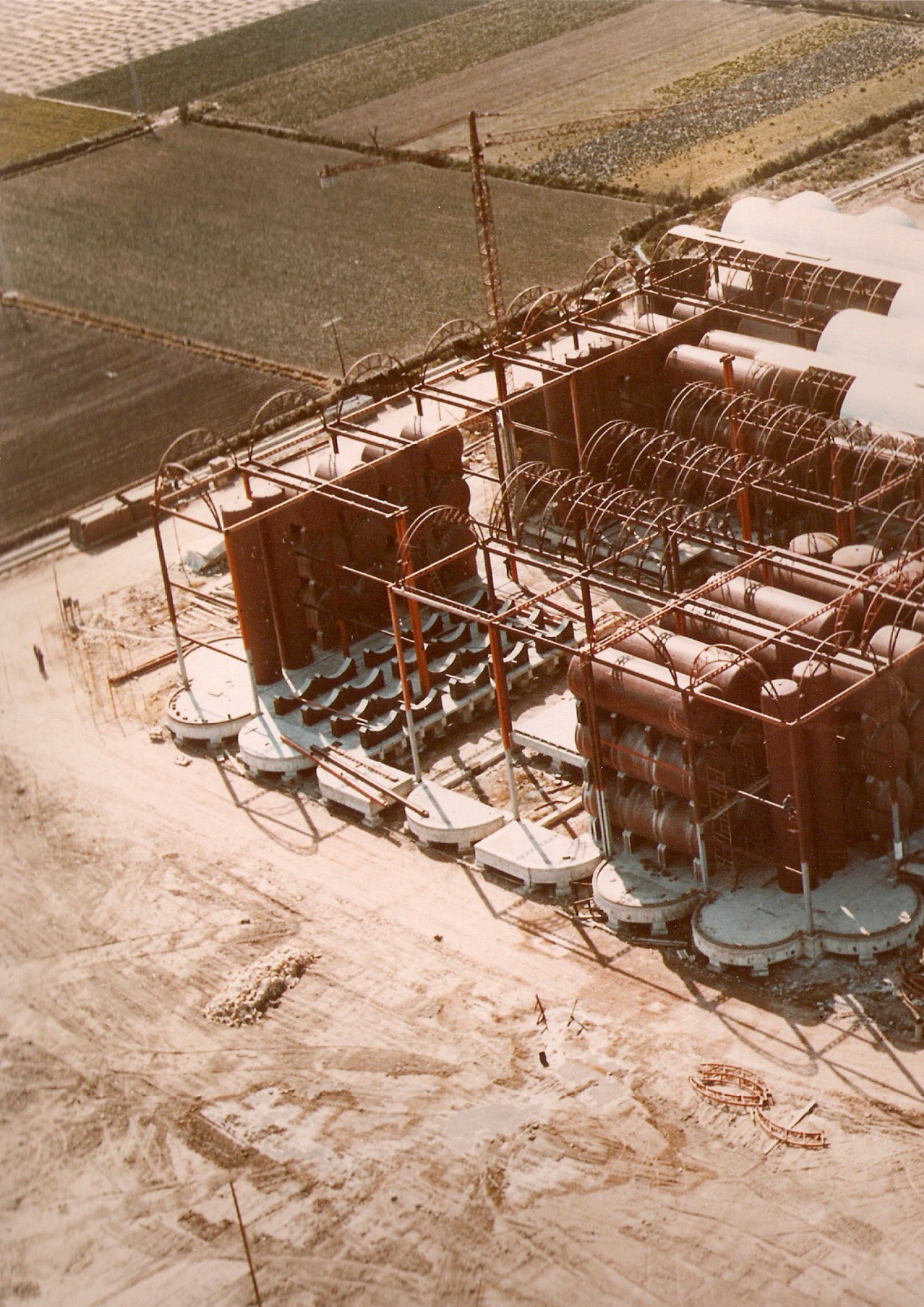
G ANEXO GRÁFICO



Planta de los silos

interior de los silos

Figure 94. *Bodegas Vinival's main building datasheet in the Catalogo de Protecciones* (Plan de Ordenación Pormenorizada de Alboraya, 2019)



Descriptive and architectural analysis of the building

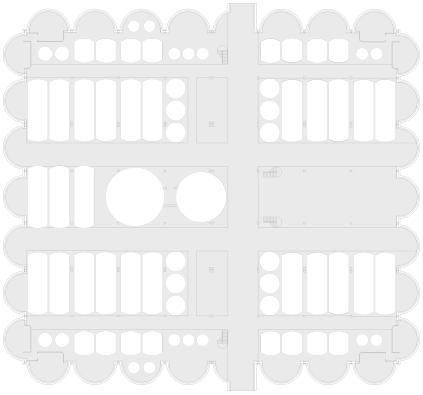
Designed by the architects Luis Gay Llácer and Juan Antonio Hoyos, the main building of the complex is located to the south of the plot. Its function is the elaboration, typification, treatment, and storage of wines. It has a rectangular floor plan of 73m x 66m, occupying an area of 4800m2 and a height of 18 meters, and is elevated on a 1.5-meter base.

Inside are the deposits necessary for the reception, storage, and winemaking, which were installed prior to the brick skin layout, composed from the extension of its four facades of the 8 barrel vaults of the roof.

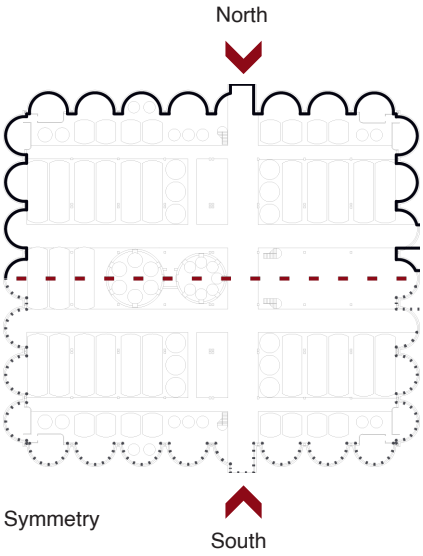
The internal distribution is symmetrical to the north-south axis, allowing the division into logically ordered areas according to the production process, which starts at the reception area at the north entrance and ends through the loading and unloading bridges located on the south façade. (Figure 101)

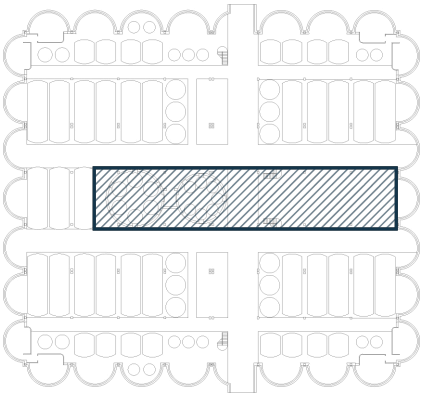
Formally, the building has an ambiguous reading. Its geometric shape alludes to the internal presence of silos. However, it does not respond to their location, resulting in each of the niches or curved spaces in the interior being used as residual or service spaces.

In the center of the building, two larger concrete tanks hierarchy the space. Inside them are smaller metal tanks for wine refrigeration, while in front is the filtering area, with greater spatial amplitude.

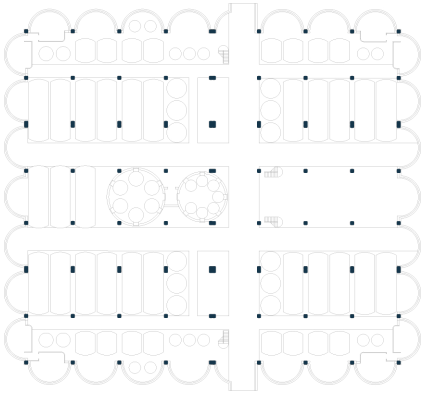


Area: 4.400 m2
Free area: 2500 m2

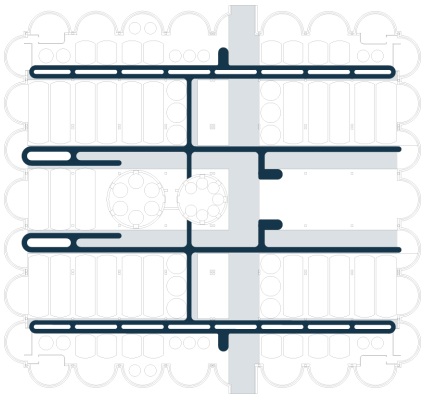




Hierarchy

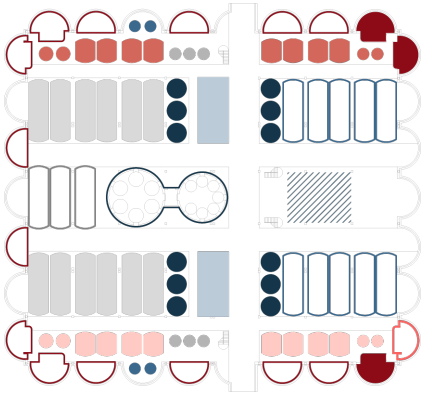


Structure
Axis: 8.20 m



Circulation

- Ground floor
- Walkways



Program

The rest of the building comprises cylindrical tanks made of steel plate, 3.50 m in diameter and 11.30 m high, arranged mostly horizontally on top of each other through metal trestles that rest on reinforcing bands of the tanks. There are also other vertical tanks especially indicated for sorting and reworking operations in cold storage and smaller-scale tanks around the entire internal perimeter of the building.

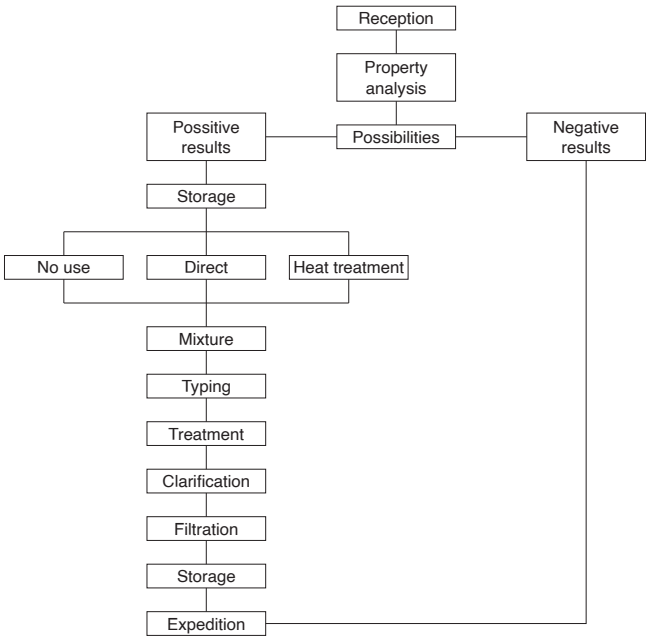


Figure 101. *Diagram of Bodegas Vinival's production process.*
Own work

Figure 95-100.
Architectural analysis of the Bodegas Vinival's main building.
Own work

- Reception tanks
- Storage tanks
- Mixing tanks
- Treatment tanks
- Colage tanks
- Filtering
- Pasteurization / clarification
- Cold tanks
- Prepared wine tanks
- Concentrated wine tanks
- Water tanks
- Boiler
- Warehouse
- Toilets

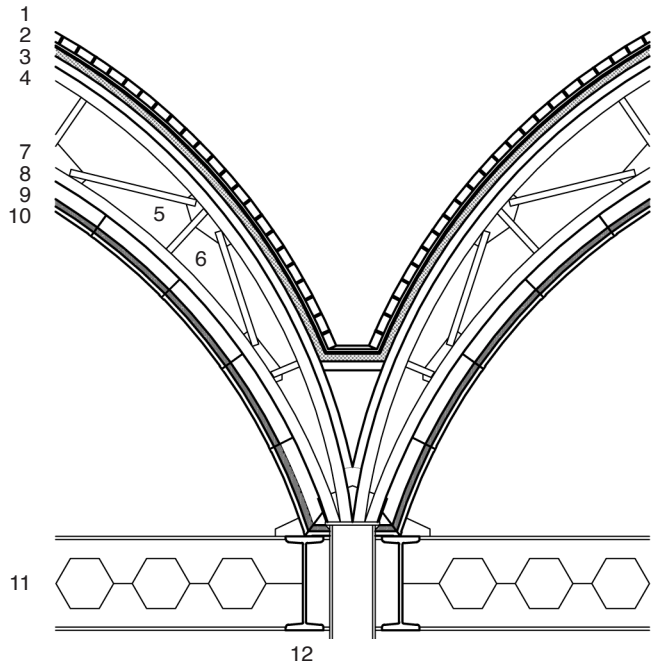
Structure

The structure of the building consists of metal frames, with laminated profiles, purlins, and pillars spaced every 8.2 m. The roof comprises trusses every 2.10 m composed of metal profiles.

Two levels of metal walkways are supported on the metal beams used for access and maintenance of the tanks.

The foundation of the building is made of deep piles due to the proximity to the coast. It is characterized by the independence between the piles of the metallic structure and those corresponding to the tanks. Each group of tanks works independently, avoiding fluctuations due to possible differences in weight between them after filling.

Two reinforced concrete loading and unloading walkways are located on the south façade of the building.



1 Facing ceramic tiles
2 Waterproofing layer
3 Concrete layer
4 Corrugated metal sheet
5 Metal profile UPN 80
6 Gusset
7 Corrugated metal sheet
8 False ceiling attachment
9 Expanded polystyrene
10 False ceiling plates
11 Boyd beam
12 Metal pillar IPN 300

Figure 102. *Construction detail of the roof section.*
(Molina, 2015)

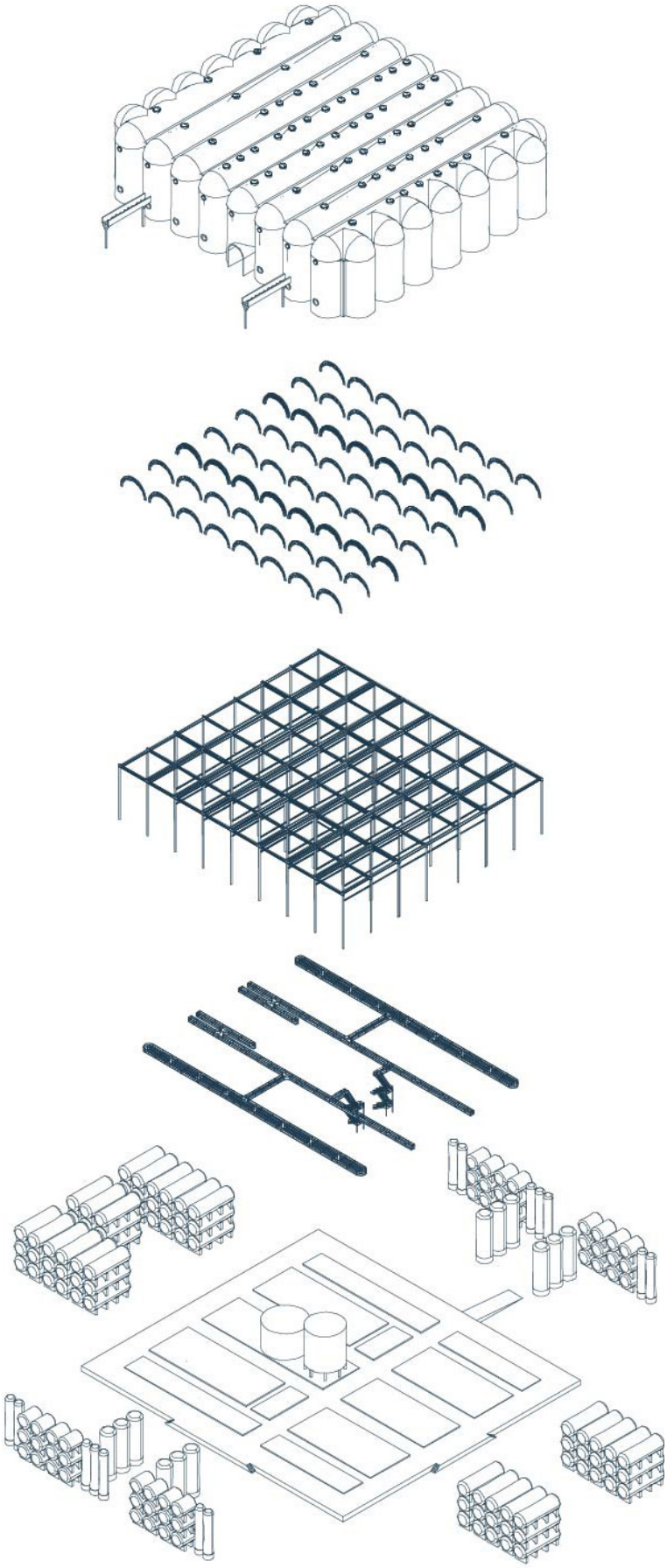
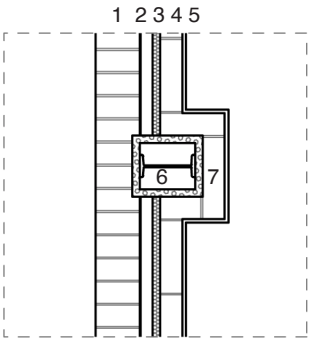


Figure 103. *Exploded axonometry of the building*. Own work

Thermal insulation

The pillars inside the brick facade are insulated with expanded polystyrene to prevent thermal transmission, as are the metal trusses.

The walls of the facades are made of ceramic brick with a mortar joint, a 7 cm air gap, a 4 cm layer of fiberglass, and a layer of 12 cm precast perforated concrete blocks.

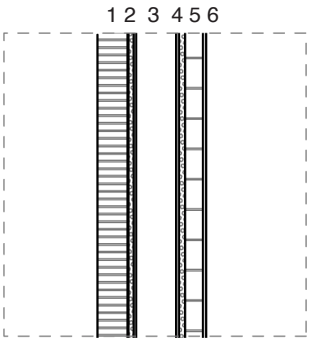


1 Ceramic brick
2 Air gap
3 Fiberglass layer
4 Pre-cast perforated concrete block
5 Plastering trowel with cement mortar
6 IPN 300 metal pillar
7 Expanded polystyrene

Figure 104. *Construction detail of wall and pillar*

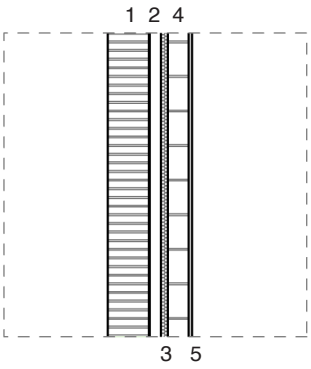
Lighting and ventilation

The brick walls are perforated with skylights on both the facade and the roof to allow ventilation and lighting of the cellars. On the upper part of the facades, there are 30 skylights, one for each semi-cylinder, built in white artificial stone, and reinforced concrete, with a diameter of 0.90m. On the other hand, 62 skylights are located on the roof of the building with a diameter of 1.5m each.



1 Ceramic brick
2 Expanded polystyrene
3 IPN 300 metal pillar
4 Expanded polystyrene
5 Pre-cast perforated concrete block
6 Plastering trowel with cement mortar

Figure 105. *Wall section*

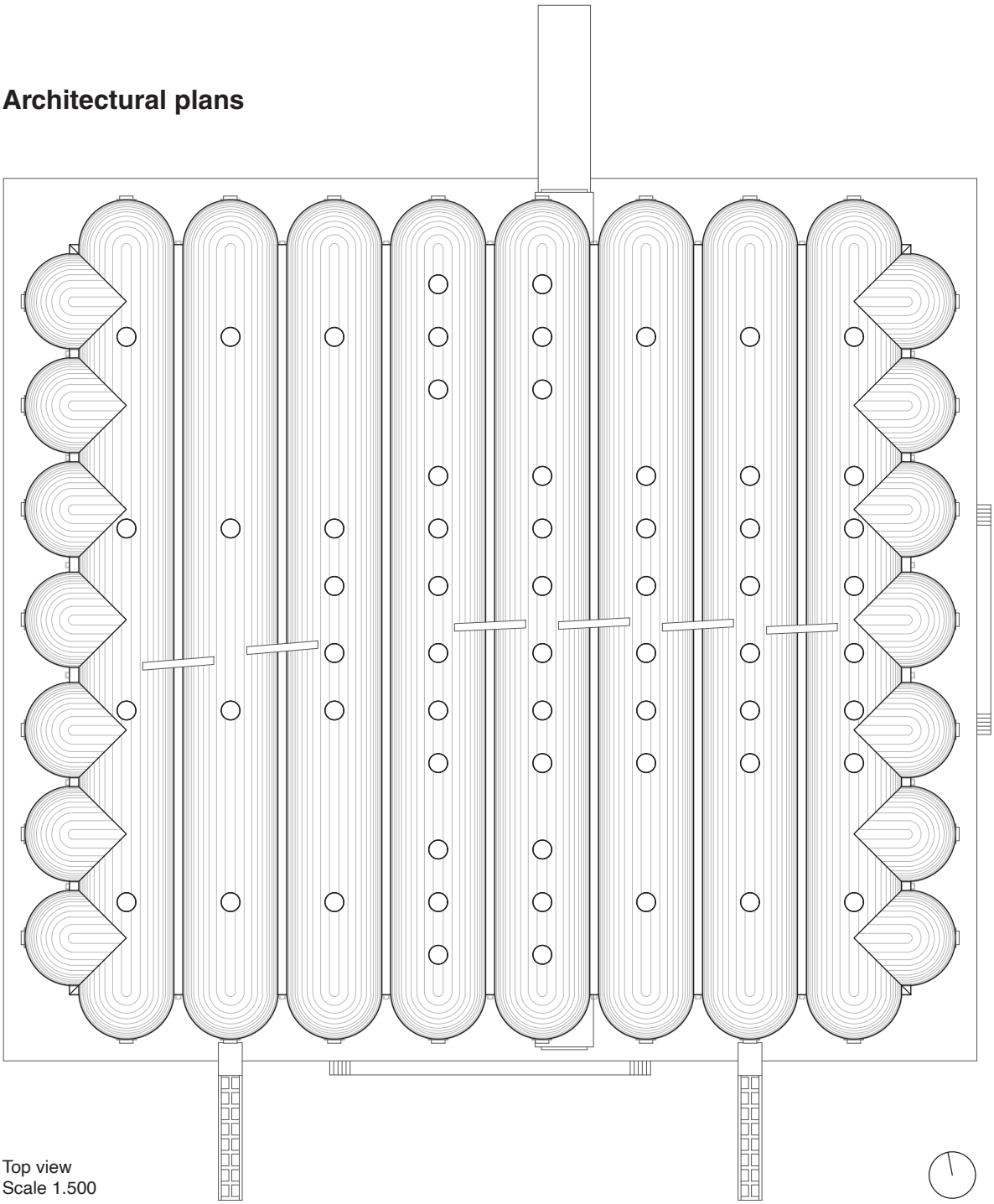


1 Ceramic bricks
2 Air gap
3 Fiberglass layer
4 Pre-cast perforated concrete block
5 Plastering trowel with cement mortar

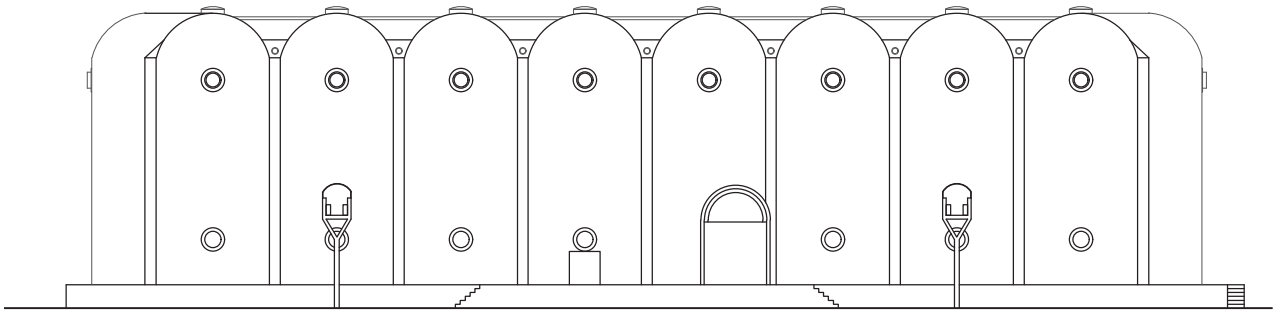
Figure 106. *Wall section* (Aucejo Mollà, 2017)

Figure 107-109. *Actual situation of the interior of the building.* (Tirado, 2018)

Architectural plans

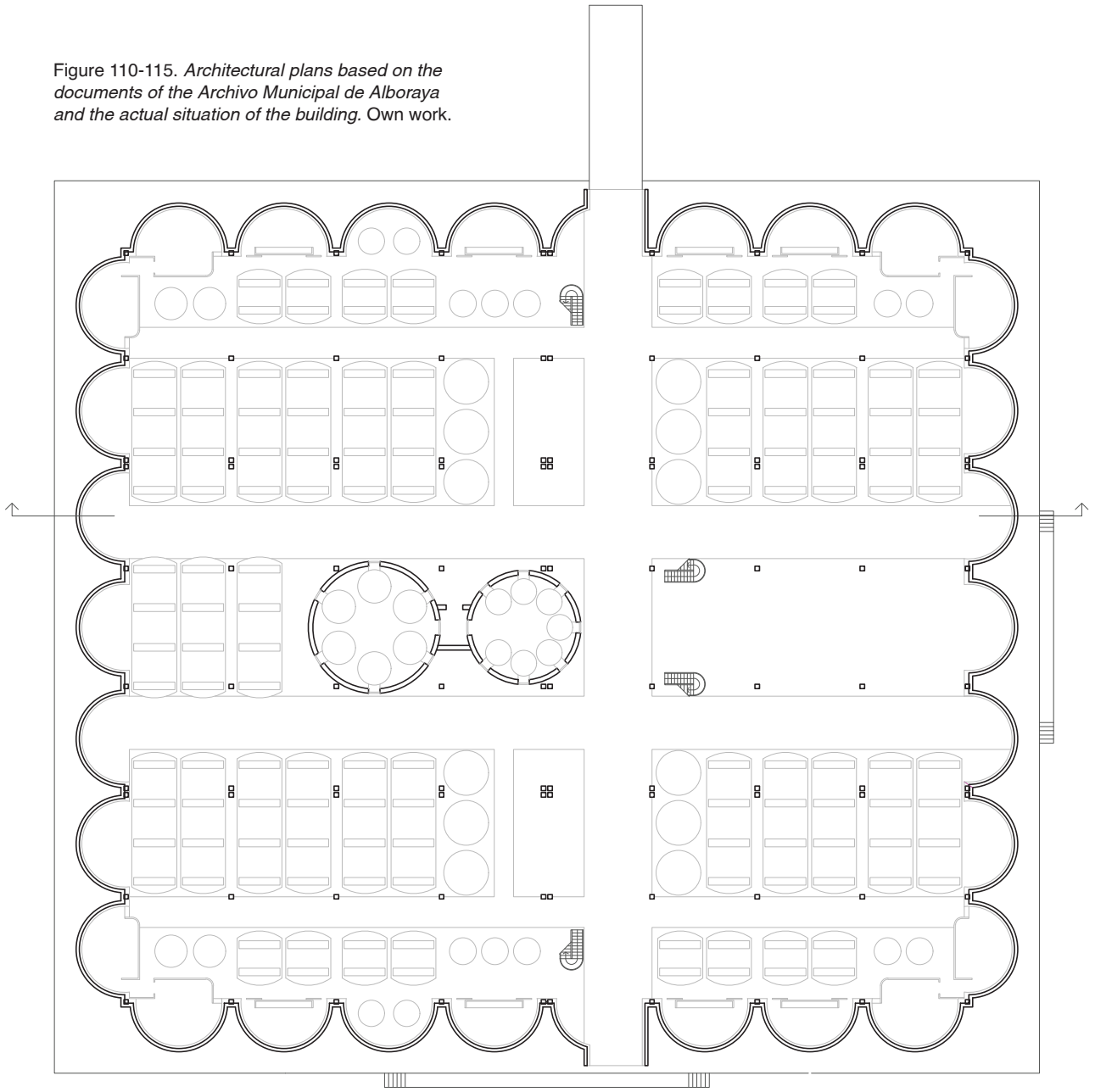


Top view
Scale 1.500

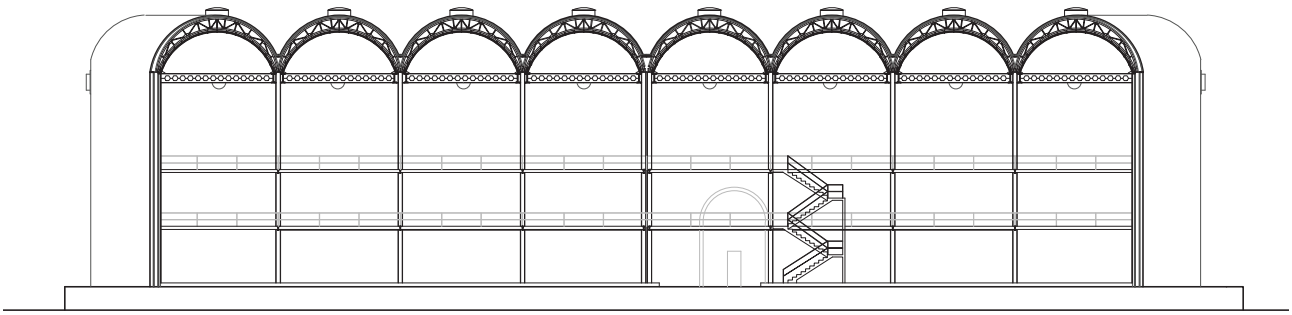


South façade
Scale 1.500

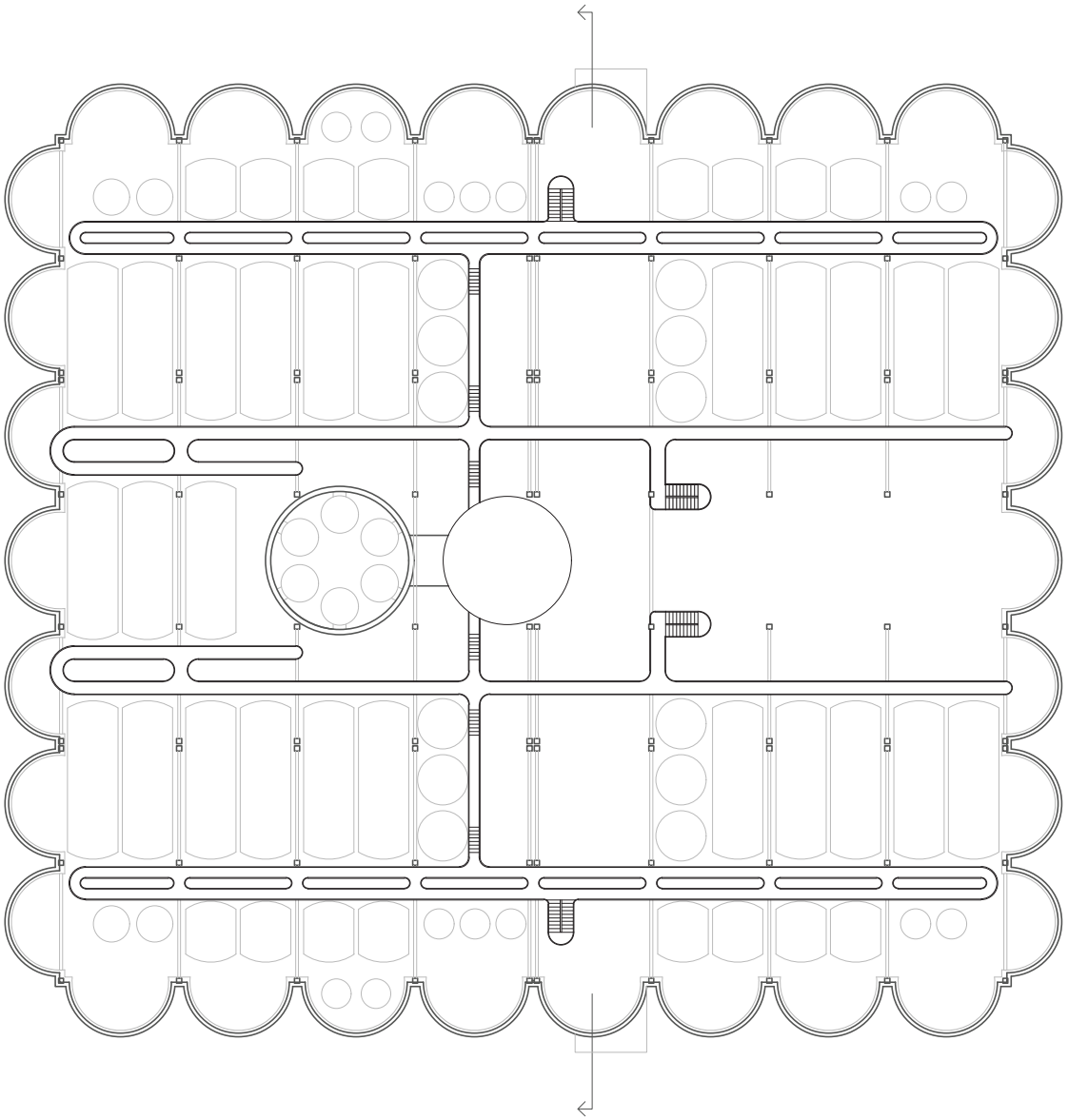
Figure 110-115. *Architectural plans based on the documents of the Archivo Municipal de Alboraya and the actual situation of the building.* Own work.



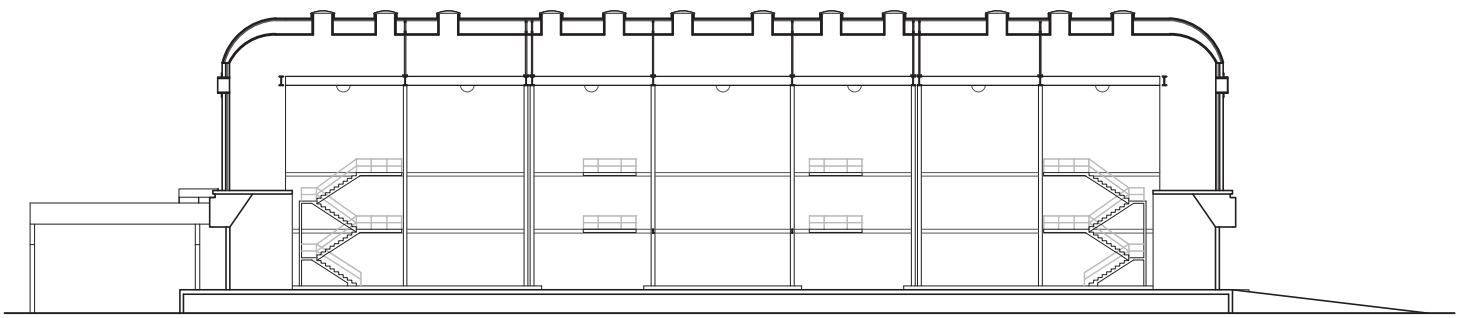
Ground floor
Scale 1.500



Section a-a'
Scale 1.500



First floor
Scale 1.500



Section b-b'
Scale 1.500

Approaching to the building

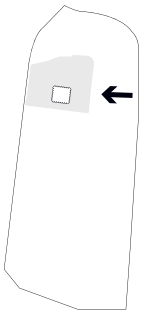


Figure 116. *Approaching to the building from the sea promenade along the Mar Menor street.* Own photography.

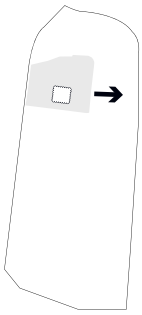


Figure 117. *Approaching to La Patacona beach from the sea Bodegas Vinival complex along the Mar Menor street.* Own photography.

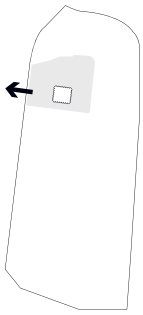


Figure 118. *Visual approaching to L’Horta de Alboraya from the Bodegas Vinival complex.* Own photography.

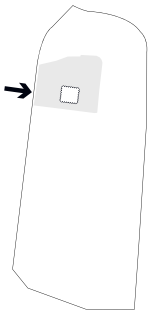


Figure 119. *Visual approaching to Bodegas Vinival from L'Horta de Alboraya.*
Own photography.


DERI
LAT

Chapter 1

Peri-urban areas
in the contemporary city.

Chapter 2

Alboraya as a peri-urban
municipality of agricultural base.

Chapter 3

Peri-urban agriculture.

Chapter 5

Cases studies

Chapter 4

L’Horta - urban area relation:
La Patacona.

Chapter 6

Back to L’Horta as an answer.

Cases studies

Urban regeneration of peripheral areas

Dvorulitsa

In order to broaden the knowledge for the approach to the problem, a series of urban and architectural references are analyzed, both buildings and spaces already constructed as well as others in construction process.

Thus, significant patterns are identified in the process of urban regeneration of marginalized areas that recognize the configuration, dynamics and intrinsic values as a starting point. In turn, how adaptive reuse has allowed existing buildings of significant historical and architectural value to become key components of urban regeneration projects, as well as being an optimal strategy in terms of sustainability and circular economy.

The studied antecedents are classified in 3 categories:

Urban regeneration of unused and underused areas

Potrero Power Station

Ordener Poissonniers

Parc de la Villete

Adaptive reuse of buildings

Station A

LocHal library

Roskilde Folk School

Cases
studies

Urban regeneration of peripheral areas

Urban regeneration of
unused and underused areas

Adaptive reuse of
buildings

Dvorulitsa [Yardstreet]

Russia

Moscow

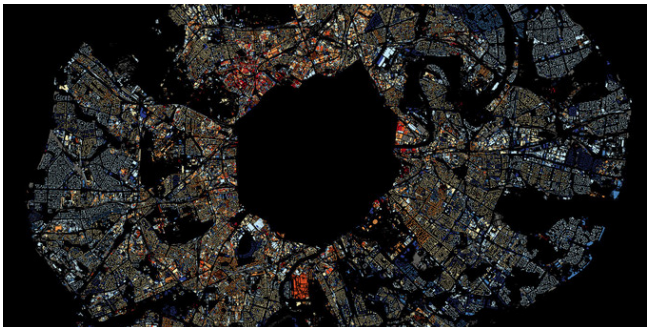
Architects:
Meganom
Location:
Moscow's peripheral residential districts
Year: 2015 - now (under construction)
Proposed use:
Transformation of the periphery into a Superpark
Type:
Peripheral urban development strategy

Urban structure of the Golovinsky District, located on the suburbs of Moscow

vs.

Urban structure of the city center of Moscow.

The project is based on the 2013 study *"Archaeology of the periphery"*, the first major interdisciplinary urban research in post-Soviet practice, developing the analysis of the industrial-modernist periphery of Moscow.

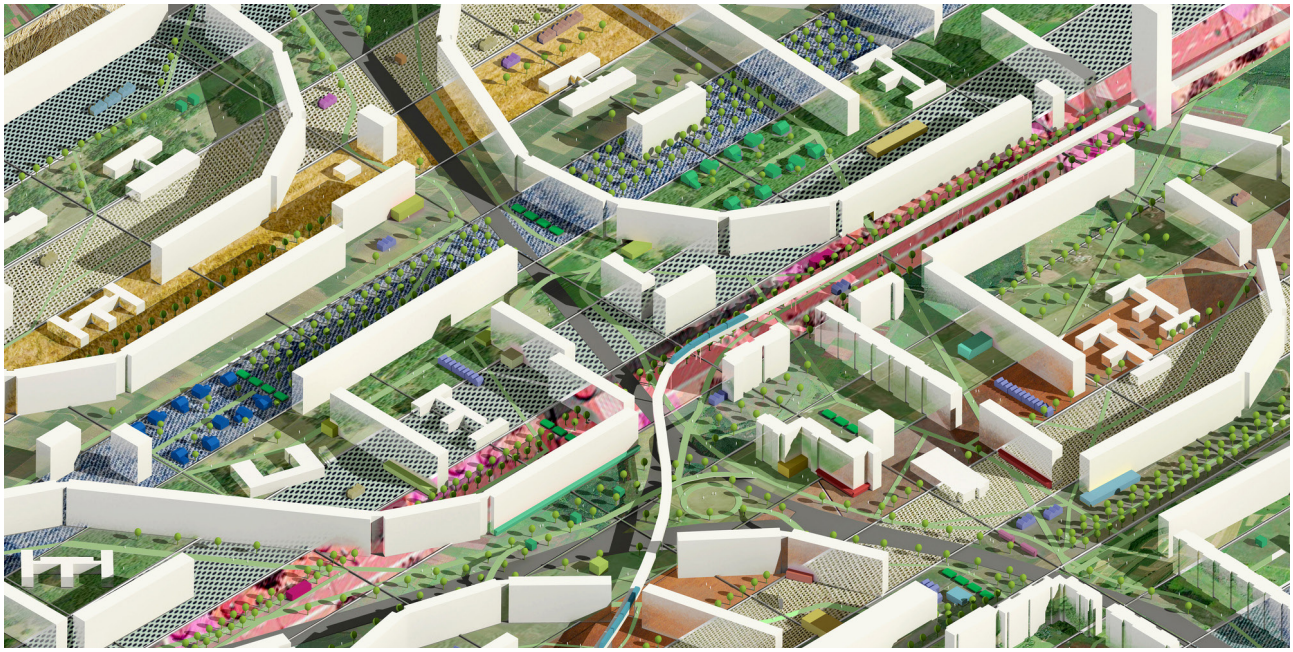


The project uses the existing space between large residential blocks, usually empty and neglected, as a space of cohesion of the district - Yardstreet - from the development and continuous renovation of the existing environment through subtle and efficient transformations.

Each projected space is adapted to the context and the neighborhood's unique needs, forming a coherent and permeable network of spaces that significantly impact the city. The idea is to accept the reality of each of these undesired areas and transform them based on their full potential.

The main aim is to develop this super park concept in Moscow and every marginalized city, where the quality of the urban environment does not depend on the building typology, but instead on the public space between the buildings.

This public space is occupied by cycling routes, pedestrian paths, gardens, parks, cafes, sports areas, community centers, workshops, etc. It functions as a shared courtyard and as a street for each building.



"The main goal of the project is to make the periphery not a copy of, but an alternative to the center of the city (if we talk about post-socialist cities). That means that both are very different and match different lifestyles. The scenario of total escape to the outskirts is hardly possible."

- Yuri Grigoryan, founder of Meganom

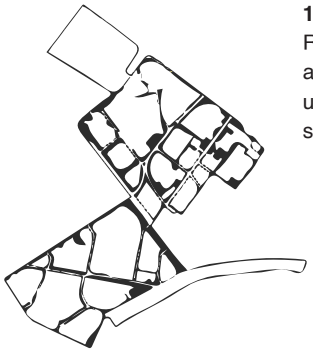
Intentions to consider:

Spaces adapted to the particularities of each residential block and the usage patterns of the residents.

Reuse of unused space, using urban land more efficiently.

Appreciation of the past as part of the identity.

Intention to build as less new as possible



1st network
Road network and adjacent urban public spaces

2nd network
New network of yards and pedestrian streets

Overlay
+ accesibility
+ pedestrian connectivity
+ quality of residential environment

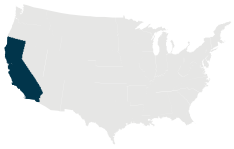
Cases
studies

Urban regeneration
of peripheral areas

Urban regeneration of unused and un-derused areas

Adaptive reuse of buildings

Potrero Power Station

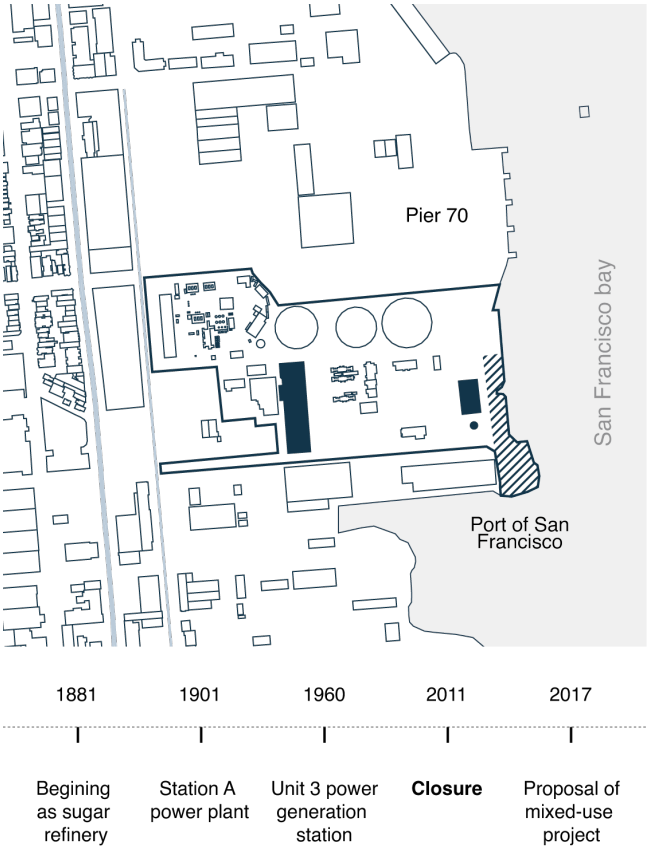


United States

California

San Francisco

Architects:
SF Planning + Herzog & de Meuron + Foster & parterns
Location:
Dogpatch neighborhood
Area: 23 ha.
Year: 2017 - now (under construction)
Original use:
Natural gas and diesel burning electricity generating station
Proposed use:
Mixed use
Type:
Urban redevelopment master plan



The Stack, will remain as a landmark of the site, the Unit 3 electricity generating station will be transformed into a hotel and, finally, Station A will be proposed as an office building.

Figure 120. *Current situation of the Potrero Power Station.* (SF Planning, 2017)

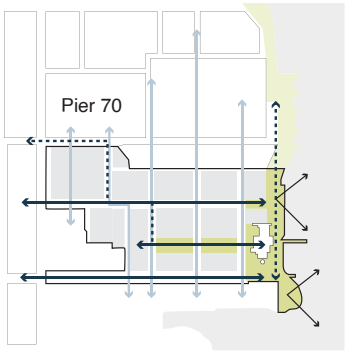
The development of the urban fabric maximizes north-south connectivity, specifically, with the future Pier 70 district, while reinforcing east-west connections that lead to the bay via a wide waterfront promenade.

The regeneration of the site is guided by the principles:

Design a public and active waterfront that emphasizes and connects to the proposed uses.
Respond to the city's growth while developing a diversity of uses for the community
Celebrate the rich industrial history
Project an accessible neighborhood that prioritizes walking, bicycling, and public transportation
Generate a network of open space with parks and recreational facilities
Design a neighborhood that is appropriate to human scale and context
Implementing a sustainable neighborhood that fosters innovation and wellness

Figure 121. *Stack and Unit 3 of the Potrero Power Station project (*Perkins&Will, 2017)

Figure 122. *Waterfront of the Potrero Power Station project (*SF Planning, 2017)



Connectivity with the Pier 70 district and the bay

Program
- Residential
- Hotel
- Office/life science

"This project offers a unique opportunity to reinvigorate an erstwhile industrial quarter and infuse new life into this part of San Francisco. Our proposals will deliver much-needed homes guided by a design approach that is underpinned by people, sustainability and community, and rooted in the rich history of the place. Our aim is to give Dogpatch an ideal urban framework to help create a vibrant, healthy and inclusive 21st century live/work community."

- Armstrong Yakubu, Senior Partner, Foster + Partners

Intentions for consideration:

Humanization of the district

Network of public spaces that promote the cultural and social dynamics of the population.

Program of interpretive spaces that recognize the value of the area's industrial past.

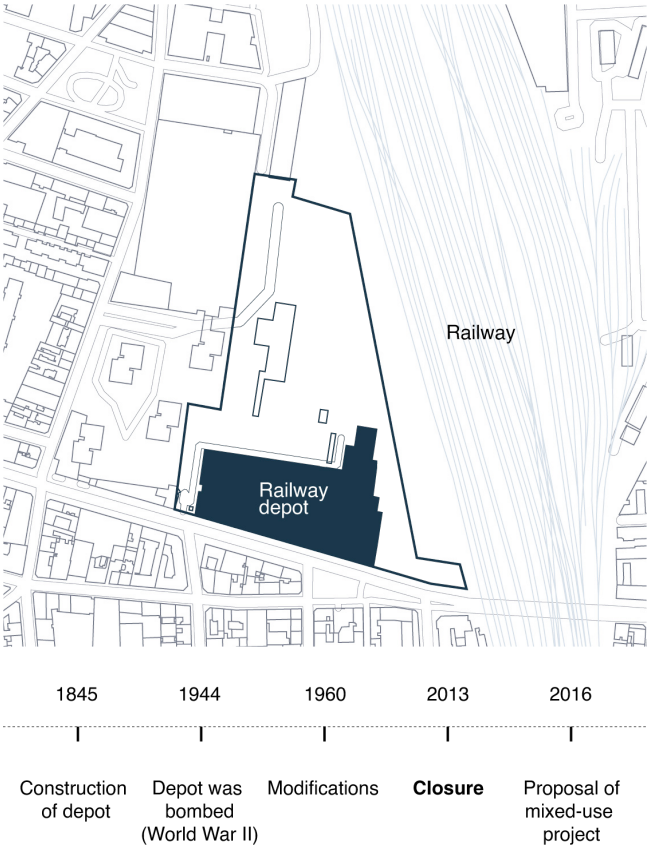
Ordener-Poissonniers

France

Paris

XVIII district

Architects:
SLA & Biecher Architectes
Location:
Rue Ordener
Area: 5 ha.
Year: 2016 - 2021 (under construction)
Original use:
La Chapelle railway depot
Proposed use:
Mixed-use district
Type:
Urban renewal master plan



La Chapelle deposit will be restored and transformed in some sections, subtracting some parts to create connections with the context and adding volumes to develop part of the residential program.
While on the first floor, the former warehouse will house stores and tertiary activities.

Figure 123. *Original situation of the La Chapelle depot* (Djabali, 2016)

The urban fabric is based on the intention of linking the industrial heritage, the Haussmannian city and the railroad. The new buildings are oriented towards the south, while the old warehouse is divided into 3 small buildings towards Ordener Street, preserving part of its structure towards the center of the site occupied by a public garden that enhances the rescued heritage and acts as the heart of the project.

The mixed-use program consists of housing for 1,000 new residents, offices, a theater, a public school, industrial design incubators, a graduate design school, food courts and urban agriculture. While public spaces include outdoor restaurants, amphitheaters, bandstands and a variety of natural amenities.

One of the main intentions is to create a district with a natural ecosystem, whereby the public spaces will act as a green lung providing ecosystem services such as air pollution cleanup, natural urban cooling, downpour management and biodiversity enhancement.

Figure 124. *Refunctionalization of La Chapelle depot (*SLA & Biecher architectes, 2016)

Figure 125. *Ordener-Poissonniers masterplan (*Espaces Ferroviaires, 2016)

Intentions to consider:

Main public space that frames the renovated building and responds to its new function.

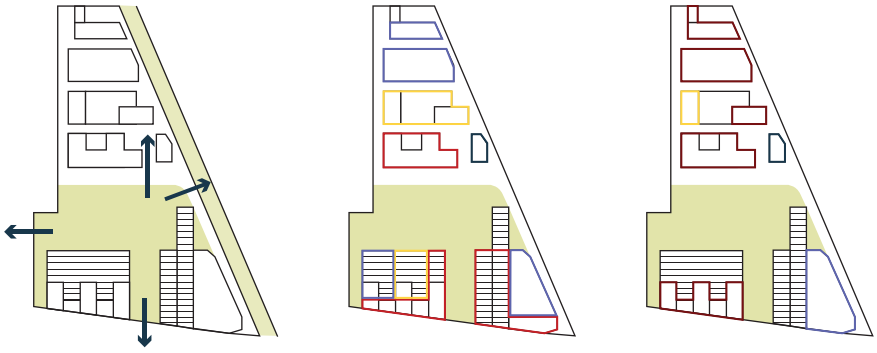
Introduction of ecosystemic strategies to the urban dynamics.

" The Ordener-Poissonniers project will act as a green generous gift to the city of Paris. By combining the strong industrial character with innovative nature-based designs and public ecosystem services we create a new standard for nature in Paris – where nature is everywhere and where humans, plants, and animals can live and flourish together."

- Rasmus Astrup, partner in SLA.

Program

- Residential
- Hotel
- Tertiary
- Commerce
- Educational



Public garden | Ground floor | First floor

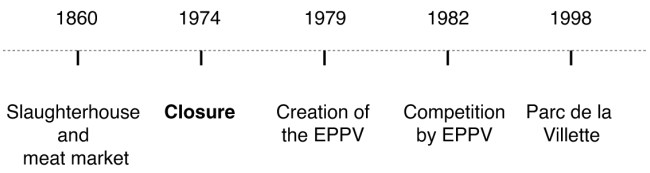
Parc de la Villette

France

Paris

XIX district

Architect:
Bernard Tschumi
Location:
Avenue Jean Jaurès
Area: 55 ha.
Year: 2016 - 2021
(under construction)
Original use:
Slaughterhouse and meat market
Proposed use:
Cultural park
Type:
Urban renewal project



The Établissement Public du Parc de La Villette defined as competition guidelines to create an urban park, open to all audiences, which should include a national museum of science and technology and an auditorium. Later, the project included a music museum and conservatory.

Figure 126. *Original situation of the intervention plots (Slaughterhouse and meat market)* (Public Space, 2018)

Its concept stems from the intention that the park is defined by its visitors' social and cultural exchange. It is developed from three autonomous and overlapping organizing systems: composite surfaces, lines of movement, and a grid of points called Folies.

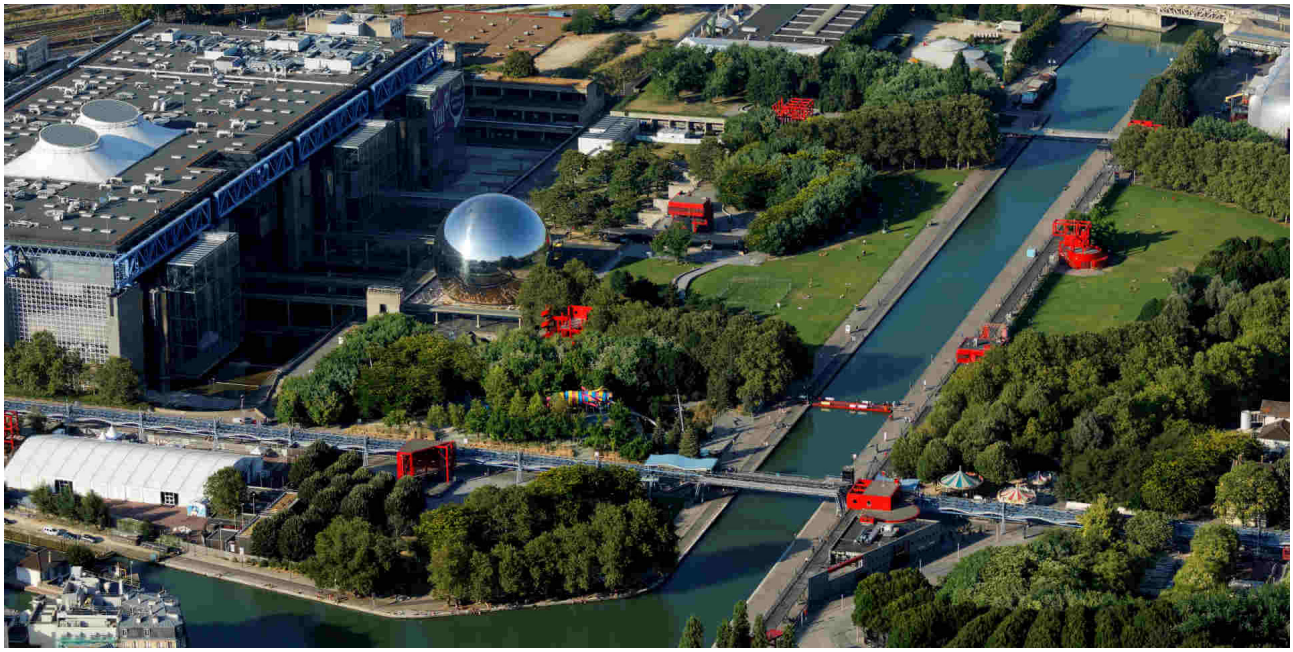
Formally, they are transformations based on the deconstruction of a cube forming pavilions that house certain cultural and leisure activities distributed throughout the park (workshops, cafeterias, kindergartens, tourist attractions, viewpoints, warehouses, services, etc.) and that can be adapted over time.

