



POLITECNICO
MILANO 1863

LANDSCAPE SPRAWL

Break to Found

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Abstract

Based on the analysis and field research of Barcelona's main traffic axes and green area, "Landscape Sprawl" breaks through the constraints and establishes a new landscape architecture model through the deep discussion and summary of the historical city changes in Barcelona. Landscape architecture is a living artform that is more about cultivation, process, and change over time, instead of the more familiar landscape integrated practices such as formal composition and representation.

After nearly 2000 years of colonial imprisonment, Barcelona in the early 19th century had been tired of the walls in the city. In order to push down the old generation, Barcelona broke , not the external, but the internal deformed wall construction, overthrowing strict supervision and control.

"Breaking to found" is an innovative change, which uses Cerda's urban planning science, classical Suzhou Gardens' elements, such as pavilions, terraces, towers and corridors, as well as a Michel Desvigne's great gift for understanding how smaller units of space

are tied to large geographical contexts, and vice versa. This is how we get inspirations and create a new pattern.

"Landscape Sprawl" is able to create extremely sensible, rational and strategic projects that approach the poetic at the same time. Desvigne approaches landscape architecture as a form of earth. Similarly, the new program is used as a landmark. More in buildings in a hedgerow or thicket than in an allee or parterre, landscape architecture seeks to immerse the visitor in a sea of pure texture. Gently swaying trees, shimmering leaves, blustery grasses, and changing dapples of light and shade, create very beautiful tactile fields which is rough and fine, near and far, and scenes without edge or boundary, and clear definition and shape.

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Introduction

1

Barcelona

Barcelona is one of the biggest European cities, the capital and largest city of the autonomous community of Catalonia, as well as the second most populous municipality of Spain. The city is located on the northeast coast of the Iberian Peninsula, facing the Mediterranean Sea, which makes it a harbour city. The Port of Barcelona has a 2000-year-old history and a great contemporary commercial importance. Having a natural advantage of frequent connection with other harbour cities along the Mediterranean Sea, like Marseille, Genova, Barcelona could develop active economic activities, undertake heavy ocean transportation.



Mediterranean Coastline



Main Harbour City



Spanish Provinces Around

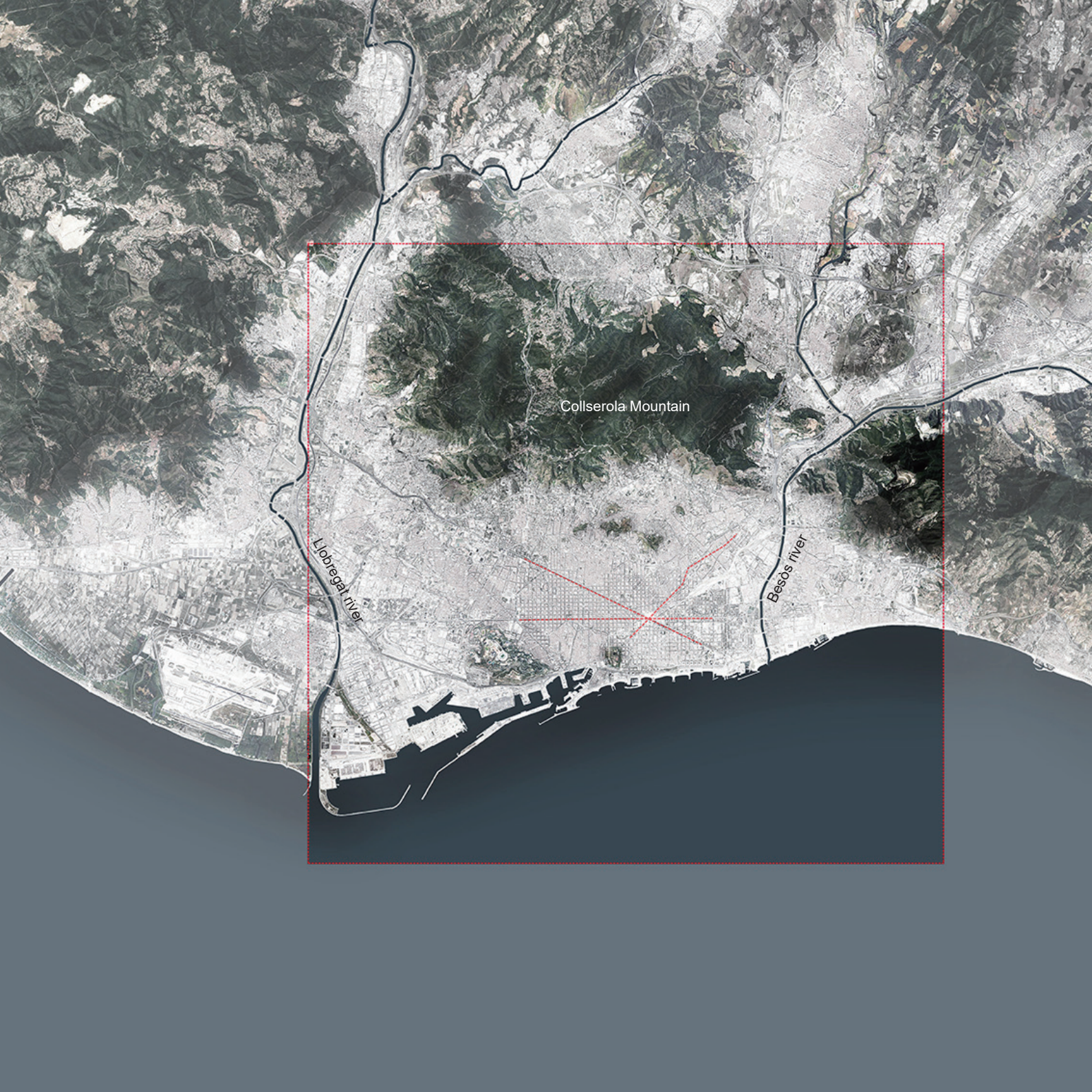
Barcelona is a harbour city, which is located on a plain approximately 5 km (3 mi) wide limited by the mountain range of Collserola, the Llobregat river to the southwest and the Besòs river to the north. This plain covers an area of 170 km² (66 sq mi), of which 101 km² (39.0 sq mi) are occupied by the city itself. It is 120 kilometres (75 miles) south of the Pyrenees and the Catalan border with France.