The second system provides movement, formed by straight and curved paths that lead to the different spaces. Two main axes predominate, one parallel to the canal and elevated and the second perpendicular and covered by a continuous canopy.

In addition, these paths are guided by the vegetation, which allows to create different approaches and experiences of use of the space.

Figure 127. *Parc de la Villette, Cité des sciences et de l'industrie (*Bernard Tschumi Architects, n.d.)

Figure 128. *Parc de la Villette, (*Bernard Tschumi Architects, n.d.)



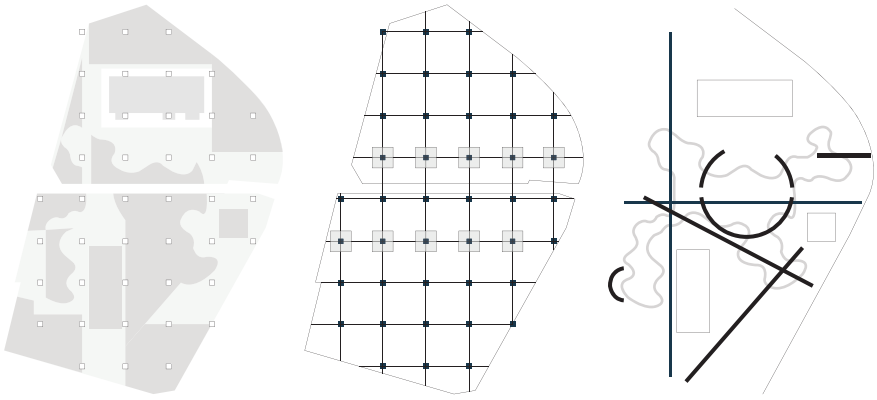
Intentions to consider:

Superposition of patterns of different character and autonomy.

Organized composition of modulated elements

Cultural dynamics as a concept

“ La Villette could be conceived of as one of the largest buildings ever constructed — a discontinuous building but a single structure nevertheless, overlapping the site’s existing features and articulating new activities. It proposes a social and cultural park with activities that include workshops, gymnasium and bath facilities, playgrounds, exhibitions, concerts, science experiments, games and competitions.“
- Bernard Tschumi Architects



Composite surfaces | Folies | Lines of movement

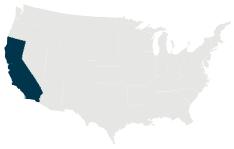
Cases
studies

Urban regeneration
of peripheral areas

Adaptive reuse of buildings

Urban regeneration of
unused and underused areas

Station A

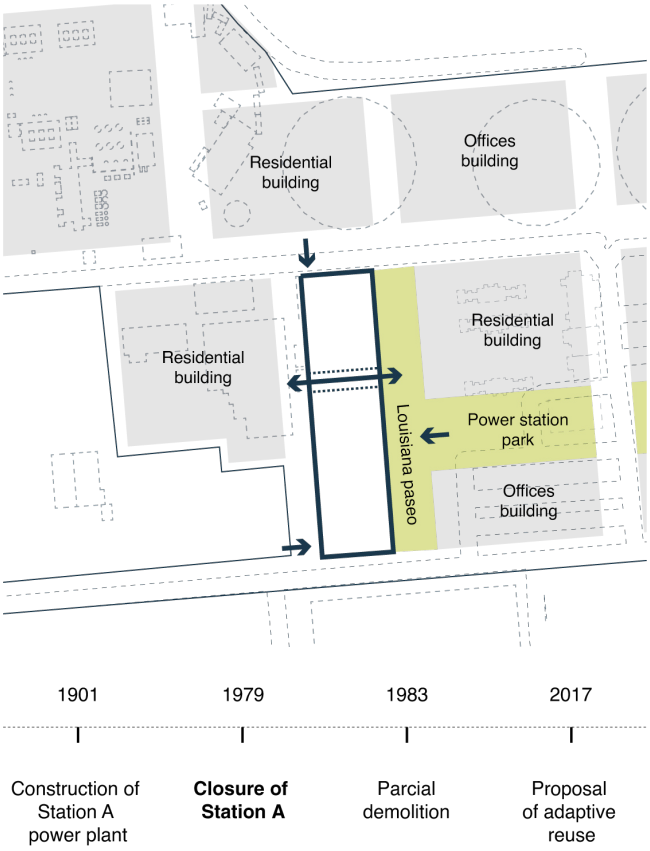


United States

California

San Francisco

Architect:
Herzog & de Meuron
Location:
Potrero Power Station masterplan
Year: 2019 (under construction)
Original use:
Power plant
Proposed use:
Offices, conference center and multifunctional spaces
Type:
Adaptive reuse + addition



The building is part of the Potrero Power Station project, a former natural gas power plant located between the San Francisco Bay and the Dogpatch neighborhood, which will be transformed into a mixed-use district.
Station A is one of 3 buildings that will maintain the industrial footprint, as it is one of the most historically significant structures in the area.

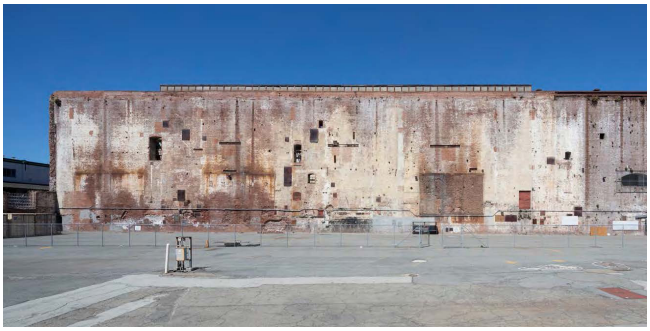


Figure 129. *Original situation of the Station A building* (Herzog & de Meuron, 2019)

The refunctionalization of the building starts from the turbine hall as a hierarchical element by the dimension of the structure, which serves as the foundation for the addition of a new volume on top of the existing building. This added volume is a 6-story light steel structure for office development.

While, in the building, the existing platforms are used as meeting areas overlooking the turbine hall, which functions as a catchment space to the rest of the program which is composed by a conference room, multifunctional lounges, a café, and service areas.

Beyond the preservation of the building and the reuse of its materials, the building has been designed with natural ventilation strategies, rainwater harvesting, photovoltaic panels, etc.

Figure 130. *Station A refunctionalization (*Herzog & de Meuron, 2019)

Figure 131. *Station A main entrance (*Herzog & de Meuron, 2019)

Sustainable strategies

"The reinvention of Power Station will bring new life to a significant building from the city's colourful past and will anchor this area as a destination on the San Francisco waterfront"
Jason Frantzen, senior partner at Herzog & de Meuron.

Intentions to consider:

Reinforce the industrial character of the building by taking as a starting point its most representative and hierarchical element.

Contrast of materiality and scale between the existing and the proposed building.

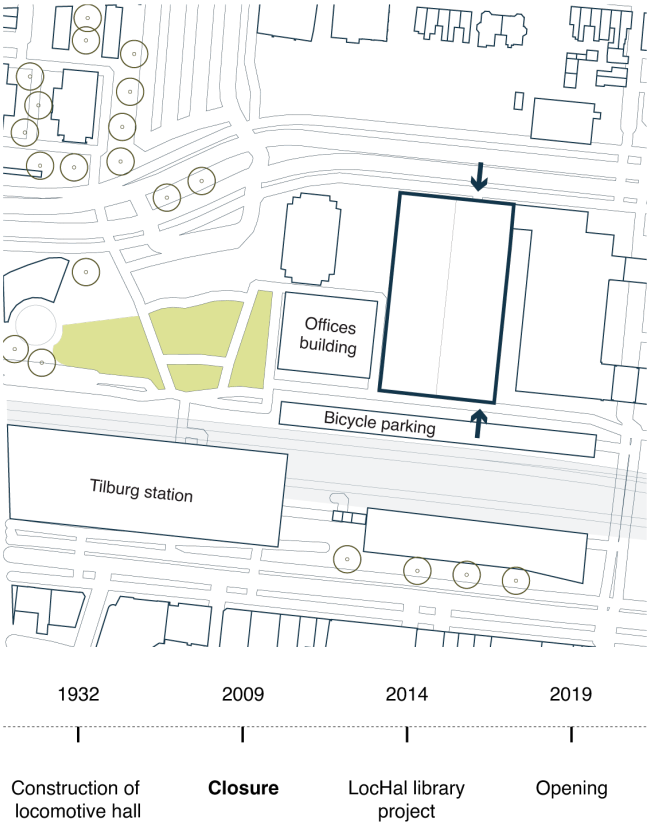
LocHal library

United States

California

San Francisco

Architect:
Braaksma & Roos architectenbureau, CIVIC architects, Inside Outside, Mecanoo
Location:
Burgemeester Brokxlaan 66
Area: 7000 m²
Year: 2019
Original use:
Former locomotive hall
Proposed use:
Public library
Type:
Adaptive reuse



The building is located in the railway area of Tilburg, formerly a large warehouse where wagons and locomotives were developed and repaired. It represents the important railway past of Tilburg, recognized and commemorated by the collective memory of its inhabitants.

Figure 132. *Original situation of the locomotive hall* (Dutch review, 2019

The structure of the locomotive factory is the starting point for the architectural composition, which is developed by generating different levels connected by terraces that lead to a large open space that functions as a covered public cultural plaza for the entire city.

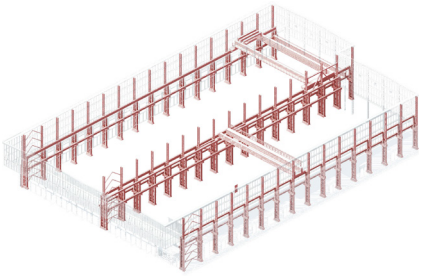
The program consists of the public library as the heart of the building, work / coworking spaces, conference rooms, classrooms, a cafeteria with reading space, exhibition spaces, and thematic laboratories (digital, games, food, learning, time, dialogue, etc.).

The design stands out for the versatility of its spaces, which can become more public or private areas through movable partitions.

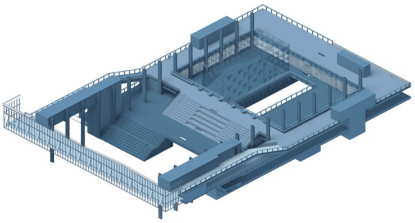
Thus, the bleachers can be transformed into a theater for large-scale events, the tables into a stage, a workshop room can become two separate spaces or be combined with another room to generate a larger space, or simply generate a private study space through the use of flexible furniture.

Figure 133. *LocHal library main space (*CIVIC architects, 2019)

Figure 134. *LocHal library (*CIVIC architects, 2019)



Original structure



Levels

Movable partitions

"Generous gesture in which history and present are smoothly linked and offers points of departure for different generations from different cultural backgrounds. The qualities can easily be 'read' by a broad target group, while architectural depth and refinement are also visible to the layman"
- Jury of the Herengracht Industry Prize

Intentions to consider:

Generation of levels that allow to create areas of different spatial conditions.
Versatility and adaptability of spaces
Preservation of representative elements of the building's industrial past.
Main hierarchical and articulating space

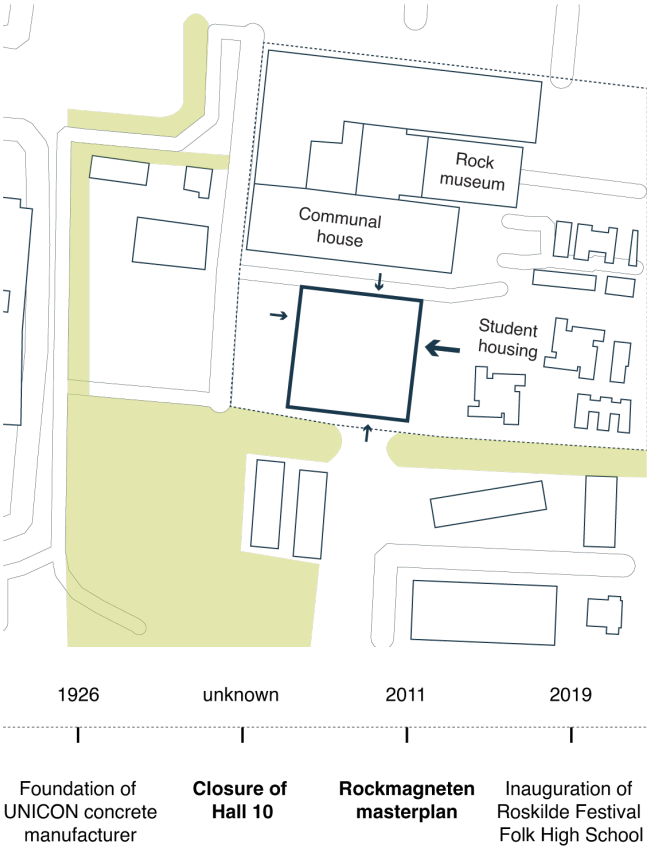
Roskilde Festival Folk High School

Denmark

Zealand

Roskilde

Architect:
MVRDV + Cobe
Location:
Basgangen 20
Area: 5600 m²
Year: 2019
Original use:
Former concrete factory
Proposed use:
Folk High school
Type:
Adaptive reuse



The old Hall 10 building is part of the ROCKmagneten urban regeneration master plan, based on the reuse of the 8,000 m² former cement factory halls into a cultural district for rock music, creativity and youth culture, while also creating a housing community for artists, musicians and other creatives.

Figure 135. *Original situation of the old Hall 10* (Cobe, 2019)

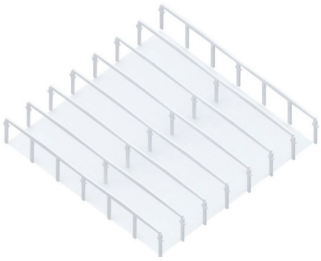
Roskilde Festival Folk High School is a school based on the ideals of the annual Roskilde Music Festival: volunteer commitment, humanitarian approach and creativity. Among its principles of "lifelong learning" the school has no curriculum or exams and students and teachers live at the school for the entire course, so the program is complemented by housing blocks.

Conceptually the design is inspired by principles of freedom and the maximum possible preservation of the industrial character of the building through the reuse of its structure.

The large single space is transformed by the insertion of volumes that form the new program of the building, arranged in such a way as to generate common spaces of different scales around a main space containing a wooden grandstand. Each of these volumes is made in different materials and colors, and in turn house uses of different nature and spatial conditions, the largest of them being an auditorium for the 150 students.

Figure 136. *Roskilde Festival Folk Public School, main entrance (*MVRDV, 2019)

Figure 137. *Roskilde Festival Folk Public School, interior (*MVRDV, 2019)



Existing concrete structure

New skin with openings

Boxes with new program

"For me as a former folk high school student it was a very special task to transform a former concrete factory into a folk high school with the purpose of shaping future generations of students. By opening the building up and adding new boxes inside the old structure we revitalize the building. A defunct industrial building has become a bustling hub for creativity and community."
- Dan Stubbergaard, architect and founder of COBE

Intentions to consider:

Box-in-a-box concept: modules that allow subdividing the large hall.
Main hierarchical and articulating space
Contrast of materiality and scale between the existing and the proposed

Chapter 1

Peri-urban areas
in the contemporary city.

Chapter 2

Alboraya as a peri-urban
municipality of agricultural base.

Chapter 3

Peri-urban agriculture.

Chapter 6

Back to L’Horta as an answer

Chapter 4

L’Horta - urban area relation:
La Patacona.

Chapter 5

Cases studies.


Alboraya
La Patacona
Isolated sector
City center
Universitat
Politècnica
City of Arts
and Sciences
New Turia river

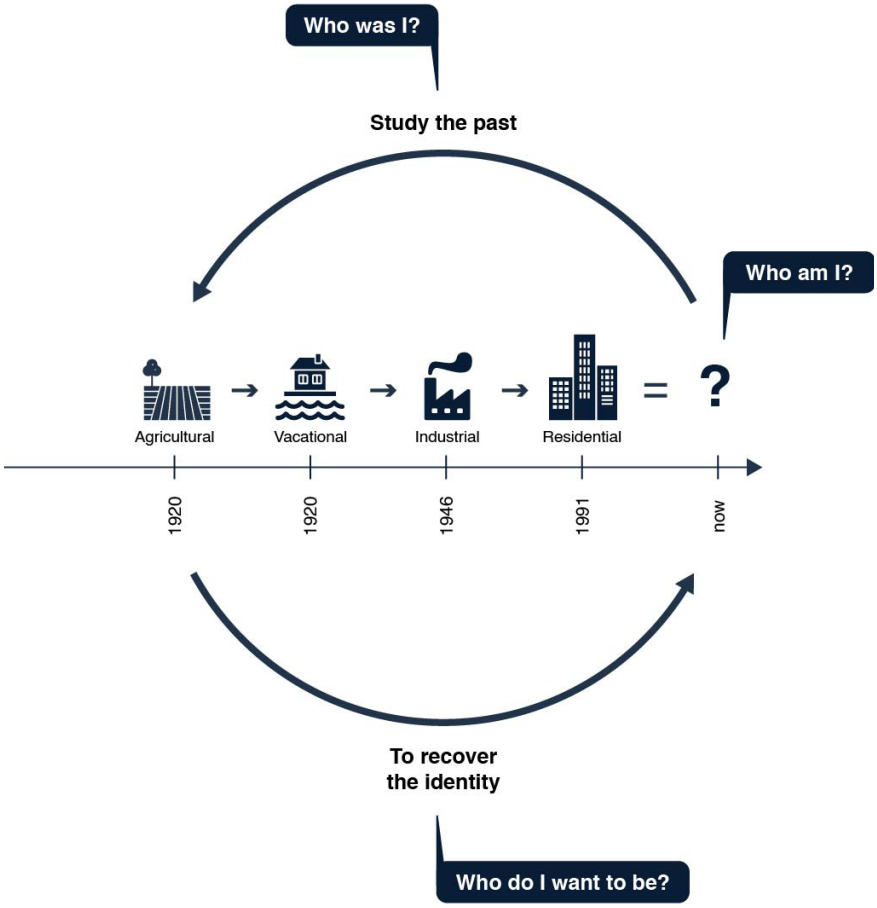


Figure 138. *Basic concept the proposal*. Own work.

Problem and proposal

After analyzing the study area in its different scales, the main problem identified is the **lack of identity of La Patacona** as a peripheral area of the municipality of Alboraya due to the diverse and sectorized urban transformations and the physical and functional segregation with the urban core.

At the same time, the importance of L'Horta de Valencia is recognized in the urban and periurban context and how it has been affected by the urban growth of the metropolitan area. Therefore, it is proposed to take as a starting point the recognition of L'Horta de Valencia to enhance the urban regeneration of La Patacona, which in turn, is manifested in the promotion and conservation of its agricultural, historical, cultural, and landscape heritage. (Figure 139)

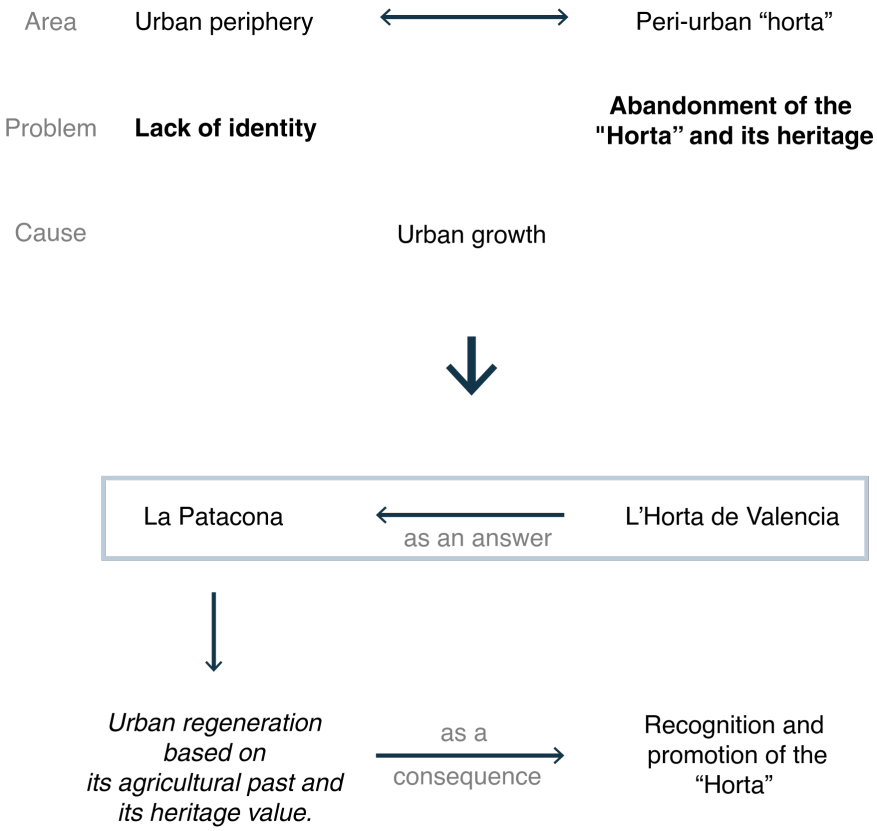
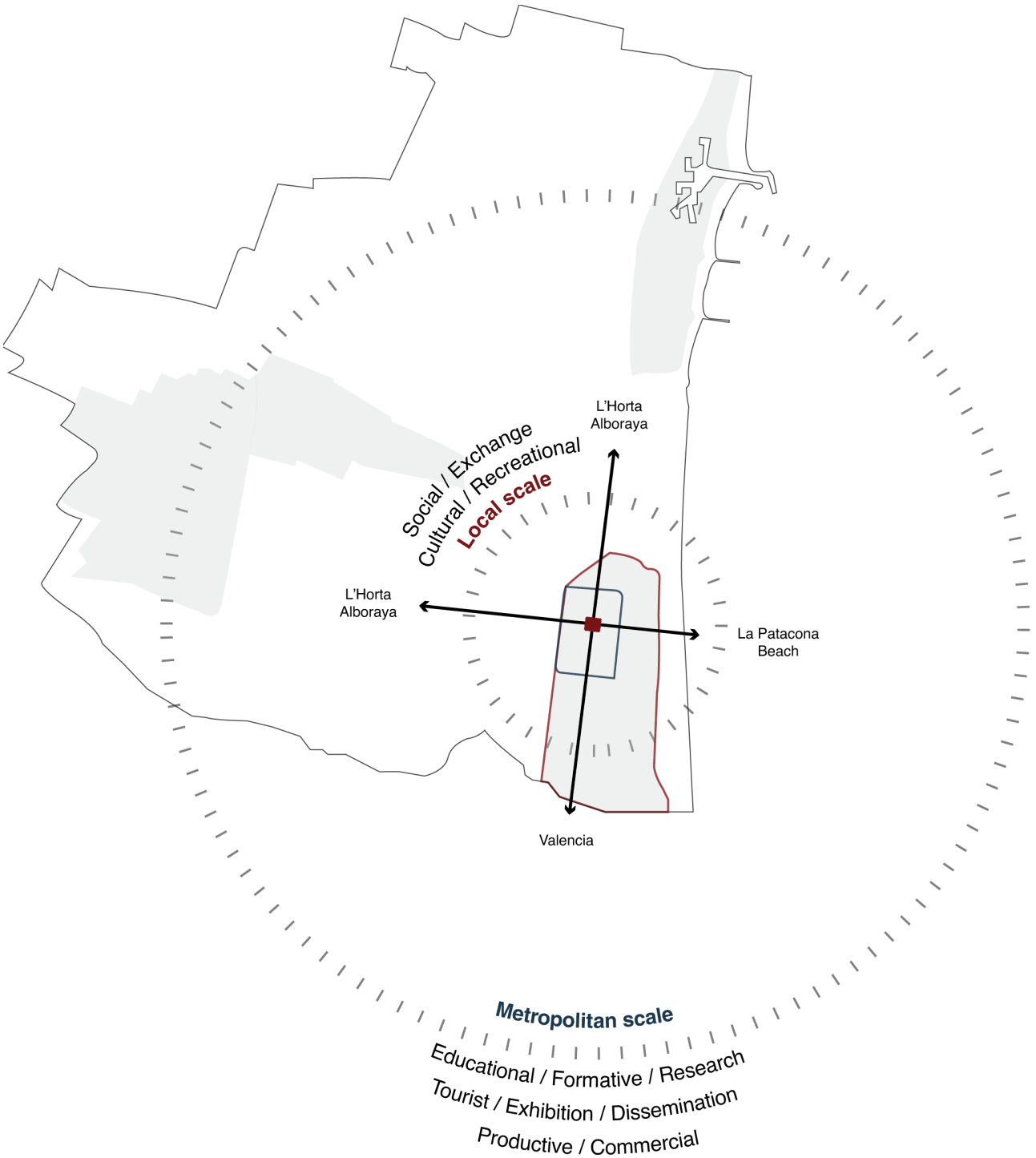


Figure 139. *Basic concept the proposal: L'Horta de Valencia as an answer.* Own work.

Figure 140. *Approach and scope of the proposal.* Own work.

In this sense, the proposal is developed on three scales: the first, the urban regeneration of La Patacona through a system of public spaces and adaptive use strategies, the second, the urban intervention in the plots of industrial origin in a state of abandonment through the development of an agricultural and cultural park of metropolitan scope, and finally, the refunctionalization of the Bodegas Vinival as a catalyst building of the urban regeneration system. (Figure 140)


L’Horta
Alboraya
Social / Exchange
Cultural / Recreational
Local scale
L’Horta
Alboraya
La Patacona
Beach
Valencia
Metropolitan scale
Educational / Formative / Research
Tourist / Exhibition / Dissemination
Productive / Commercial

Contemporary reinterpretation of La Huerta

In order to answer the question *"What is La Patacona?"* it is necessary to study the past to recover the lost or never recognized identity. Therefore, starting from its beginnings as an agricultural territory of L'Horta, a reinterpretation is developed based on the agricultural spatial model and its main elements. (Figure 141)

The agricultural plot of L'Horta is composed of four main elements:

The irrigation ditches, which start from the river as a water source and lead the water to secondary branches that distribute it to the places of settlement and cultivation.

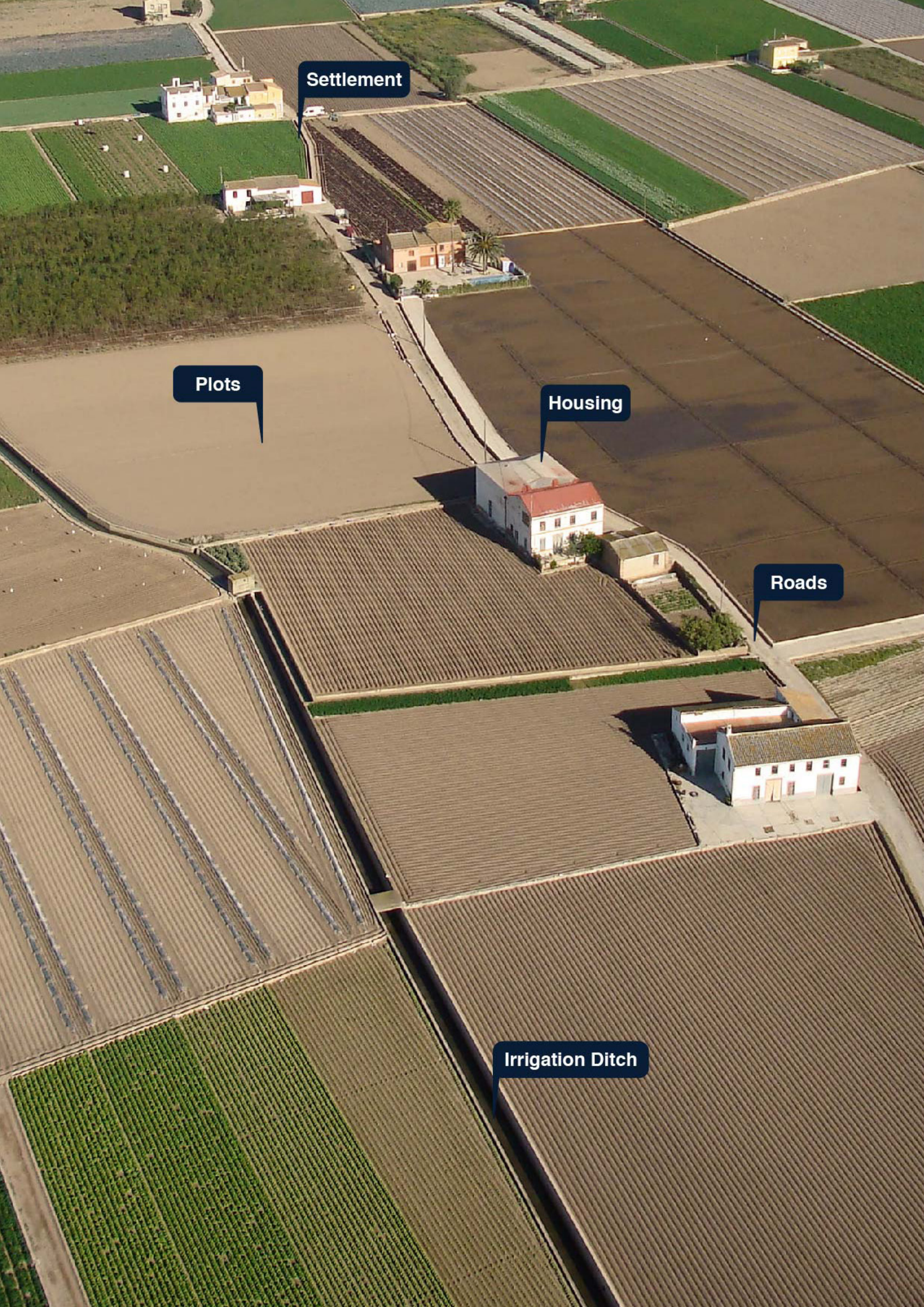
The roads that connect the settlements and generally run parallel to the irrigation ditches.

The plots, organized from the layout generated by the irrigation ditches and the communication routes.

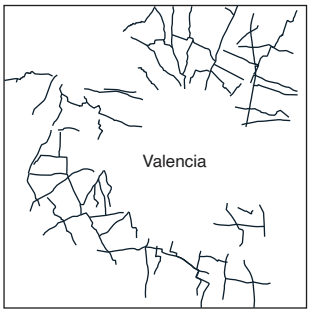
The farmhouses, which can be isolated or around a road or ditch, or they can be barracas (small single-family houses) or alquerías (small settlements).

Now, the irrigation ditches are the main element of the system because they are the ones that lead and supply water from the river Turia to each of the agricultural plots of the Huerta. In analogy, the sea promenade functions as the main attraction of La Patacona because it is on the beach where most of the social dynamics that attract the population are developed.

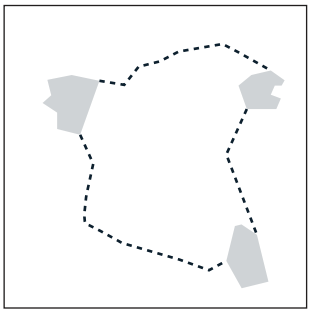
Therefore, the aim is to lead people to the areas of intervention, to take the population from the areas with more activity to those that need to be regenerated. (Figure 142)


Settlement
Plots
Housing
Roads
Irrigation Ditch

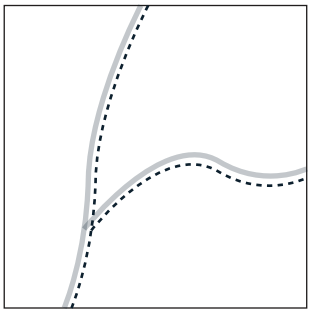
Roads



Radial organization

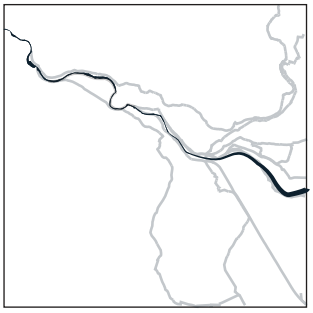


Links between settlements



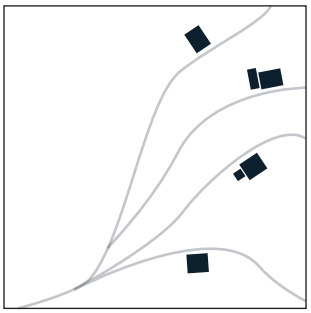
Roads along irrigation ditches

Irrigation ditches



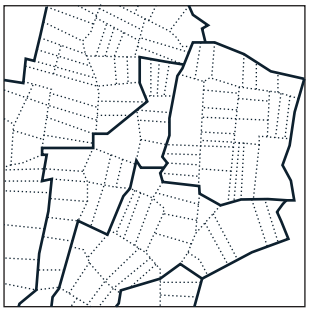
Origin in the Turia River

Secondary branches from main irrigation ditches

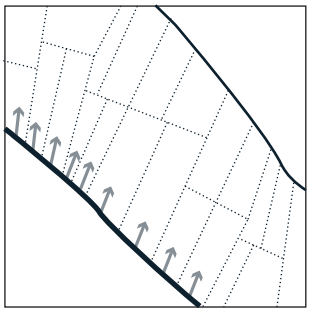


Distribution branches to farmhouses

Plots

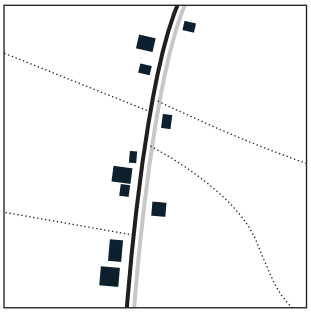


Plot organization adapted to roads and irrigation ditches.

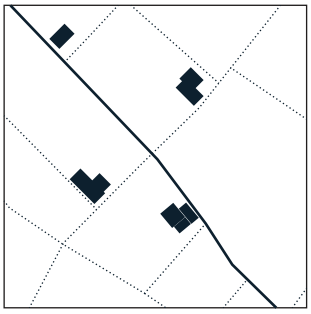


Plots perpendicular to main irrigation ditches

Settlement typology

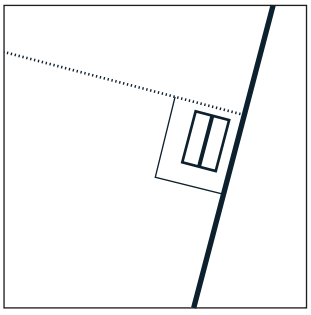


"Caserios-calle" along a road or irrigation ditch.

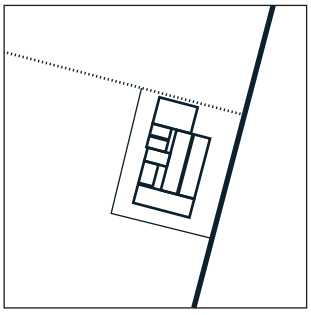


Disperse housing

Housing typology



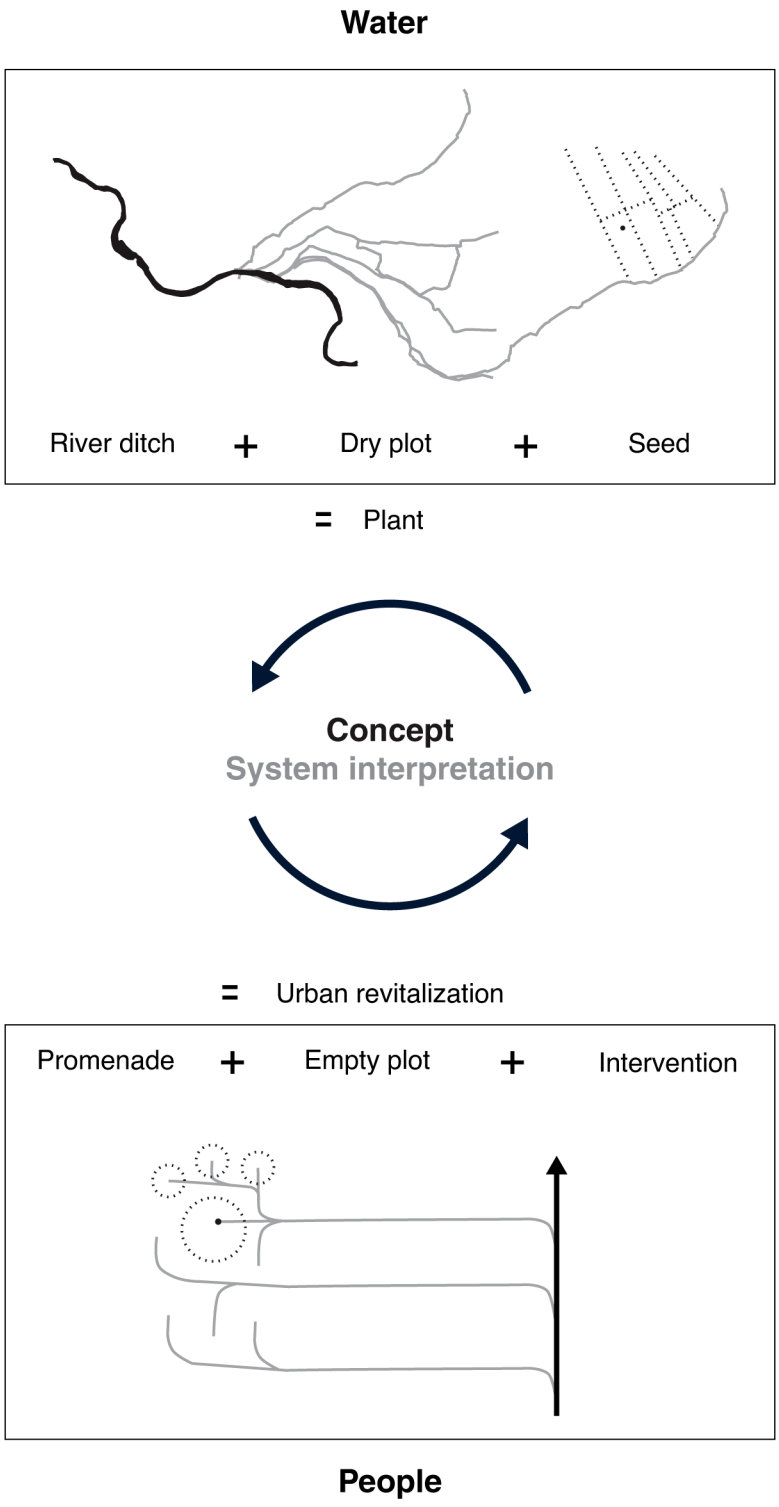
Barraca



Alqueria

Figure 141. *Graphical analysis of the main elements of L'Horta agrarian system.* Own work

The acequia, an example of sustainability.
In a world threatened by CO2 emissions into the atmosphere, fossil fuels, environmental pollution, climate change, the acequia is a great example of sustainability. L´Horta of Valencia, is full of life thanks to the irrigation ditches, whose main function is to carry water from the Turia River to the fields.



The Patacona promenade
It is the main attraction of the area, located in an urban beach of Alboraya, Valencia, which arises from the natural extension of the Malvarrosa Beach. The gastronomic offer of the area is very wide; autochthonous, with the presence of several beach bars.

Figure 142. *Contemporary reinterpretation of the agrarian system.* Own work

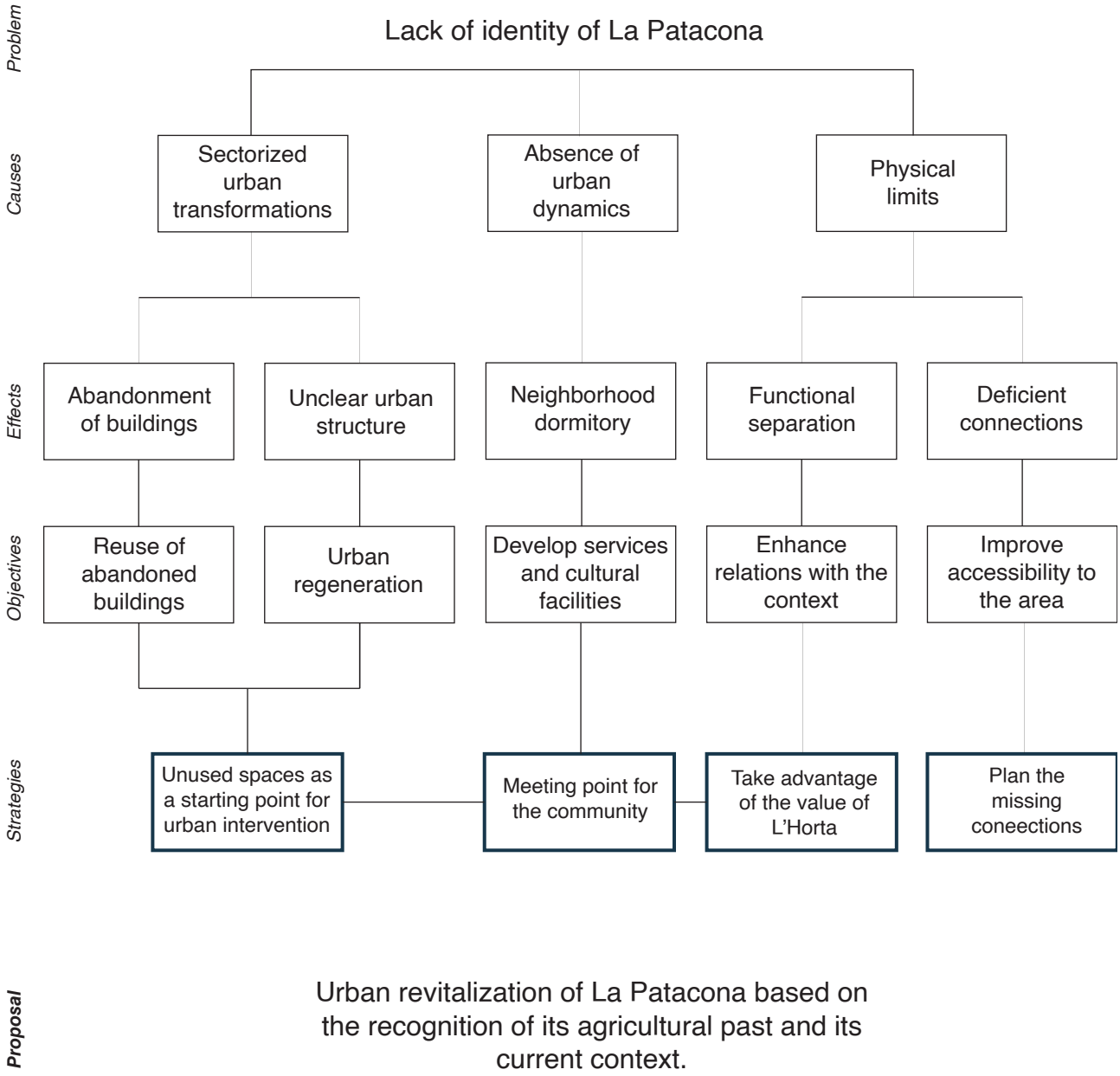


Figure 143. *Problem and proposal.* Own work


La Patacona
Dead end
?
1,2 km - 14 min
Weak connection
La Malvarrosa
Junction node
Valencia's promenade
2,5 km - 30 min
El Cabanyal
Junction node

Back to L'Horta
as an answer

1st phase

La Patacona scale

2nd phase
Ex-industrial area scale

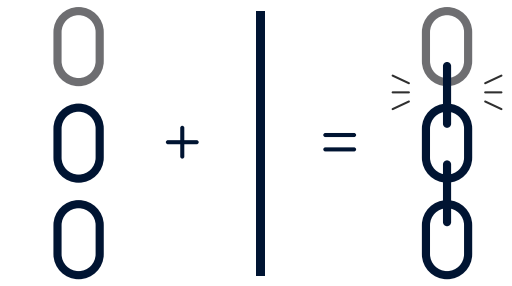
3rd phase
Building scale

La Patacona scale:

Public spaces system

Besides the promenade being the most dynamic urban component of La Patacona, it acts as a linking element with the city of Valencia, and specifically, with the La Malvarrosa neighborhood.

The promenade starts at the Port of Valencia, connecting the neighborhoods of El Cabanyal, La Malvarrosa, and La Patacona. However, the connection between La Malvarrosa and La Patacona is weak due to the discontinuity of the path and the absence of a transition space in this connection node.

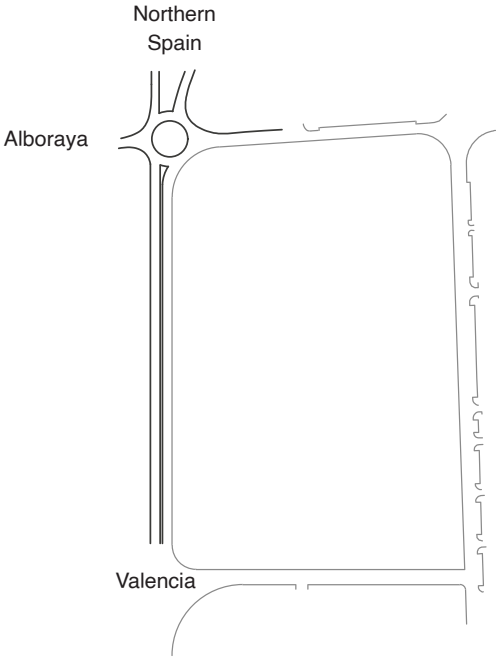


Neighborhoods Promenade Link


Connection with Alboraya
Sea promenade
Bodegas Vinival
Agricultural area
La Patacona beach
Vera Irrigation ditch
Connector bridge


No highway connection
No highway connection
Main connection from Alboraya
Discontinued highway
No option of return

Design process

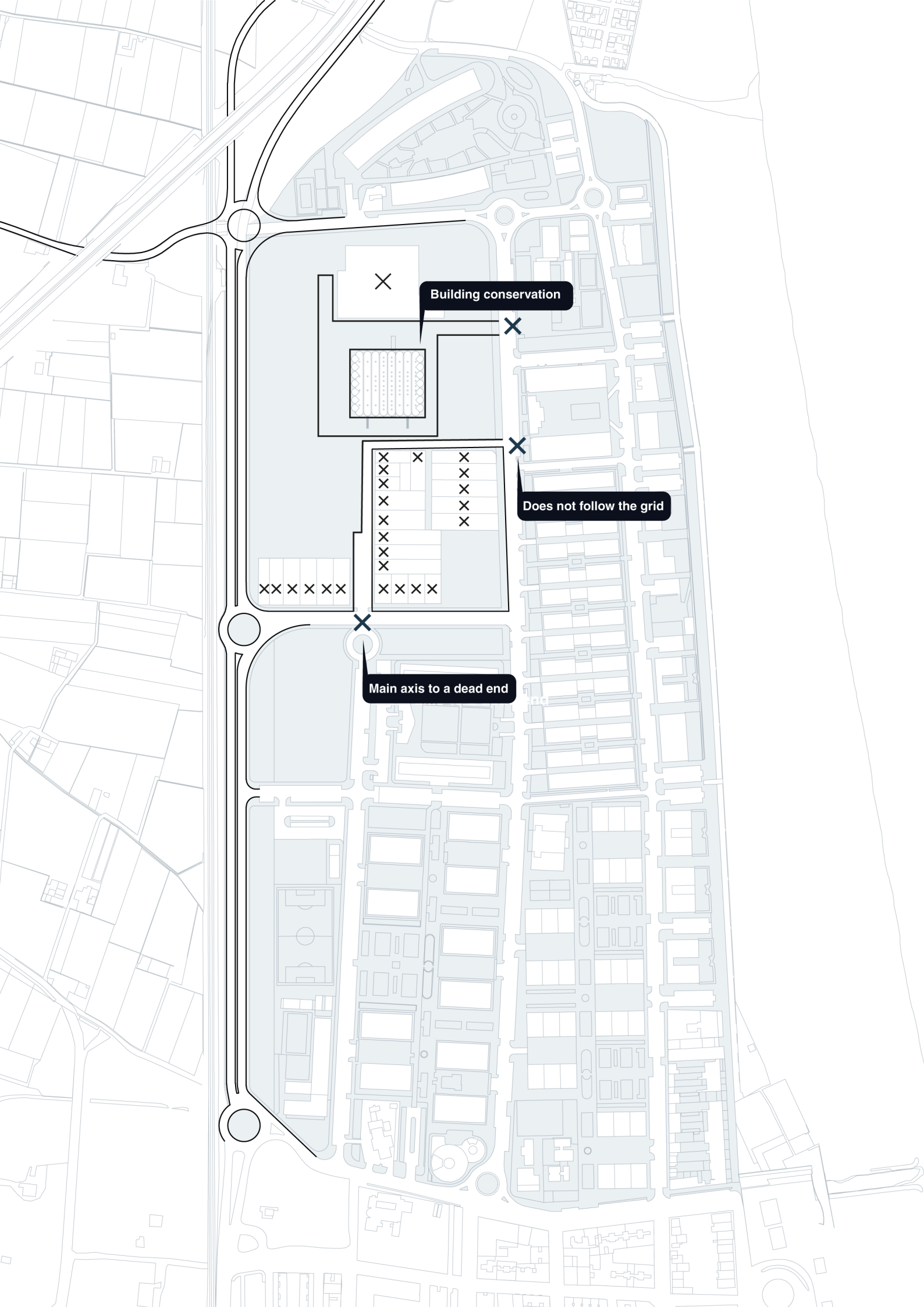


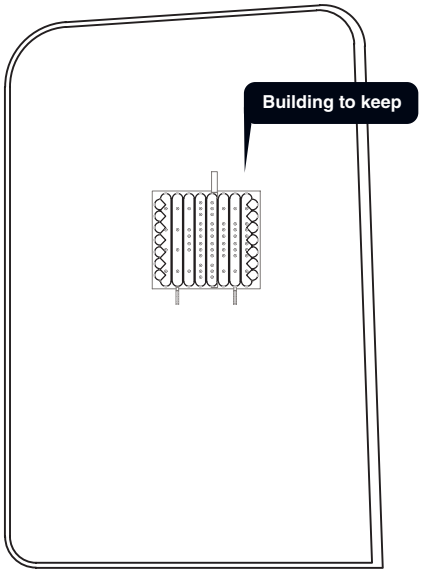
First step
Mobility analysis

A roundabout is proposed as a solution to the to the lack of continuity of the V-21 highway in order to achieve the articulation and connection with Alboraya, Valencia and its surroundings.

Legend

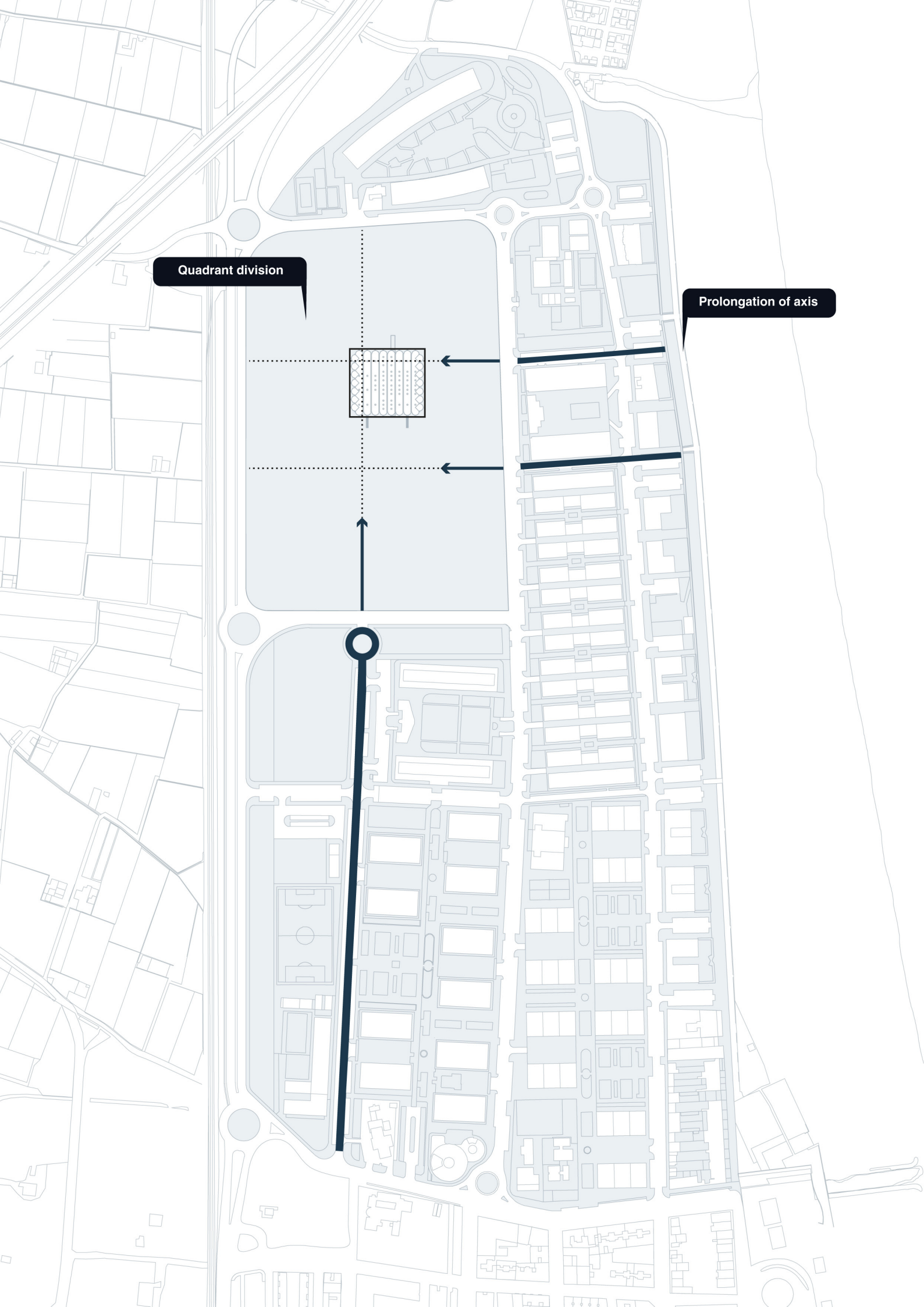
Discontinuous highway
Discontinuous cycle paths
Pedestrian corridors

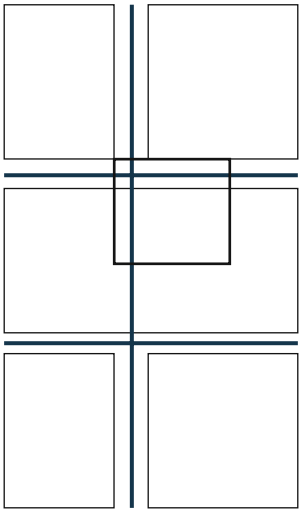

Building conservation
Does not follow the grid
Main axis to a dead end



Second step
Building conservation

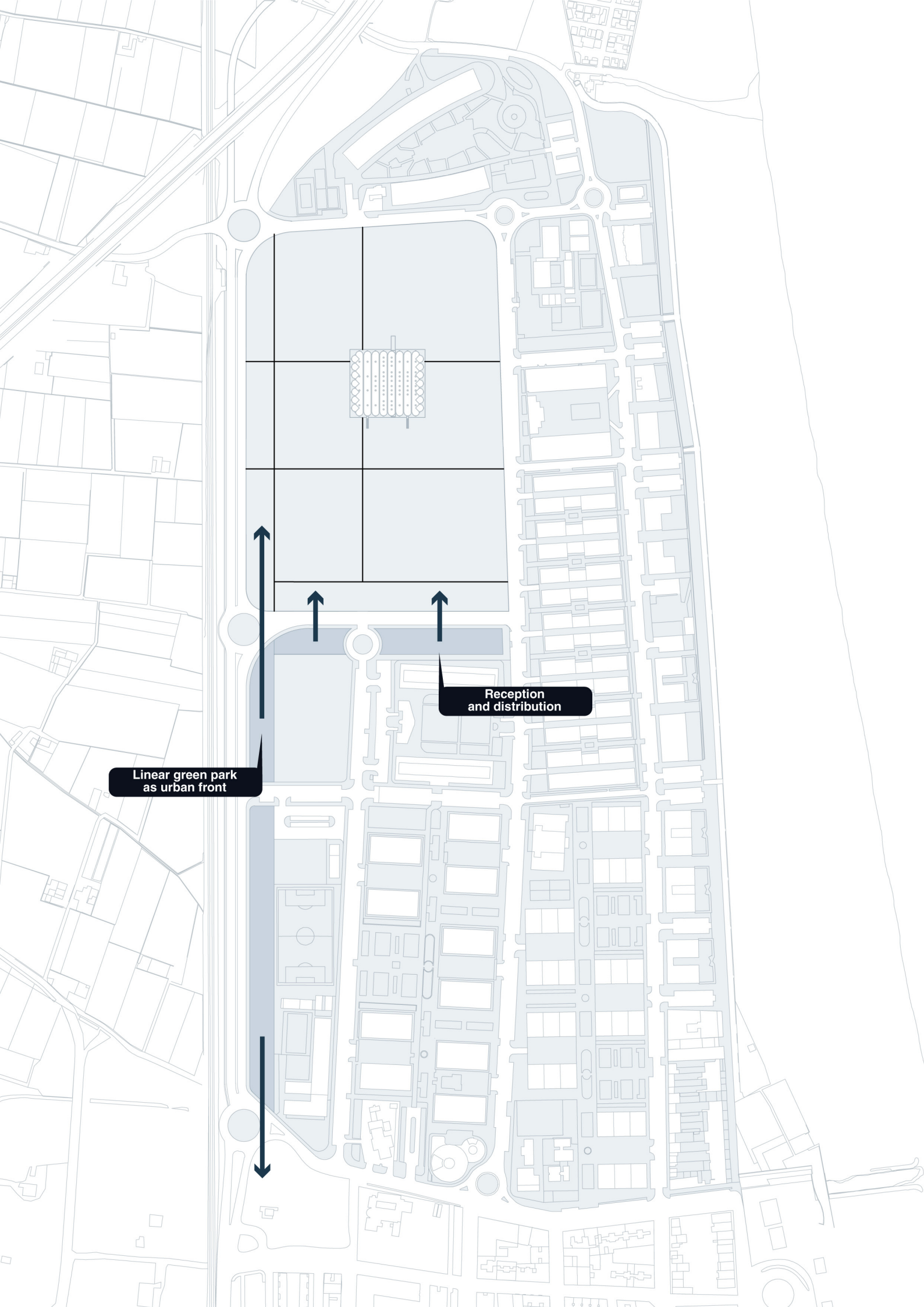
It is proposed to preserve the building that is currently in a state of protection, demolishing the rest in order to definitively eliminate the industrial footprint in the sector. It is also proposed to eliminate all the streets inside the plot which does not follow the grid.

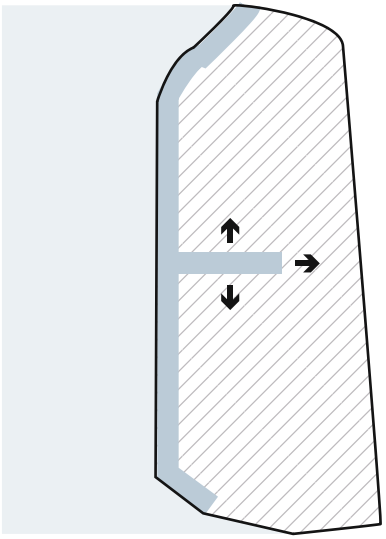

Quadrant division
Prolongation of axis



Third step
Quadrant separation

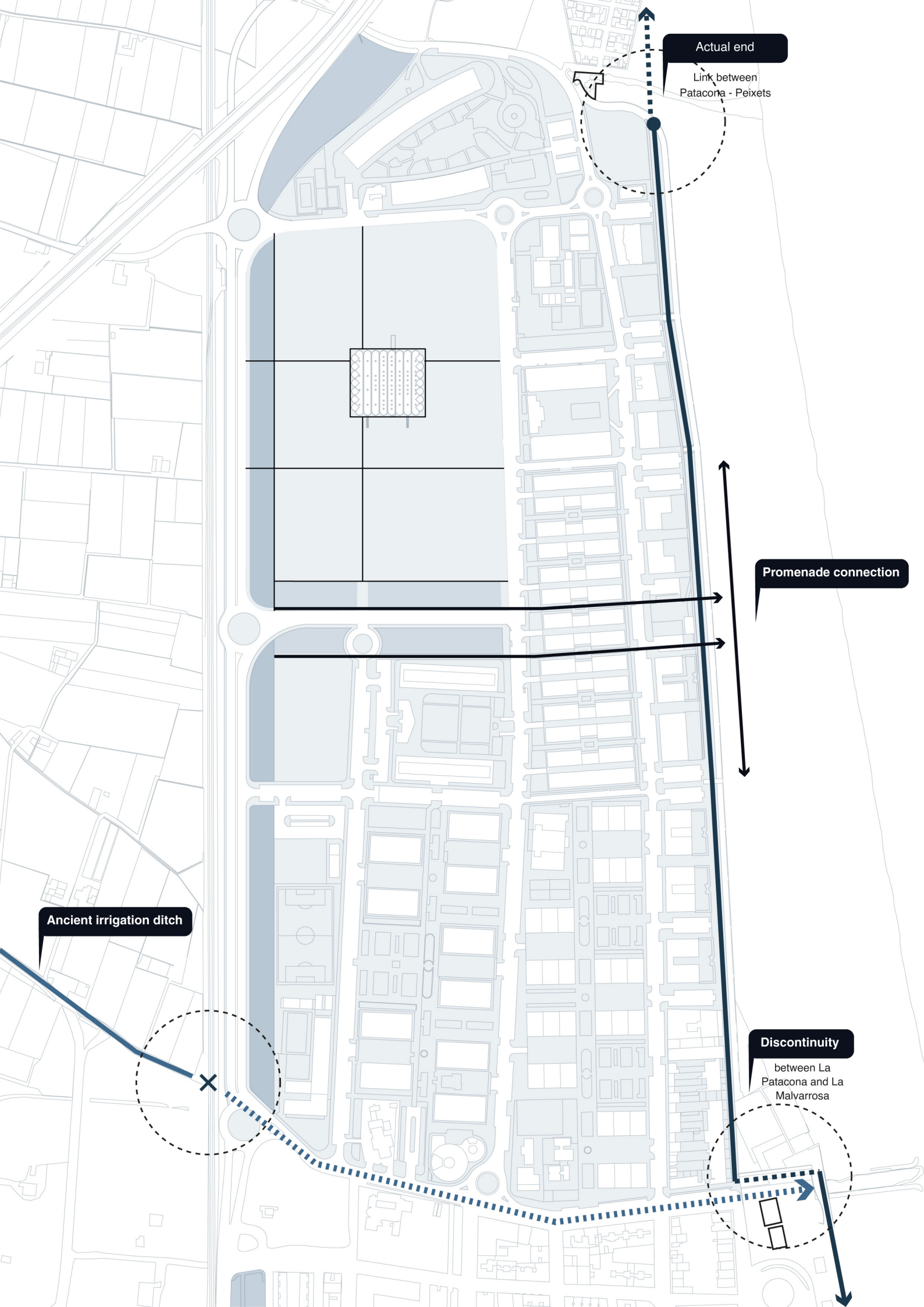
Prolongation of the existing urban grid axes on the plot, thus generating four quadrants that will respond in different ways with respect to their immediate context.


Reception
and distribution
Linear green park
as urban front



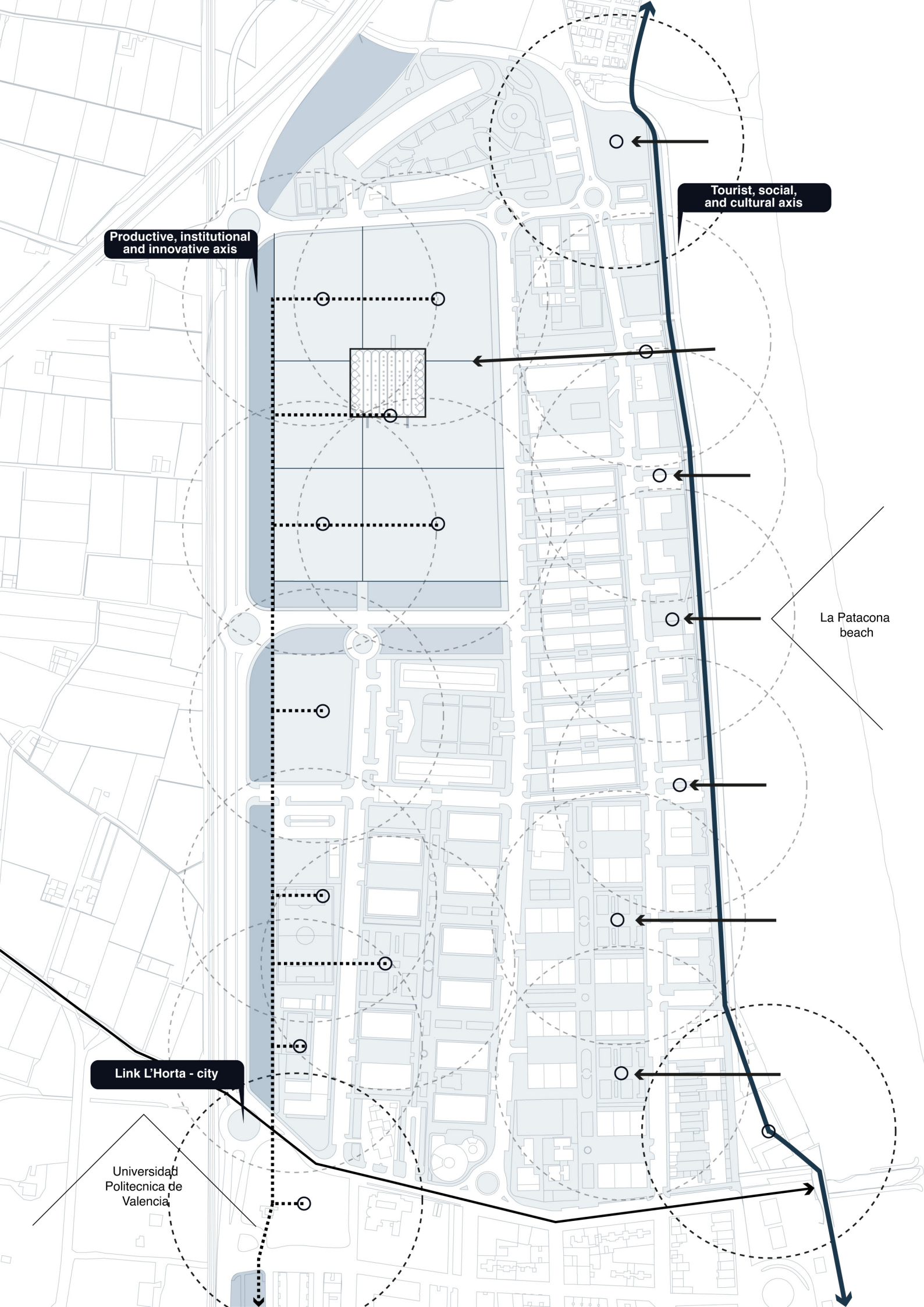
Forth step
Urban front

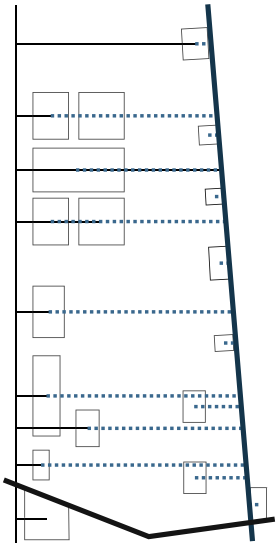
The existing green area is extended as an urban edge and permeable transition space between L´Horta and the urban area. At the same time, a reception and distribution axis is defined to serve as a mobility center for the community and visitors.


Actual end
Link between
Patacona - Peixets
Promenade connection
Ancient irrigation ditch
Discontinuity
between La
Patacona and La
Malvarrosa

Fifth step
Main axes

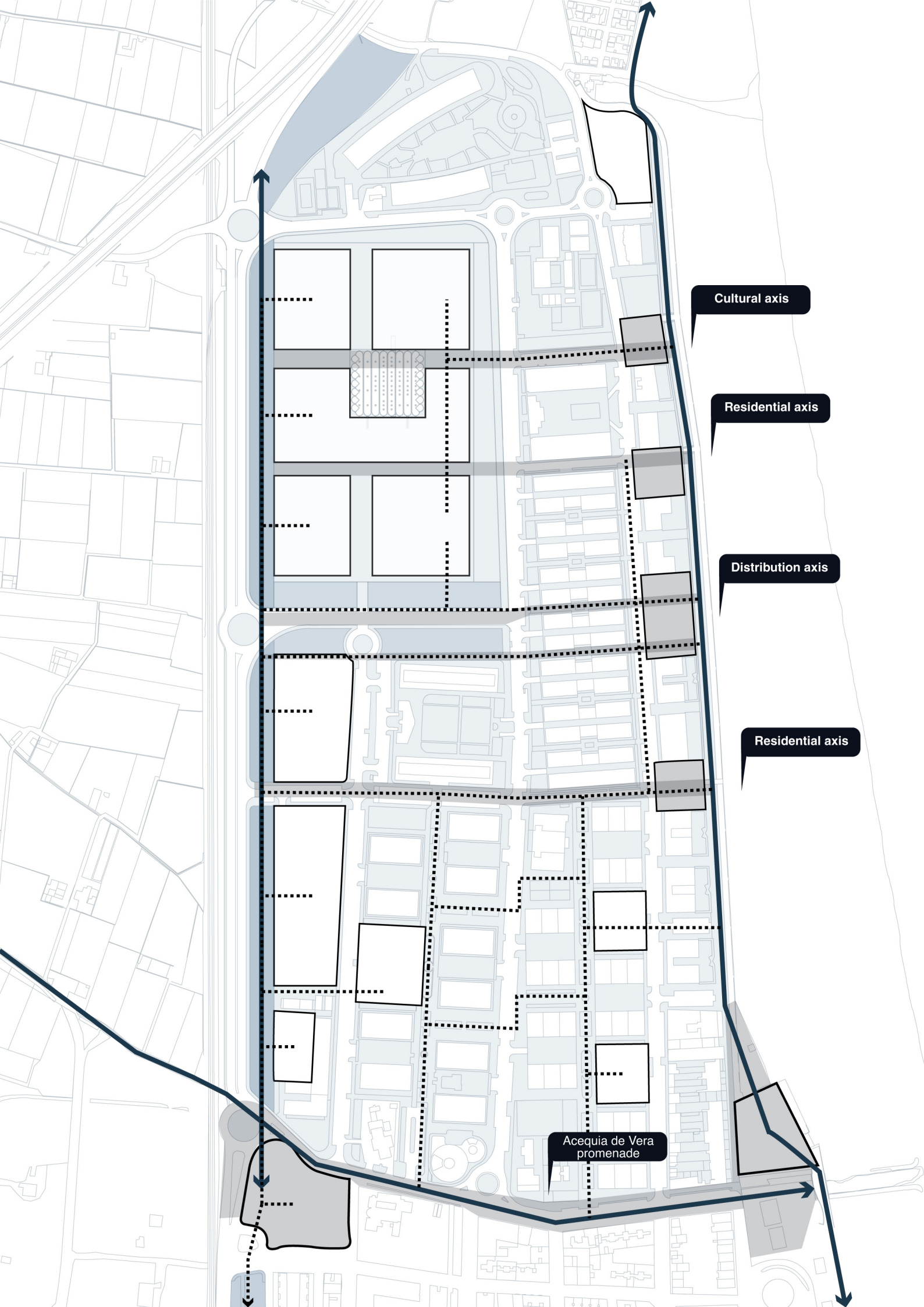
In analogy to the mother irrigation ditches, the promenade functions as an axis of attraction of people, being the space with the greatest dynamism and affluence. In turn, Arnaldo de Vilanova street acts as an important axis between the two neighborhoods, La Patacona and La Malvarrosa.

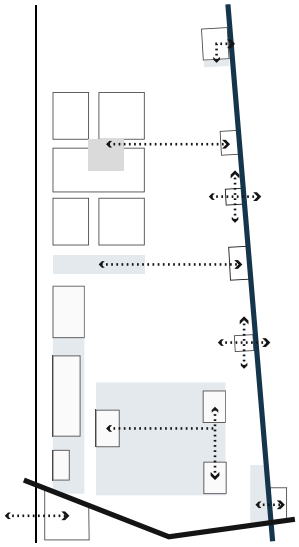

Tourist, social, and cultural axis
Productive, institutional and innovative axis
La Patacona beach
Link L'Horta - city
Universidad Politecnica de Valencia



Sixth step
Intervention areas

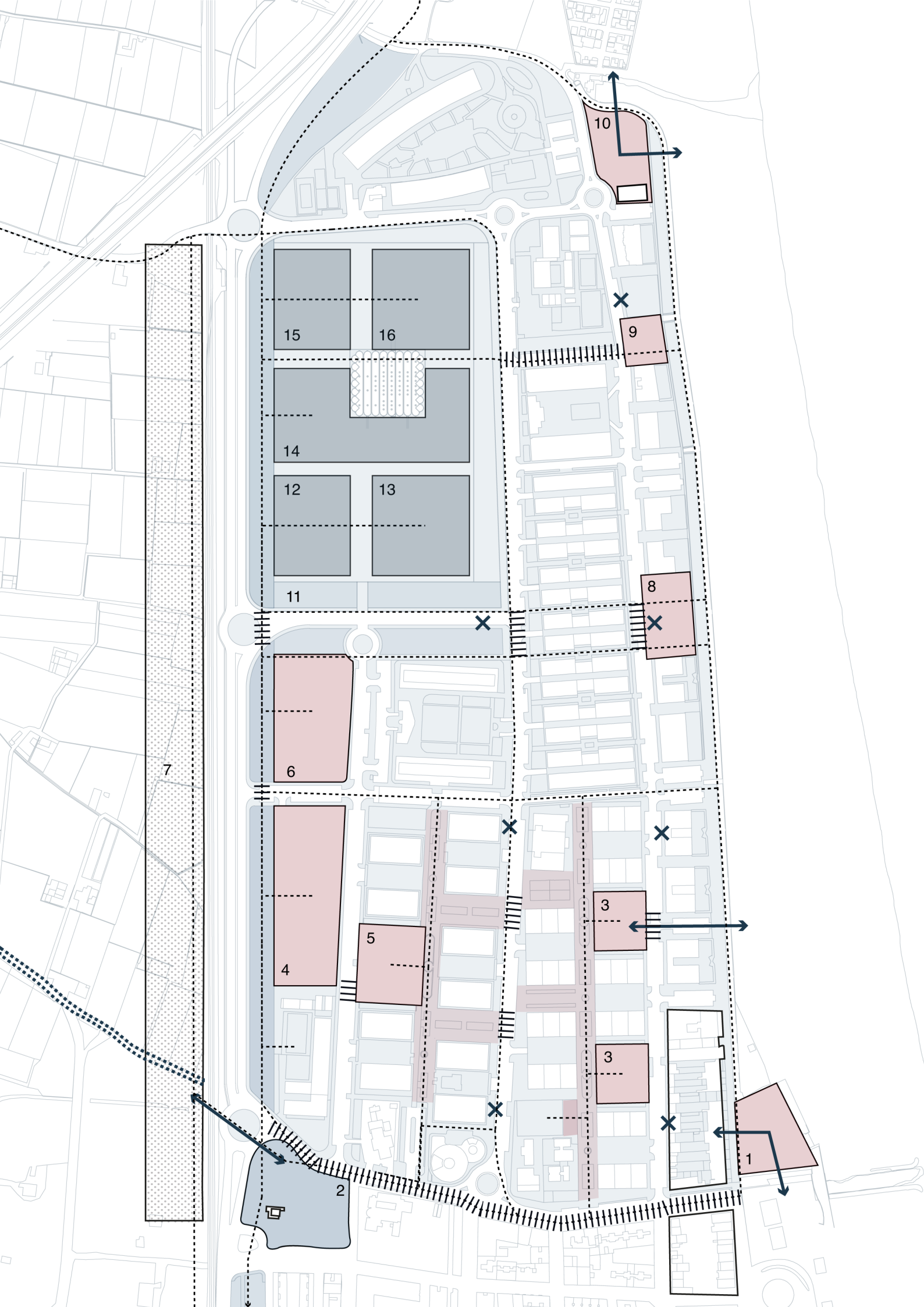
Were identified spaces in disuse and/or underutilized to be developed as areas of intervention through adaptive reuse strategies that contribute to the articulation of the urban area and the social fabric.


Cultural axis
Residential axis
Distribution axis
Residential axis
Acequia de Vera promenade



Seventh step
Public spaces network

From the structuring axes (population catchment areas) and intervention areas, it is developed a network/system of public spaces and facilities in order to improve urban vitality.


10
15
16
9
14
12
13
11
8
6
7
4
5
3
3
1
2

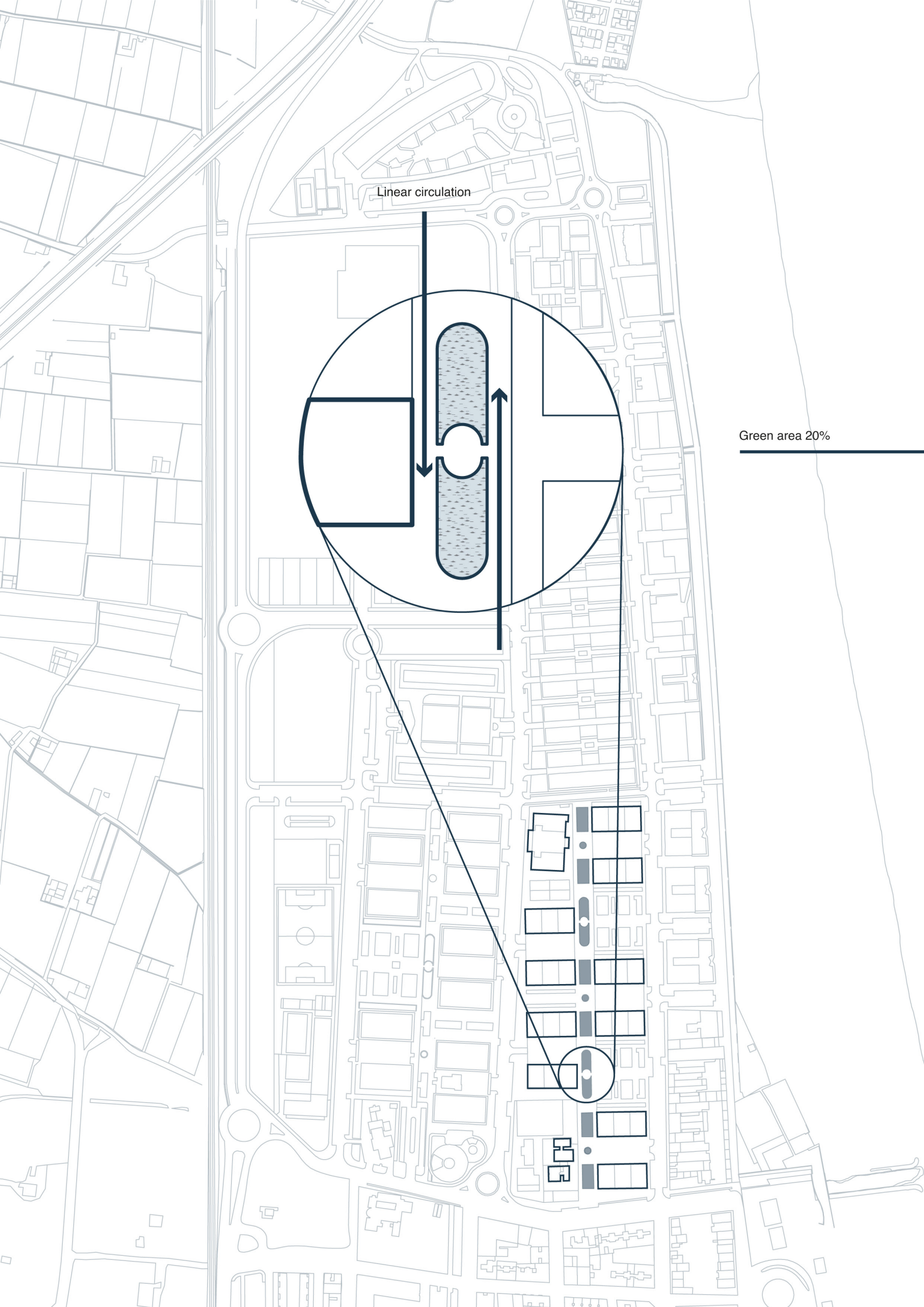
1 "Las casitas" - Open air museum
2 Vera Ditch - Agricultural reconnection
3 Revitalization of squares and corridors
4 Improve existing sports club
5 Green residential square
6 Health center
7 L'Horta rental (urban gardens)
8 Main Beach point
9 Natural funnel to "Bodegas Vinival"
10 El Palmeral park / night club

11 Mobility hub
12 Research center
13 Residence agricultural community
14 Cultural and tourism center
15 L'Horta viewpoint
16 Commertial center

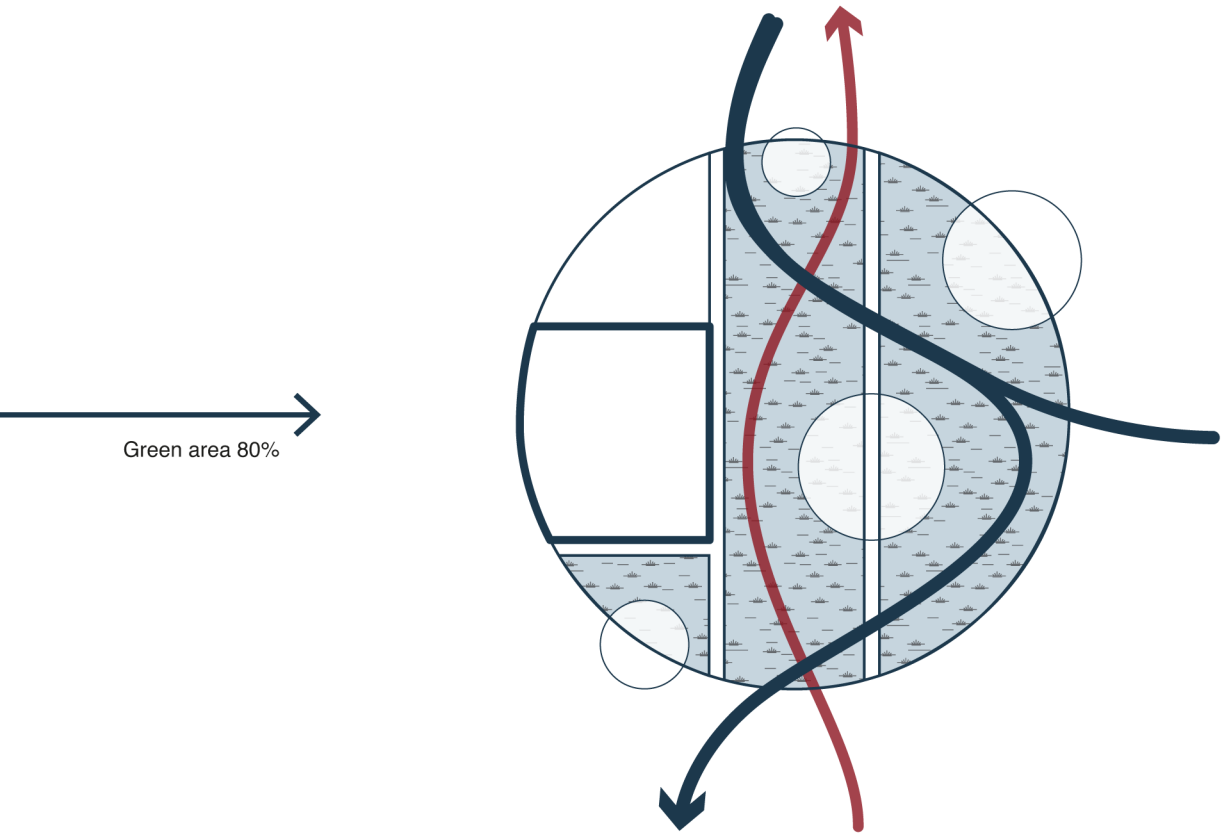
Proposed road section
Proposed cycle way
Bus stop design

Eighth step
Program

Are defined the interventions to be carried out in the underutilized spaces through adaptive reuse strategies, in response to the needs of the population and the physical and functional relationships of the area.


Linear circulation
Green area 20%

Organic circulation



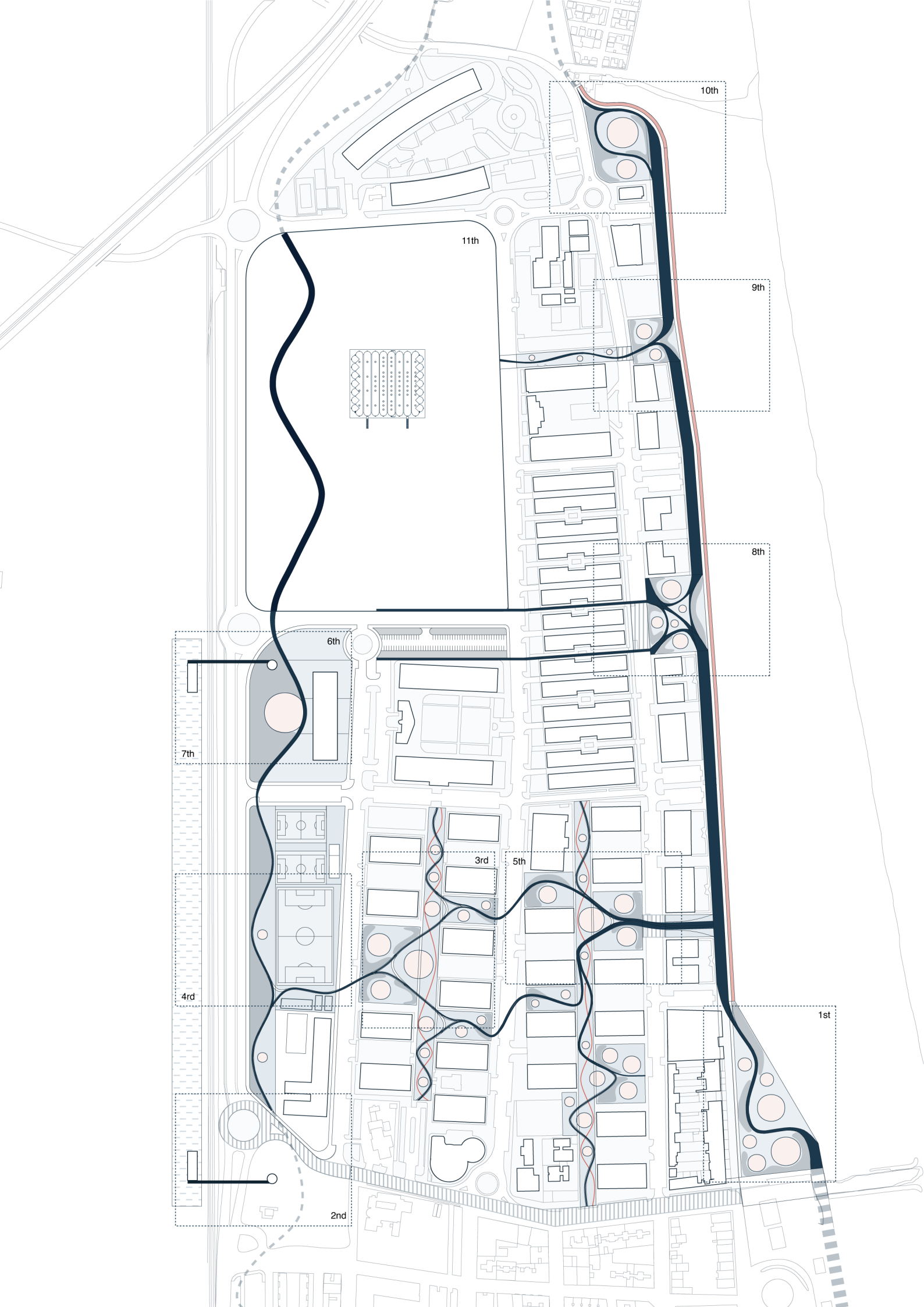
Ninth step

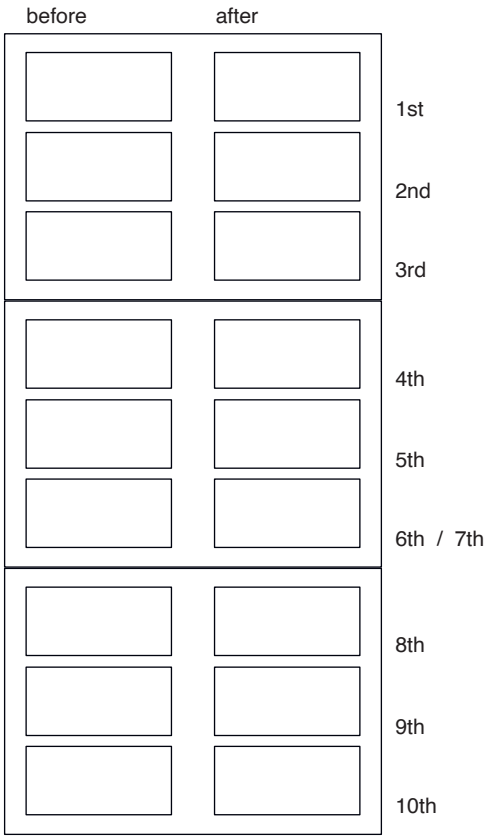
Concept

Network of public spaces

In order to connect the spaces, a change of paradigm is proposed which is based on allocating all public spaces as green areas in which then draws the organic design of a walkway and a bike path that with its shapes generates permanence spaces.

- Green area
- Walkway
- Bike path
- Permanence space


10th
11th
9th
8th
6th
7th
3rd
5th
4rd
1st
2nd

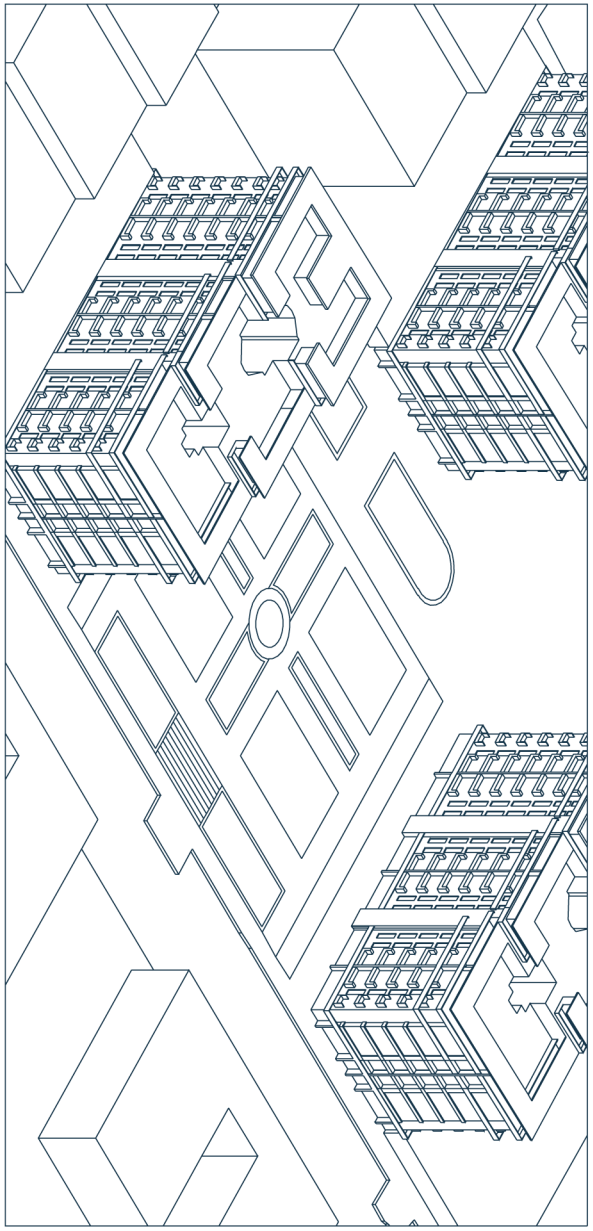


Tenth step

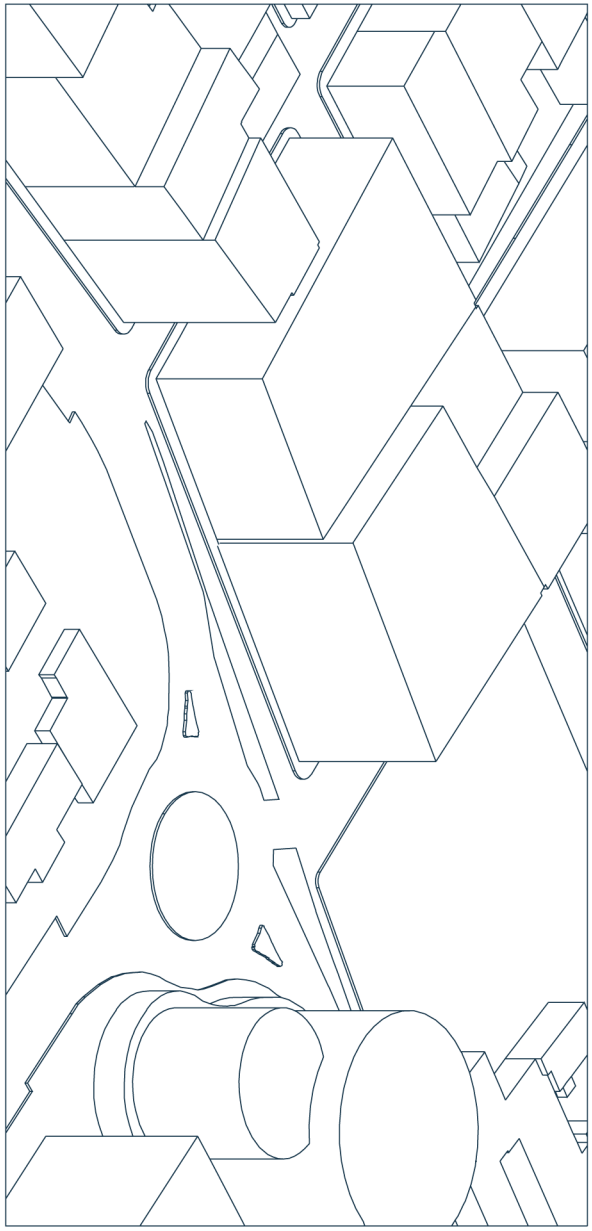
Design of intervention areas

After the definition of the design concept of the intervention spaces, the diverse areas of permanence that conform the urban route are developed, reinforcing the characteristics of the place and fulfilling the specific needs of the population.

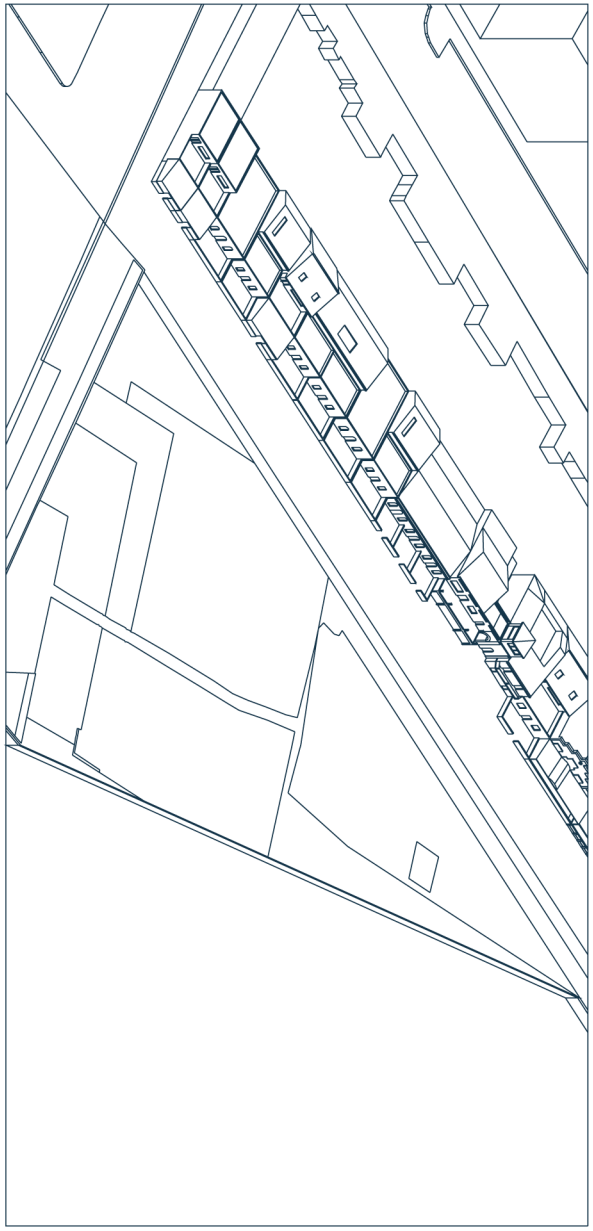
3rd intervention



2nd intervention



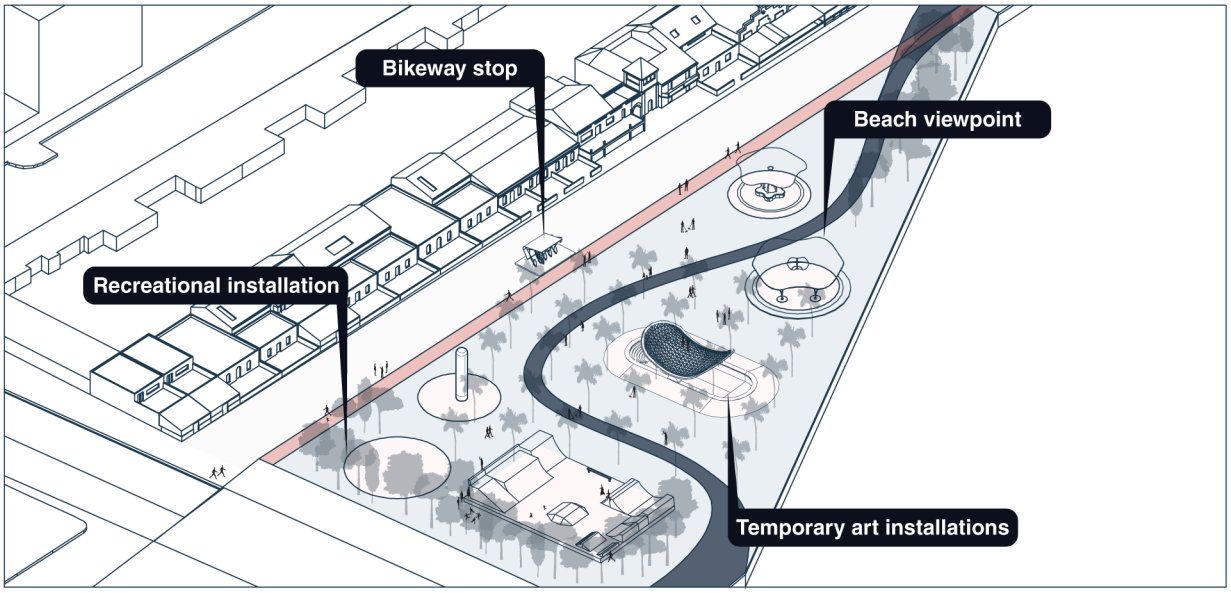
1st intervention



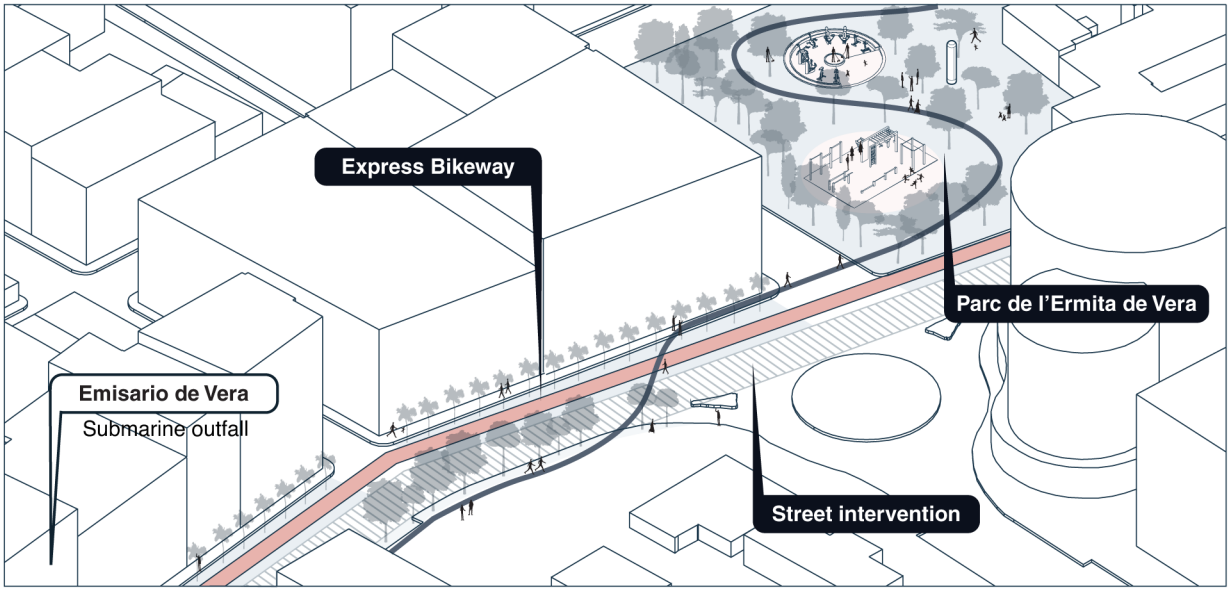
Before

After

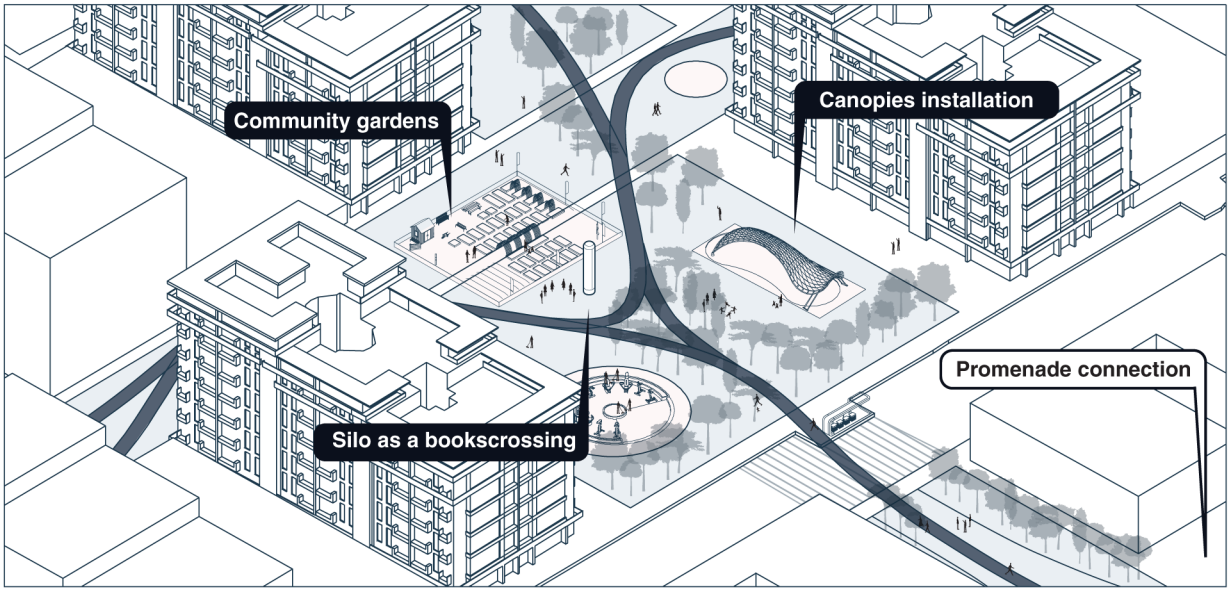
"Las Casitas" open air museum



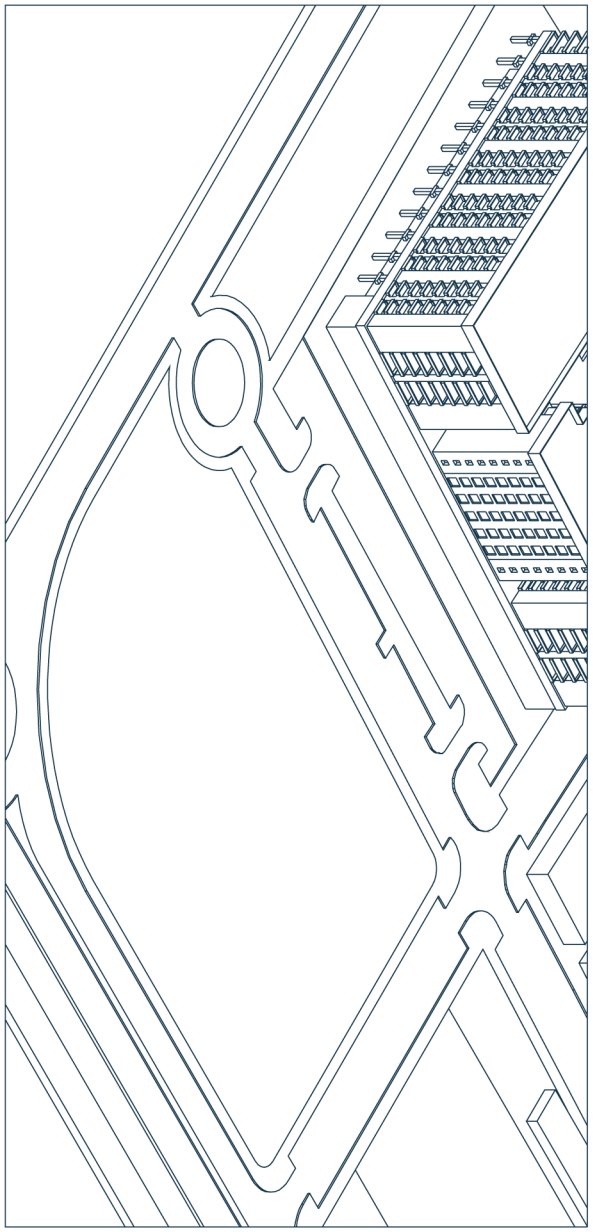
Old Vera irrigation ditch - agricultural relation