The city borders on the municipalities of Santa Coloma de Gramenet and Sant Adrià de Besòs to the north; the Mediterranean Sea to the east; El Prat de Llobregat and L'Hospitalet de Llobregat to the south; and Sant Feliu de Llobregat, Sant Just Desvern, Esplugues de Llobregat, Sant Cugat del Vallès, and Montcada i Reixac to the west. The municipality includes two small sparsely-inhabited exclaves to the north-west.

Barcelona is a maverick in the construction of European cities. In particular, Barcelona's structured extension of the texture is not like a city that can appear in Europe, enough to surprise any one. Barcelona can be clearly

divided into three levels - the medieval old town, the mid-19th century Cerdà expansion plan and the revitalized waterfront of the 1992 Barcelona Olympics. Barcelona Port is the largest port on the Mediterranean coast and the largest container terminal, also the Spain's largest integrated port. The Gothic-style old buildings and high-rise buildings complement each other to form the fascinating skyline of Barcelona.

Glòries is a large square in Barcelona, first designed by Ildefons Cerdà to serve as the city centre in his original urban plan (Pla Cerdà), but nowadays relegated to quite a secondary position. It is located in the Sant Martí district, bordering Eixample, at the junction of three of the city's most important thoroughfares: Avenue Diagonal, Avenue Meridiana and Gran Via de les Corts Catalanes.



Collserola Mountain

Llobregat river

Besòs river

Trace

- 1 Av.Diagonal
- 2 Av.Gran
- 3 Av.Meridiana

- 4 Barcelona-Sants
- 5 Barcelona-Estacio de Franca
- 6 Barcelona Nord
- 7 Port Olimpic
- 8 Port Forum

- 🏢 9 Alta Mar Tower
- 10 Hotel W
- 11 Hotel de las Artes
- 12 Mapfre Tower
- 13 Agbar Tower
- 14 Maritima Tower
- 15 Diagonal Zero Zero
- 16 Hotel Princess

- 🌉 17 Ferrocarril Bridge
- 18 Cristofol Bridge
- 19 Tsk Bridge
- 20 Guipuscoa Bridge
- 21 Molinet Bridge
- 22 Sta.Coloma Bridge





1| Barcelona-Estacio de Franca



2| Barcelona Nord



3| Diagonal Zero Zero



4| Alta Mar Tower



5| Sta.Coloma Bridge



6| Molinet Bridge



Agbar Tower
Height 144.4m



Hotel W
Height 98.8m



Port Olympic
Height 144m



Path through history

2

Barcelona is a maverick in the construction of European cities. In particular, the texture of Barcelona's regular expansion zone (EixamPle) is not like a city that can appear in Europe, enough to surprise anyone who studies the city. It is only possible to have a Barcelona in the European continent. This is not a collage city, but a cascade of cities. Barcelona is a miracle in urban construction. Anyone who studies a city will marvel at seeing his map: What kind of city is this? Urban researchers' analysis of urban textures will certainly not fall to Barcelona, and they are often tied to Washington, Chicago, New York, Paris and Rome. Every great city has its great era and great stories, the Roman transformation plan, the Paris renovation plan or the Washington plan, all of which cannot cover the glory of Barcelona's urban construction.