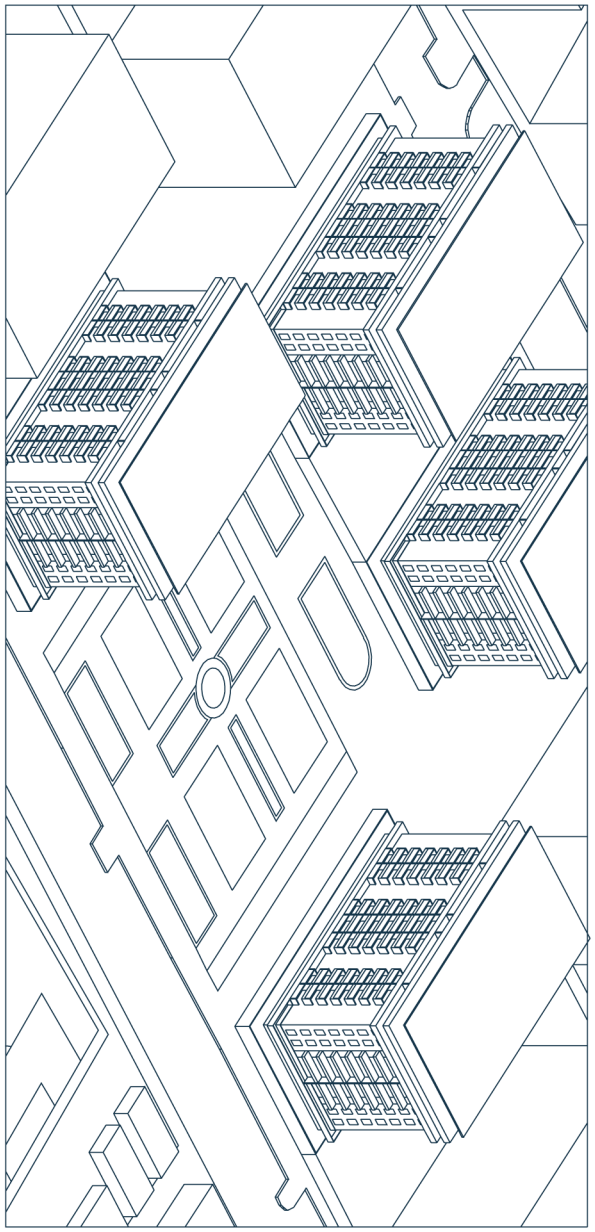
Revitalization of squares and corridors



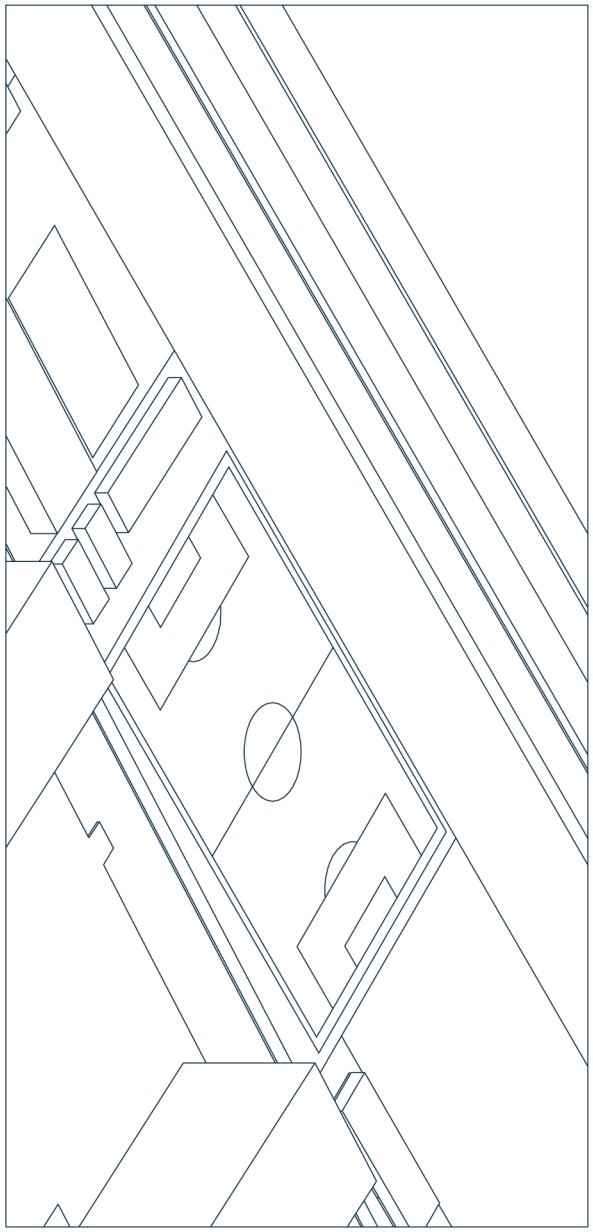
6th intervention 7th intervention



5th intervention



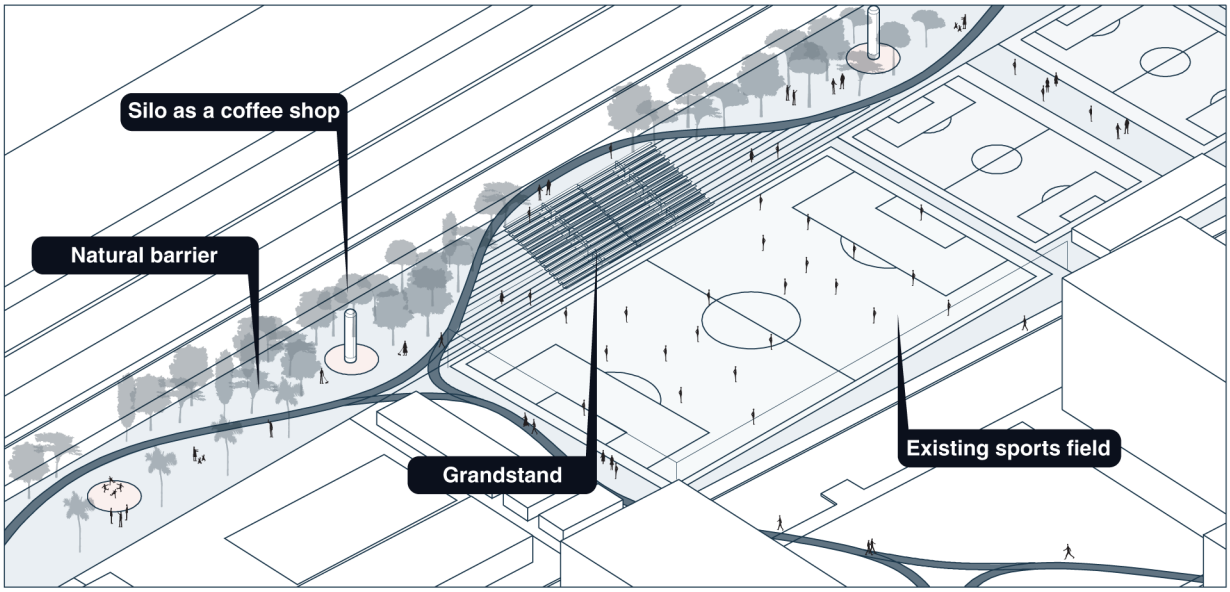
4th intervention



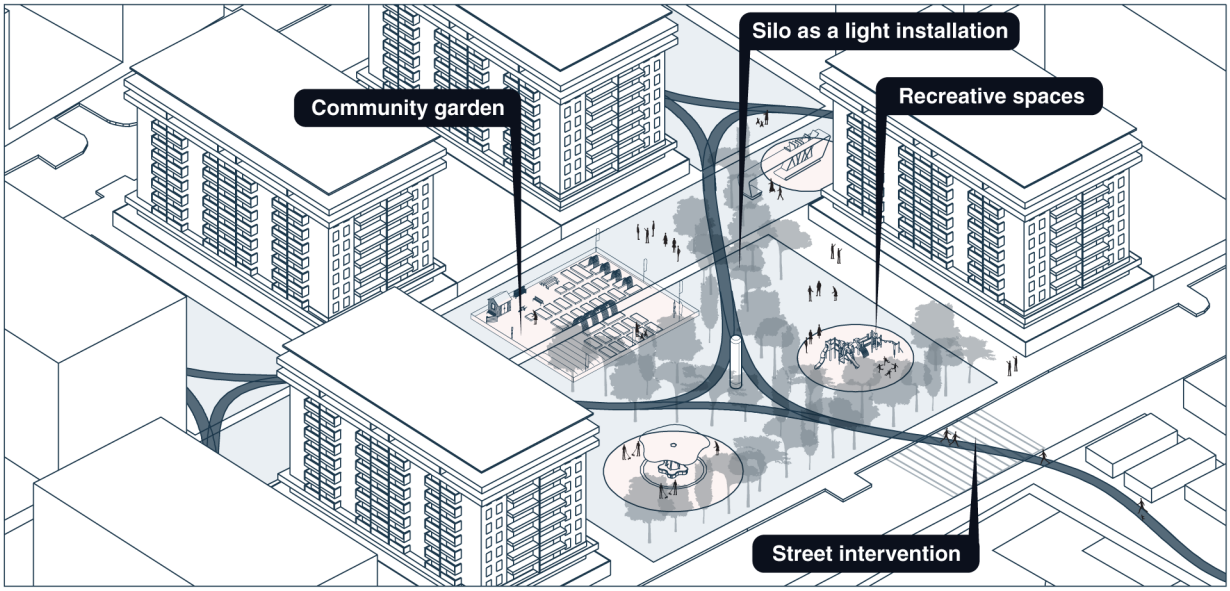
Before

After

Improvement of existing sports club

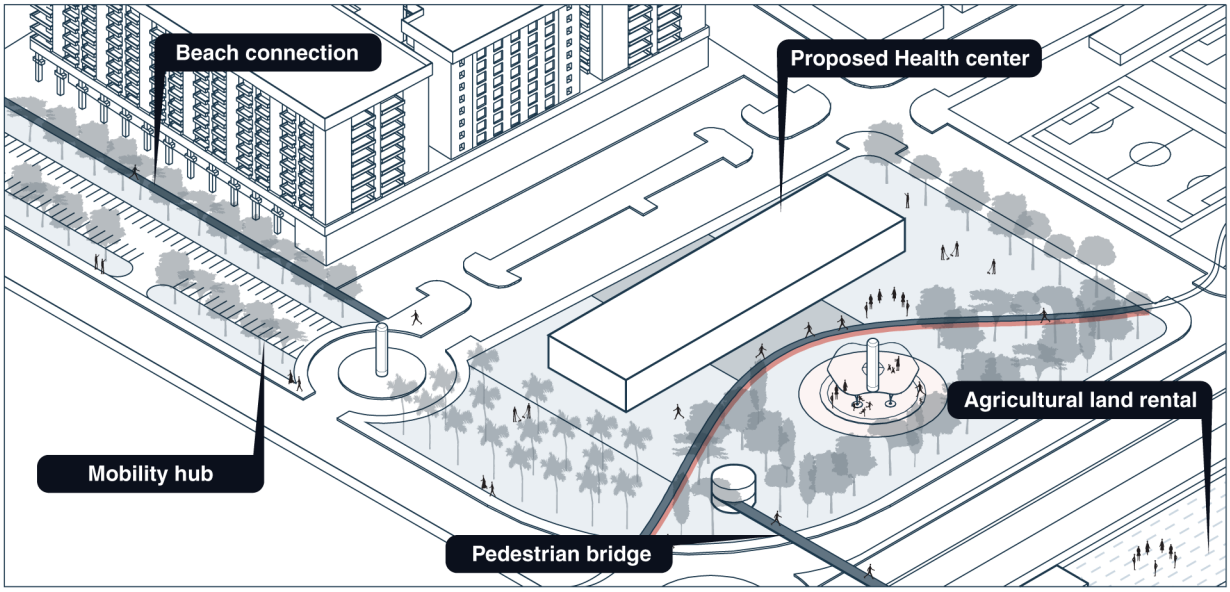


Green residential square

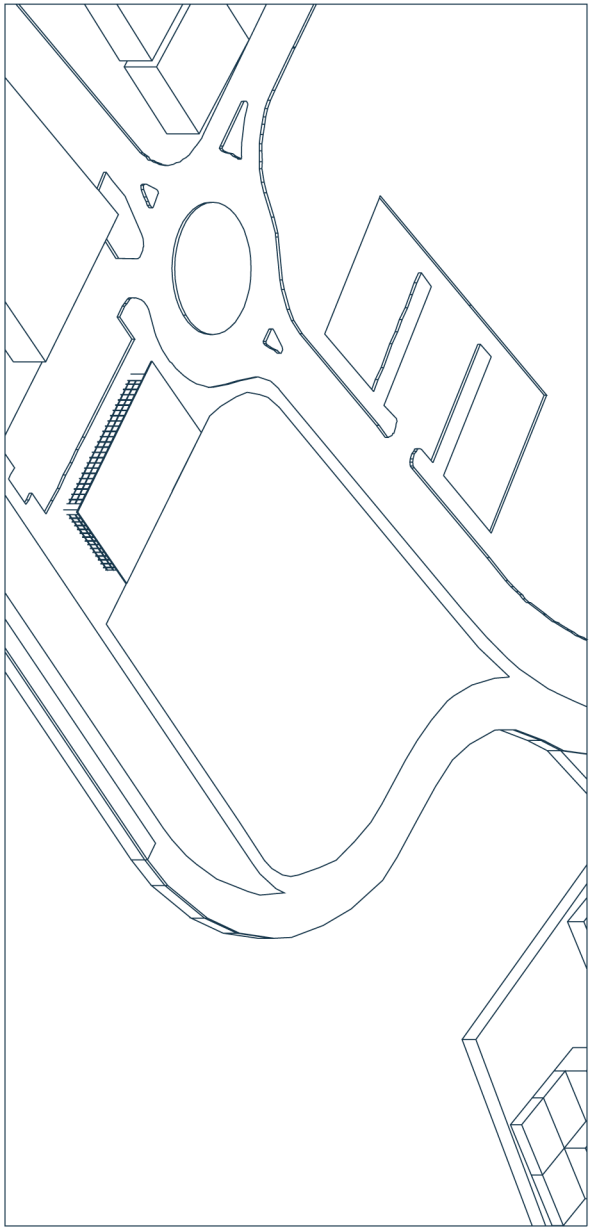


L'Horta connection and rental

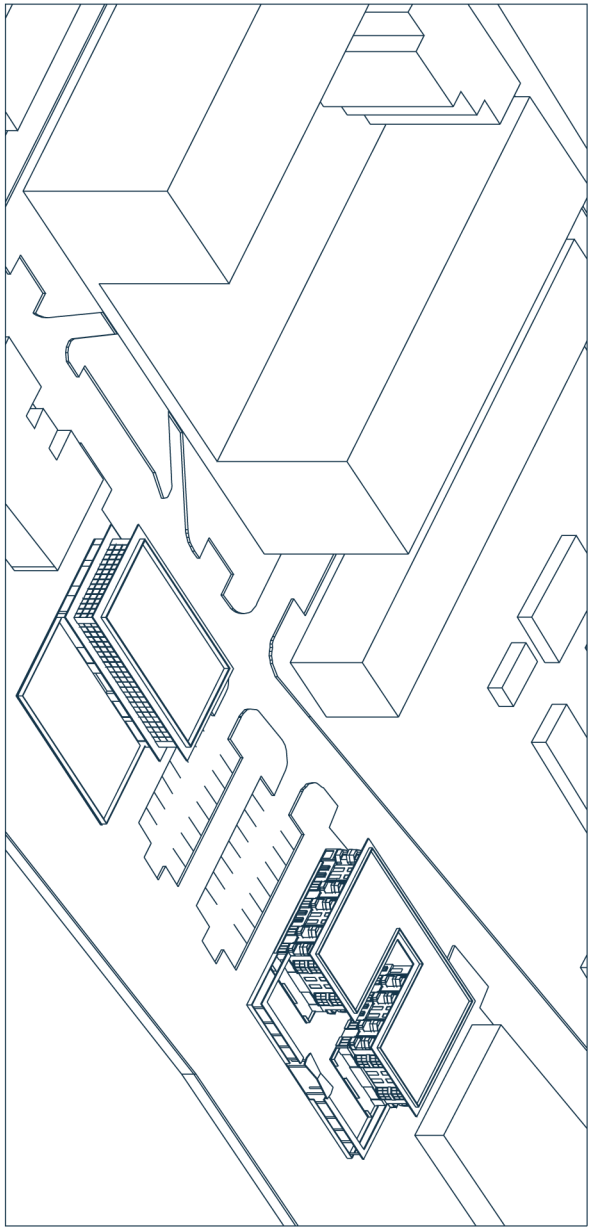
Health center



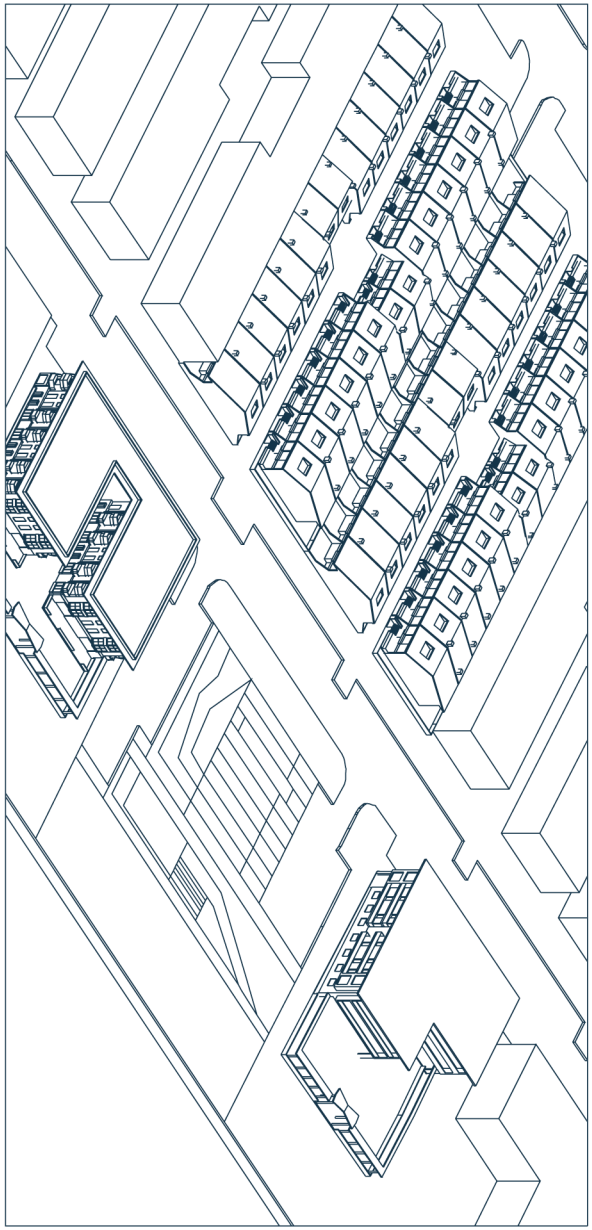
10th intervention



9th intervention



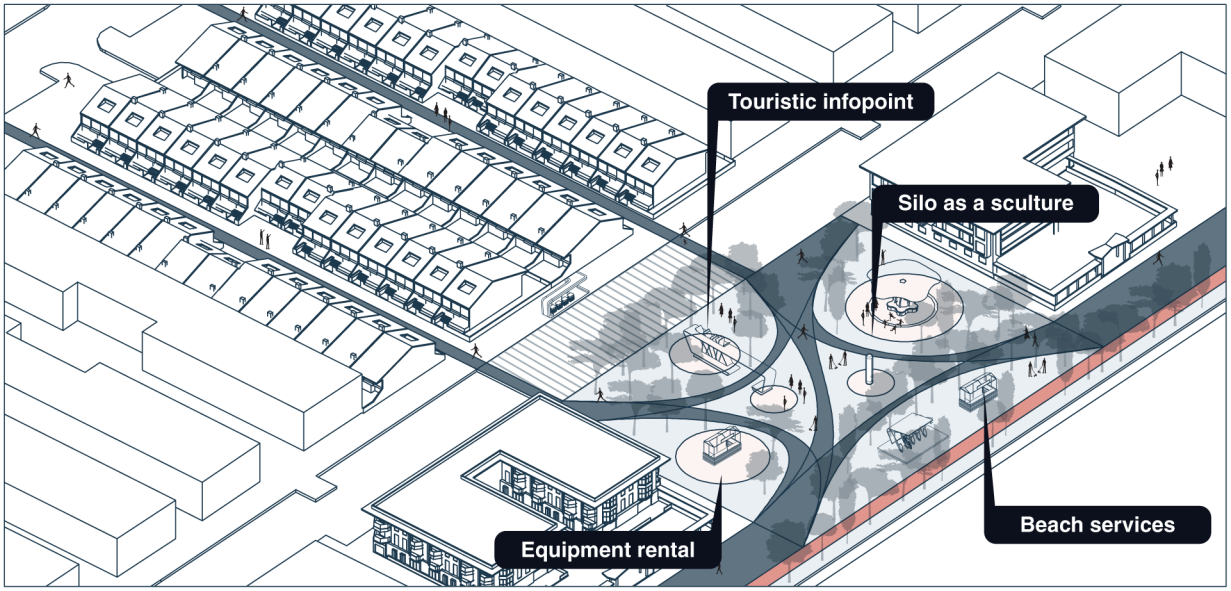
8th intervention



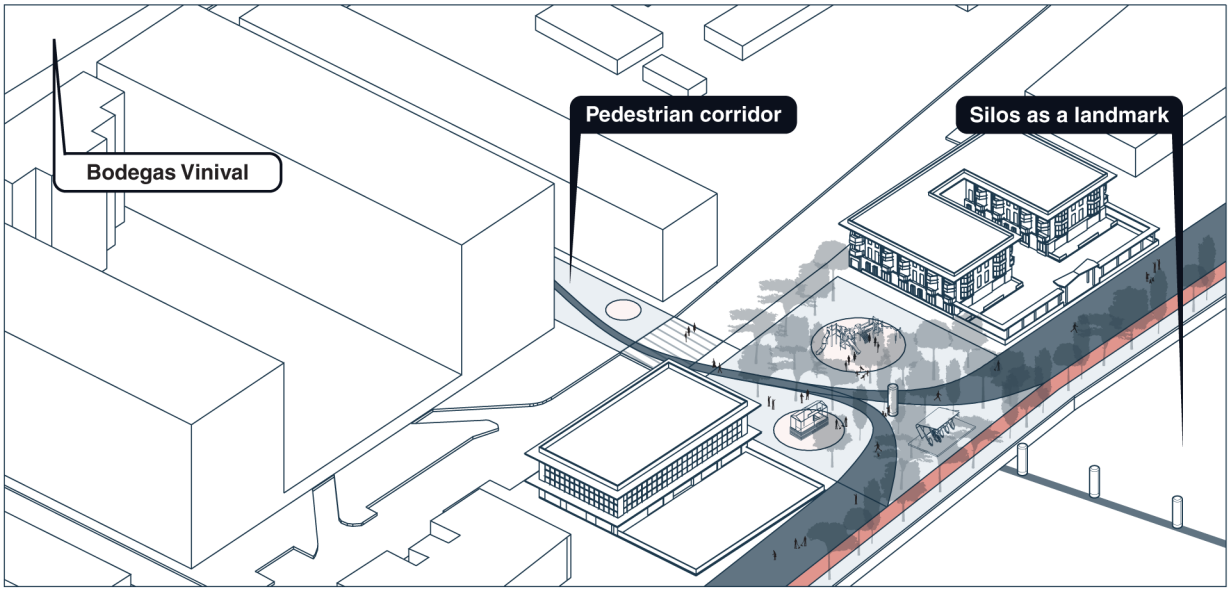
Before

After

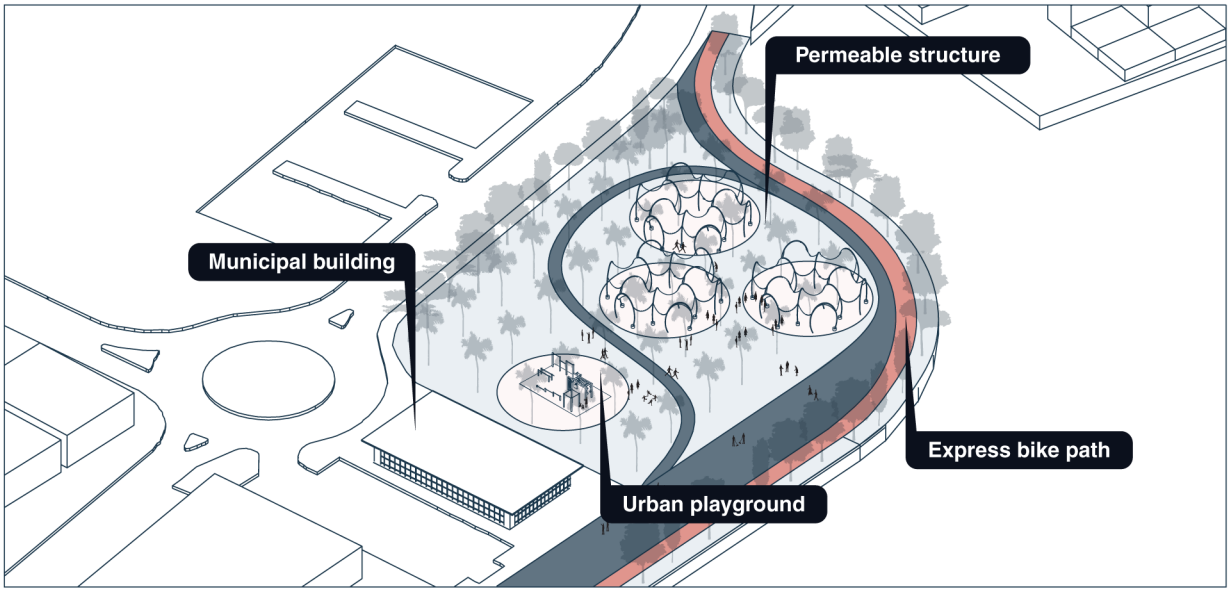
Central beach point



Natural funnel to Bodegas Vinival



El Palmeral park / night club



Back to L’Horta
as an answer

1st phase
La Patacona scale

2nd phase

Ex-industrial area scale

3rd phase

Building scale

Ex-industrial area scale:

L'Horta agri-cultural park

After developing the network of public spaces as a urban regeneration strategy of La Patacona, the refunctionalization of the old industrial plots act as the main public space of the system.

Due to its scale and strategic location, it has a metropolitan scope, responding not only to the needs of the population of La Patacona, but also to the rest of the municipality, L'Horta, the city of Valencia and the surrounding municipalities.

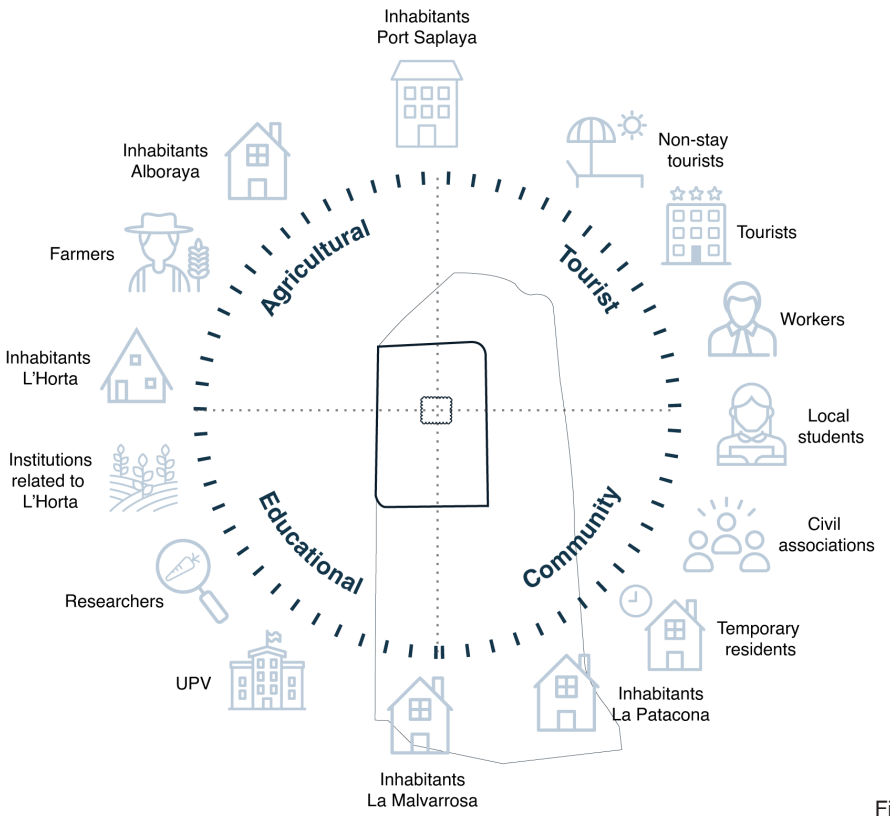


Figure 144. *Users involved in the proposal.* Own work

Cultural and tourism center

Enhance the agricultural productive development based on:

- Promotion of the culture, techniques and traditional knowledge as well as the historical and cultural heritage of L'Horta.
- Promotion of the scientific research and technological development in the agroalimentary sector.
- Research and development of contemporary agricultural techniques (e.g. organic farming) and local species.
- Provide a space for community agricultural integration and innovation.
- Take advantage of the proximity to the city of Valencia and in turn with L'Horta, to establish both physical and functional links with institutions such as the UPV

Research and innovation center of the Mediterranean Huerta

- Revitalize the area through a multifunctional center that allows the socio-cultural development.
- Recognize and revalue the assets and values of the municipality (heritage elements, agricultural products as the tigernuts and the "horchata" and the gastronomy in general) improving the economy of the population.
- Take advantage of the Patacona as a tourist area, and at the same time, as a northern access to the city of Valencia and the end of the promenade, as a venue for larger scale events such as seasonal festivals.

Cultural and tourism center

Educational program

Public library	1000 m²
Workshops / community rooms	1000 m²

Cultural program

Auditorium / theater	1000 m² / 500 m²
Exhibition areas	500 m²
Cultural square / Outdoor amphitheatrical space	2500 m²
Recreational areas	2000 m²
Community gardens	1500 m²

Touristic program

L'Horta de Valencia museum	500 m²
Museum of Horchata	
Exhibition gardens / living museum	1500 m²
Seasonal food fairs / festivals	

Productive program

Market 0km (Local products)	2000 m²
Gastronomic market / Restaurants (local products)	1000 m²
Rental of urban gardens	
Coworking spaces	500 m²
Stores	1000 m²

Accomodation

Housing / co-living	
Hotel / Aparthotel	10.000 m² (350 p.)
	2000 m² (70 p.)

Complementary program

Health center	1000 m²
Childcare services	500 m²
Supermarket	800 m²
Pharmacy	300 m²
Gym	500 m²
Services	
Parking	around 200

Agricultural research center

Center of documentation and diffusion of L'Horta

Agriculture education center for traditional and organic farming

Research and innovation center of L'Horta

Educational program

Specialized library	
Classrooms / study rooms	

Support facilities

Auditorium	
Exhibition areas	
Meeting / multipurpose rooms	500 m²
Archive	300 m²

Research program

Laboratories	750 m²
Work areas / offices	500 m²
Greenhouses / Experimental gardens	2000 m²

Complementary program

Bar / coffee shop / restaurant	500 m²
Technical areas	
Services areas	

TOTAL BUILT around 25.000m²

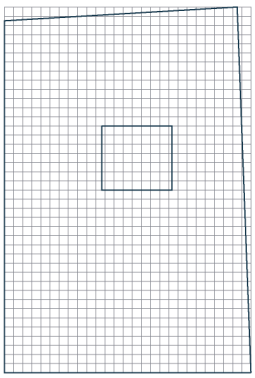
Hotel

Parking

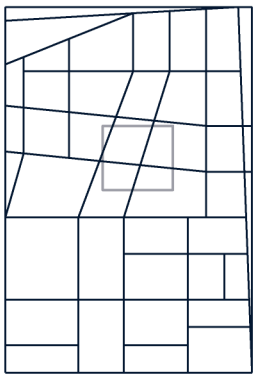
Figure 145. *Agricultural occupation of La Patacona in 1945.*(Institut Cartogàfic Valencia, Vol: 1945 Vol Americà sèrie A (1945-1947))

Figure 146. *Current occupation of La Patacona* (Institut Cartogàfic Valencia, Vol: 2020 Comunitat Valenciana)

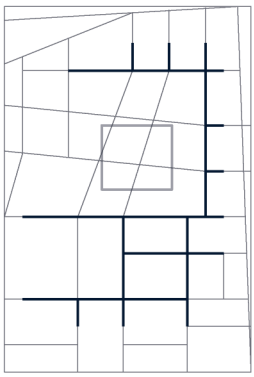
Plot concept



Organizing grid



Old agricultural grid



Reinterpretation

1 2 3

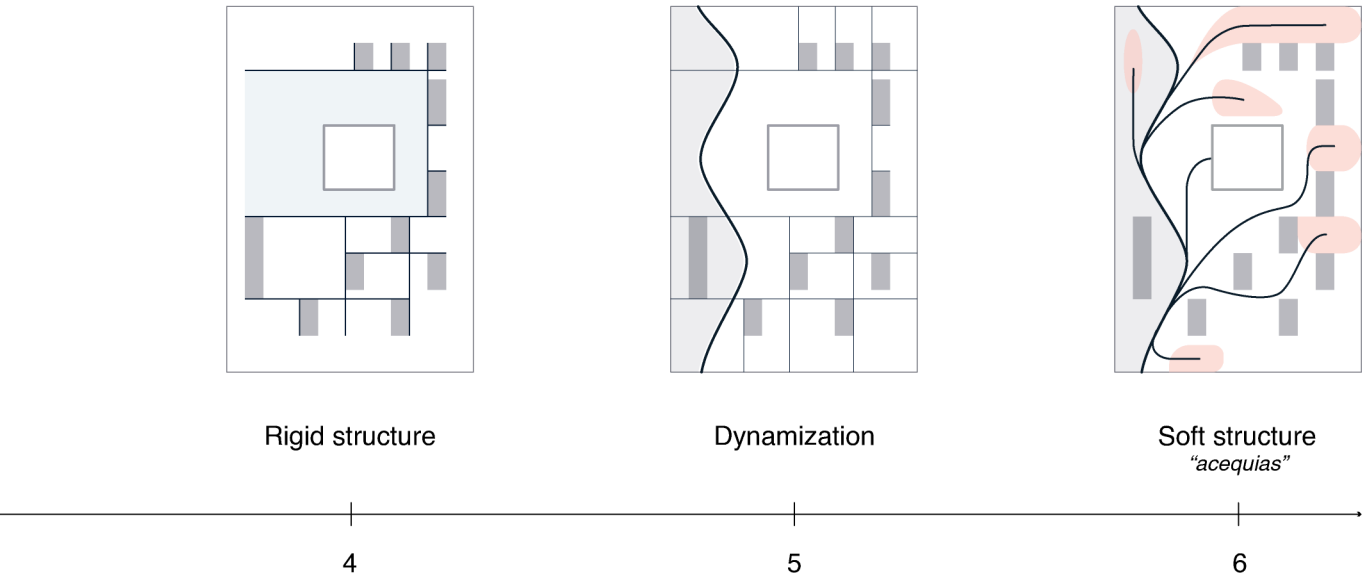


Figure 146. *Design process of the L'Horta agri-cultural park.*

Main strategies

The layout of the buildings follows the rigid grid and the proposed program in response to the current characteristics and needs of the context. (Figure 147).

Four building typologies are defined that do not exceed the height of the Bodegas, maintaining a more humanized scale and reinforcing the hierarchy of the main building as the core of the system. (Figure 148)

Moreover, the orientation of the buildings is defined by the east-west axis on the longest facades, responding to the climatic conditions of the site. (Figure 149)

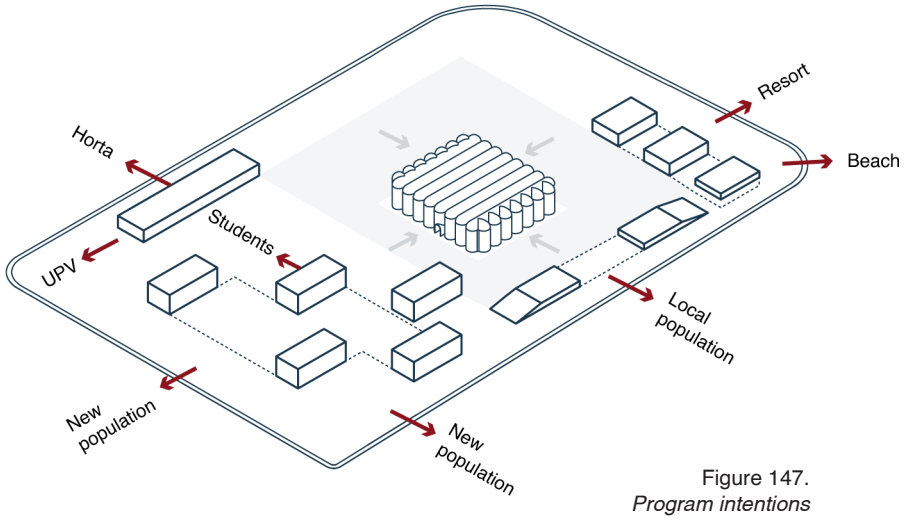


Figure 147.
Program intentions

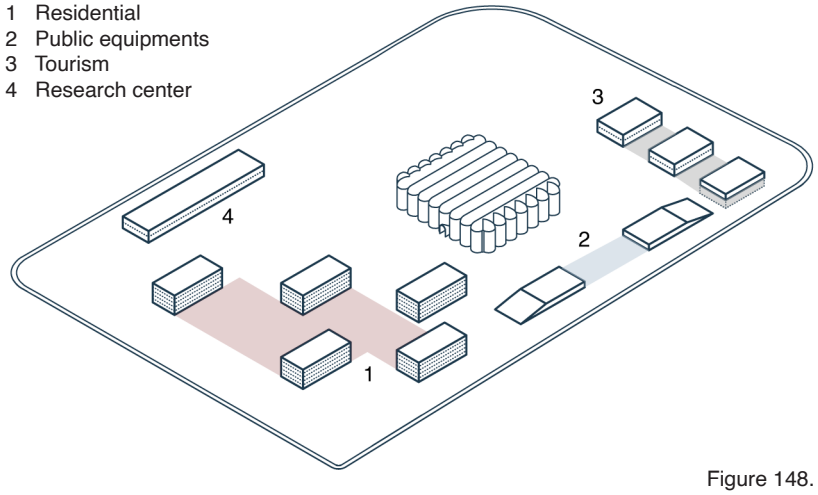


Figure 148.
Building typologies

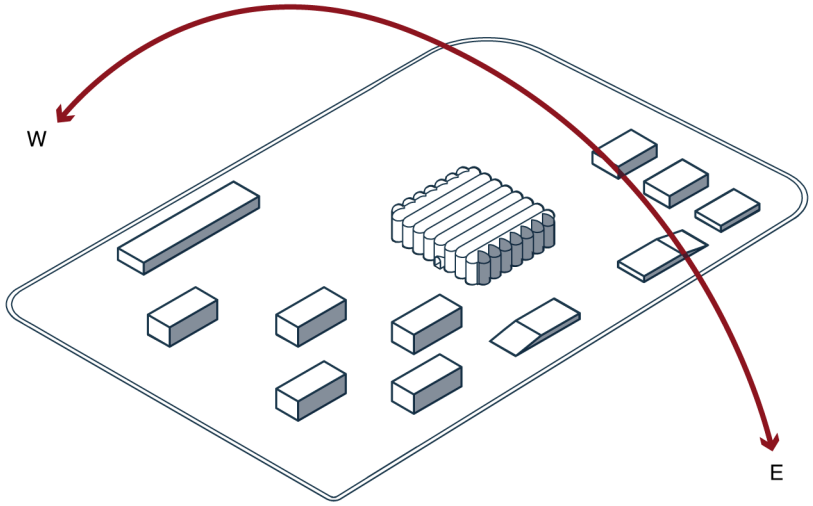


Figure 149.
Building orientation

In the other hand, the soft grid composed by the "acequias" or paths, is defined from the existing urban grid of the context, generating the main squares of the proposal as catchment spaces. (Figure 150)

At the same time, the Horta-beach axis defines the main cultural uses of the park, with the community plaza, the Bodegas as a cultural hub and the open-air amphitheater. (Figure 151)

Then, the topography design reinforces the existing basement of the building, enhancing its hierachy and creating the amphitheater and natural terraces that surround the building.

Moreover, the topography is also used as a natural barrier to the road node at the northeast end of the plot, acting also as a space of contemplation towards L'Horta. (Figure 152).

0 "Mother" acequia
1 Mobility acequia
2 Residential acequia
3 Community acequia
4 Tourism acequia
5. Cultural acequia
6. Vinival acequia
7. L'Horta acequia

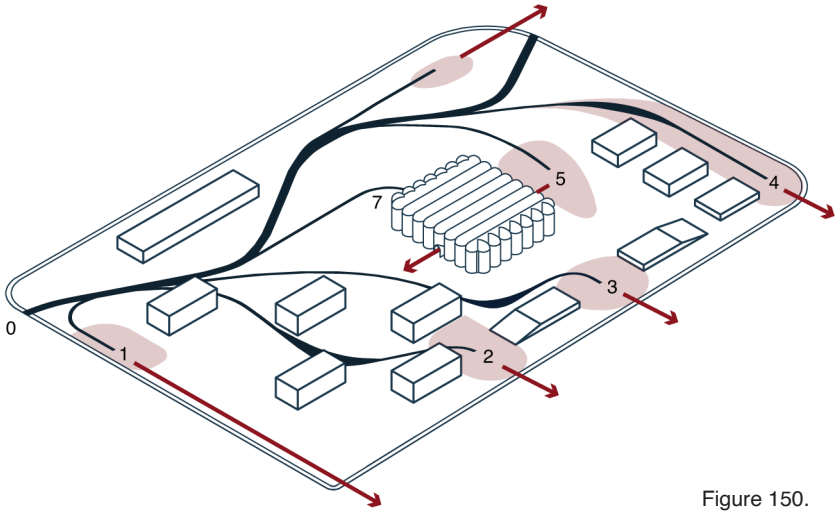


Figure 150.
Natural paths and squares

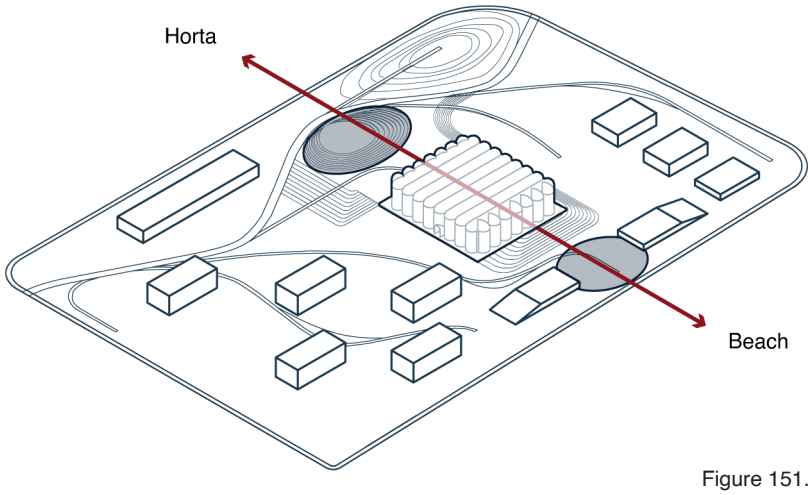


Figure 151.
Cultural axis

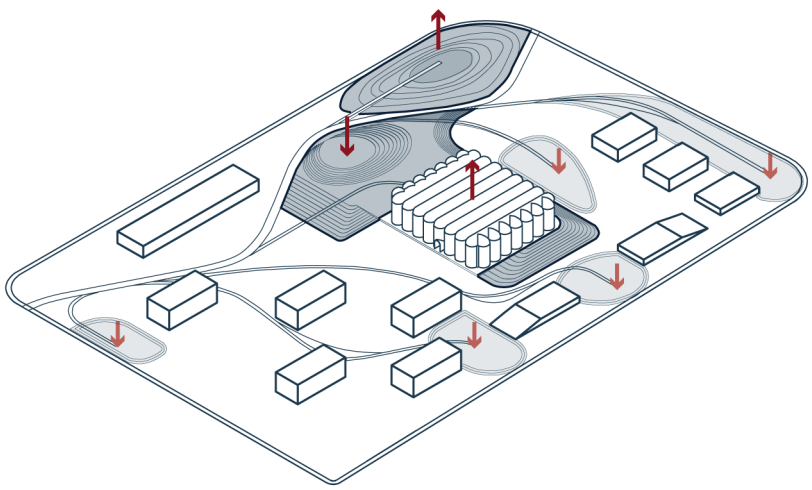


Figure 152.
Topography

Legend

- Main squares
- Secondary squares
- Horta area
- Recreational area
- Interpretative area
- Services area

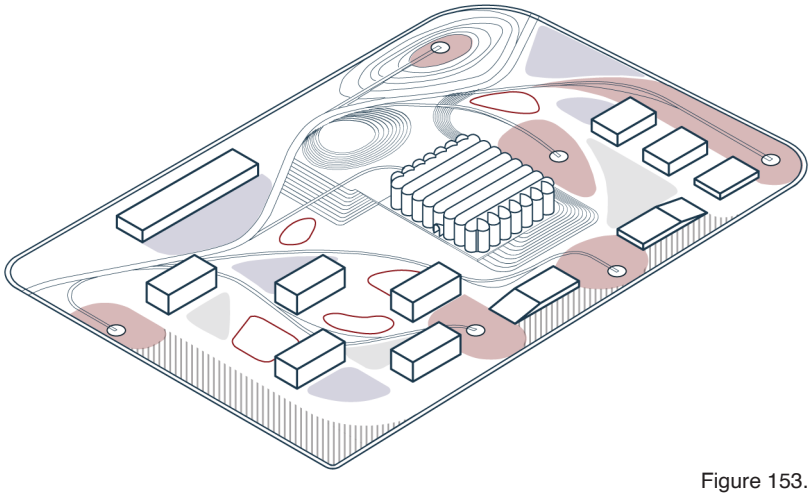


Figure 153.
Areas

Legend

- Vegetation as a path
- Vegetation as a barrier
- Disperse vegetation
- Cultivated area

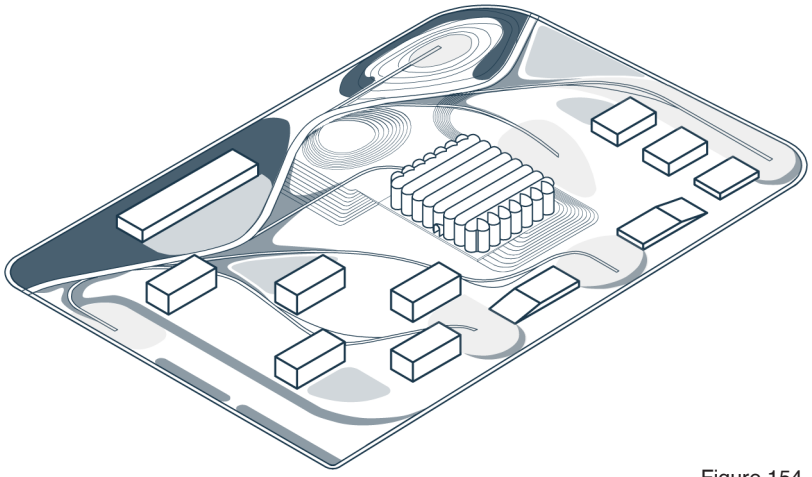


Figure 154.
Vegetation

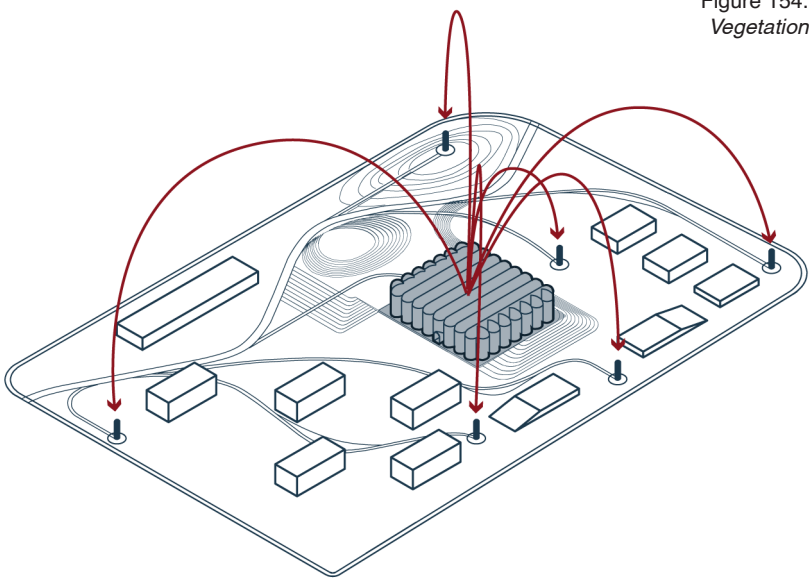


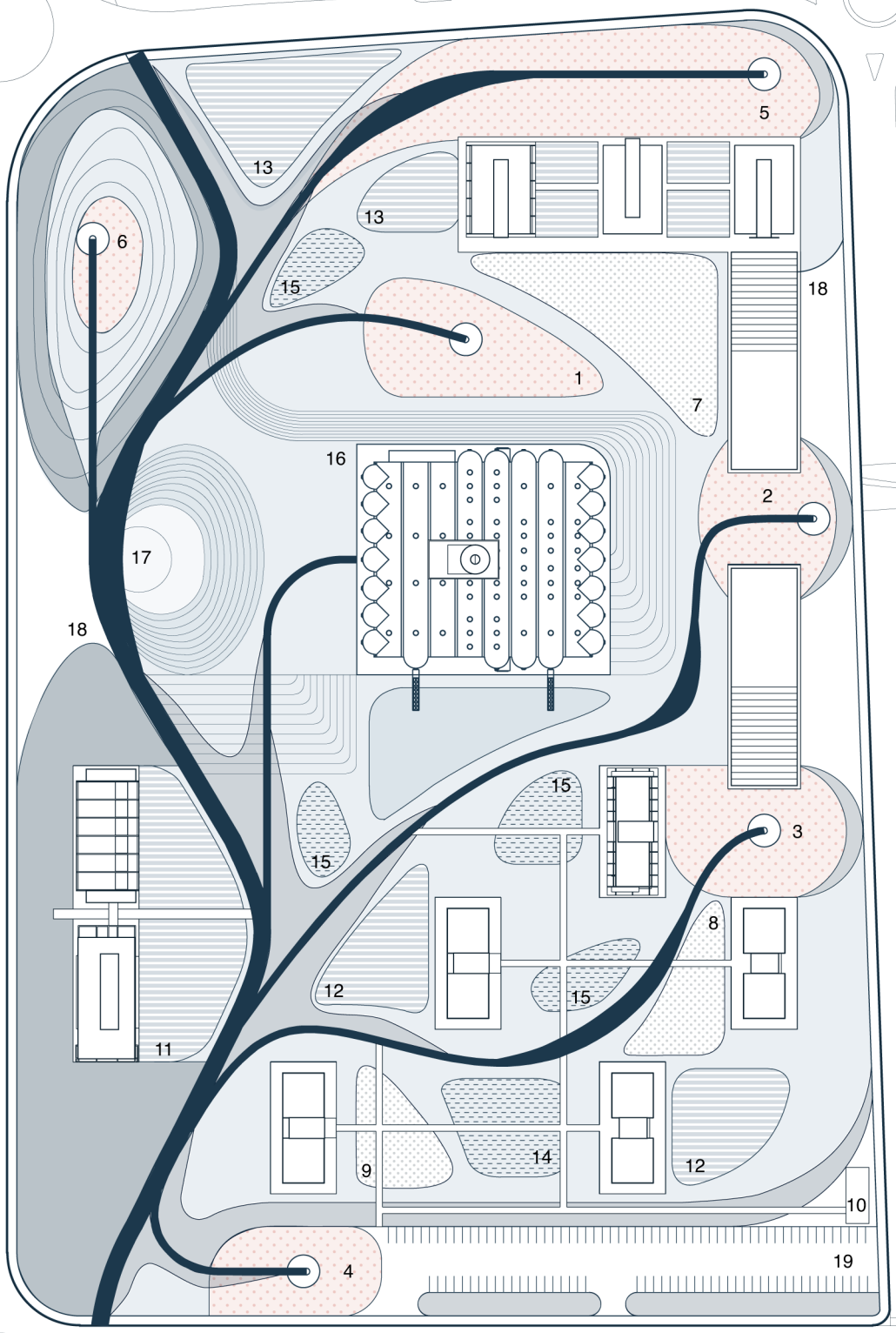
Figure 155.
Silos as a landmarks

From the proposed grid and the location of the buildings, the exterior spaces are defined, generating public areas of diverse character and uses, characterized by the occupancy flexibility. (Figure 153)

On the other hand, the vegetation is used as an approach strategy to the different areas of the park, reinforcing the proposed routes and generating spaces for permanence within them.

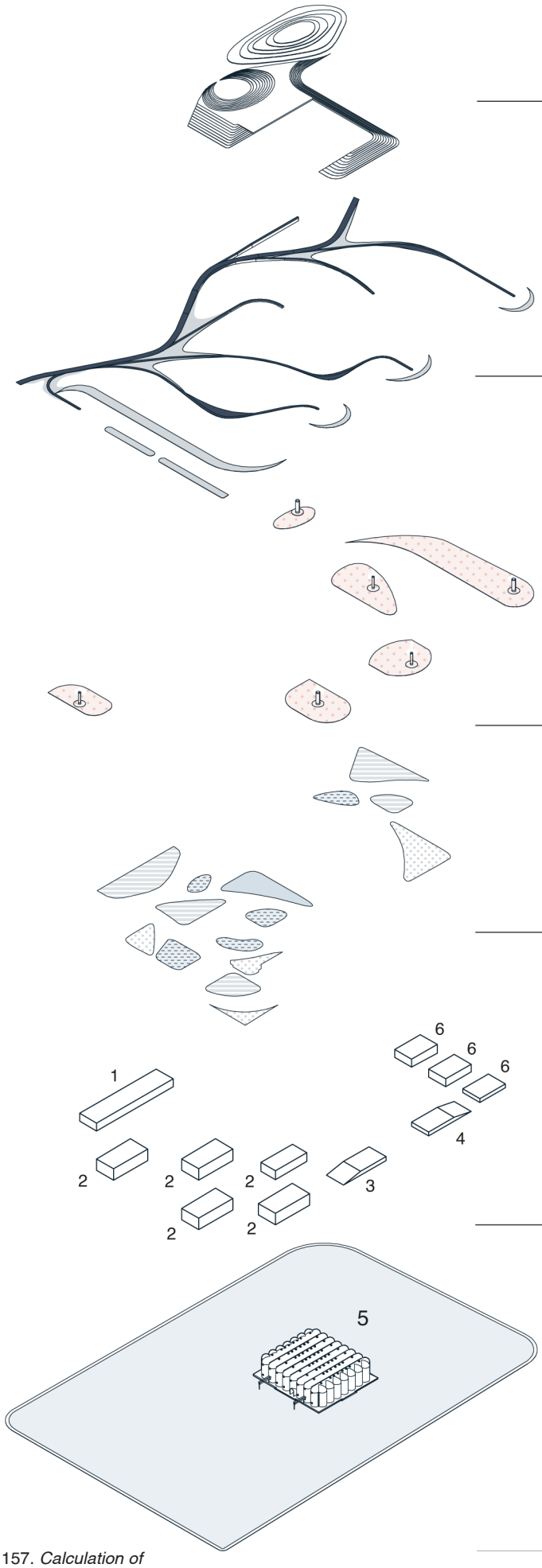
In addition, the vegetation is used as an acoustic and visual barrier towards the context, mainly towards the V-21 highway, generating a densely wooded area that surrounds the Research center. (Figure 154)

Finally, part of the silos of the Bodegas are extracted to be reused as landmarks and cultural devices in the main squares of the park. (Figure 155)



1 Vinival square **2** Community square **3** Housing square **4** Mobility square
5 Touristic square **6** Contemplation square **7** Open-air market / skatepark **8** Supermarket area
9 Childcare park **10** Mobility hub (bus stop, bike parking & rental, charging station, car sharing, taxi)
11 Experimental gardens **12** Community / educational gardens **13** Touristic gardens **14** Sports field **15** Recreative areas (playground, grill area, art installations) **16** Vinival terrace / foyer
17 Open-air amphitheater **18** Services area (loading and unloading) **19** Parking (around 200 pl.)

Figure 156. *External areas program*



Topography 10.180 m2

Main path
Peatonal path
Cycleway
Urban "acequia" (water canal)

Vegetation path

Main squares 12.300 m2

Areas

Horta	6.500 m2
Secondary squares	2.500 m2
Recreatives areas	2.500 m2
Water	1.500 m2

Buildings

1. Research center	3.600 m2
2. Residential	1.200 m2
3. Library	1.000 m2
4. Market	1.000 m2
5. Cultural hub	5.400 m2
6. Commerce / tourist	3.600 m2
Total Built	10.400 m2

Plot 101.913 m2

Figure 157. *Calculation of m2 of areas and buildings.*

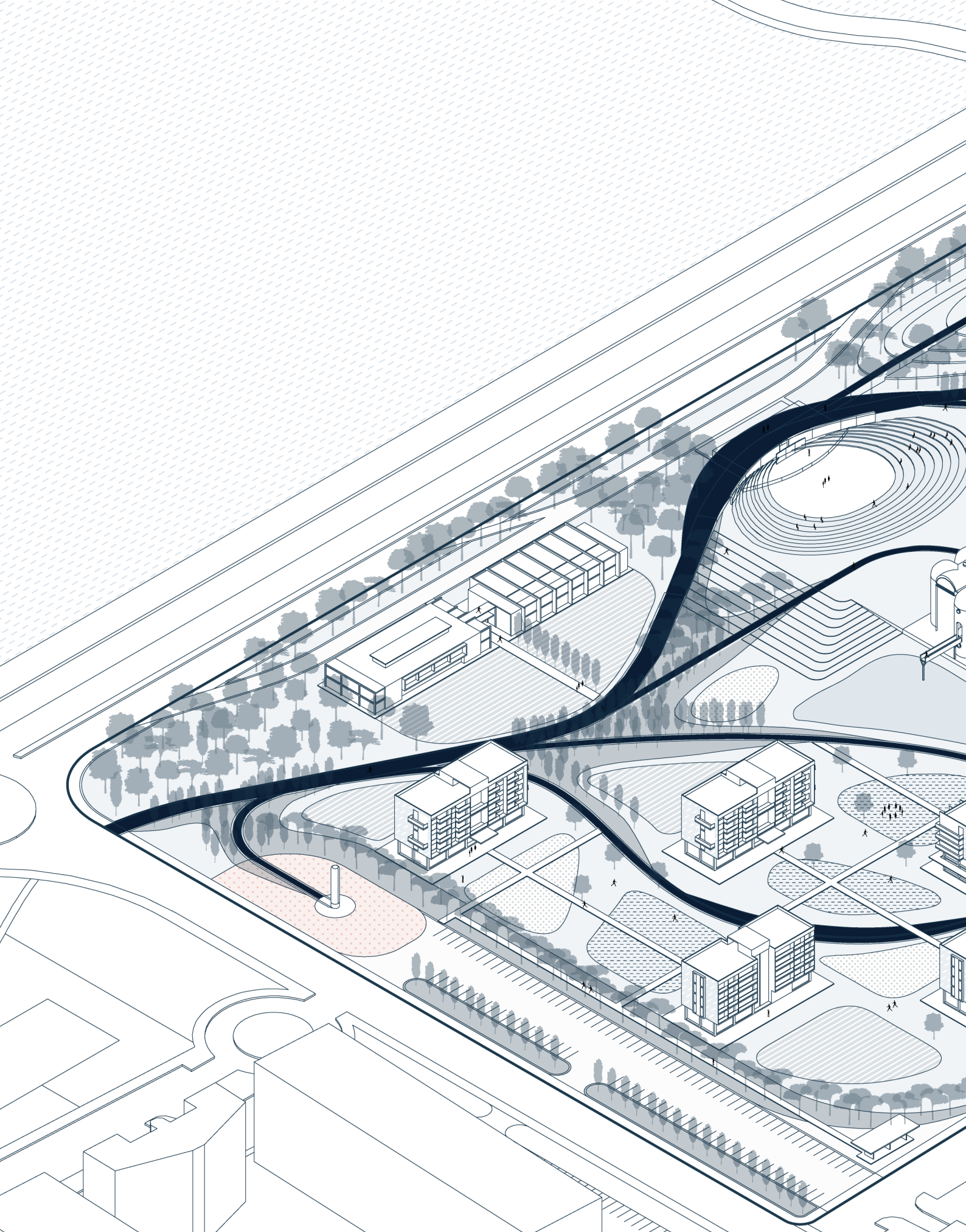
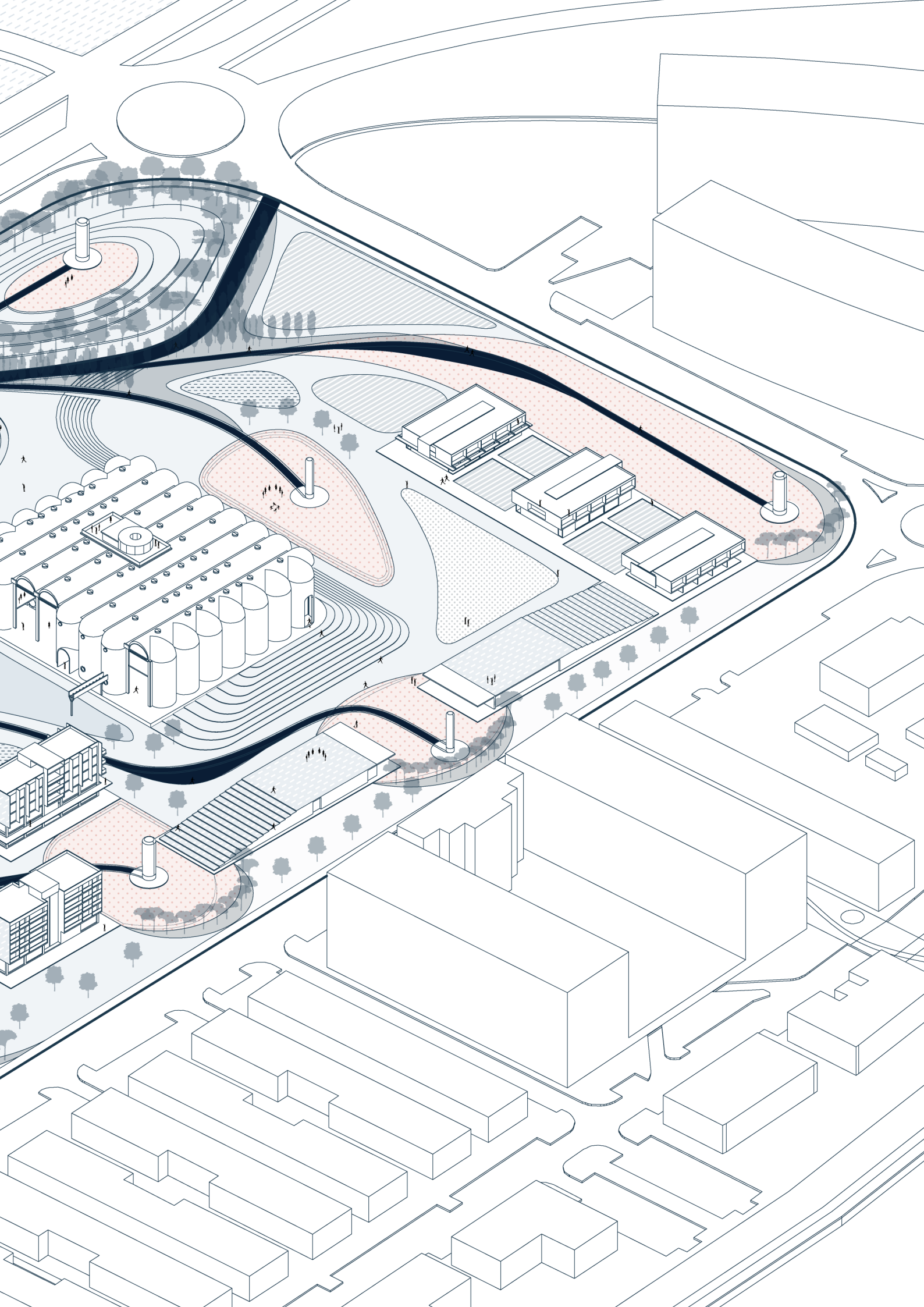
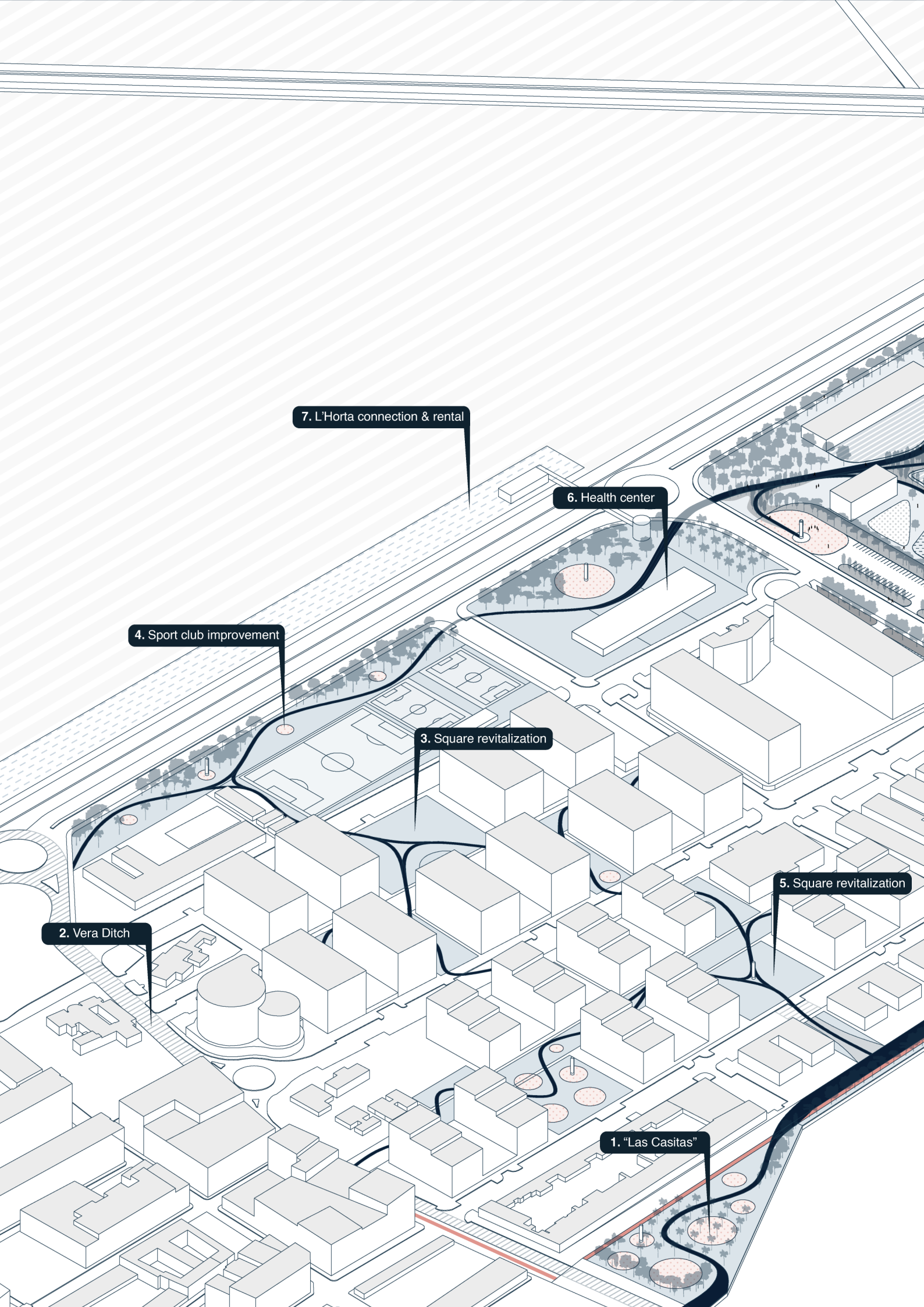


Figure 158. *Axonometric masterplan "L'Horta agri-cultural park"*




7. L'Horta connection & rental
6. Health center
4. Sport club improvement
3. Square revitalization
5. Square revitalization
2. Vera Ditch
1. "Las Casitas"

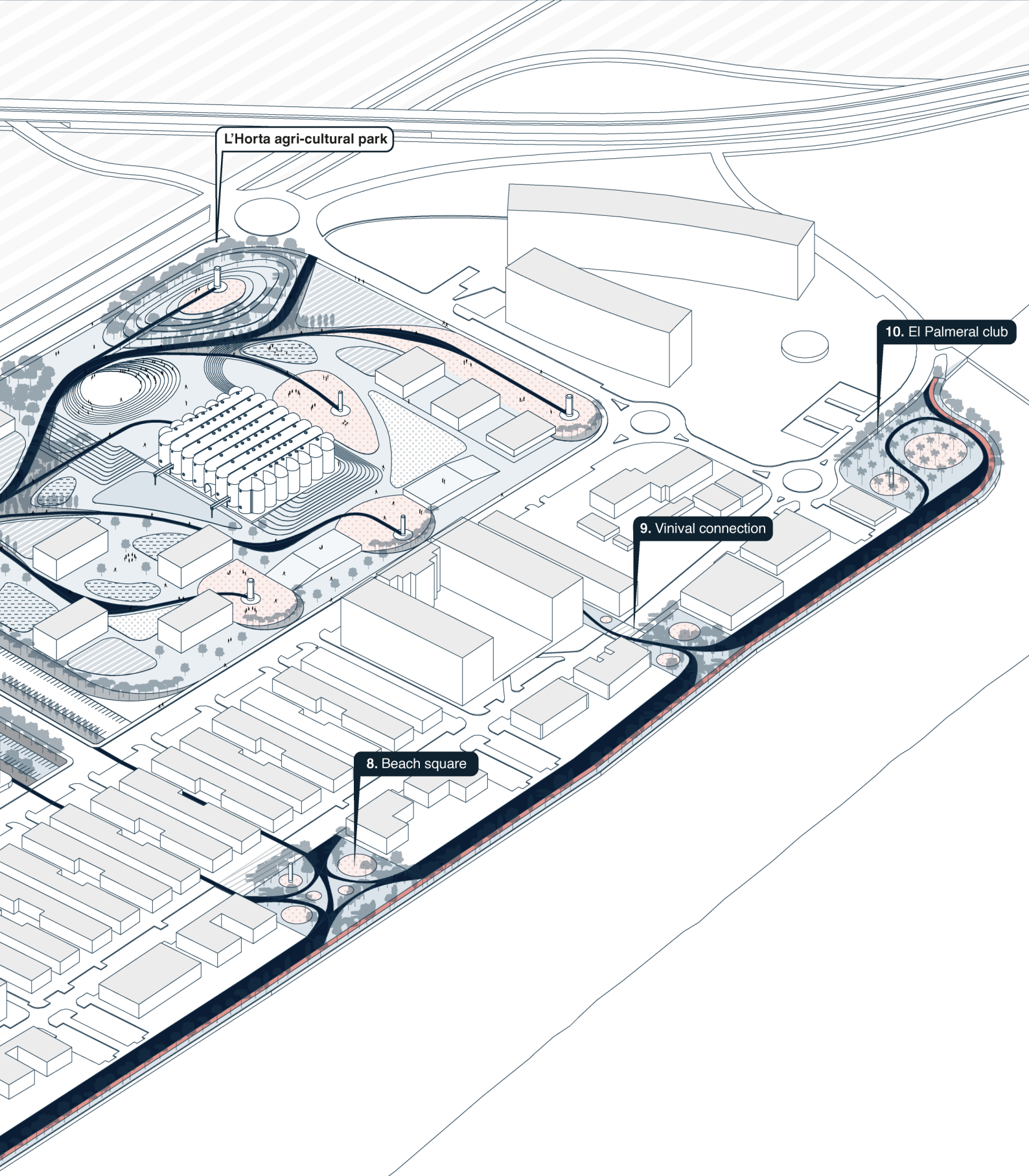


Figure 159. *Axonometric masterplan "La Patacona"*

Environmental strategies

Green parks are one of the most sustainable urban ways to control heat island and pollution since vegetation, besides producing oxygen and controlling temperature and humidity, helps decomposition organic chemicals present in the urban environment.

In this order of ideas, about 50% of the plot is made up of vegetation and permeable soils that favor the infiltration of water and its pollutants, helping to reestablish a more natural hydrological balance. Meanwhile, the vegetation is used as a road and railway sound barrier.

On the other hand, the main squares of the park are slightly excavated, and besides responding to public urban functions, they function as water squares that, in times of rain, retain water and store it in underground storage tanks for reuse.

Since it is a project that aims to connect the figure of L'Horta with the urban area, community gardens are developed to involve the population in the use of the resources of the municipality, not only improve the community economy and produce fresh food but also providing educational, tourism and research opportunities.

The proposed buildings are based on passive architecture by taking advantage of the site's climatic conditions. For example, the east-west facades are permeable, allowing natural lighting and ventilation, while the south facade has green walls that contribute to temperature regulation.

Finally, the buildings with the highest energy demand have photovoltaic panels on their roofs that provide clean and ecological energy.

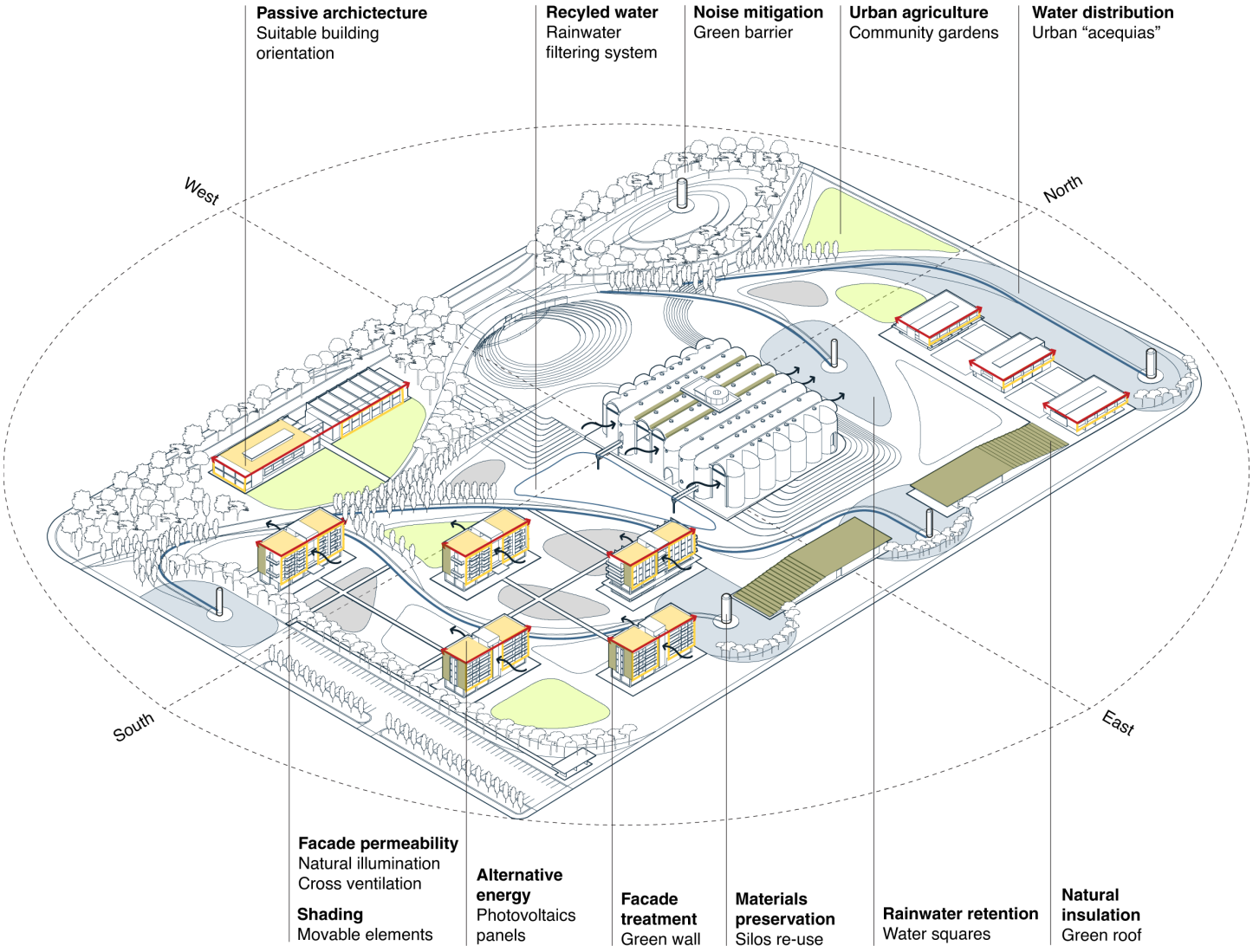


Figure 160. *Sustainable strategies.* Own work

Vegetation

Vegetation is used as an environmental strategy to mitigate the phenomenon of heat islands, absorbing part of the heat of the urban environment and reducing the temperature both at a microclimatic scale and at a larger scale. In turn, green areas reduce the effects of urban pollution by absorbing noise, trapping dust, and recycling carbon dioxide present in the environment.

All this directly influences the inhabitants' quality of life by creating comfortable environments for coexistence.

On the other hand, vegetation is used as a compositional and experiential strategy. It is organized as elements of an approach to the diverse areas of the park, reinforcing the connections and guiding the user through paths of different colors, scents, and scales.

The Valencian Community has one of the highest plant biodiversity in Spain, as its species represent approximately 20% of all Spanish diversity.

At the same time, the flora of the Valencian Community is characterized as a biome of Mediterranean forests and scrublands, developed in a climate characterized by mild winters, dry summers, autumns, and springs with abundant rainfall.

However, due to the diversity of climatic environments and the introduction of crops in the Middle Ages, the Valencian Community stands out for the presence of citrus fruit trees, which also characterize part of the agricultural history of L'Horta de Valencia.

Citrus Aurantium

Origin: Asia, cultivated since ancient times in the Mediterranean basin.
Type: evergreen tree
Height: up to 8 meters
Climate: temperate
Uses: tree-lined streets

Quercus Ilex

Origin: Iberian Peninsula
Type: marcescent tree
Height: up to 20 meters
Climate: Mediterranean
Use: natural spaces

Platanus Hispanica

Origin: Mediterranean, southeastern Europe and southwestern Asia.
Type: deciduous tree
Height: Up to 30 meters
Climate: Temperate
Use: widely used as a shade tree in streets and landscaped walkways

Washingtonia robusta

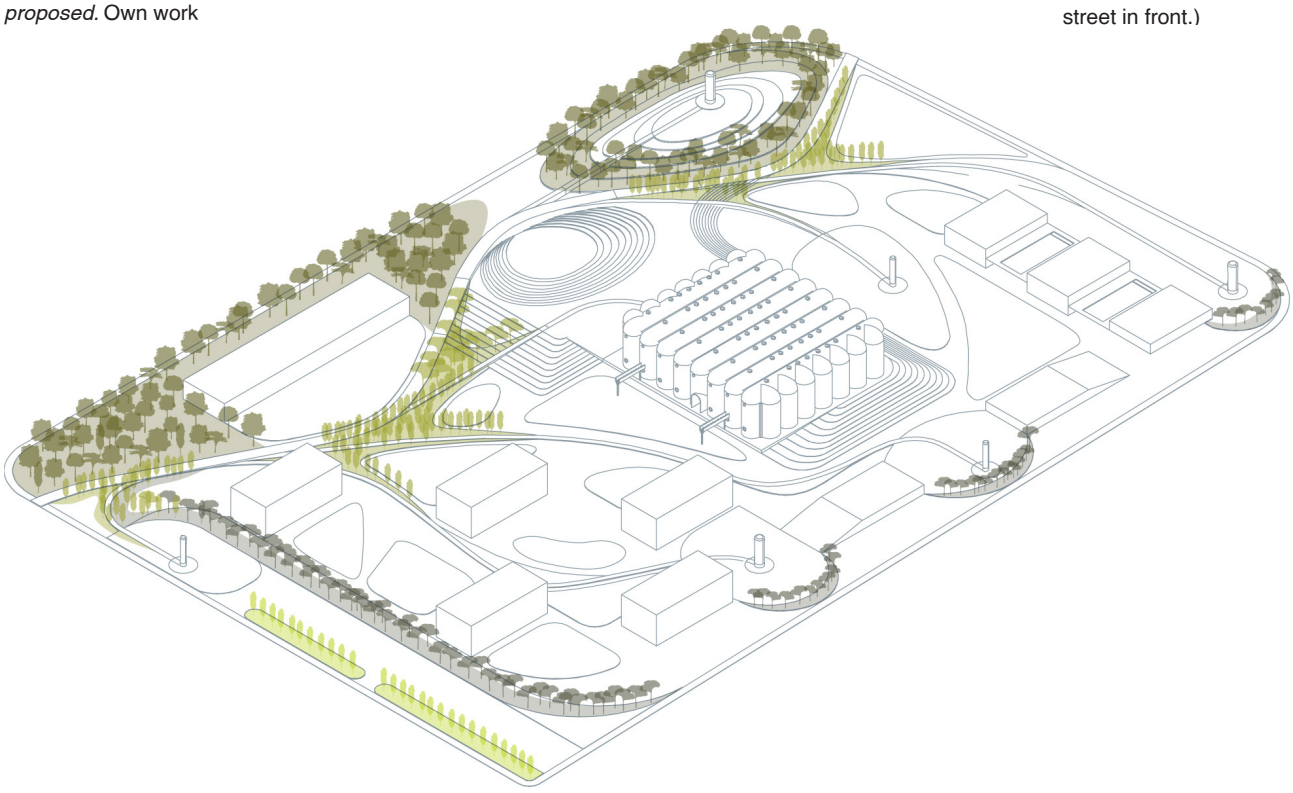
Origin: Mexico
Type: Palm tree
Height: up to 36 meters
Climate: desert ecosystems
Use: ornamental tree in parks and gardens
* Rustic specie that is very tolerant of transplanting.

Figure 161. *Technical data of the main trees used in the proposal.* (Generalitat Valenciana, n.d.)

Legend

- Citrus aurantium & others citrics trees
- Quercus ilex & other evergreen trees
- Platanus hispanica & other deciduous trees
- Washingtonia robusta (transpantation of the existing ones in the street in front.)

Figure 162. *Main tree species proposed.* Own work



Surfaces & materials

Meadow
Albedo: 0.25
Reduce the run-off phenomenon
Perform a thermal regulation function near buildings

Draining flooring
Albedo: 0.30
Favor the infiltration of water and pollutants

Cultivated area
Albedo: 0.20 - 0.75
Contributes to wastewater management
Stops erosion and improves soil quality

Loamy soil
Albedo: 0.15
Favor the balance between precipitation, evaporation, feeding the aquifer and surface run-off

Cast-in-site concrete
0.35 - 0.60
Economy and ease of maintenance

Concrete in slabs/tiles
Albedo: 0.35 - 0.60
Economy and ease of maintenance

Stoneware in slabs/tiles
Albedo: 0.20 - 0.30
Resistance and durability in public spaces

Anti-trauma paving
Albedo: 0.4

Legend

- Meadow
- Draining flooring
- Cultivated area
- Loamy soil
- Cast-in-site concrete
- Concrete in slabs/tiles
- Stoneware in slabs/tiles
- Anti-trauma paving
- Wood
- Green roof
- Green walls
- Water

Resistant to atmospheric agents, chemicals UV rays, as well as easily washable.

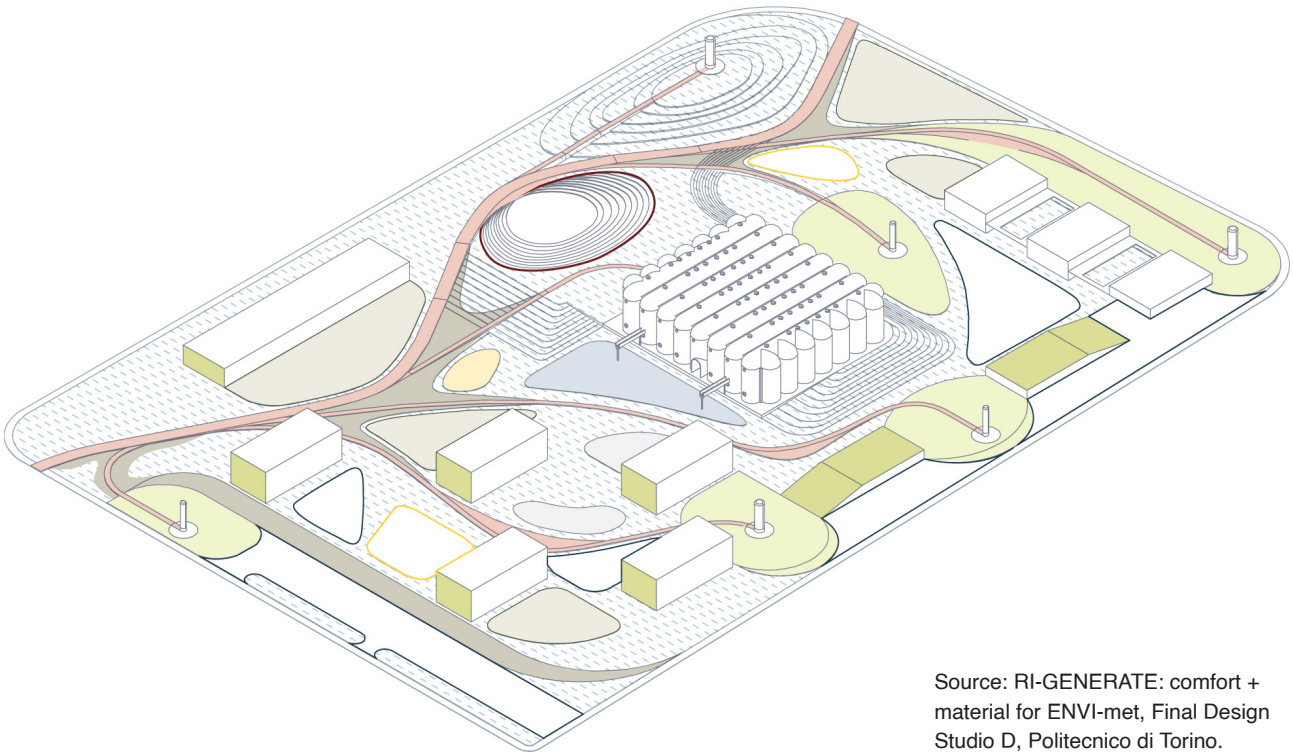
Wood
Albedo: 0.25 - 0.40
May not require foundations, being self-supporting and removable.

Green roof
Albedo: 0.25
Absorbes rainwater and provides insulation

Green walls
Albedo: 0.25
Improve insulation with the reduction of heat loss from buildings to the outside

Water
Rainwater collection and re-use

Figure 163. *Surfaces and materiales proposed*. Own work



Source: RI-GENERATE: comfort + material for ENVI-met, Final Design Studio D, Politecnico di Torino.

Silos re-use

Among the sustainable strategies of the proposal, it is proposed the conservation, recovery and reuse of the metal deposits inside the winery building.

Part of them are preserved inside the building, to be reused as part of the architectural program, while those extracted by opening the facades of the building, are used as urban devices within L'Horta agri-cultural park and also, around the network of public spaces proposed for La Patacona.

The silos are originally made of steel sheet, so their exposure to air causes the oxidation and subsequent corrosion of the material, requiring the addition of anti-corrosion coatings.

For this, based on **ISO 12944-5:2019** *(Paints and varnishes - Corrosion protection of steel structures by protective paint systems),* the material to be used is determined within the corrosivity category C3, corresponding to urban and industrial atmospheres with moderate levels of sulfur dioxide and coasts with low salinity. (figure 164)

Corrosivity category	Exterior environment
C1 C2	Rural areas, low pollution
C3	*Urban and industrial atmospheres, moderate sulphur dioxide pollution, coastal area with low salinity*
C4	Industrial and coastal areas with moderate salinity
C5-I	Industrial areas with high humidity and aggresive atmospheres
C6-M	Coastal and offshore areas with high salinity

Figure 164. *Corrosion classification and selection of coating system according to the standard ISO 12944-5:2019*

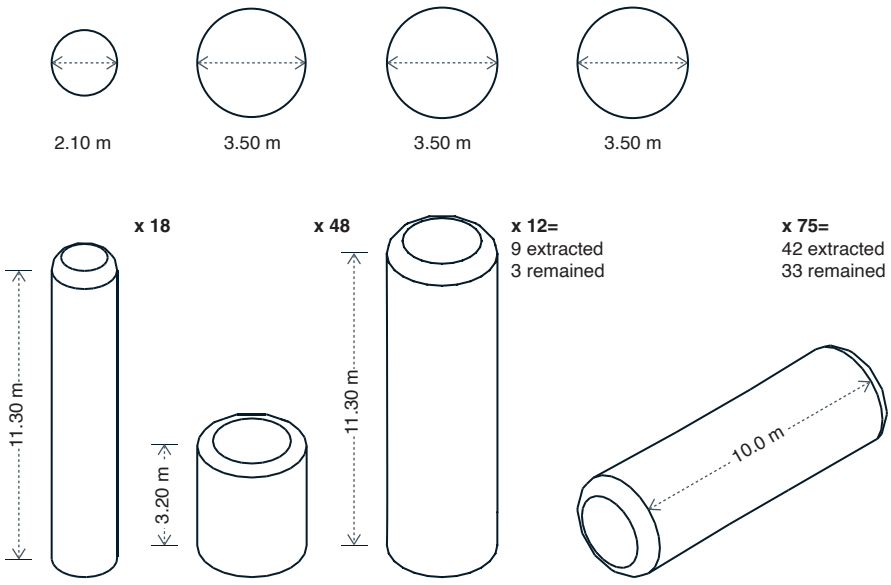


Figure 165. *Inventory of silos to be extracted and reused. Own work*

However, the surfaces of the silos must be previously prepared from surface cleaning and mechanical anchoring to obtain a greater roughness that in turn favors the adhesion of the paint on the metal. (Hempel, 2019).

For this purpose, according to the ISO 8501-01 standard, the abrasive cleaning method Sa 2 ½ "Very thorough blast-cleaning" is proposed, due to the current degree of deterioration of the metal deposits. (figure 166)

Then, a painting system is proposed that complies with the standard in terms of type of material, thickness and number of layers. The system consists of three coats of coating, the first two epoxy primers, and a final coat of aliphatic polyurethane with pigments of the desired color. (figure 167)

Grade	Abrasive blasting method
Sa 3	Blast-cleaning to visually clean steel
Sa 2 ½	Very thorough blast-cleaning
Sa 2	Thorough blast-cleaning
Sa 1	Light blast-cleaning

Figure 166. *Standard surface preparation grades for primary surface preparation by abrasive blasting methods according to the ISO 8501-1* (Hempel, 2019)

System	Paint type	Thickn.
1	SB Epoxy	120 µm
2	SB Polyurethane	120 µm
3	SB Epoxy	120 µm

Figure 167. *Sample systems corresponding to C3 Corrosivity Category in accordance with ISO 12944* (Hempel, 2019)

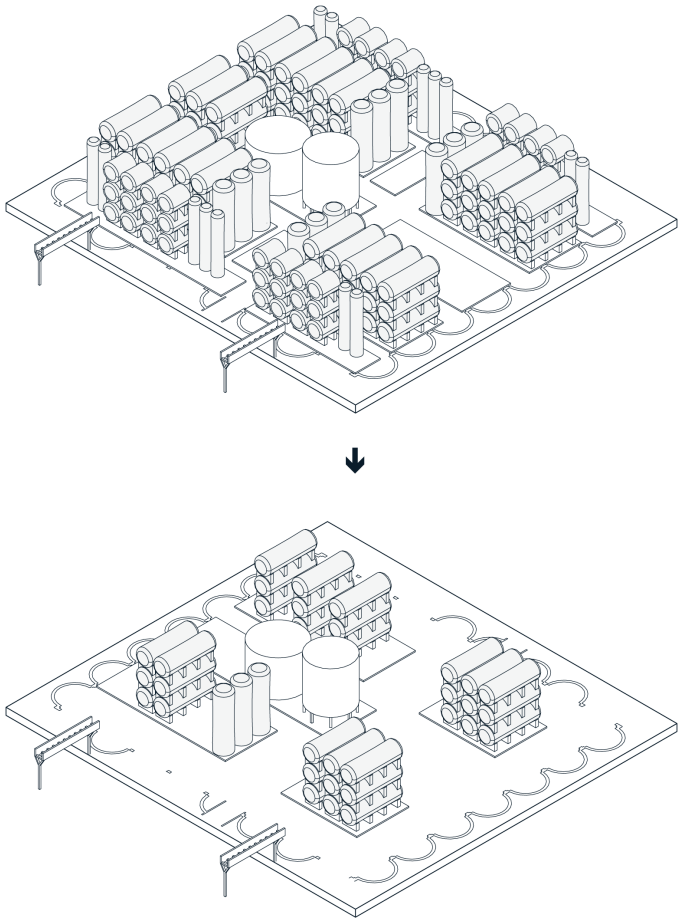


Figure 168. *Existing silos vs. silos to be maintained*. Own work

Silos as cultural devices

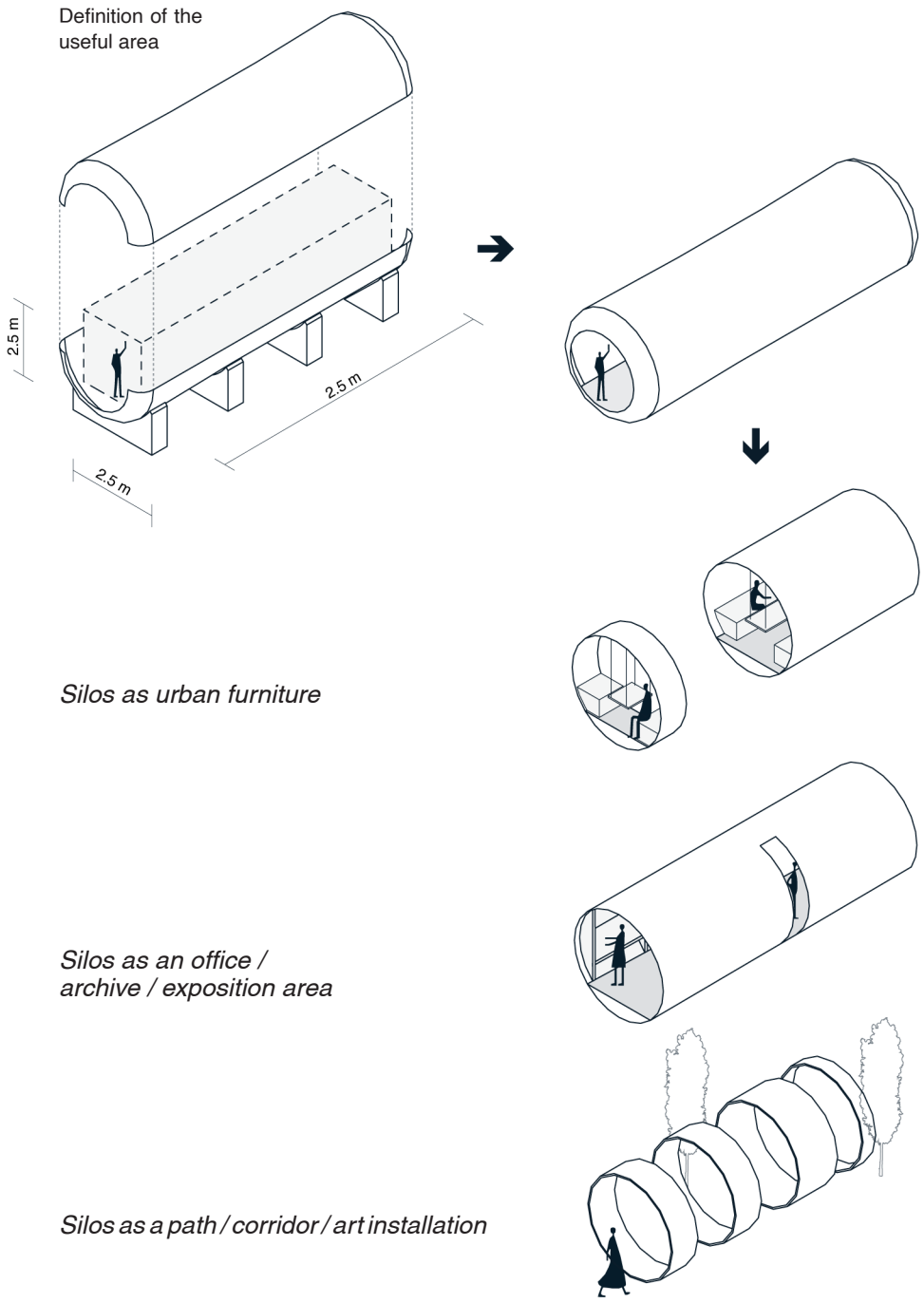
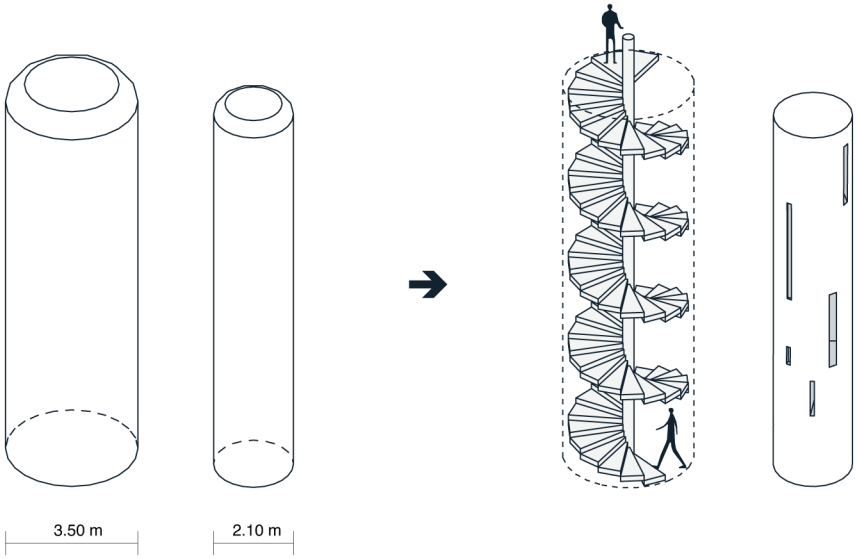
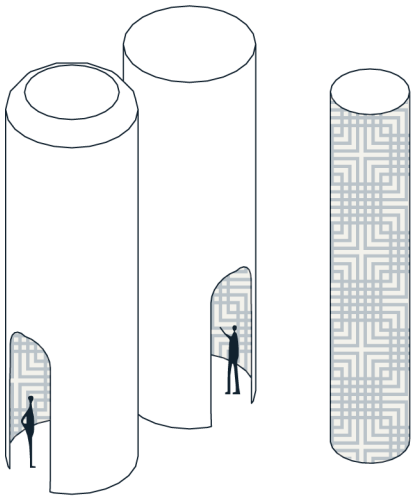


Figure 169. *Proposals for reuse and intervention of horizontal silos.*
Own work

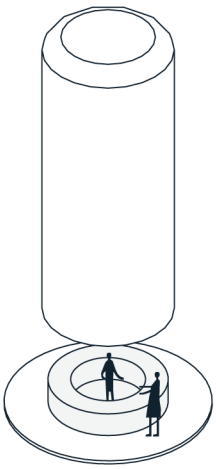


Silos as a viewpoint



Silos as a light installation

Silos as exposition area / sculpture



Silos as a coffee shop / bar / retail / info-point

Figure 170. *Proposals for reuse and intervention of vertical silos.*
Own work

Stakeholders

First, both Alboraya and La Patacona have a large presence of civil associations, mainly of a cultural nature, which generally do not have sufficient scope due to a deficit of adequate spaces for their development or a limited diffusion of their activities. L'Horta agri-cultural park functions as a meeting place for these associations.

On the other hand, the Research Center maintains a close relationship with the Universidad Politecnica de Valencia and with several programs that support the dissemination and conservation of L'Horta de Valencia.

In addition, there are a large number of public and private institutions that have been working for L'Hort for many years, allowing the possibility of establishing a network of stakeholders for the promotion and preservation of L'Horta de Valencia.

Valencia

Per L'Horta
Centre d'Estudis de l'Horta Nord
La Universitat d'Estiu de L'Horta
LA UNIÓ de Llauradors i Ramaders
Asociación Valenciana de Agricultores (AVA)

Alboraya

Professional Association of Artisan "Horchateros"
Centre de iniciatives turístiques d´Alboraia
Cultural association Peña "El Parke de Alboraya"
Cultural association "La Xunsa"
Cultural association LLiber-Art
Civic and cultural association of Port Saplaya
Cultural association Llaurant Cultura
Cultural association Club de L'Horta
Gastronomic association Els Amics
Association L'Alqueria de L'Horta
Ateneo Alborayense
Cultural association JARANA Cultural association
ROSELLA "cultura i art"

La Patacona

Peña Valencianista del Facebook
Association "Modelistas Valencianos IPMS-CV"
Falla Platja La Patacona-Cami De Vera
Neighbors Association Playa de la Patacona
Valencian Association "DetectoAficionats"
Cultural association Horta, Art i Cultur
Association of traders and businessmen of La Patacona
Cultural and educational association XUEMEI
Disabled Association Alboraya – ADIAL
Alboraya Sick Association

Legend

- Civil associations
- Private companies
- Public institutions
- Government agency
- Citizens

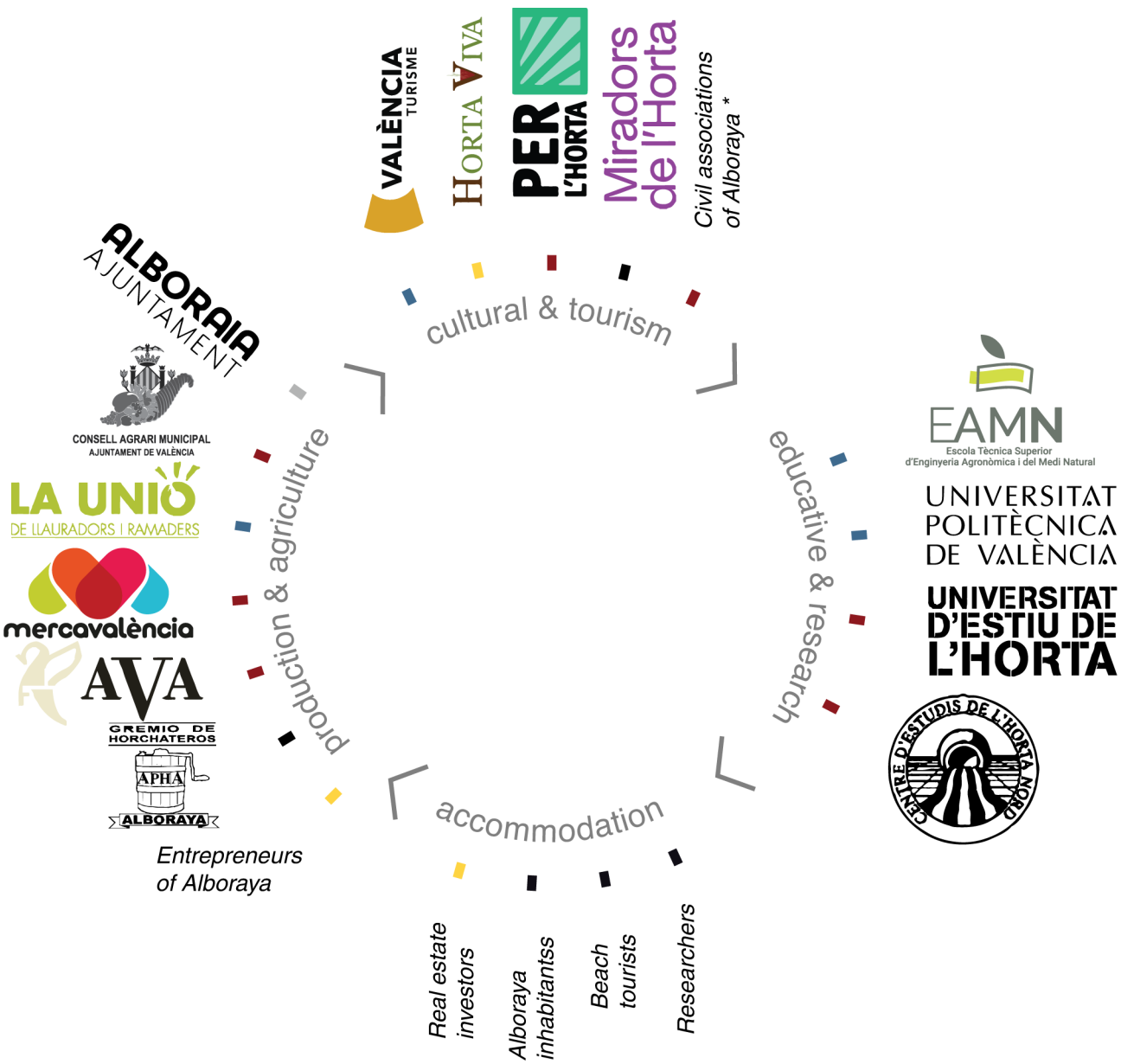


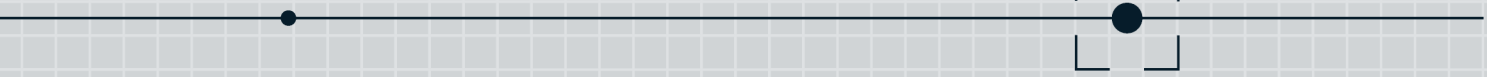
Figure 171. *Main stakeholders of the proposal.* Own work

Back to L’Horta
as an answer

1st phase
La Patacona scale

3rd phase

Building scale



2nd phase

Ex-industrial area scale

Building scale:

Building typologies

After establishing the compositional and functional strategies of the master plan, the building typologies are developed, classified into four main categories: public facilities, commercial / tourism, educational / research, and finally, accommodation.

In order to humanize the scale of the park, most of the proposed buildings do not exceed 8 meters in height, except for the residential buildings that are developed on 4 levels and respond to the demand of new residents, students, and workers that the project aspires to.

As a basic strategy, the ground floors of the buildings develop public uses for residents, students, the community of Patacona, and tourists, being spaces with greater permeability in their facades.

In addition, diverse spatial organizations are proposed that allow the program's versatility, considering the temporary and adaptable occupation of the spaces.