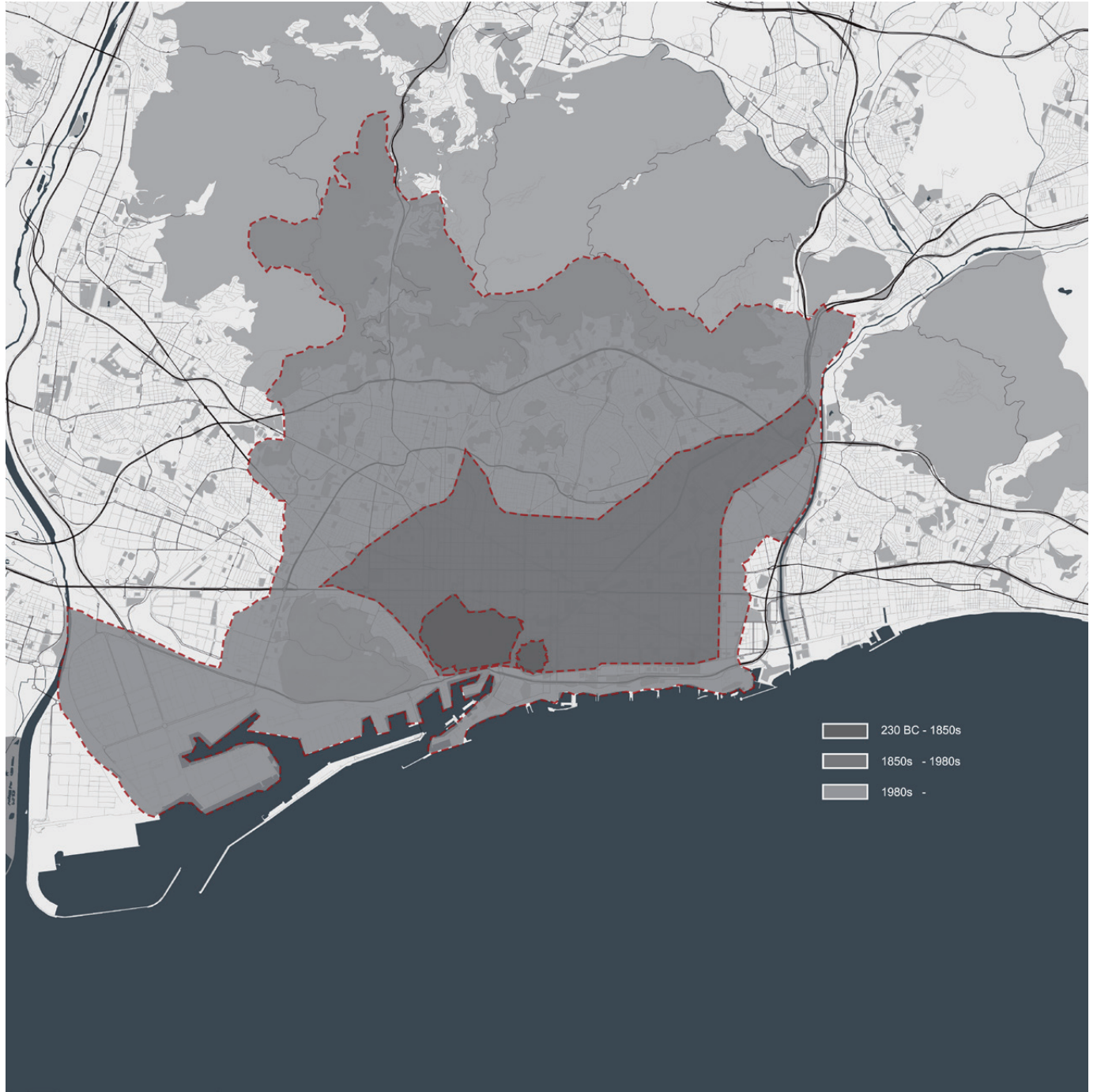
The story of the birth of this city is not a plan, but an uprising. : Barcelona, a city of businessmen, architects and citizens, screaming and counterattacking to the European capital, Madrid.

The history of Barcelona can be traced

back to the Roman era in the first century BC, but it was not until the 12th century that it developed into the Mediterranean coast and became an important trade center. Before the first industrial revolution, the population of Barcelona has been growing slowly. At the end of the 18th century, the industrial revolution Hewlett-Packard, Barcelona, experienced a population boom. In the process of industrialization in the 19th century, a large number of domestic immigrants rushed to Barcelona, and Barcelona experienced a continuous growth process, which absorbed a large number of villages around. Especially in the early 20th century, people came to Barcelona with their hopes for the future to make the population grow rapidly and become a metropolis.

The city of Barcelona was originally only in the Gothic district, but now it has expanded to the city's inland and surrounding areas by a factor of ten.

Its city has experienced three major developments, namely, the urban formation stage, the urban expansion stage, the Urban renewal stage.



1| The urban formation stage(230 BC - 1850s)

From 230 BC to 1850 AD, 2000 years ago, Barcelona developed from a 10-hectare residential area to a colonial fortress of 260 hectares. The struggle for power and territory in the era of ancient European feudal gods created the federal capital. The glory of the past also left the darkness of the colonial imprisonment period.