1. Public equipments
1.1 Public library
Community rooms
Workshops
Walkable green roof

1.2. Covered market
Walkable green roof

2. Commerce / tourism
Gastronomic market
Restaurants
Hotel / aparthotel
Terraces

3. Research center
Laboratories
Greenhouse
Classrooms
Study rooms
Meeting rooms
Offices
Specialized library

4. Accommodation
4.1 Residential housing
Childcare center
Supermarket
Pharmacy

4.2. Student housing
Canteen
Shops

4.3. Co-living
Gym
Shops

5. Open-air amphitheater
Backstage and services

6 . Mobility hub:
Bus stop
Bike parking
Bike/car sharing
Charging station
Taxis

7. Cultural hub

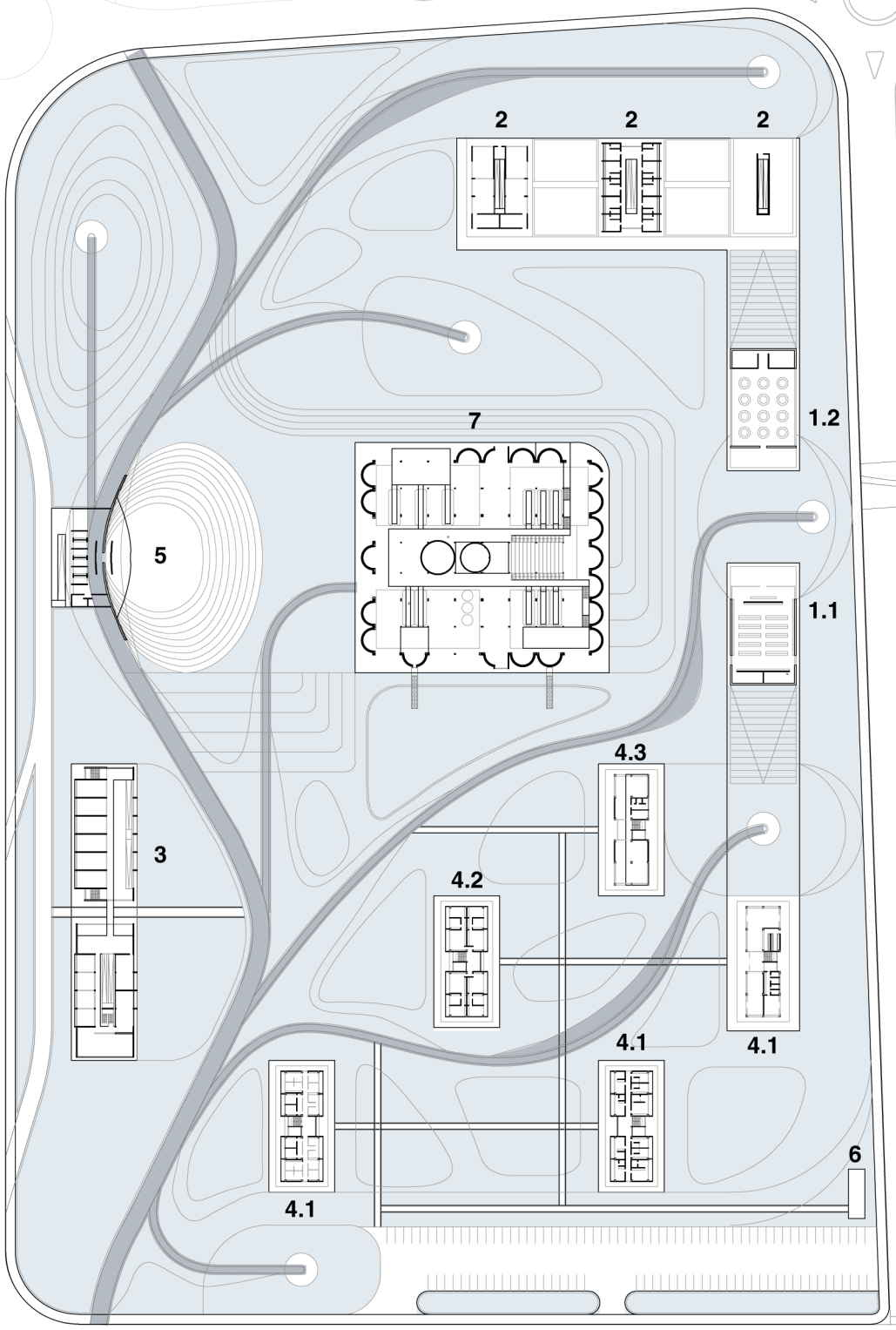
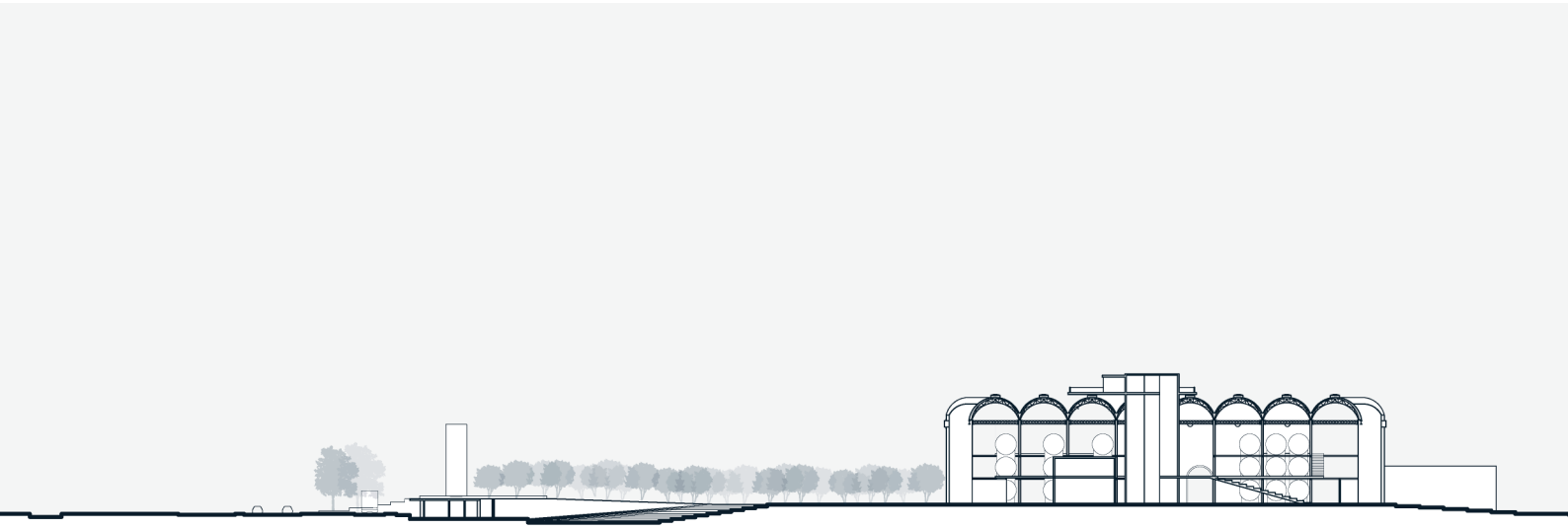
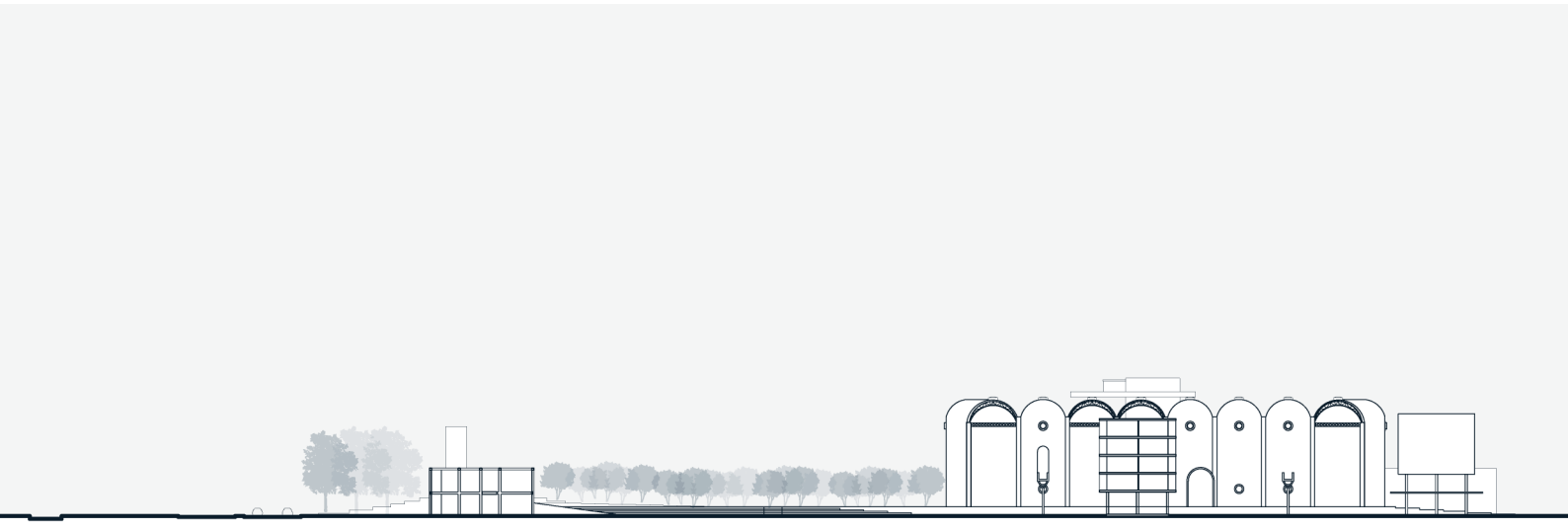
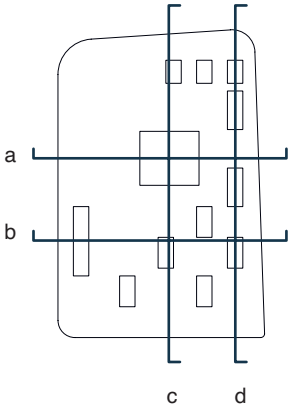


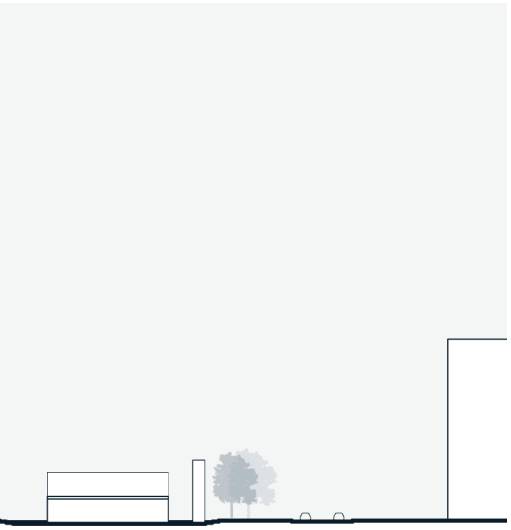
Figure 172. *Proposed building program*


backstage
+ services
entrance
outdoor
amphitheater
foyer
cultural
hub
commerce
hotel


urban forest
research
center
experimental
garden
housing +
chilcare +
housing

Masterplan sections

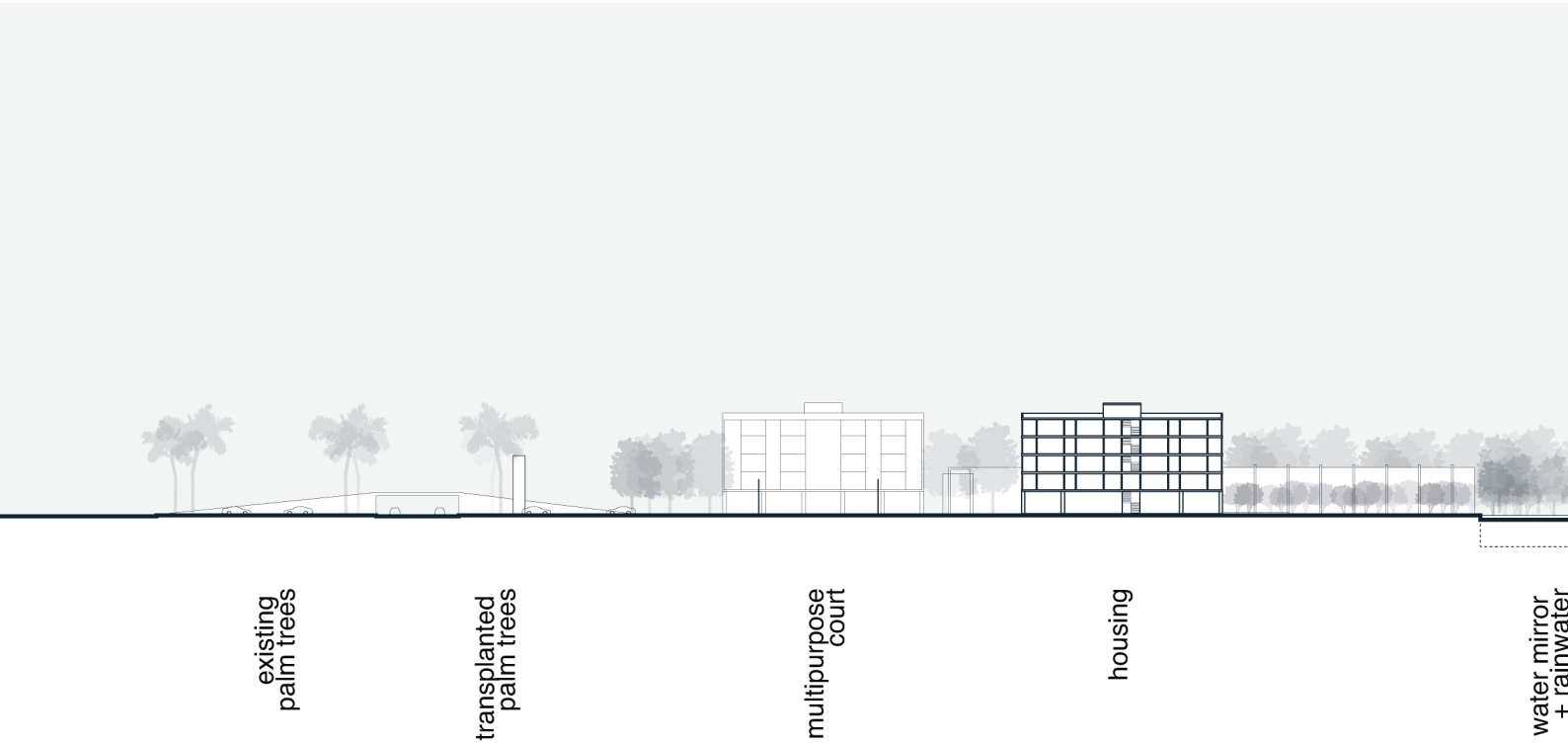




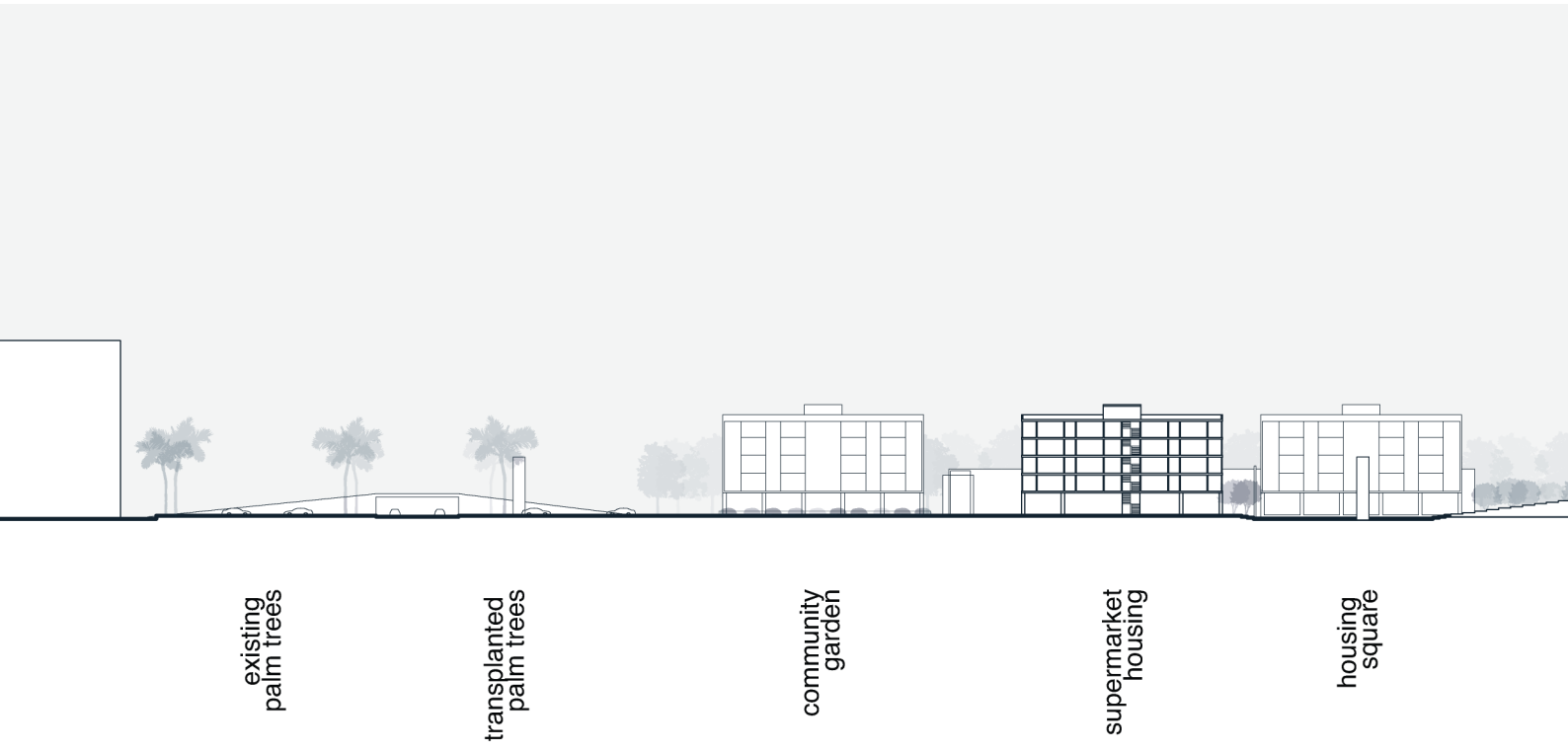
Section a-a’

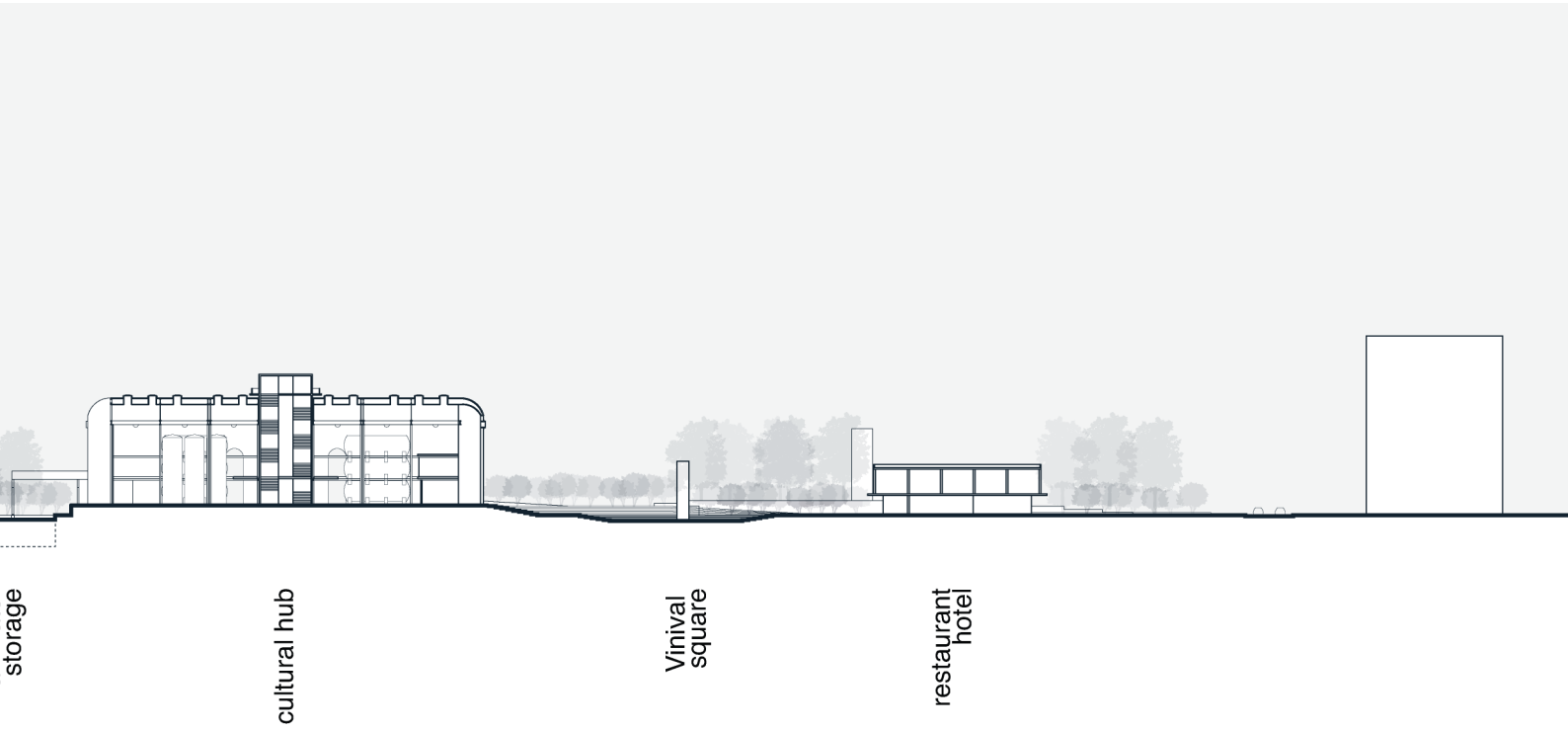
Section b-b’

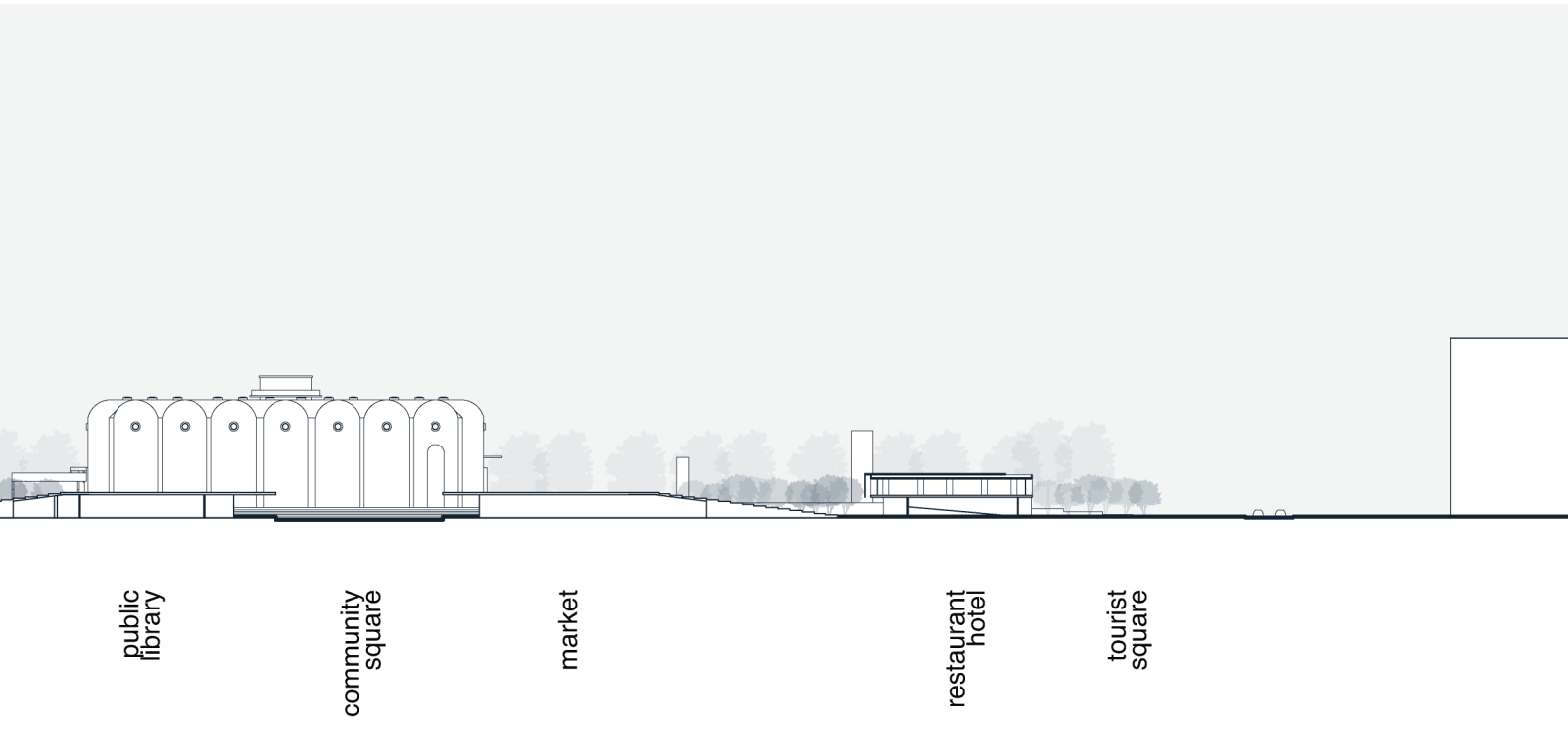
Section c-c'



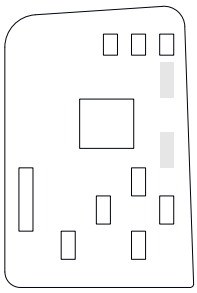
Section d-d'




storage
cultural hub
Vinival square
restaurant hotel


public library
community square
market
restaurant hotel
tourist square

1. Public equipments

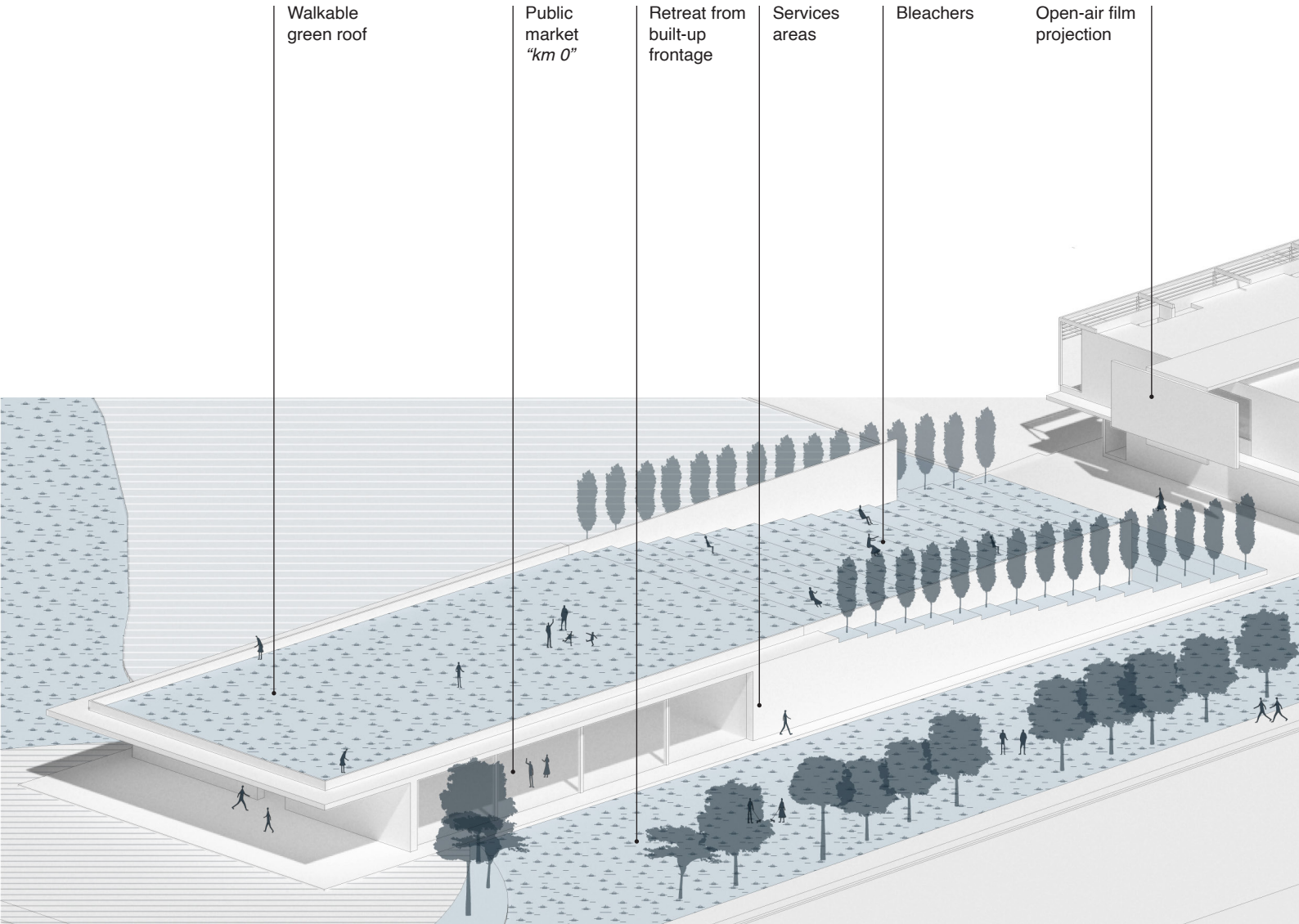


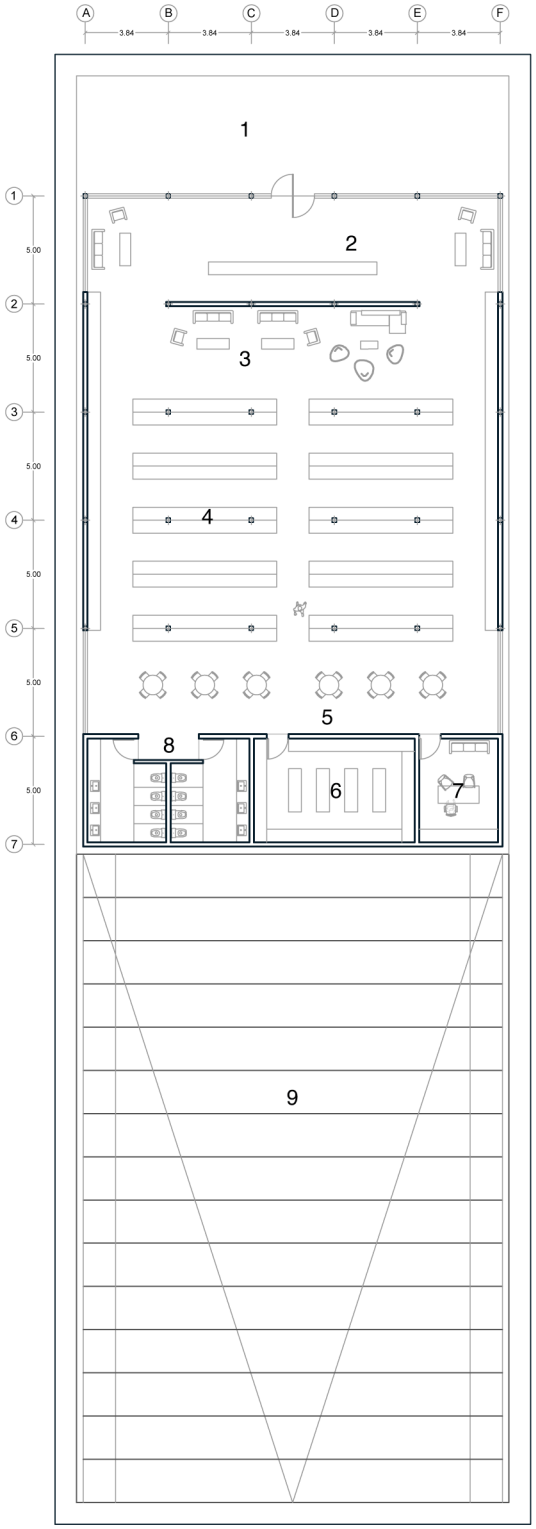
1.1 Public library

1	Foyer	120 m²
2	Reception	90 m²
3	Flexible lecture area	90 m²
4	Library	200 m²
5	Traditional lecture area	80 m²
6	Archive	40 m²
7	Administration	20 m²
8	Public restrooms	40 m²
9	Green bleachers	

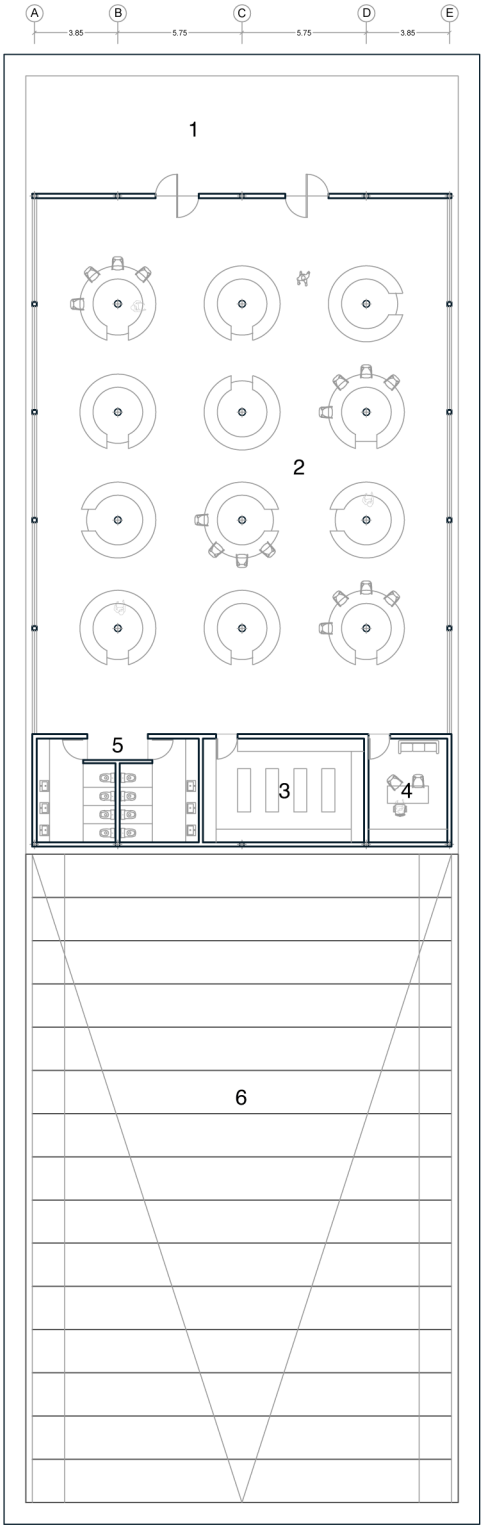
1.2 Market

1	Covered transition area	120 m²
2	Market stands	450 m²
3	Warehouse	40 m²
4	Administration	20 m²
5	Public restrooms	40 m²
6	Green bleachers	



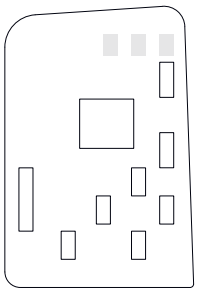


1.1 Public library plan
Scale 1.350

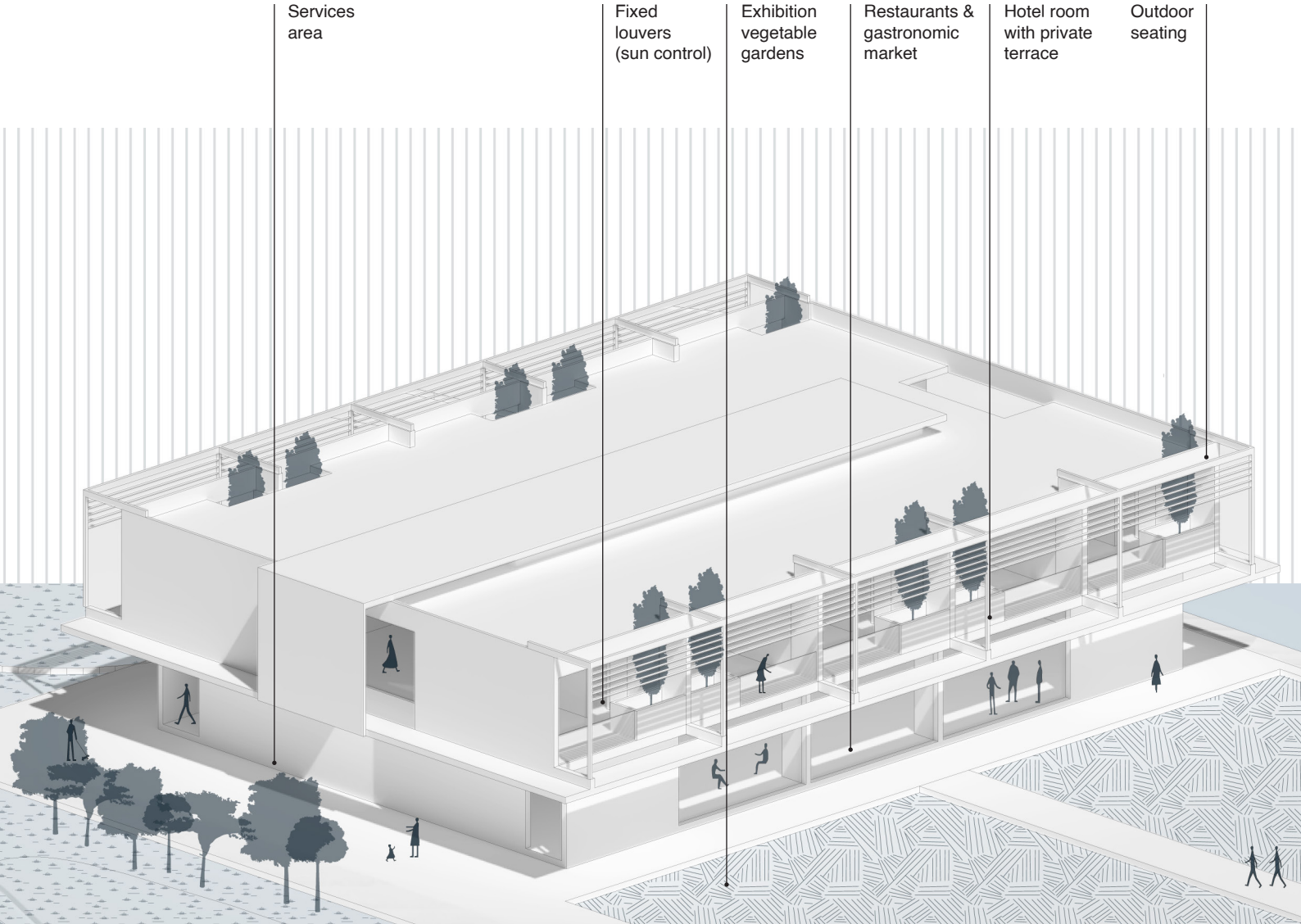


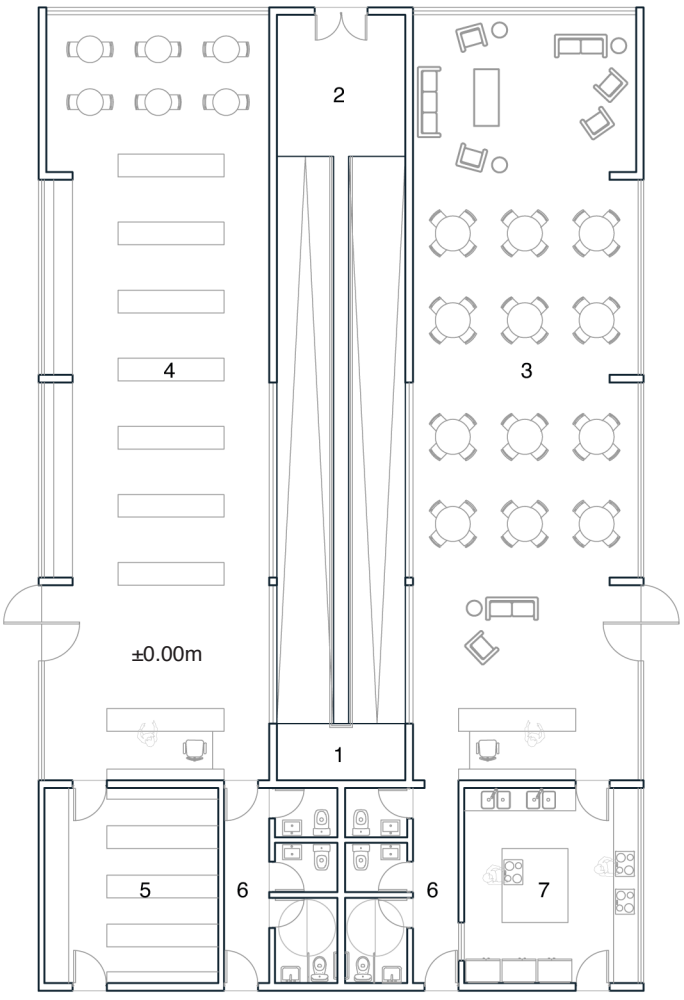
1.2 Market plan
Scale 1.350

2. Commerce / tourism

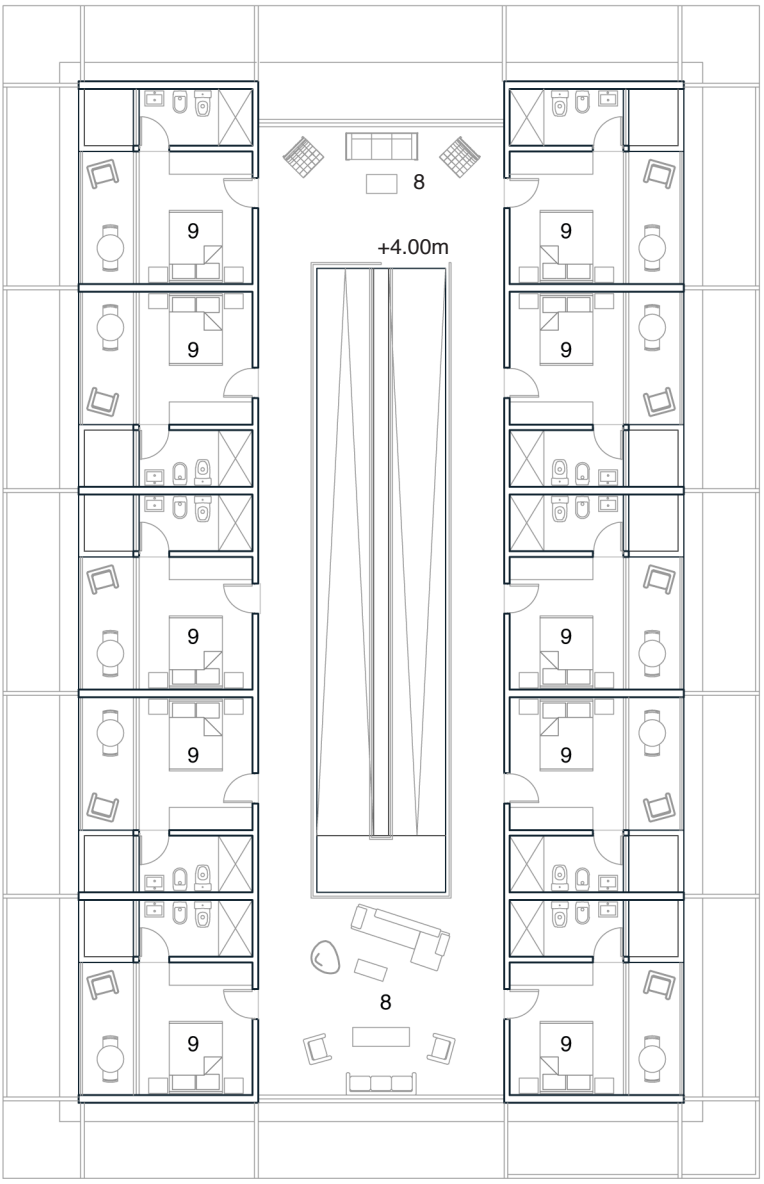


1	Circulation core	50 m²
2	Hotel entrance	12 m²
3	Commerce type 1	130 m²
4	Commerce type 2	130 m²
5	Warehouse	20 m²
6	Restrooms	14 m²
7	Kitchen	20 m²
8	Common areas	40 m²
9	Hotel room type	24 m²



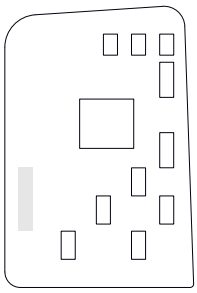


Ground floor plan
Scale 1.200



First floor plan
Scale 1.200

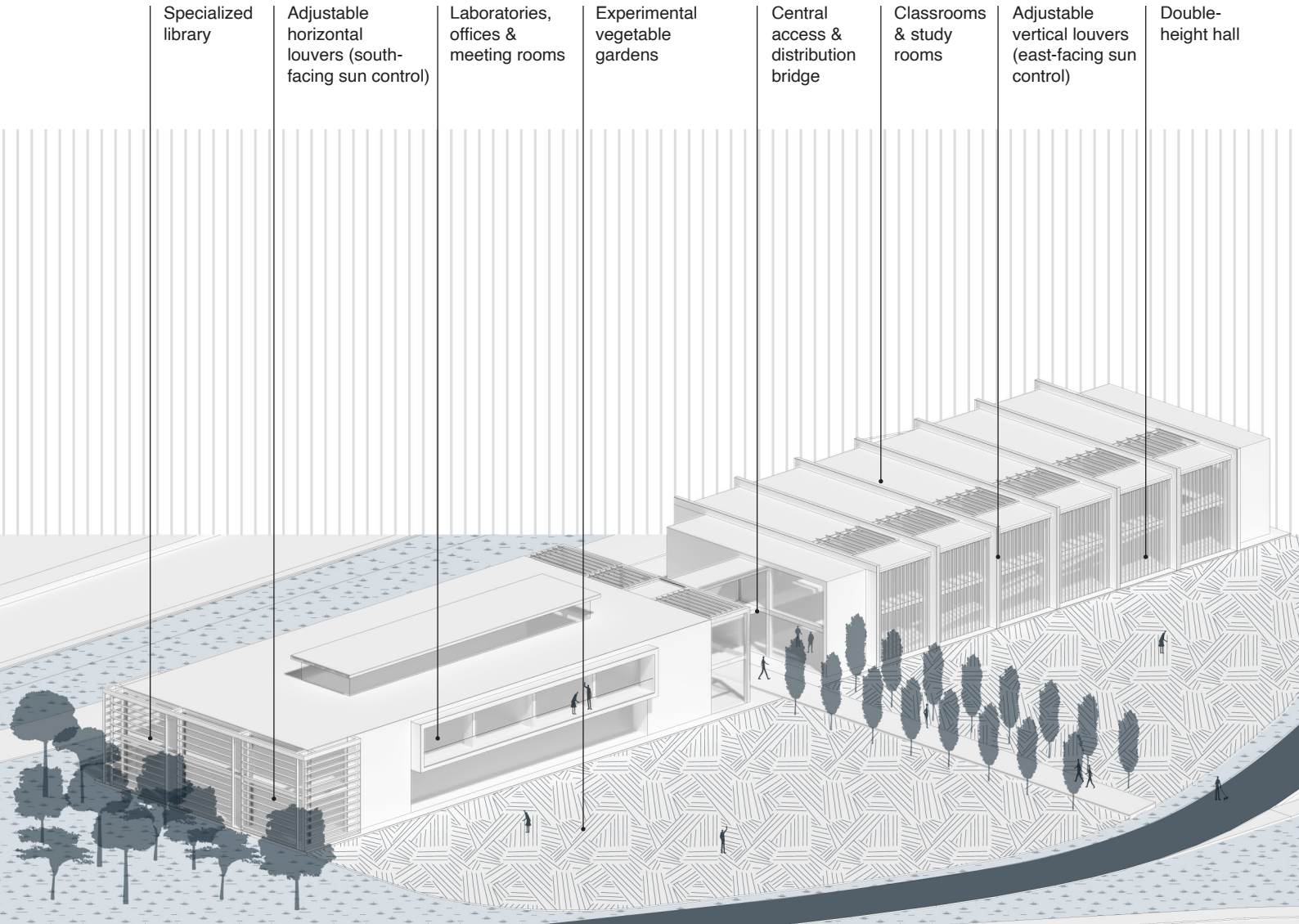
3. Research center

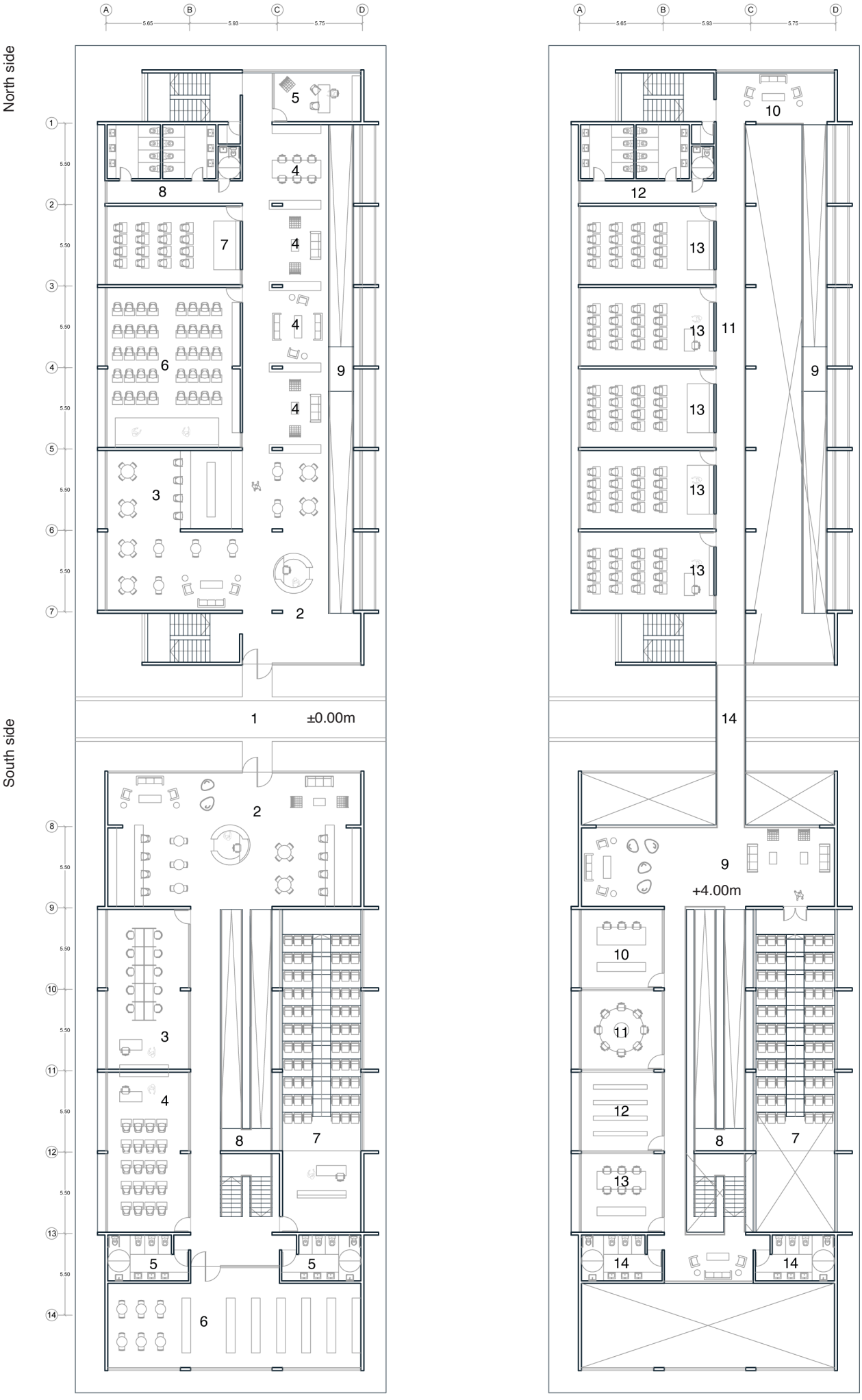


1 Main entrance

	North side		South side	
2	Reception	30 m²	Reception + main lounge	30 m²
3	Coffee area	90 m²	Computing room	90 m²
4	Double-height hall	120 m²	Audiovisual room	120 m²
5	Administration	20 m²	Restrooms	20 m²
6	Main room	100 m²	Specialized library	100 m²
7	Secondary room	50 m²	Auditorium	50 m²
8	Restrooms	40 m²	Main circulation	40 m²
9	Main circulation		Common lounge	
10	Common lounge	25m²	Laboratory type 1	25m²
11	Distribution corridor		Meeting room	
12	Restrooms	40 m²	Laboratory type 2	40 m²
13	Classroom type	50m²	Laboratory type 3	50m²
			14 Restrooms	

14 Connection bridge



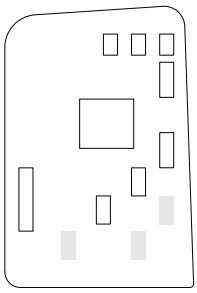


Ground floor plan
Scale 1.350

First floor plan
Scale 1.350

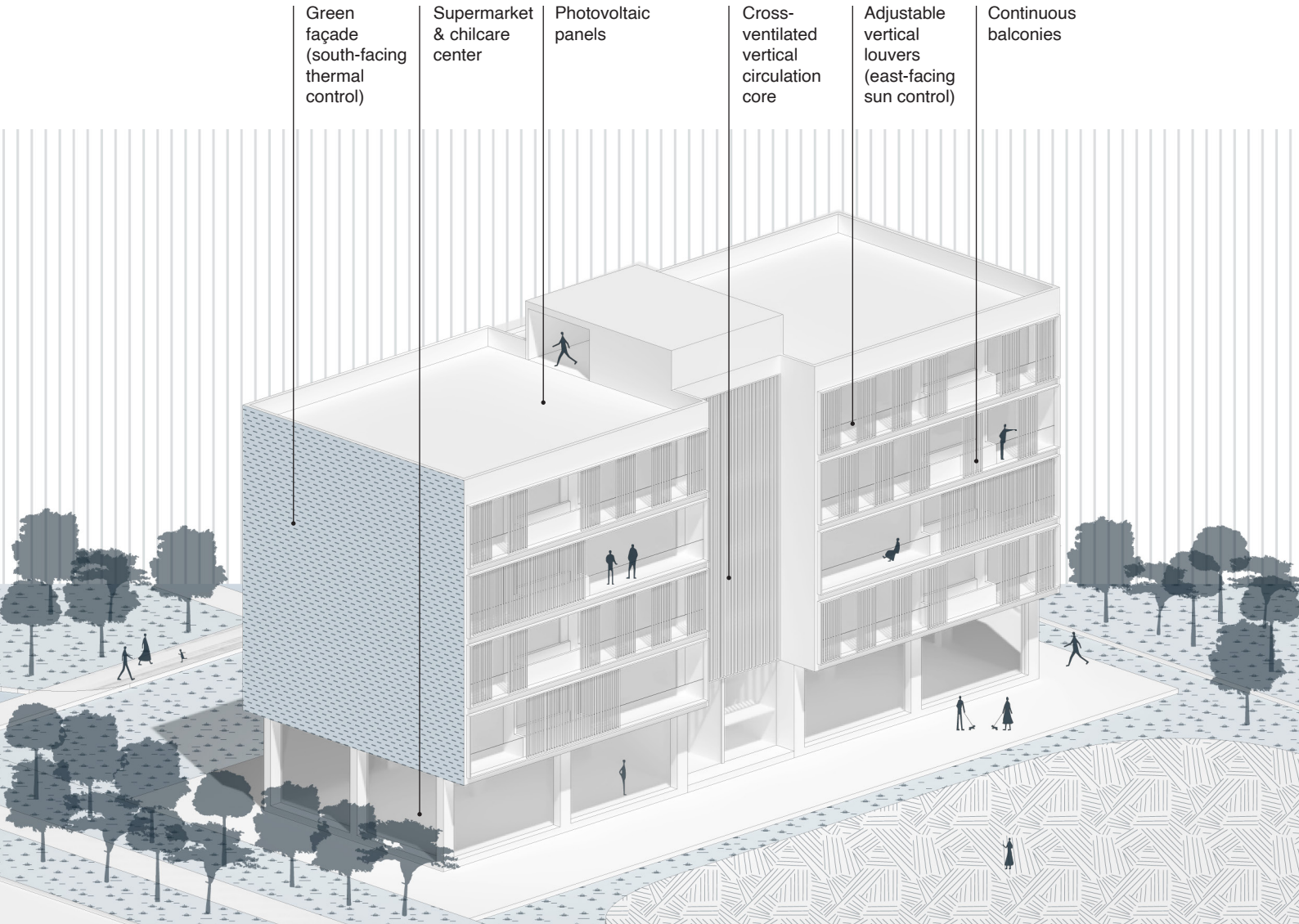
4. Accommodation

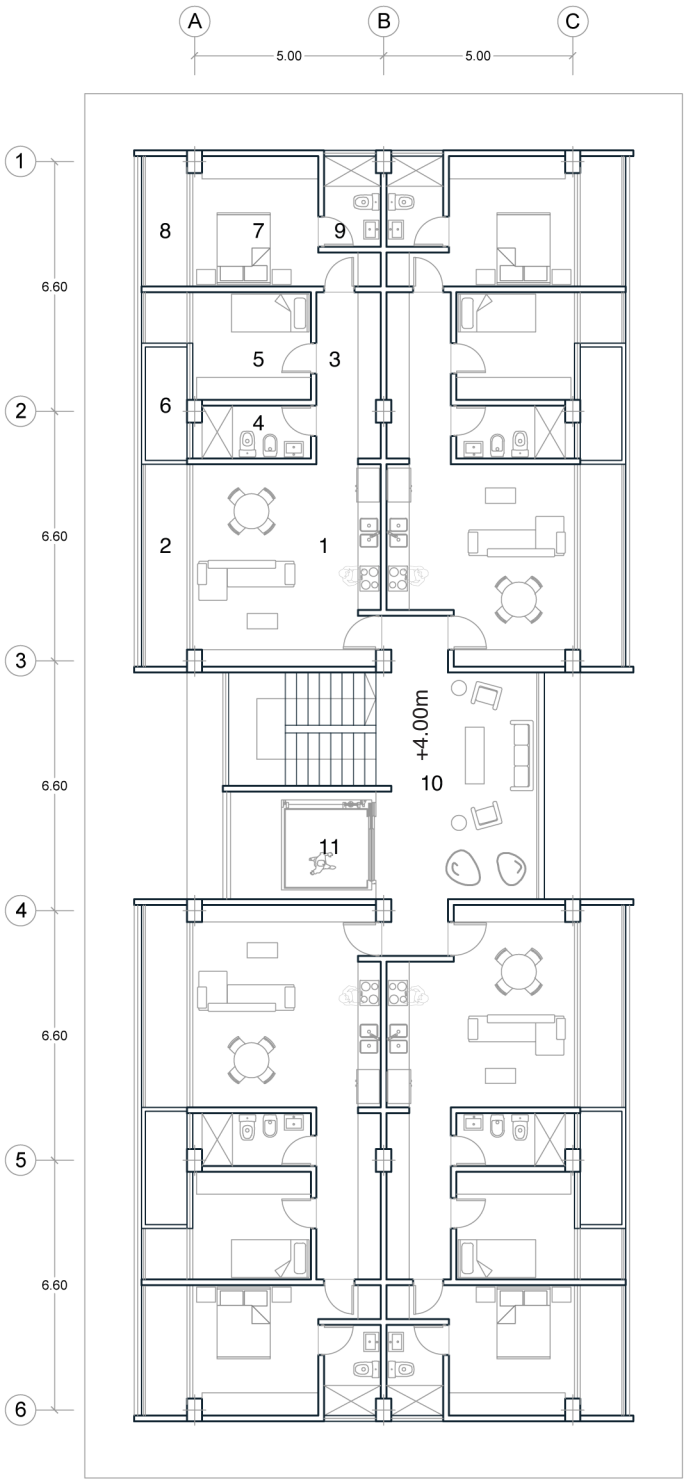
4.1 Residential housing



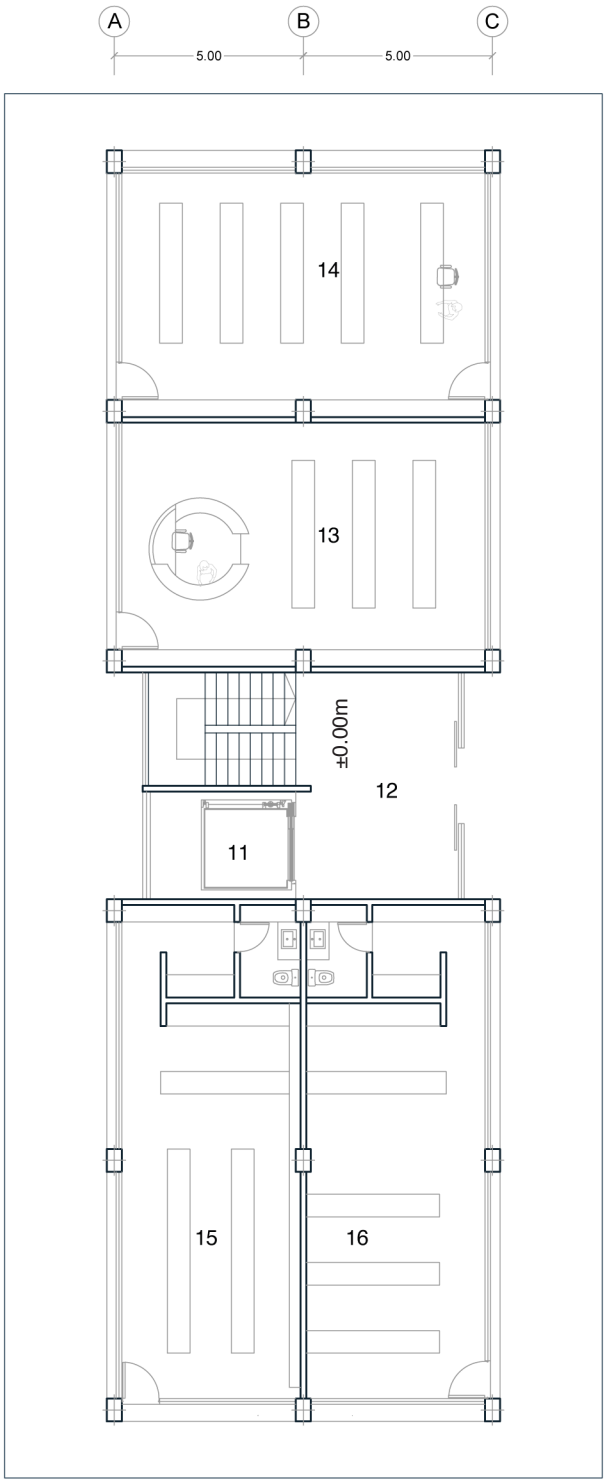
	Floor plan type	
1	Open-plan kitchen	26 m²
2	Public balcony	8 m²
3	Corridor	
4	Bathroom	4 m²
5	Secondary bedroom	10 m²
6	Private balcony	3 m²
7	Master bedroom	12 m²
8	Private balcony	4 m²
9	Bathroom	4 m²
10	Common lounge	15 m²