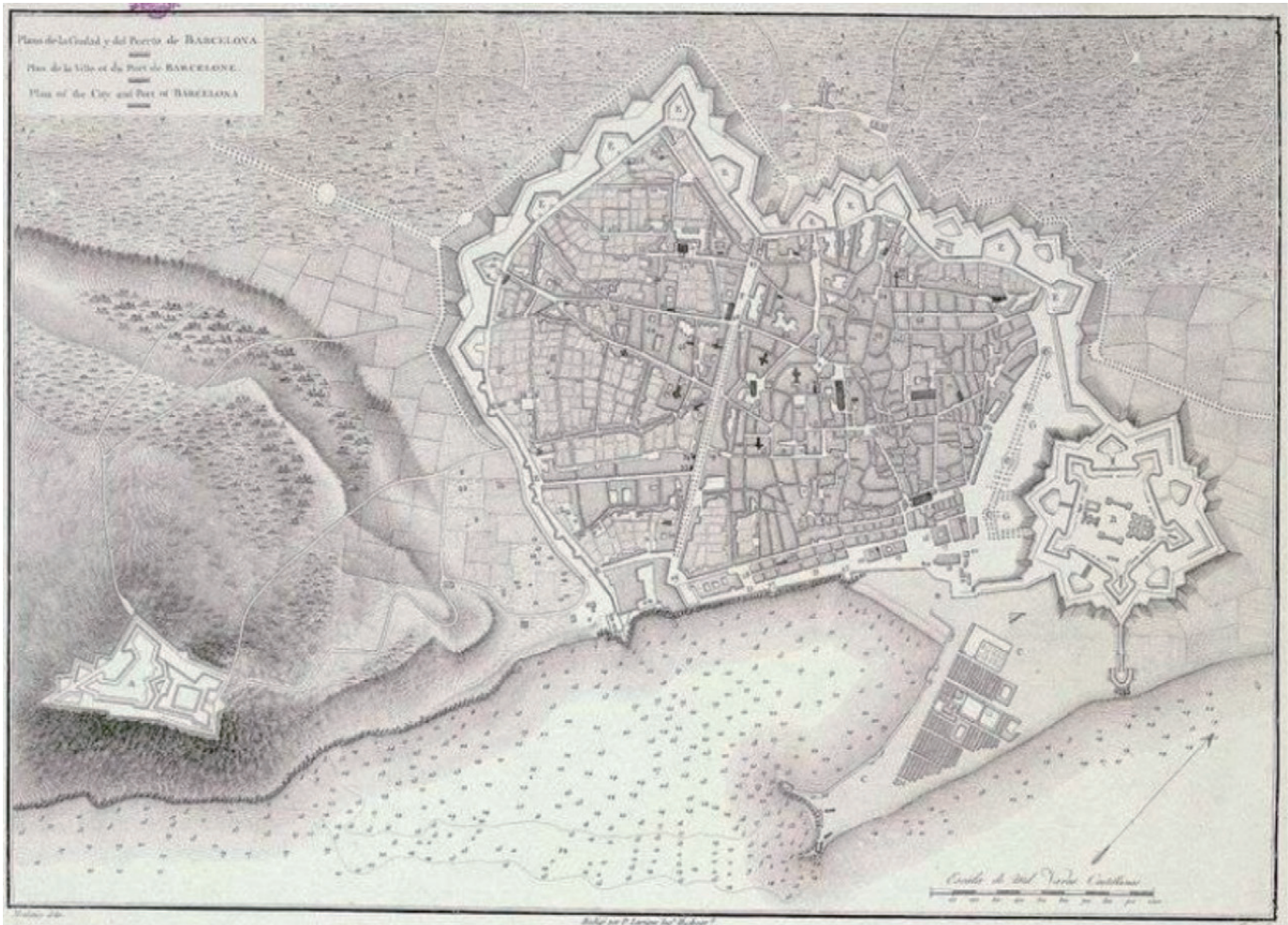
In the 5th century BC, due to trade reasons, the earliest settlements in the Barcelona area emerged in the coastal zone and developed into a trading port. At the end of the third century BC, when the Carthaginians and the Romans competed for the hegemony of the Western Mediterranean, Barcelona became one of the coastal bases of Carthage. In the 1st century BC, this place was under the rule of Rome and established a defensive city close to the sea, which is the prototype of the old city of Barcelona today.

In the civil war between the Bourbon royal family at the beginning of the eighteenth century and the Habsburg royal family for the Spanish regime, the Catalan regime in Barcelona was oppressed by the Bourbon royal family for a century of political culture due to the wrong team. In this history, the city of Barcelona is in a very deformed development, and the long-term political oppression of urban form is

very rare in the history of world cities.

The walls of Barcelona in the eighteenth century were the most distinctive on the European continent. European cities have a long history of wall construction. The city wall always has special significance for the city. It not only marks the birth of the city's political power, but also the symbol of the city's citizens' rights and interests. The people inside the city wall and the people outside the city wall are in two completely different ways. Social status - to some extent similar to our household registration system today. In the 18th century Barcelona's deformed urban construction, a large number of military facilities were almost equal to the urban construction area. The solid walls were not for defending the enemy but for suppressing the urban people.

The city of Barcelona has its unique dual tradition into the 19th century. It is not only a port city with the Romans of Lun Bula, but also a colony with the densely populated fortress and the encircled La Barceloni. With the decline of the rule of the kingdom of Spain, the city of Barcelona was once again prosperous.



7| Barcelona, Plan (1806)



L'assaut donne au Corps de la Place.

Les Bastions étant pris, les Sapper poussés au pied du mur qui ferme la gorge des bastions, les breches faites, à Coup de Canon, ou bien les mines étant chargées, on fait pousser les allées de rendre la place, et au cas de refus on fait monter à l'assaut, on attaque en même tems la Courbine, et on pousse les ennemis jusqu'au grand retranchement qui couvre le dedans de la Place, on L'attaque en plusieurs endroits tout à la fois et on fait effort pour gagner les remparts, on fait remplacer les troupes à mesure qu'elles avancent en sorte qu'il y ait toujours des bataillons qui occupent les breches les plus saez et le logement du chemin couvert, et lorsque l'on ne peut forcer le grand retranchement, on se loge sur les remparts ou du moins sur les breches.

Der Sturm auf den Haupt-Ort der Festung

Wenn man die Bollwerke erobert und die Untergrubungen unten an der Mauer welche die Kehl-Quelle der Bastionen verstreuet gestrichen seyn und die Breche insünder durch die Canonen oder die Mauer gemacht ist laßt man die Sapper ein aufsteigen die Festung zu übergeben. Schloß sie ihm selber ab sonst man am zu kommen. Man greiff nicht zu gleicher zeit die Courbine oder die Mauer zwilchen den zweyen Bollwerken an, und treibt den Feind bis in die große Schanze welche das innere der Festung bedeckt, diese fällt man an vielen Orten zu gleich an, und man bemühet sich auf die Malle zu kommen, Man reißt allenthal die Truppen nach dem dieselben avanciren wieder mit andern, so daß alle den die Brechen, Druben und die Eingrubungen des bedeckten Wegs von denen Truppen befehlt seyn, und wann man die große Schanze nicht beduennet hin, so setz man sich auf den Wällen oder wenigstens an denen Brechen feste.

- 8| The troops of Philip V enter through the walls of Barcelona in 1714
 Drawing by P Rigaud and engraving by M Engelbrecht, 1722.



9| Barceloneta beach at the end of the 19th century

2| The Urban expansion stage (1850s-1980s)

In the middle of the 19th century, with the development of the industrial revolution, the population of Barcelona increased sharply, while the construction of the city was still limited to the original urban wall, leading to overcrowding.

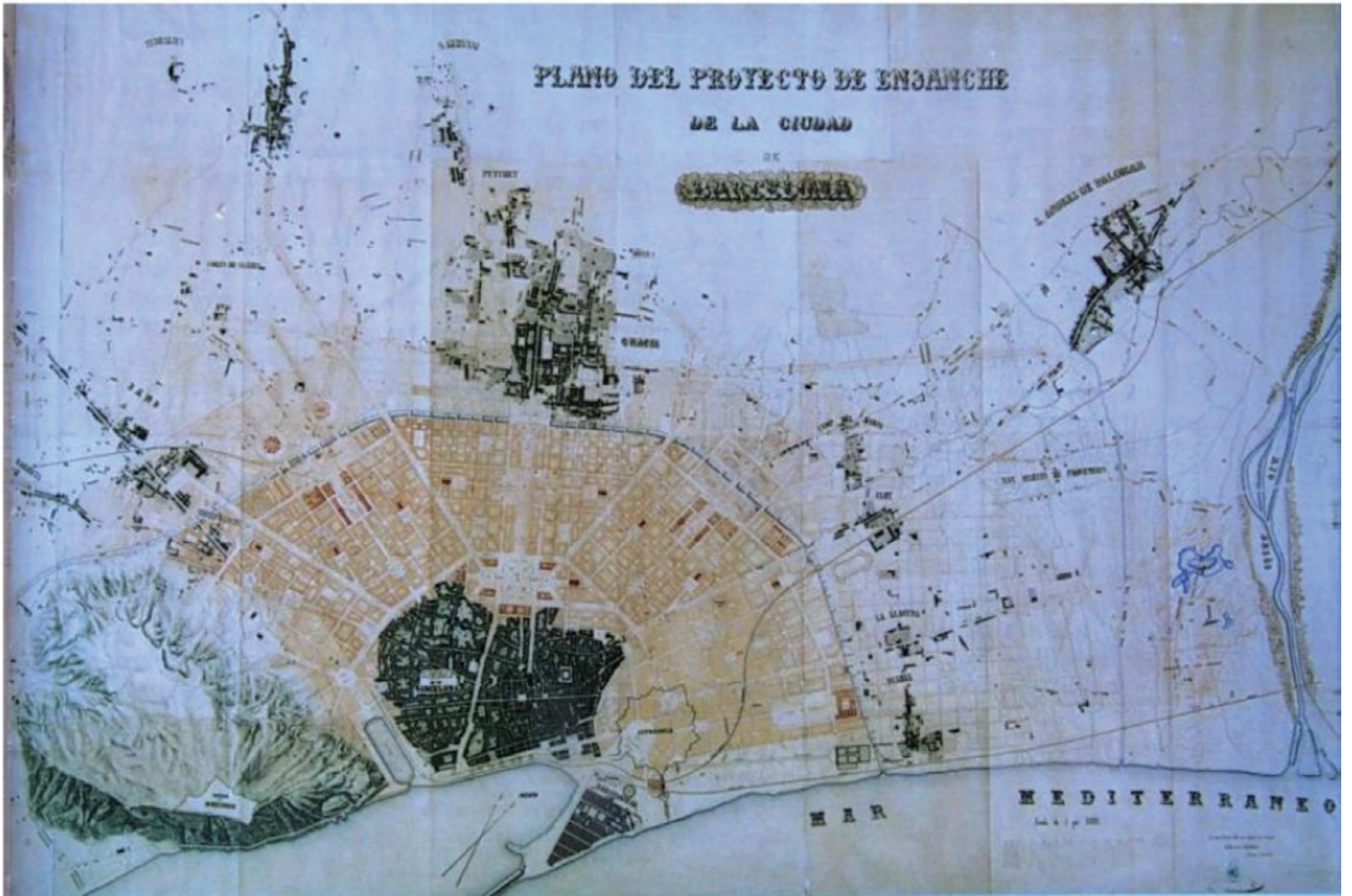
Living in an environment is extremely bad. As there was no more land left inside the city walls, all kinds of inventions were used to build more lodgings – houses were literally being created on empty space. Arches were erected in the middle of streets to be built upon, and a technique called *retreating façades* saw house fronts extended out into the street as they rose up – until they almost touched the building opposite (this practice was banned in 1770, as it prevented air circulation).

Traffic – in those days, horse-drawn carts – was problematic too: the city's narrowest street (now gone) was just 1.10 metres wide, while around 200 were less than three metres across. This, combined with residents' Mediterranean way of life (which meant being on the street whenever it was light – and in the case of some artisanal

professionals, working there too), worsened an already severe lack of hygiene in the city.

Barcelona's epidemics were devastating: each time they broke out, 3% of the population died, according to Montserrat Pallarès-Barberà, geography and urbanism professor at Universitat Autònoma de Barcelona. Cholera alone killed more than 13,000 people between 1834 and 1865.

Barcelona has been banned by the colonies of nearly 2000 years, and has been tired of the walls of the city. In order to push the old generations to bind the elephants and meet the needs of the new development of the city, Barcelona has broken through the walls and developed outwards. The Eixample master plan was devised as a necessary extension to Barcelona's medieval city walls during the second half of the 19th century. By the early 19th century, the old walled city of Barcelona had become so crammed that the working classes, bourgeois society and factories all co-existed in the same space. "Everyone was suffering the consequences of an Asian-level density," says the writer and essayist Lluís Permanyer, whose book



10| Antai Rovira Plan

Example: 150 Years of History chronicles that period.