	Ground floor	
11	Vertical circulation core	
12	Residential entrance	15 m²
13	Retail type 1	60 m²
14	Retail type 2	60 m²
15	Retail type 3	60 m²
16	Retail type 4	60 m²





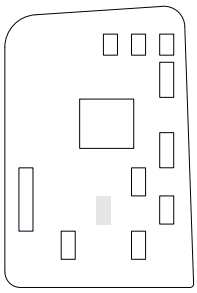
Floor plan type
Scale 1.200



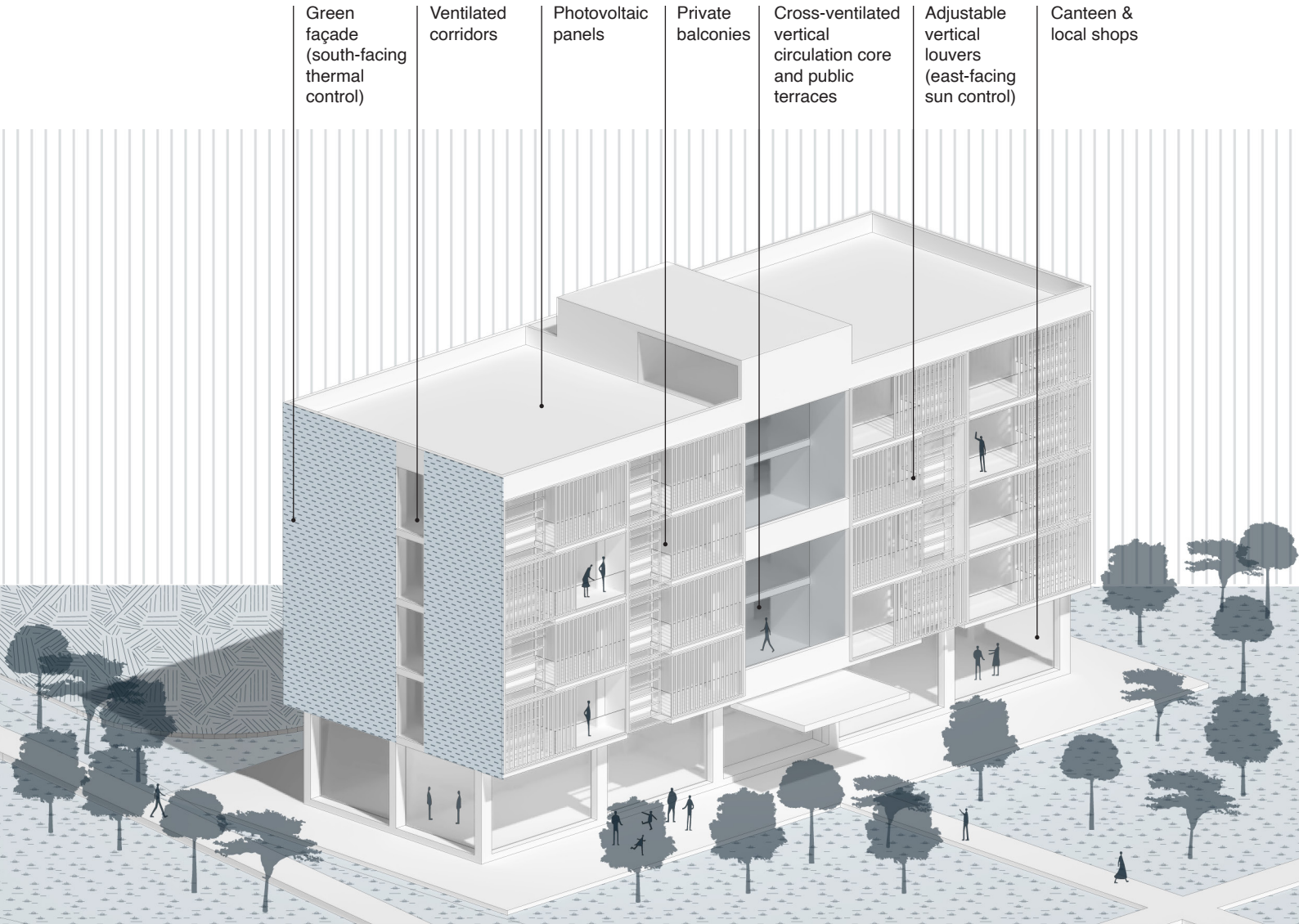
Ground floor
Scale 1.200

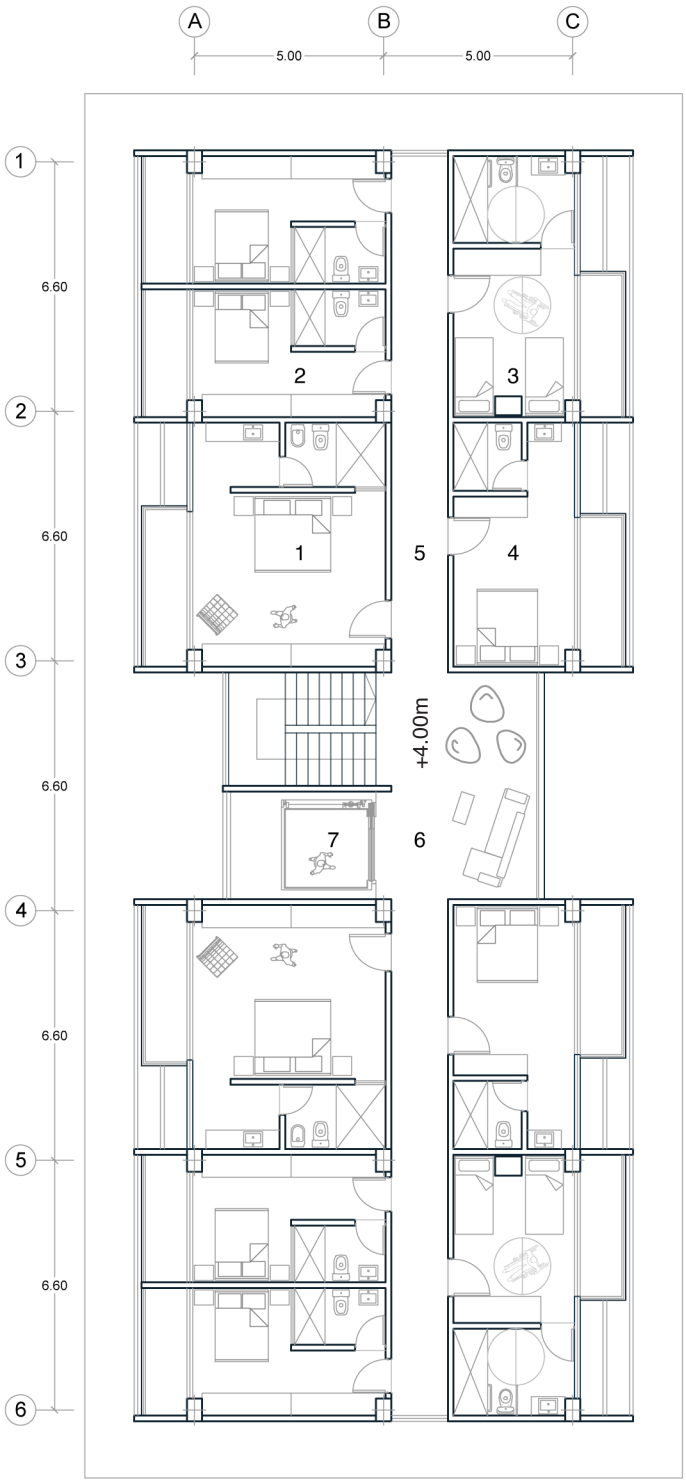
4. Accommodation

4.2 Student housing

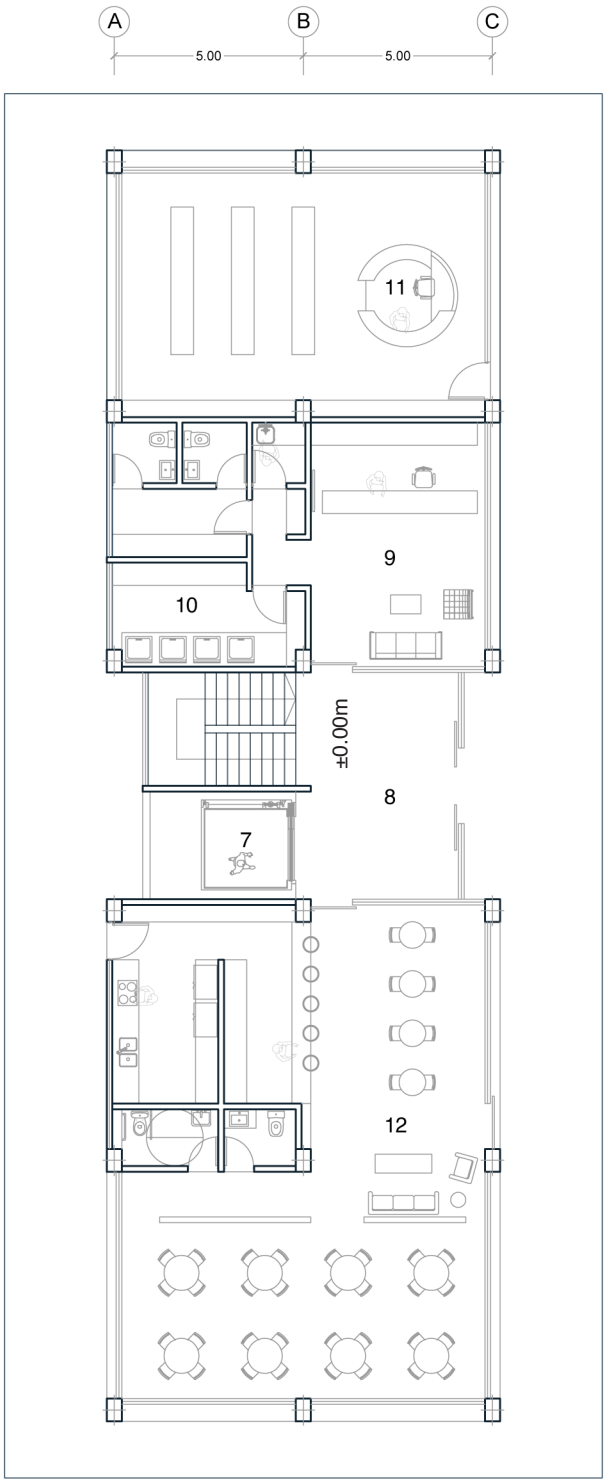


	Floor plan type			Ground floor	
1	Room type 1	30 m²	7	Vertical circulation core	
2	Room type 2	17 m²	8	Entrance	
3	Room type 3	20 m²	9	Reception	30 m²
4	Room type 4	20 m²	10	Services area	30 m²
5	Public corridor		11	Retail	60 m²
6	Common terrace	15 m²	12	Canteen	120 m²





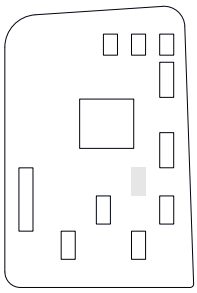
Floor plan type
Scale 1.200



Ground floor
Scale 1.200

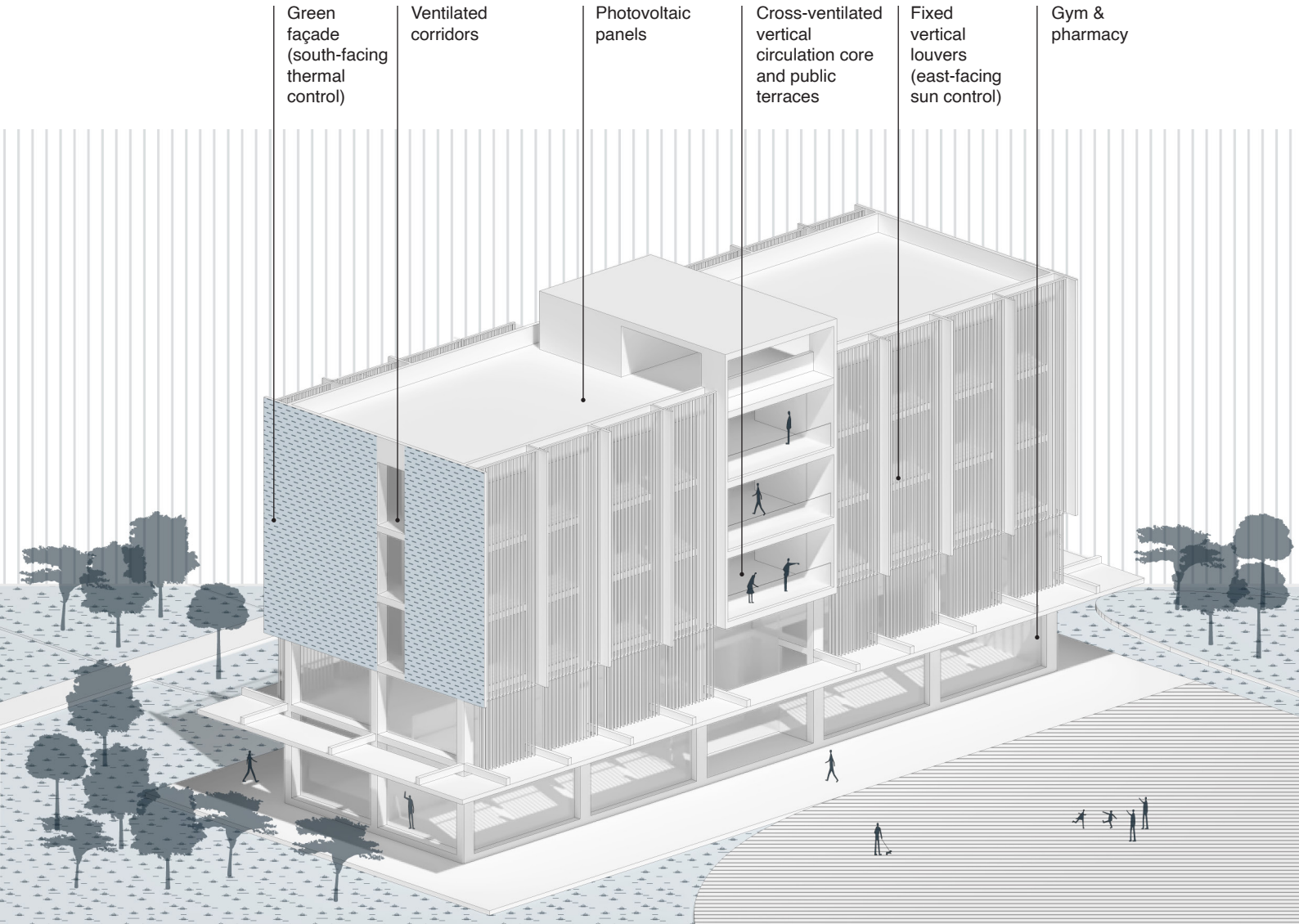
4. Accommodation

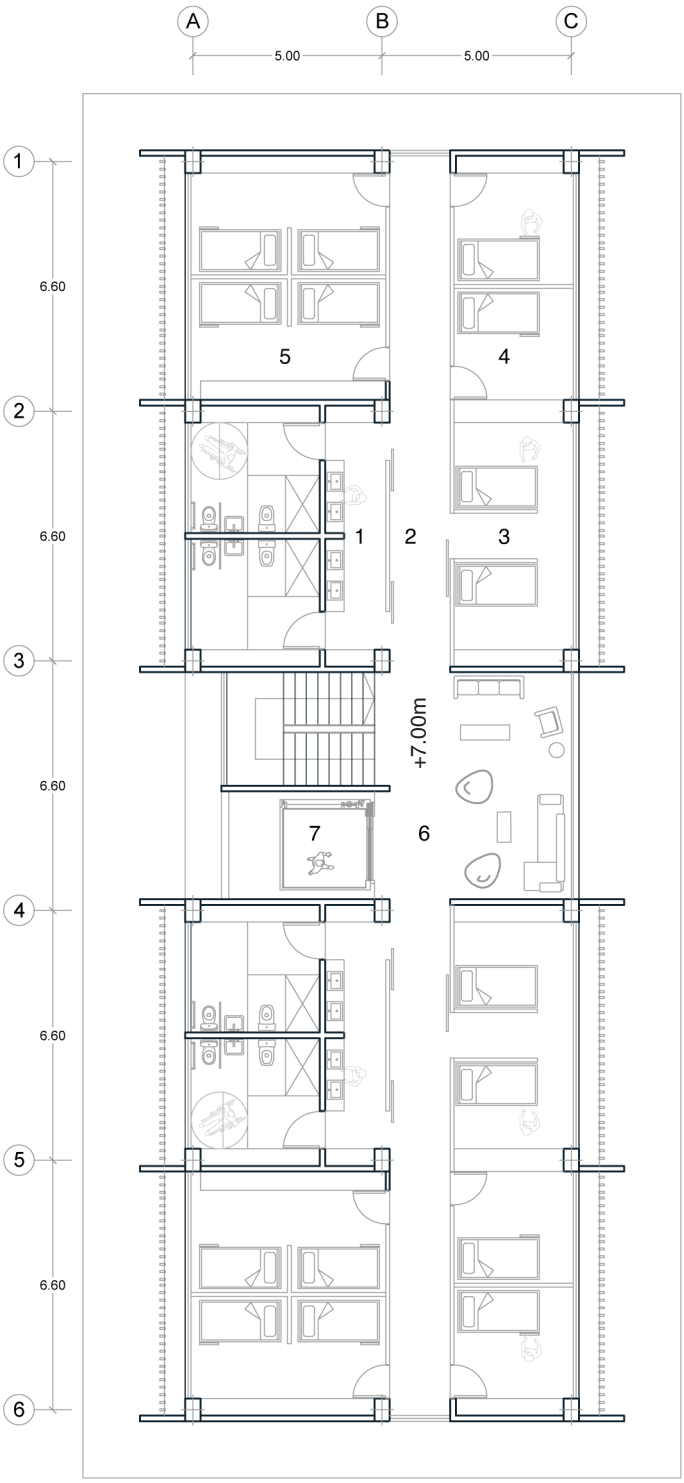
4.3 Co-living



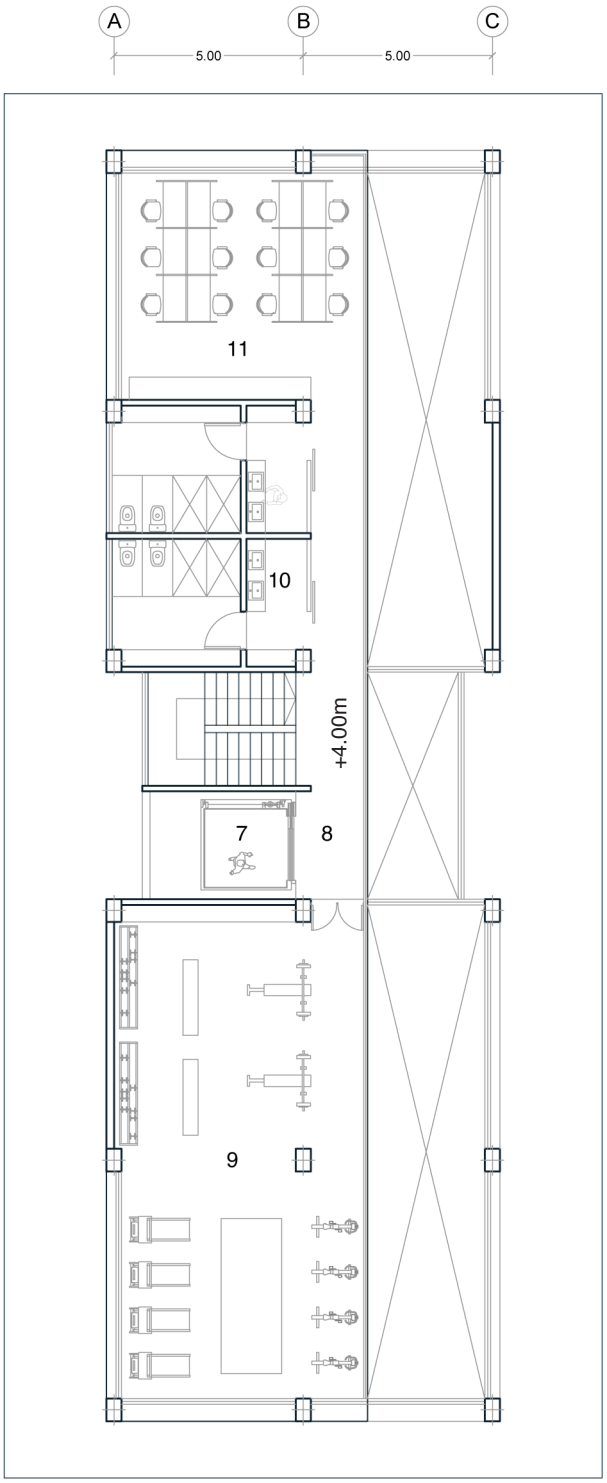
	Floor plan type	
1	Shared bathroom	35 m²
2	Public corridor	
3	Room type 1	20 m²
4	Room type 2	10 m²
5	Room type 3	16 m²
6	Common space	15 m²

	Ground floor	
7	Vertical circulation core	
8	Public corridor	
9	Gym	85 m²
10	Public bathroom	30 m²
11	Study room	40 m²



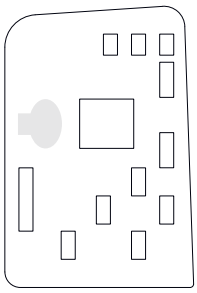


Floor plan type
Scale 1.200

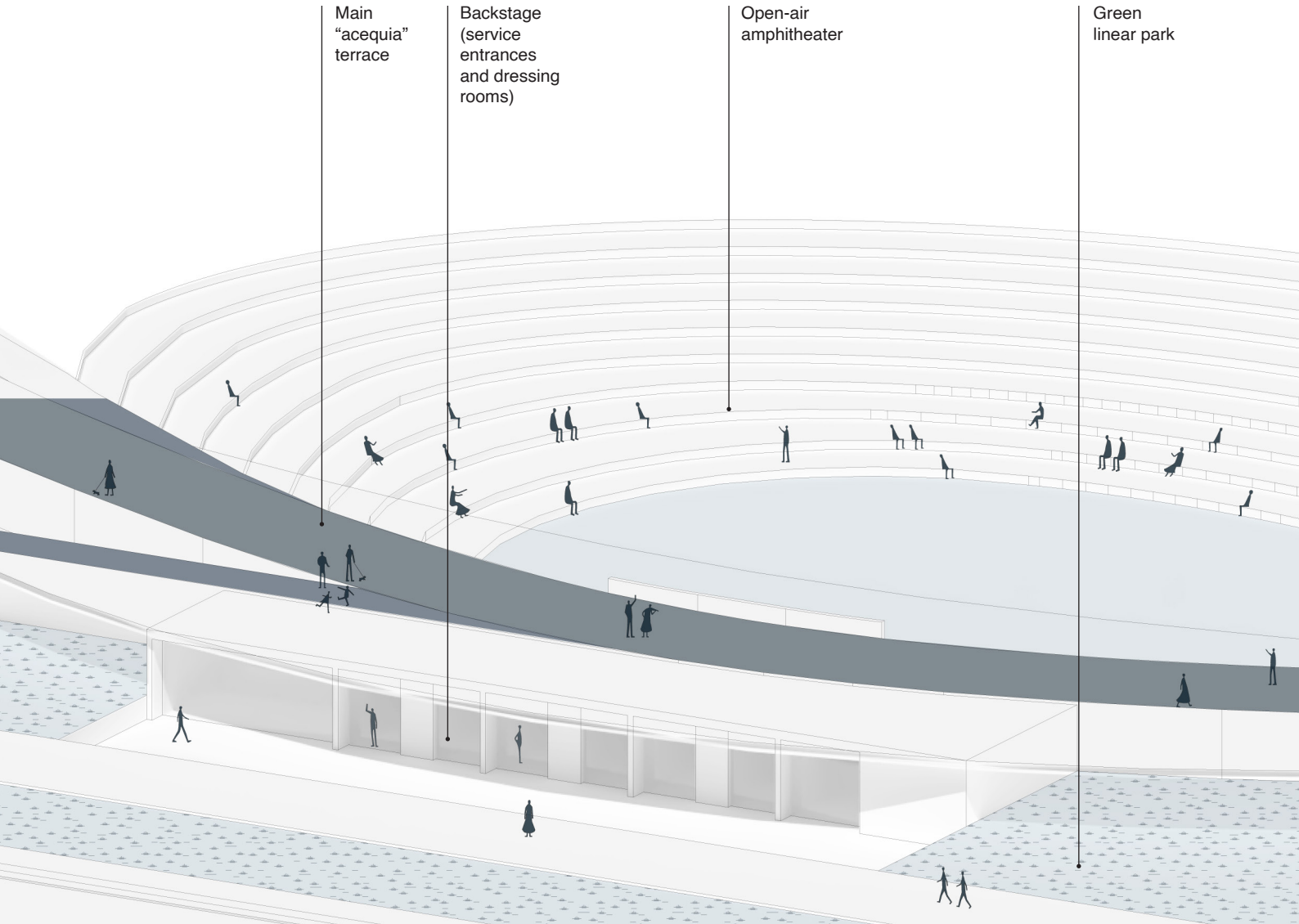


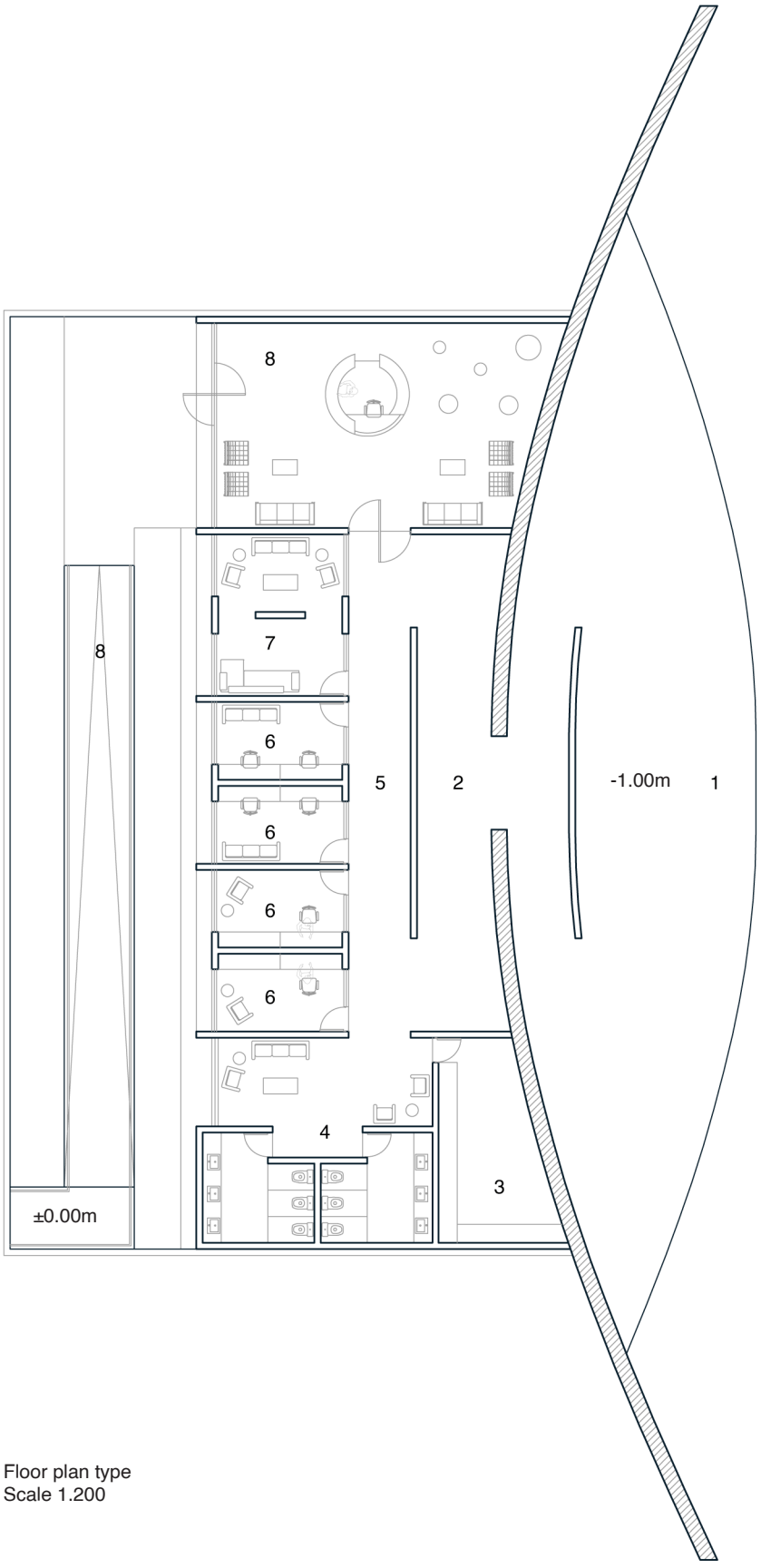
Mezzanine floor
Scale 1.200

5. Open-air amphitheater



1	Platform	200 m²
2	Backstage	
3	Warehouse	25 m²
4	Restrooms	45 m²
5	Corridor	
6	Dressing rooms	50 m²
7	Meeting room	25 m²
8	Reception	60 m²
9	Entrance ramp	





Floor plan type
Scale 1.200

Timber

The proposed new buildings are designed under the intention of being built in timber, based on the *Guía Verde of the Generalitat Valenciana* (2019) which through the Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 establishes:

1. *Encourage the use of wood or wood derivatives for being a natural, renewable and recyclable material whose processing requires very little energy consumption compared to other building materials.*

2. *Validate the legal origin of timber or timber products in order to combat illegal logging and prevent illegally harvested timber from entering the market.*

3. *Promote the use of wood species from sustainable forest management.*

In addition, the use of CLT (Cross-Laminated Timber) is defined as a construction system due to its resistance, appearance, versatility and sustainability.

"

Why we use timber?

When it comes to a sustainable built environment, material choices matter. Wood is a natural, renewable, and sustainable material for building, with a lighter carbon footprint than steel or concrete.

What is CLT?

Cross-laminated timber (CLT) is a wood panel system that is rapidly gaining popularity in the U.S. after being widely adopted in Europe. The strength, dimensional stability, and rigidity of CLT allow it to be used in mid- and high-rise buildings.

What is Glulam?

Glue-laminated timber (glulam) is a structural engineered wood product commonly used for beams and columns in residential and commercial applications. It is a highly visible form of mass timber in contemporary projects, with long spans framing signature designs left exposed to take advantage of wood's natural aesthetic.

"

(Think wood, n.d., www.thinkwood.com/sustainability)

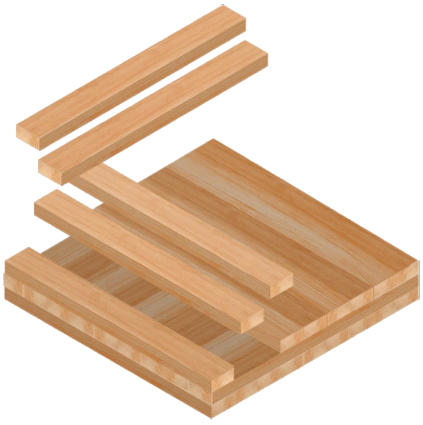


Figure 173. *Cross-laminated timber.* (Think wood, n.d.)

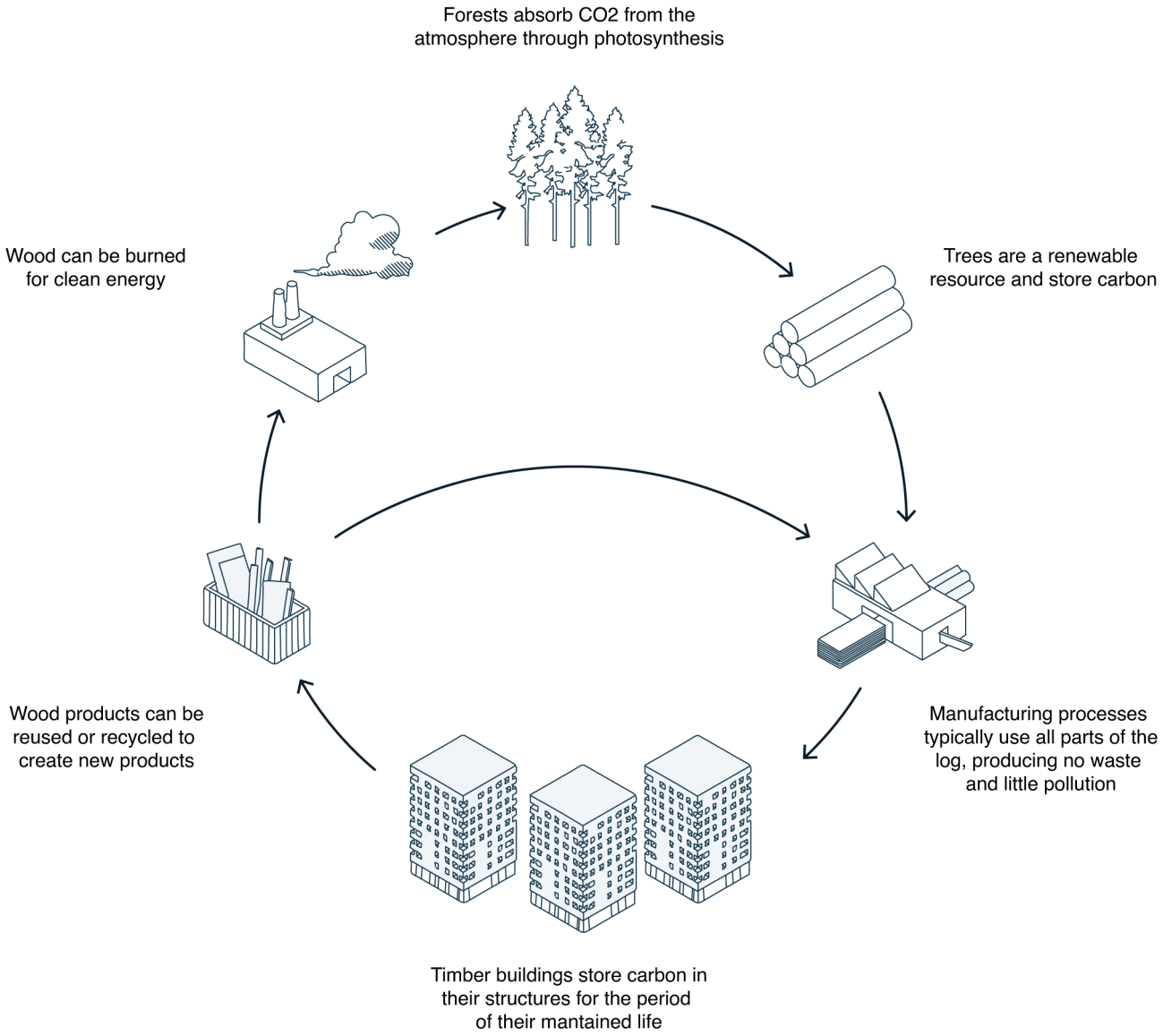
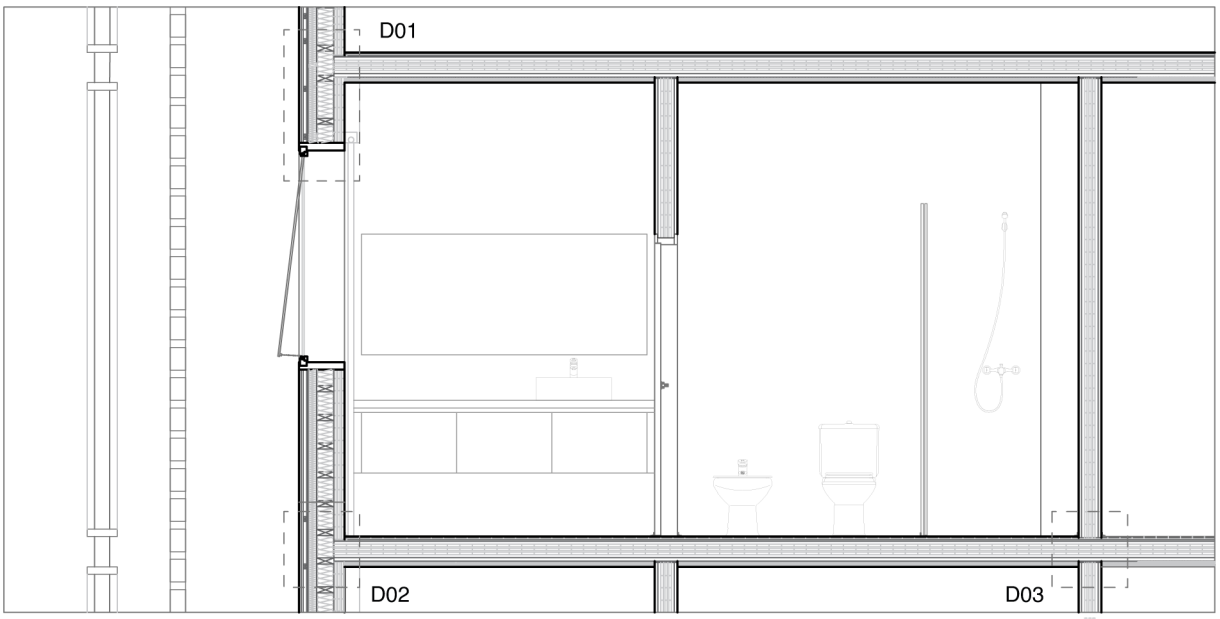
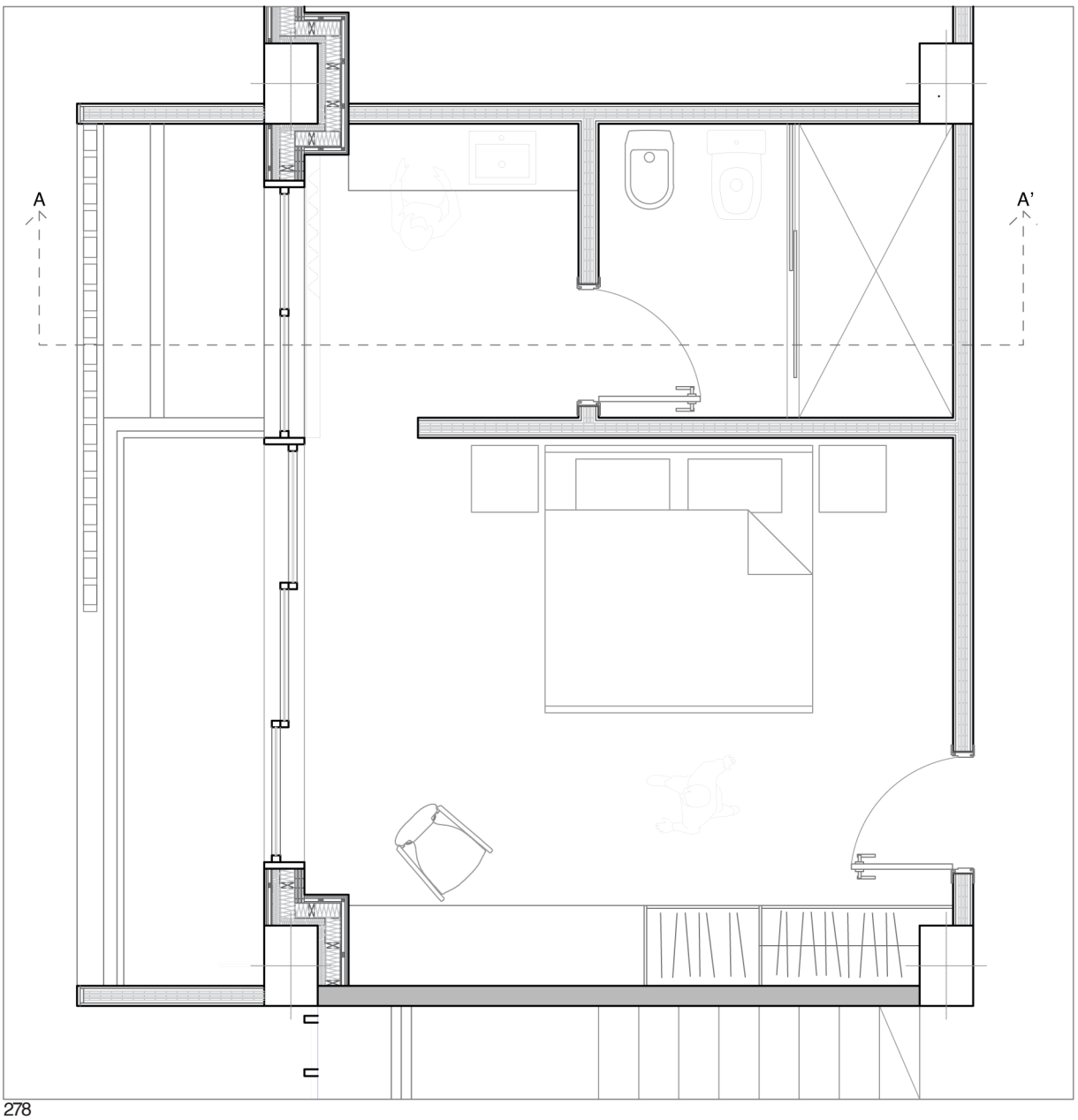


Figure 174. *Lifecycle of timber construction,* (Waugh Thistleton, 2018)

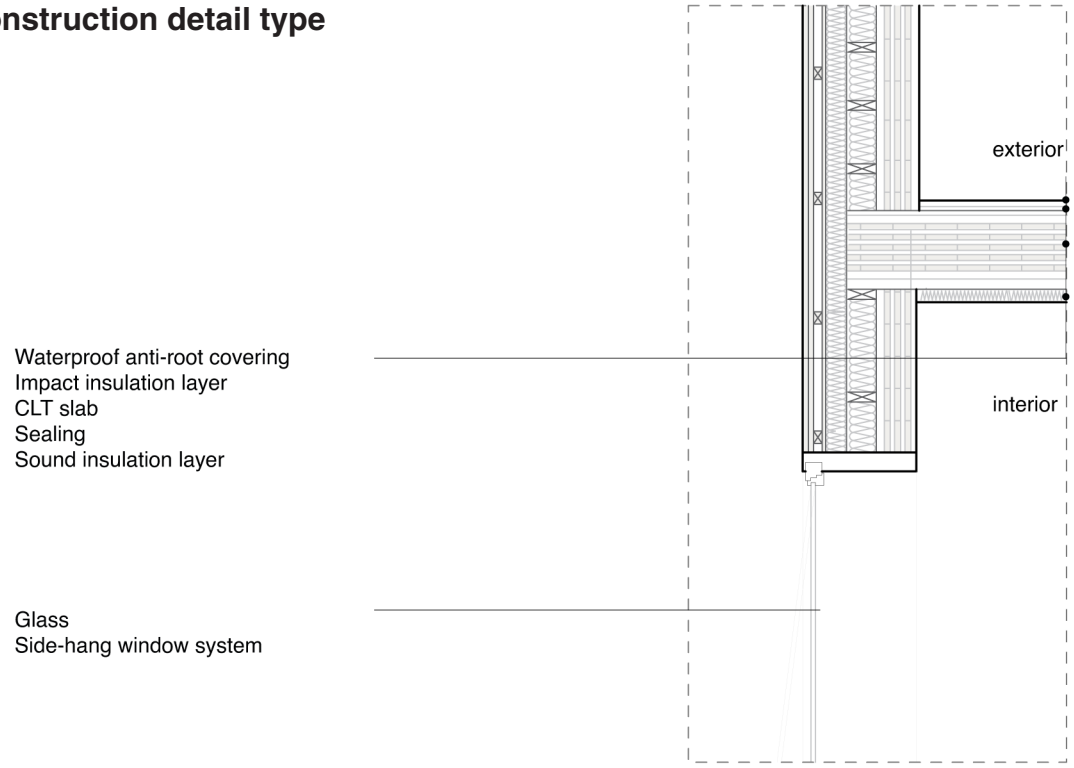


Section a-a'
Scale 1:50

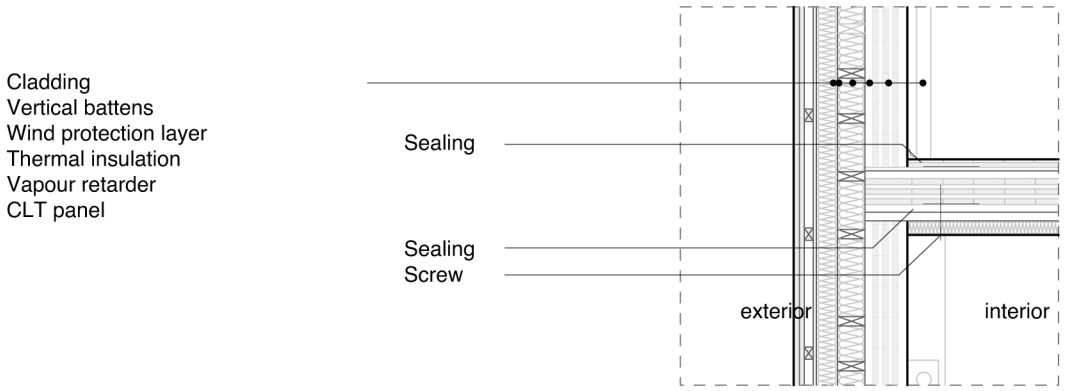


Plan detail
Scale 1:50

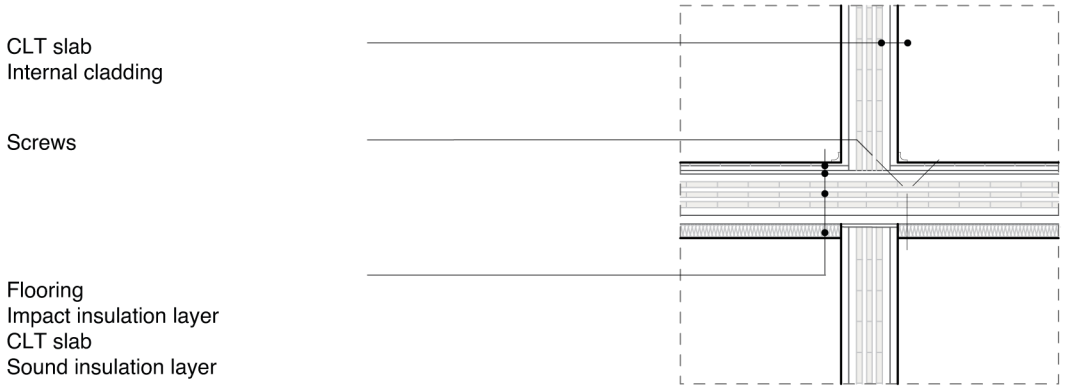
Construction detail type



Detail 01. Last slab to rooftop
Scale 1:20



Detail 02. External wall
Scale 1:20



Detail 03. Internal wall and slab
Scale 1:20

Figure 175. *Type construction details of proposed timber buildings.* Own work

Building scale:

Vinival hub

Considering its architectural value and hierarchy, the main building of Bodegas Vinival is the cultural heart of L'Horta agri-cultural park. It is located in the center of the proposal and rises on a smooth natural topography that allows access through three of its facades.

The intervention is based on recognizing the main elements of the building. First, the brick framework that forms the facades and the roof and is only perforated through small skylights. Then, the metal frame structure, and finally, the metal deposits that occupy a large part of the internal area of the building.

This results in three main strategies:

1. **Openings in the facades** to allow light and ventilation.

2. **Extraction of silos** to free up internal space and distribute the program.

3. **Reuse of the silos** for temporary uses (corridors, cafes, exhibition spaces, stores).

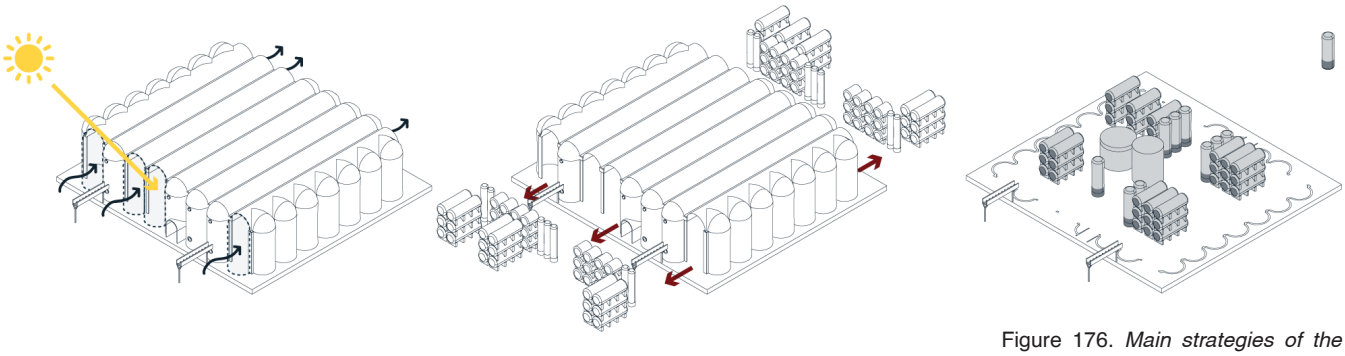


Figure 176. *Main strategies of the building intervention*

Design process

First, two organizing axes are defined, the first, east-west defined by the relationship Horta - coast, and the second, based on the previous function of the building, since the wine process began on the north facade and ended on the south facade from the loading and unloading bridges.

Then, the silos are extracted through the north and south facades due to the arrangement of the silos and the internal metal structure. First, the internal niches are released for better use of their spatial conditions, and, in addition, other silos are extracted to be able to locate the program.

The extraction of the silos results in the opening of the facades, generating a compositional rhythm and allowing the entry of natural lighting and ventilation.

On the other hand, the concrete silos are maintained, defining the disposal of an articulating element that allows generating levels and routes with the silos of the upper levels.

The most central silo functions as the main vertical circulation core, while the metal silos are reused as transition and temporary spaces.

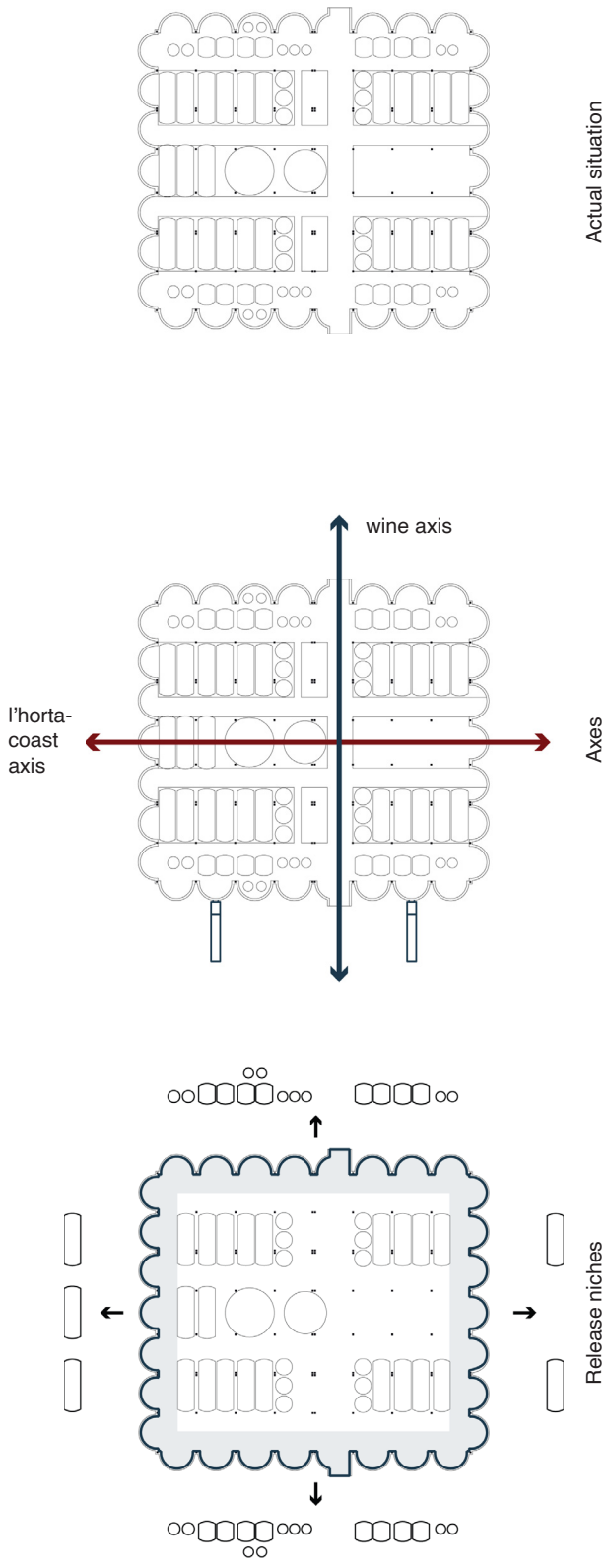
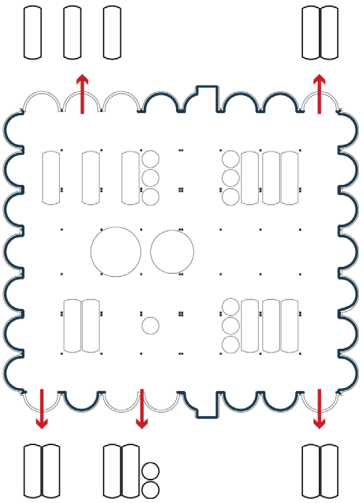
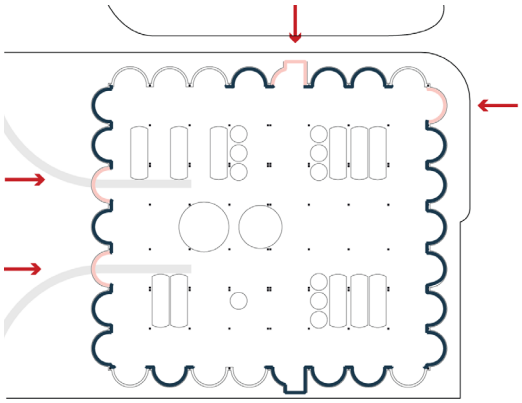


Figure 177. *Design process of the building intervention*

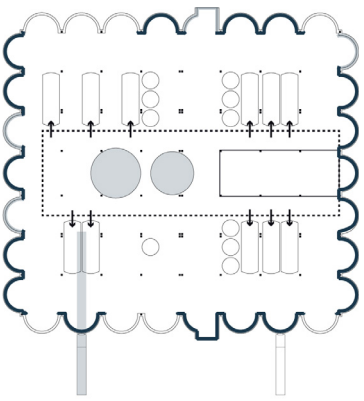
Silos breaks walls



Context defines access



Articulation element



Program

The program aims to create a meeting space for the different users involved, the residents, the community and its associations, the professors and students, and all the institutions and programs related to La Patacona and L'Horta.

This means developing a varied repertoire that responds to both traditional cultural consumers and new contemporary uses, diverse and adaptable, which encourages participation, commitment, and a sense of belonging to the community.

Thus, the program is organized around preserving and reusing part of the old wine deposits and the definition of the central organizing element. This element is based on the amphitheater as the main space, adaptable for the development of minor and spontaneous events of the community or meetings and conferences of a higher level of formality of the Research Center and the various institutions involved.