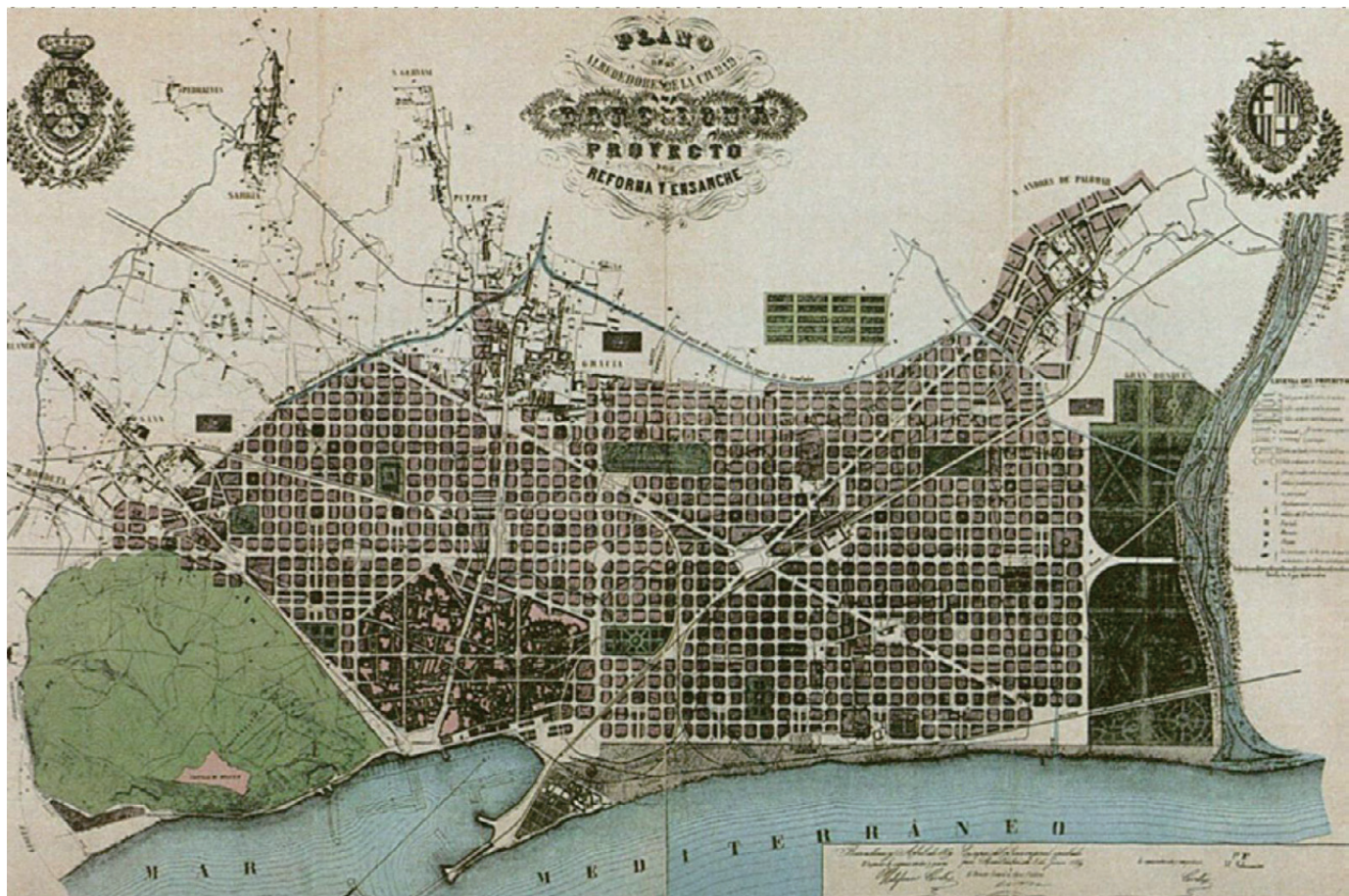
As the Industrial Revolution's influence began to rise within Spain, newly constructed factories and the subsequent increasing labor demands drew rural citizens to the urban centres of both Madrid and Barcelona like never before. Due to poor living conditions, overcrowding, a rising cholera epidemic and a population density as high as 1500 inhabitants per hectare, the Madrid government authorized in 1854 the destruction of Barcelona's medieval walls and called for a competition for the design of a new expansion of the city.

The city of Barcelona has its unique dual tradition into the 19th century. It is not only a port city with the Romans of Lun Bula, but also a colony with the densely populated fortress and the encircled La Barceloni. With the decline of the rule of the kingdom of Spain, the city of Barcelona was once again prosperous.

In fact, the Madrid Central Government's plan for New Barcelona began when the decision to overthrow the city wall was made

in 1854. Cerda participated in the project in Madrid from 1854, and the Madrid Central Government saw the construction of the new city. An important opportunity to use the new culture to replace Barcelona's deep-rooted old Catalan tradition and exclusion, the new plan is seen as an opportunity for "reconciliation", but this reconciliation is a reconciliation with the people of Barcelona. The ordinary urban life of businessmen and poor workers is the object of the central government's enthusiasm, and those deeply rooted elites need to be further weakened. Madrid hopes to transform the original social structure through equal urban space and obtain the support of urban civilians. Advocate and divest the privileges and interests of the local elites in urban space.

In the face of the wishful thinking of the Central Government of Madrid, the powerful elites in Barcelona naturally fought back. They organized their own "official" urban planning bids, inviting a large number of planners and architects – Cerda, which belongs to the Madrid government, was not invited. The list. This is a coup, and the vigorous planning and bidding activities



11| Hdenfons Cerda Plan

have aroused widespread concern from all walks of life in Barcelona. The Madrid Central Government has been forced by the pressure of the situation to force Cerda to take the completed plan to participate in this dramatic bidding event. - The result is naturally unsuccessful. Unfortunately, the elites in Barcelona will still be able to cheer their own victory in the future. The central government of Madrid has made a killer, forced to change the standard, and adopted Cerda's plan as an implementation plan.