On the other hand, the cultural hub meets the need for a space to recognize the history and value of L'Horta, without forgetting the original function of the building as a wine warehouse. Therefore, some silos are used as exhibition corridors that generate a historical tour of the different stages of the building and its valuable context.

Now, taking advantage of the geometry of the building, the niches generated by the curvatures of the façade function as multifunctional spaces that can be adaptable through movable partitions, allowing uses such as meeting rooms, coworking spaces, workshops, private study rooms, and on a smaller scale, services.

Finally, this cultural development requires secondary attractions that form an integrated offer. For this reason, the silos located on the first floor are used to organize small commercial, gastronomic and touristic spaces that allow to enhance the dynamics and integration of the place.

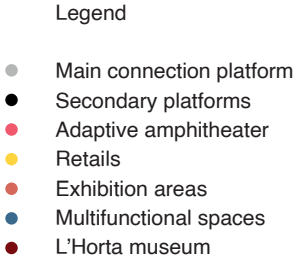
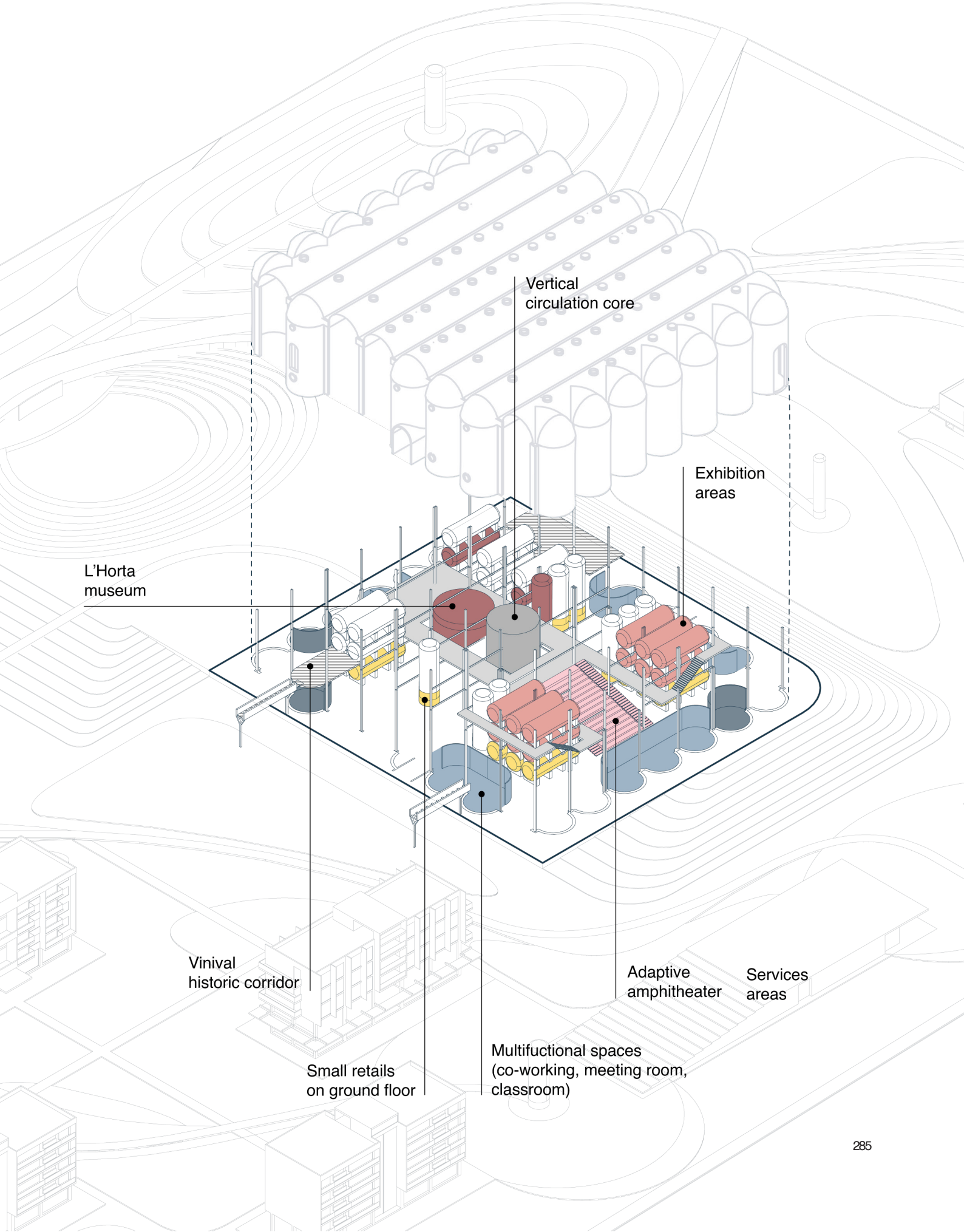


Figure 178. *First approximation of the building program.*

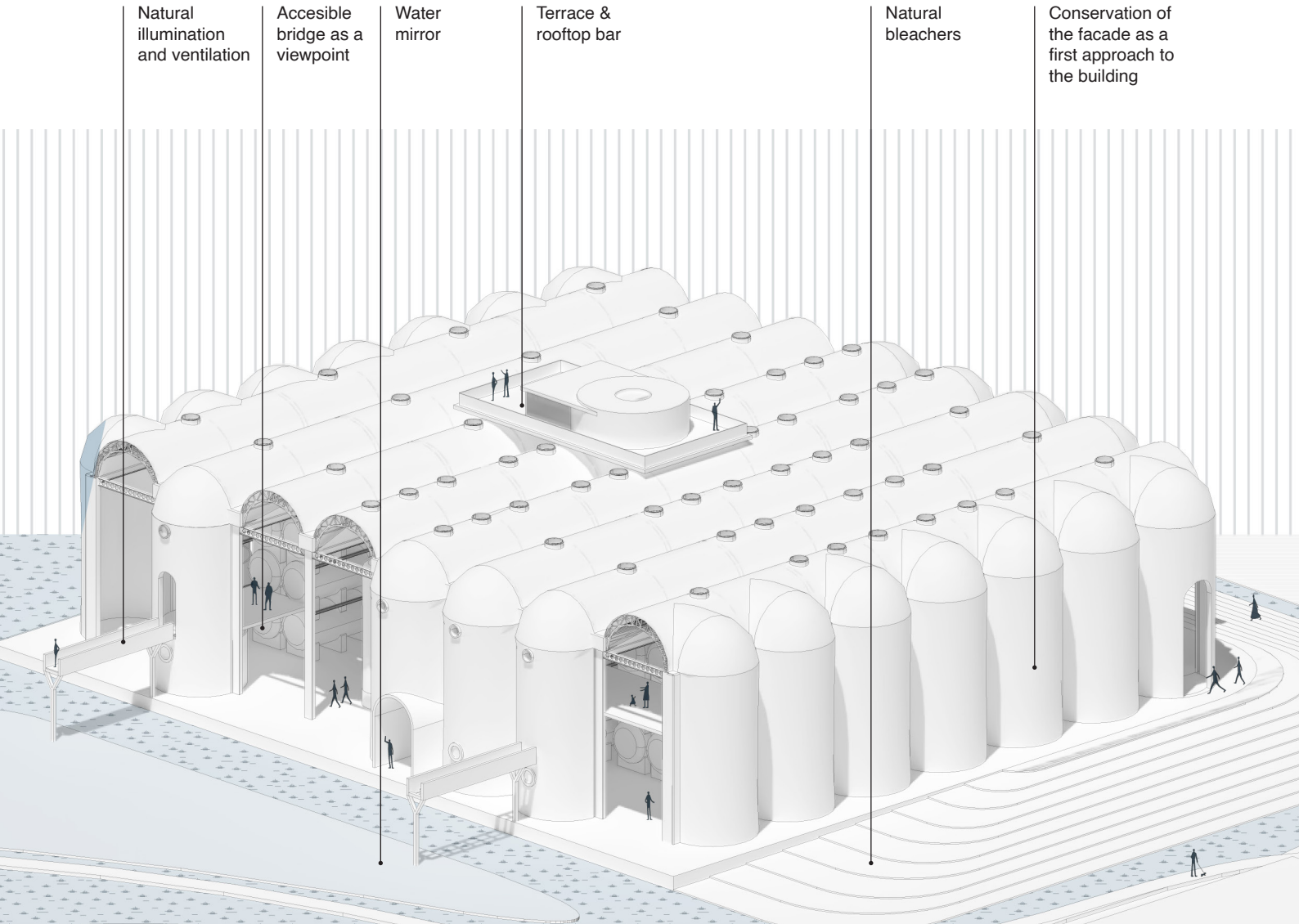

Vertical
circulation core
Exhibition
areas
L'Horta
museum
Vinival
historic corridor
Small retails
on ground floor
Multifuctional spaces
(co-working, meeting room,
classroom)
Adaptive
amphitheater
Services
areas

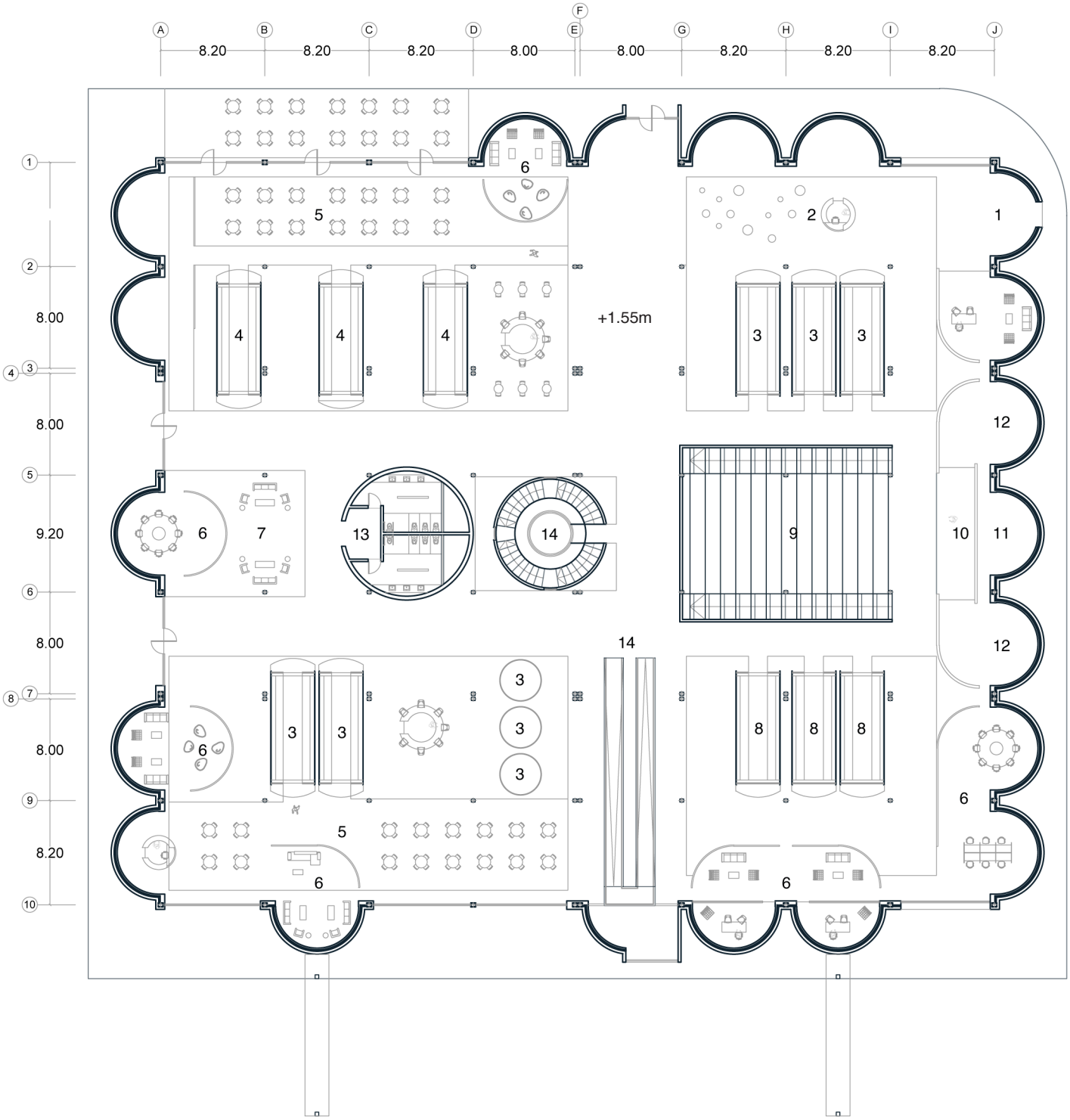
Vinival cultural hub

	Ground floor	
1	Main entrance	
2	Reception area	100 m²
3	Silos as small retails	70 m²
4	Silos as a coffee/bar	130 m²
5	Dining area	300 m²
6	Adaptive areas	300 m²
7	Lounge area	60 m²
8	Silos as warehouses	50 m²
9	Adaptive amphitheater	250 m²
10	Stage	40 m²
11	Backstage	30 m²
12	Services areas	60 m²
13	Public restrooms	75 m²
14	Vertical circulation	

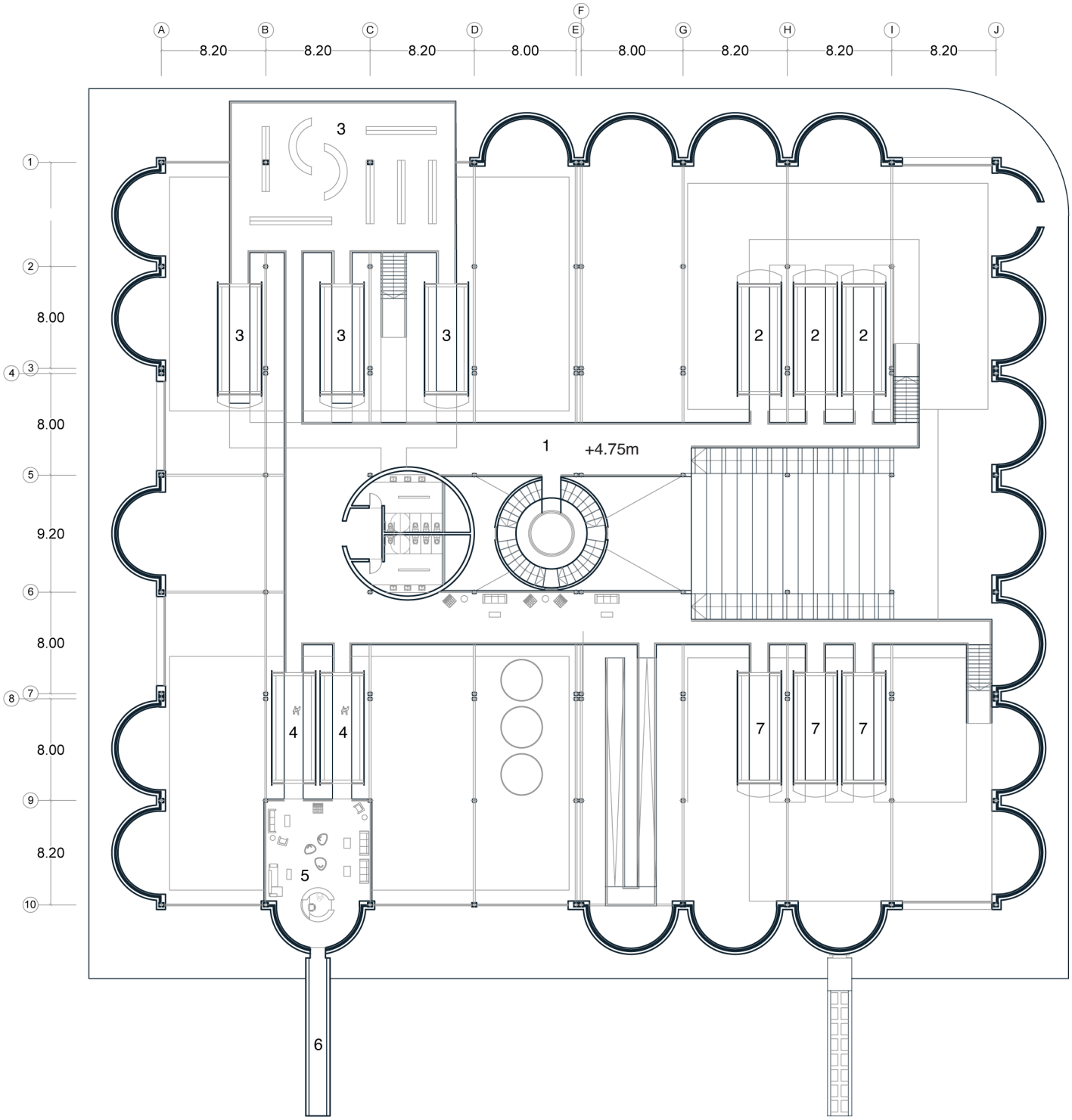
	First floor	
1	Central platform	
2	Silos as exposition areas	50 m²
3	L'Horta museum	230 m²
4	Vinival corridor	20 m²
5	Lounge area	70 m²
6	Viewpoint bridge	
7	Silos as offices	50 m²

	Second floor	
1	Silos as exposition areas	50 m²
2	Adaptive meeting space	150 m²
3	Silos as a study hub	50 m²
4	Lounge area	75 m²
5	Silos as corridors	
6	Terrace	180m²

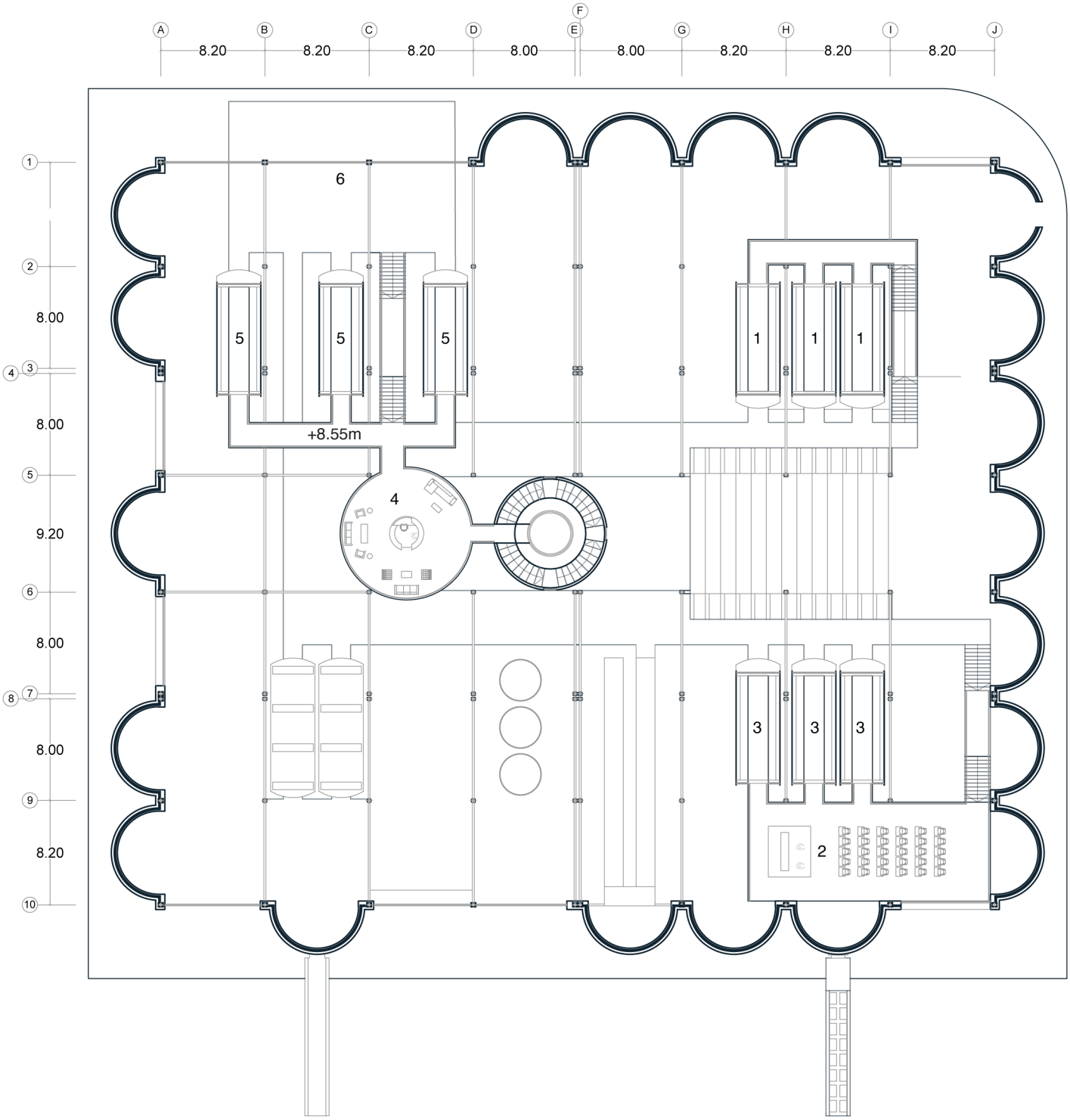




Ground floor
Scale 1.200

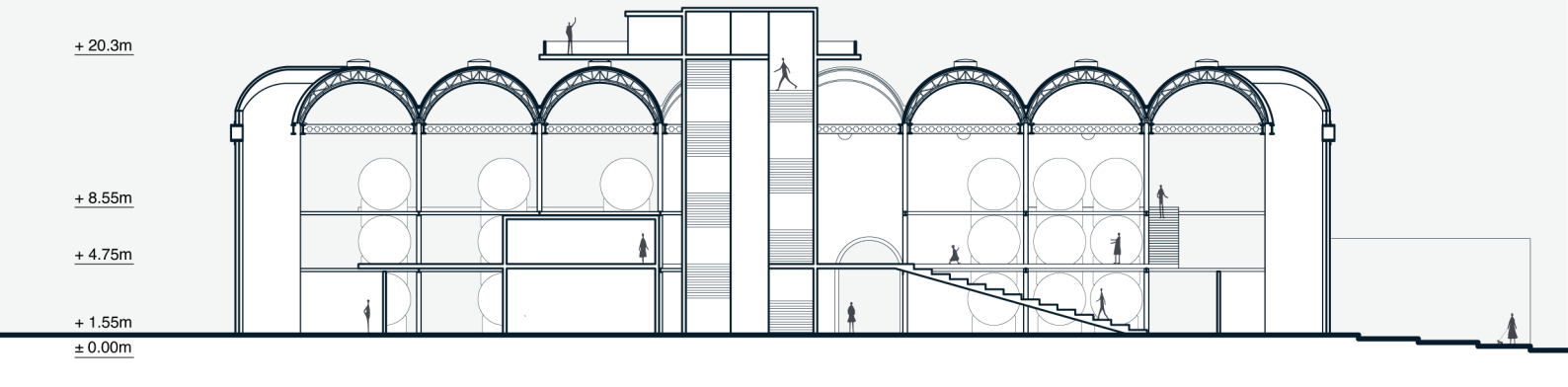


First floor
Scale 1.450

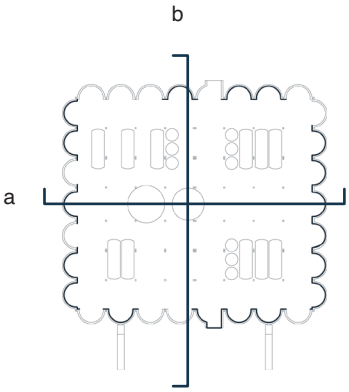


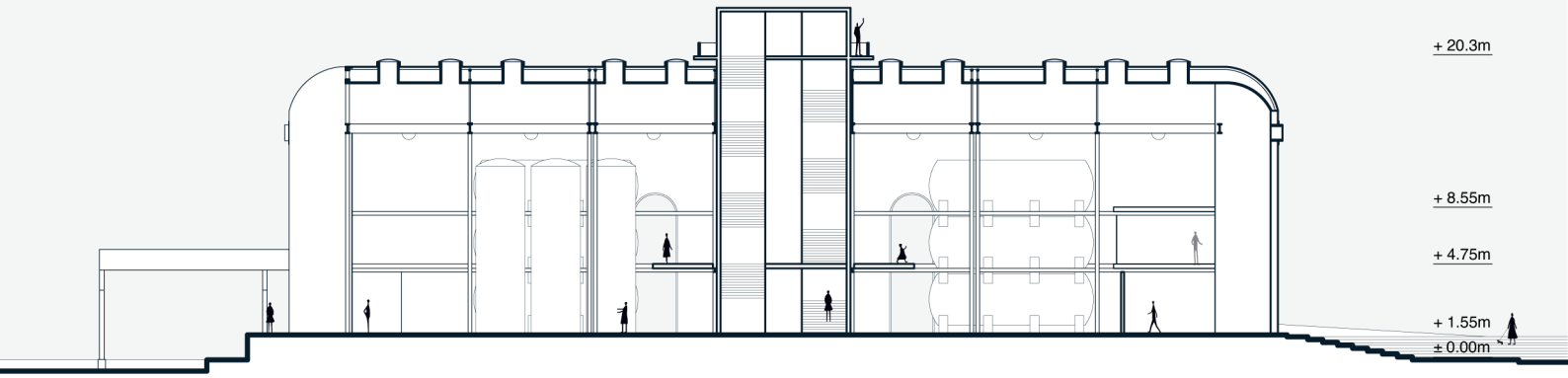
Second floor
Scale 1.450

Architectural sections



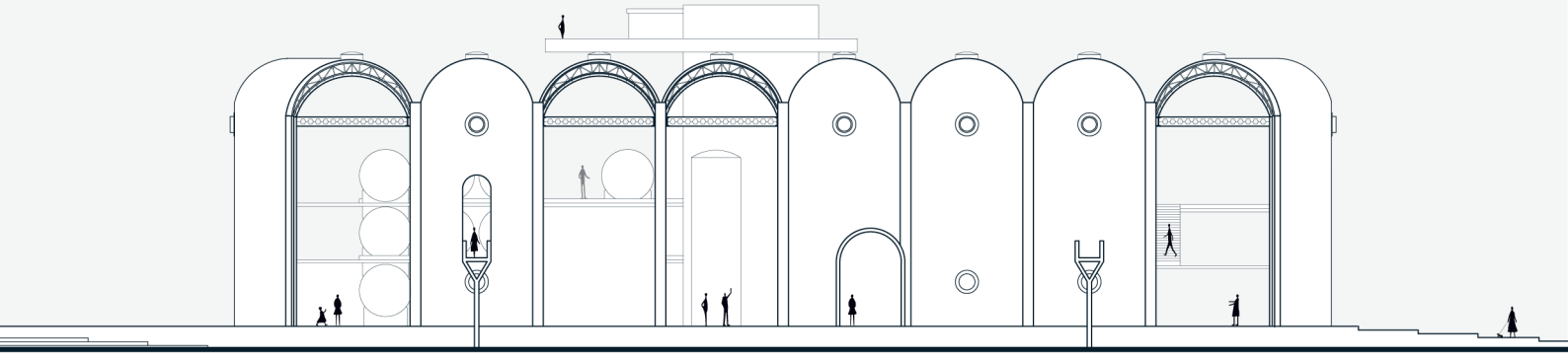
Section a-a’





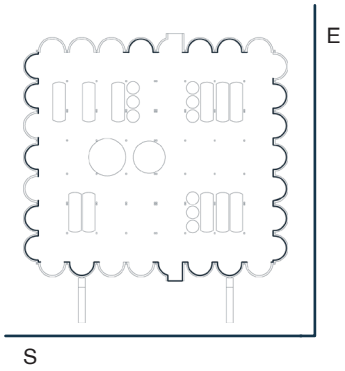
Section b-b’

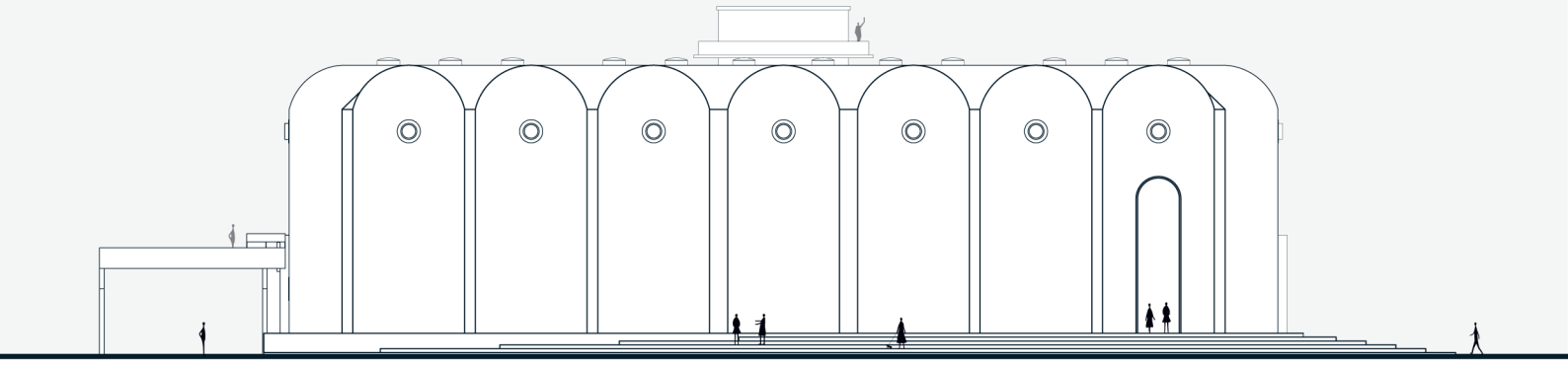
Architectural façades



0 10 20

South façade





East façade

Vinival hub

Terrace, bar and viewpoint towards L'Horta and La Patacona beach.

Facade opening for silos extraction and natural ventilation and light introduction.

Existing metal frame structure

Elevated platform serving first and second floor silos

Amphitheater that can be adapted to the flexibility of use by mobile partitions

Reuse of concrete silos as circulation and services cores

Reuse of metal silos on the ground floor as commercial units

Mobile partitions for flexible and adaptable spaces

Soft topography to access the building and to be used as a natural stands.

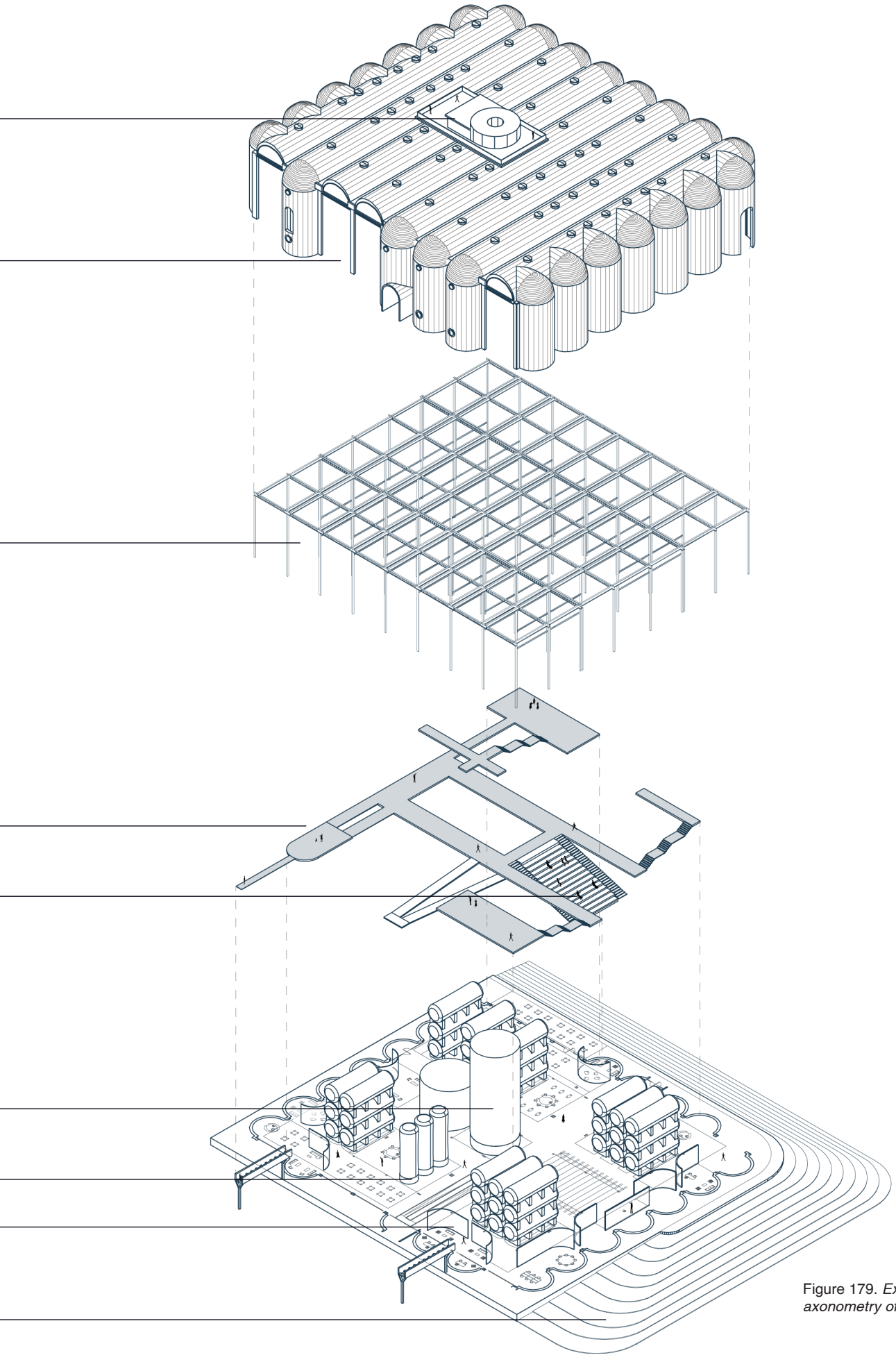
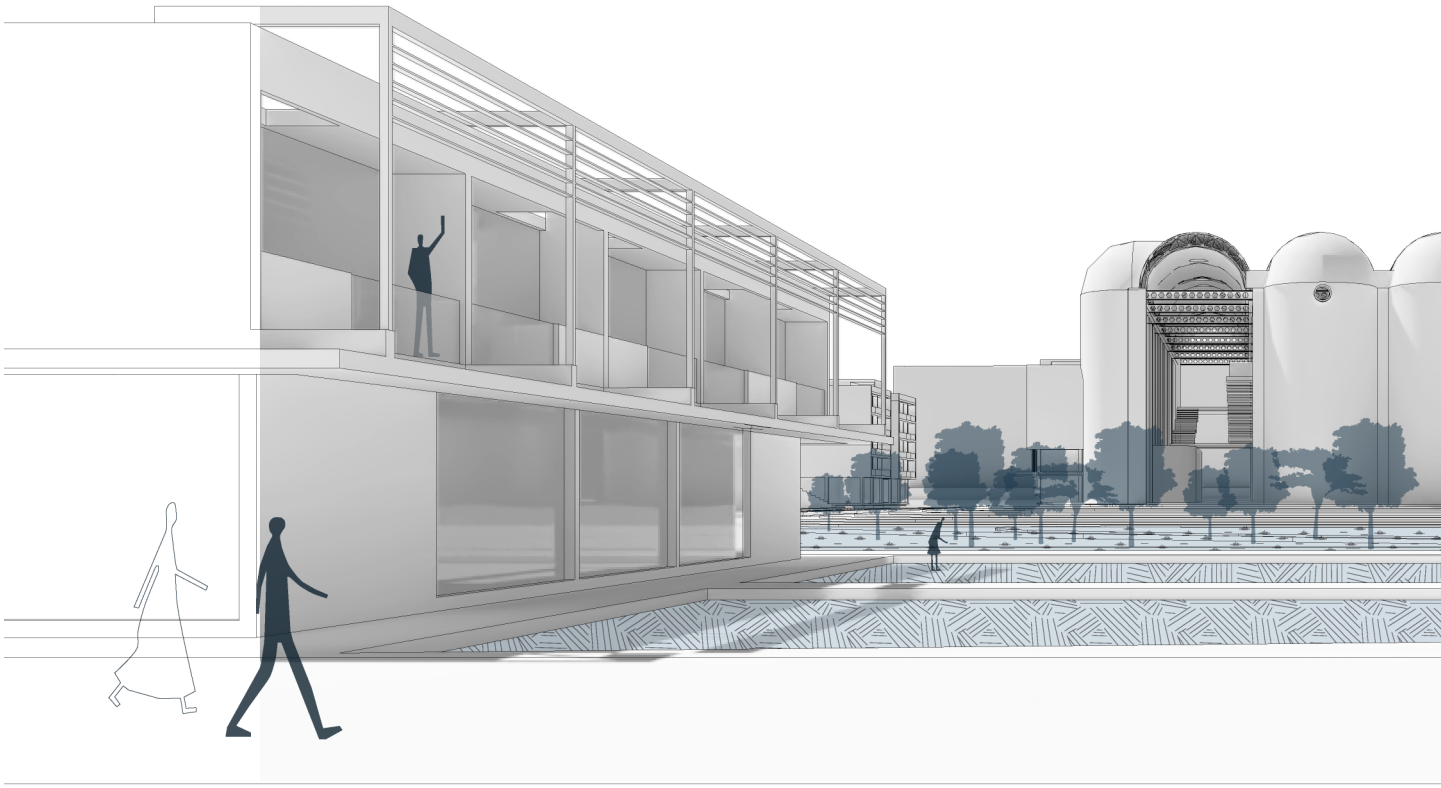
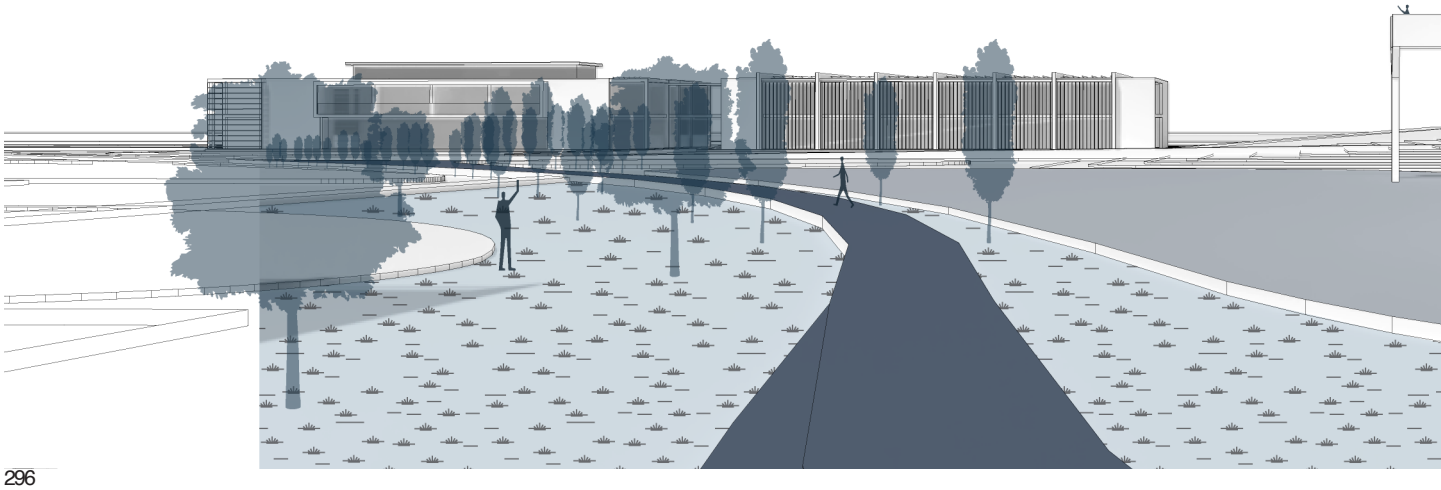
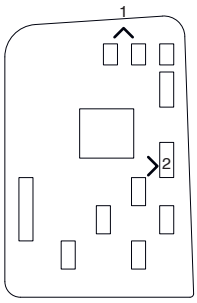


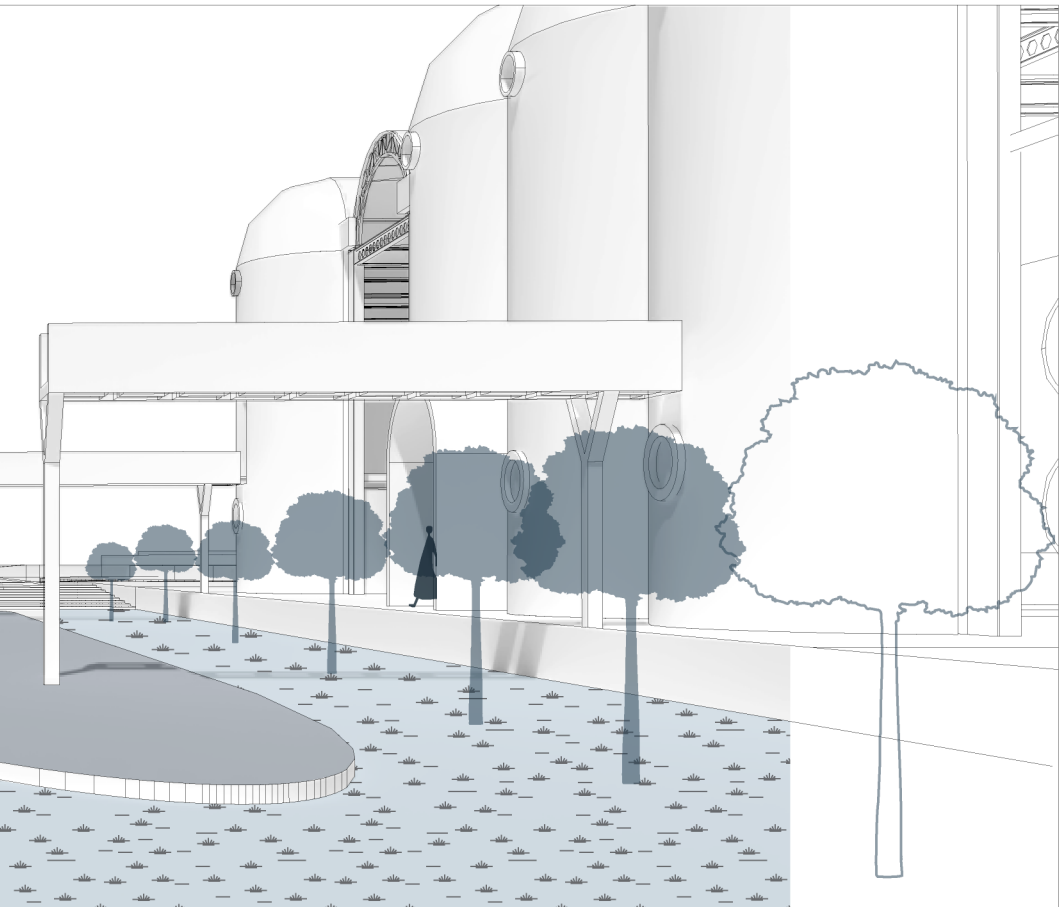
Figure 179. *Exploded axonometry of the proposal*



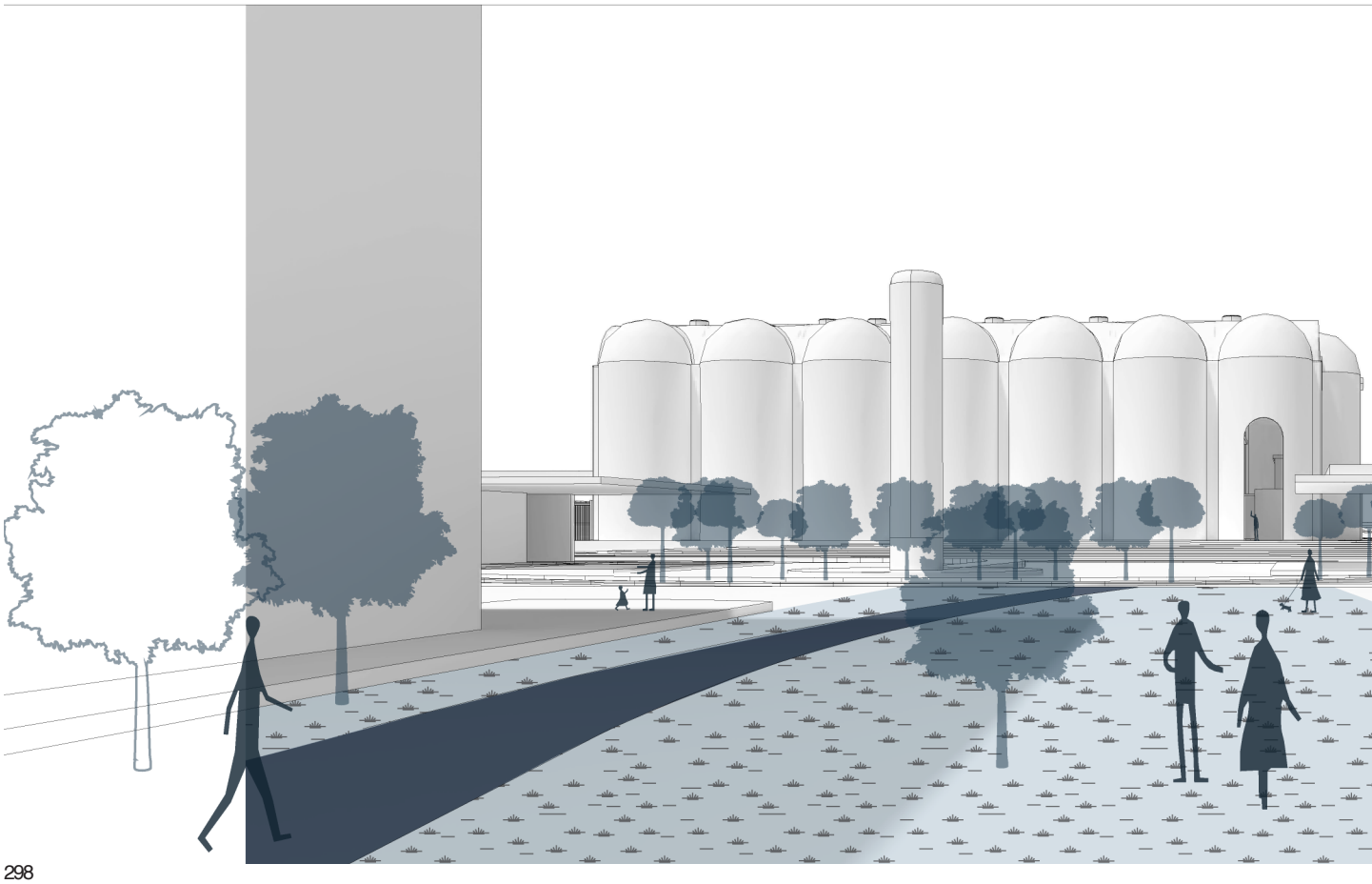


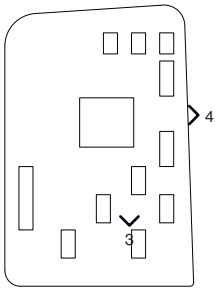


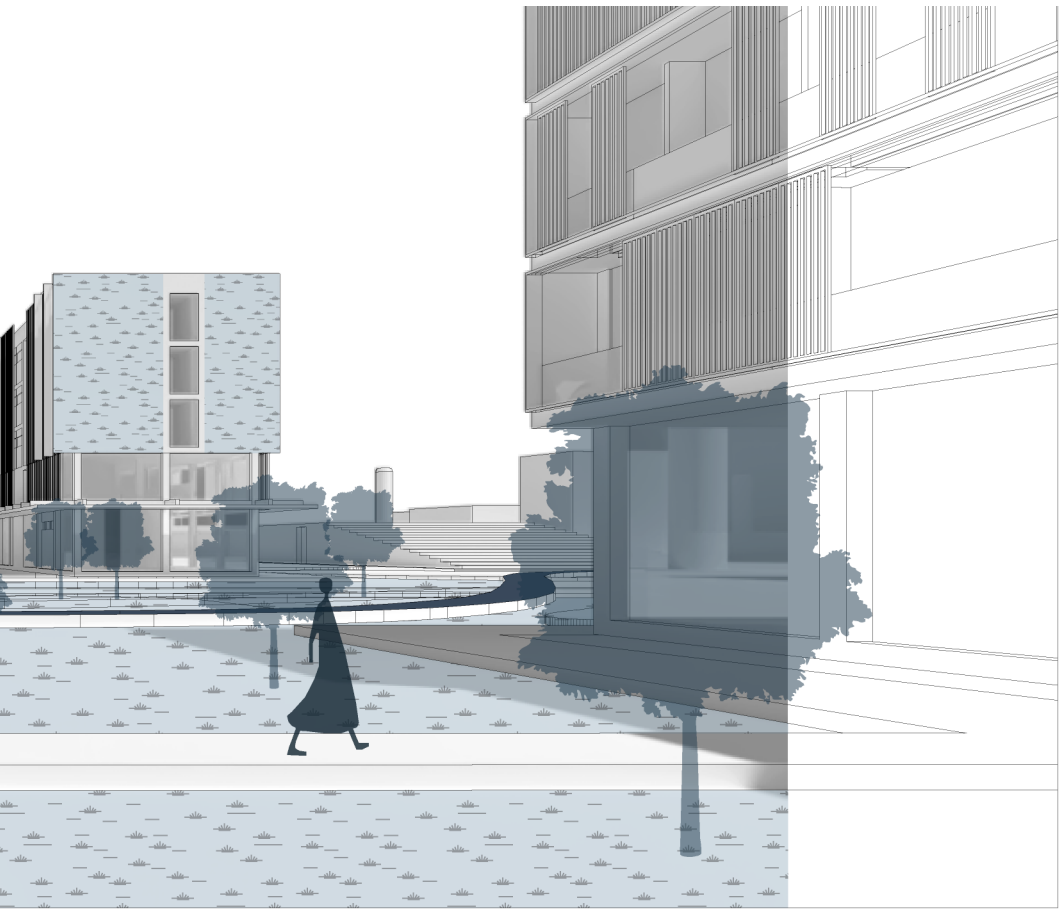
Perspective from tourist square to terciary buildings and Vinival hub



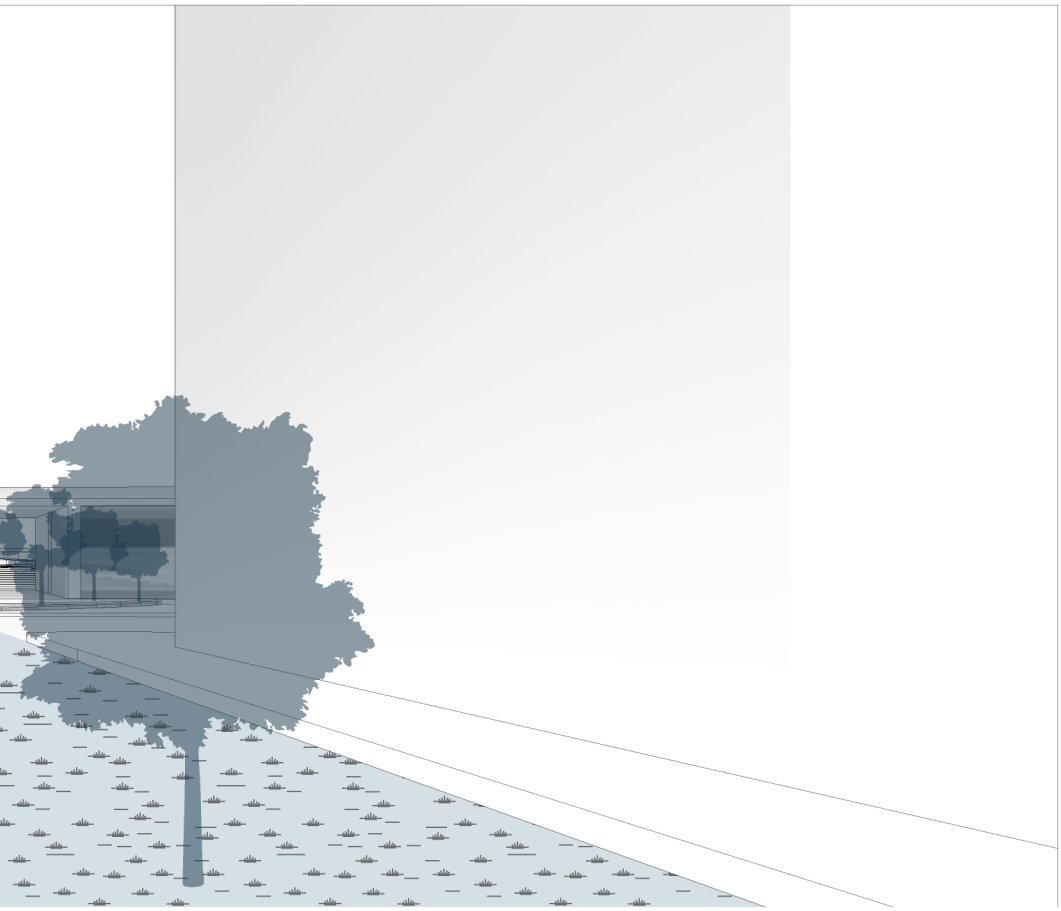
Perspective from public library to Vinival bridges and the Research center







Perspective from residential area to Vinival hub



Perspective from Mar Menor street (proposed pedestrian path)

“ La periferia è una fabbrica di idee, è la città del futuro ”

- Renzo Piano.

Conclusions

Back to L'Horta follows the contemporary vision of the periphery as an opportunity for urban revitalization, based on a complex and extensive analysis of the physical, functional, and social characteristics of the La Patacona neighborhood and, at the same time, an understanding of its weaknesses and needs.

In this order of ideas, it should be noted that from the diagnosis of the area and its valuable context for its historical, cultural, and landscape potential, it was determined that the questions of the project give rise to the development of countless proposals that respond to both the problems of segregation with Valencia and the surrounding municipalities, as well as the intervention of L'Horta for its recovery. However, the thesis merited to limit the space of action to the limits of the urban area of Patacona.

On the other hand, two conditions that define the proposal are established after the analysis. The first one is that the Patacona area deserves a system solution more than an architectural proposal. That is, understanding the "systemic" approach of the city from the development of networks between the population and the urban landscape that determine the characteristics or identity.

Second, in areas with high urban consolidation, as in the case study, the objective is aimed at preserving the existing and intervening those spaces in a state of disuse and underutilization as focal points of the new urban dynamics, a social, economical and environmentally more positive strategy that also favors the recognition of the past as part of the identity.

Thus, although La Patacona will never again be a productive agricultural area, it can function as a transition between L'Horta and the city, where nature takes possession of the place through the reinterpretation of a millenary and historically recognized system that adapts organically and flexibly to the existing rigid urban fabric, transforming the way of living and the way of making use of public spaces.

From there, urban interventions become a place in which architecture is supported, creating urban programs and dynamics that are more humanized and sustainable over time. In addition, the creation of these new processes generates a feedback action with the context, specifically, with the Huerta de Valencia, since its figure defines the concept of the proposal and reinforces the identity of the area, but also benefits through its recognition and diffusion.

As a result, Back to L'Huerta, an urban regeneration project composed of a network of public spaces and the L'Horta agri-cultural park demonstrates the possibility of recovering the identity of a peri-urban area through the recognition of its agricultural past and the enhancement of its heritage assets, and in turn, serves as a reference and starting point for the revitalization of L'Horta de Valencia on a larger scale.

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“ Nelle periferie, che sono la parte più fragile del nostro Paese, ci sono delle perle. Nonostante tutto ci sono. Spesso sono nascoste sul fondo, bisogna scovarle, lucidarle e aiutarle a crescere. Non è vero che le periferie sono sempre brutte e desolate, c’è bellezza, ci sono cuore ed energia ”

- Renzo Piano.