The bidding process in the Barcelona extended area is full of twists and turns. A seemingly simple urban planning process is produced by the continual squeezing of two completely different political positions and interests. The implementation of the Cerda program has a profound background of economic, political and cultural changes. In the process of implementation, new political forces are gradually formed, and the power struggle between the emerging middle class and the traditional Catalan aristocracy is intensifying. It is said that Cerda's plan satisfies the petty bourgeoisie's pursuit of ideal life, and at the same time meets the

needs of ordinary residents in the city to improve the urban living environment.

By 1855 Cerda had surveyed and drawn up Barcelona's first accurate topographical plans for the preliminary expansion project which was soon approved by the city council. In 1859, however, a newly elected council held an urgent projects competition for the expansion area citing that Cerda's original plan took no consideration of the existing medieval city. Cerda's plan was again successful in the competition (albeit with slight modifications), but for unknown reasons (although one can speculate about political partisanship or poor personal relationships) the city council repealed the competition and declared it void. It subsequently selected Antonio Rovira y Trias and his radial centric design as the winning master plan. However, the Madrid government remained interested in Cerda's plans and allowed him to continue working, albeit at his own expense. In 1860, and with Madrid's approval, Rovira y Trias's plan was scrapped and Cerda's plan again passed, although with major compromises.



12| Garden-style low-density urban landscape advocated by Cerda

In 1859, Barcelona organized a competition on urban development planning after the wall was demolished. The two options came from the two political forces behind the Antai Rovira and Ildefons Cerda. In 1859 The planning storm and Cerda's plan made Barcelona what it is today.

By 1865, the wall of the city of Barcelona was basically completed. At that time, Barcelona was in a perfect city with a vacuum belt, and there were only five scattered villages in the distance. Barcelona had set the new city development area in a vacuum between the old town and the village.

Rovira's plan fully respects the old city, and the program starts to cater to the aesthetic concept of the very conservative Catalan nobles at that time, in order to reproduce the glory of the Middle Ages dominated by Catalan culture, continuing the old city, designed 5 The radiological axis and the cumbersome urban public space were designed as a Baroque city resembling the Roman or Lebanese tradition.

Ildefons Cerda (December 23, 1815 – August 21, 1876) was an urban planner originally trained as a civil engineer who left his job in the civil engineering service to begin working on a grid based plan that would come to be known as the Eixample. At this time, grid or radial based urban planning principles were being implemented or experimented with in New York, Buenos Aires, Paris and London. Unable to find relevant planning precedents for his unique vision however, Cerda undertook the task of writing his own from scratch.

At the core of Cerda's master plan was the creation of the manzana – a city block structure that had been meticulously studied and detailed. Into this came Cerdà. His plan consisted of a grid of streets that would unite the old city with seven peripheral villages (which later became integral Barcelona neighbourhoods such as Gràcia and Sarrià). The united area was almost four times the size of the old city (which was around 2 sq km) and would come to be known as Eixample.



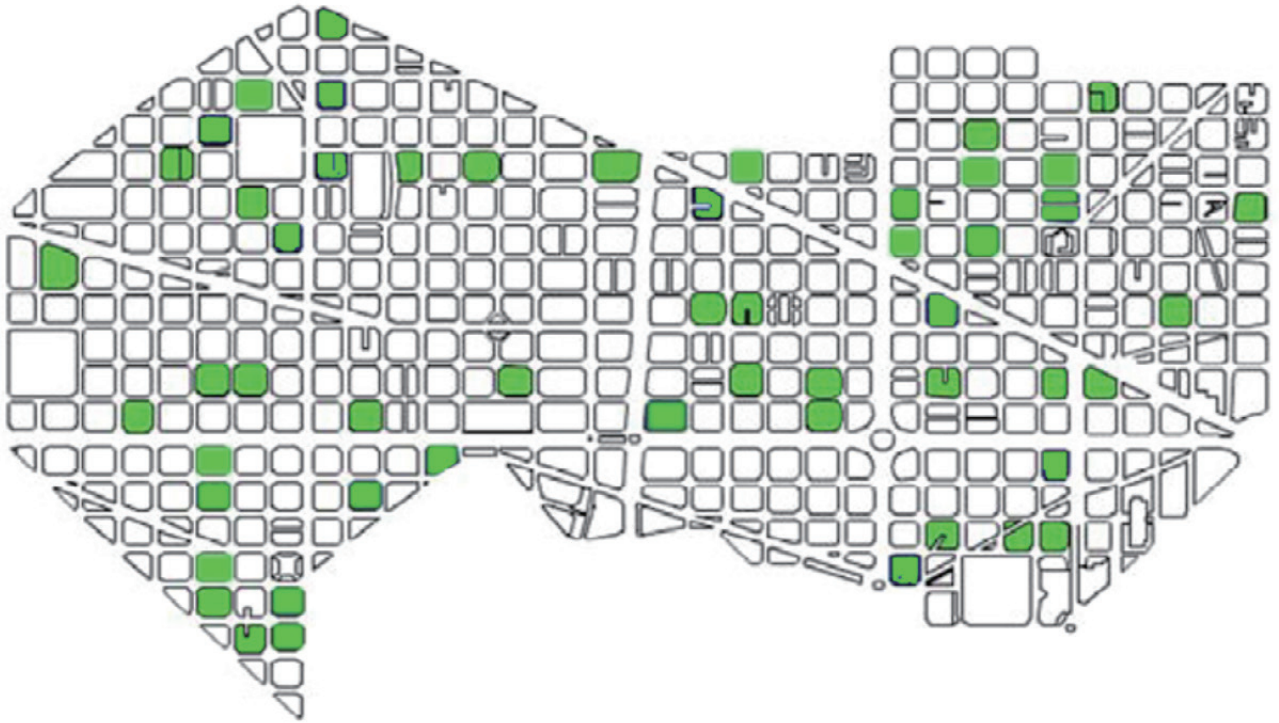
13| Distribution of public facilities

The Cerda plan satisfies the pursuit of the new generation of middle class for the ideal life, and also meets the needs of ordinary residents in the city to improve the living environment of the city. In the space, it is reflected in the use of grids in a large number of undifferentiated city blocks. Public facilities and parks all have equalization ideas, and each public facility layout service is close to 25 blocks.

Cerda's solution is to build a new skeleton of the city with a chessboard network to diagonally arrange the streets, connecting the new district with the old district and the neighboring small towns to become a new type of industrial and commercial city. The plan uses Square Street as the basic unit of the city. Originally, each manzana was to be built up on only 2 or 3 sides, with a depth of 20 metres and a height of 16 metres. The plan uses the technical calculation to set the block of land to a 13-meter square (the plot area is about 13,000 square meters). On this basis, the plan explores the various possibilities of the layout of the block in the block, without using the building. The traditional

way around the neighborhood is to use a five-story building, along the second or third quarter of the neighborhood. The construction density of the blocks on both sides of the building is not more than 50%. The remaining land is reserved for the city flower garden, and it is hoped that this will create a more open and dense urban environment. In between the 2 or 3 built-up sides a recreational green space would allow for a maximum amount of sunlight and ventilation to penetrate every unit in the manzana while simultaneously providing a green belt for the entire city in all cardinal directions. Unique to Cerda's manzana was the 45 degree chamfer of each corner of the city block. Cerda believed that the steam tram would come to dominate the future of transport in Barcelona, and as such the 45 degree chamfer was designed to accommodate for the tram's turning radius. The traditional "bottom-to-business" model is adopted along the street to provide employment opportunities for residents to work nearby and reduce traffic.

The surrounding road is 20 meters wide. Each square has four large cut angles of 20



14| Courtyard recovery locations within the Eixample neighborhoods.

meters wide. The squares of the squares are slightly octagonal, so a considerable amount of public space is left at the square cross. Each corner has become an important focal point for street activities, and it also plays a role in reducing the traffic load. In order to divert the car, he divided the 5m wide sidewalks on the two sides of the 20m wide road, so that each street was formed into continuous walkways.

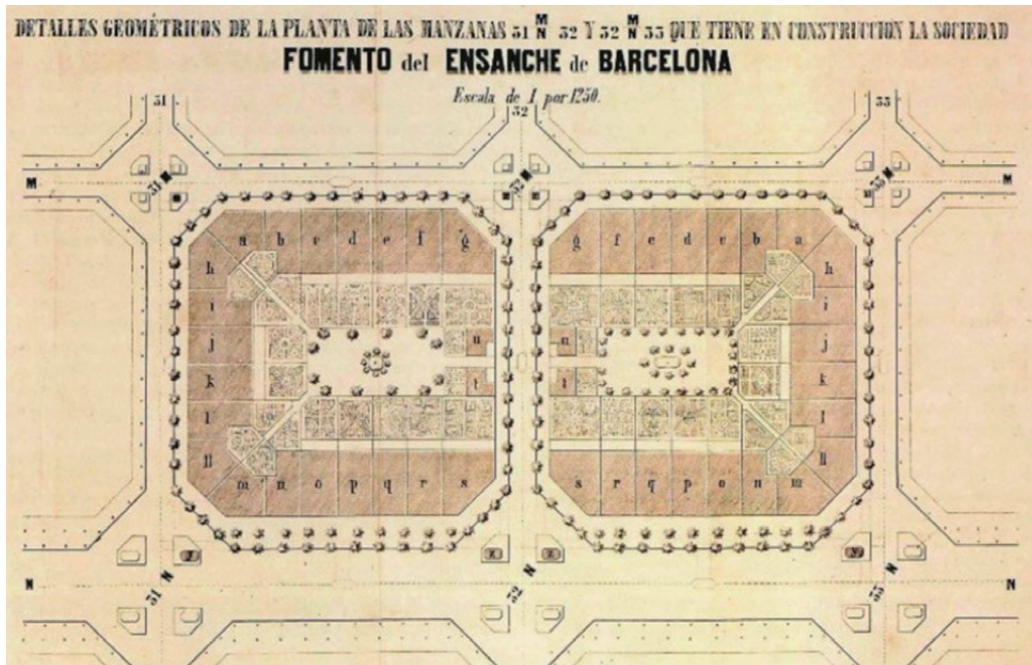
In the subsequent industrialization process in Barcelona, the ever-increasing number of people has made it necessary to develop urban land pressure. In the process of construction and development of the expansion area, the city's neighborhood ideas of C e r d a initial low density were not realized, but in the continuous adjustment, the city of jie'fa with a more traditional high-density periphery was moved.

On the road network, Barcelona's extended area plan is the only city on the European continent that uses grid + diagonal lines, and later developments prove that Barcelona made the right choice, although the new expansion area is on the scale. In

stark contrast to the old city, the scale of the extended area is still very comfortable.

Controlled planning. The programme has established a strong control framework for the future development of urban space in Barcelona, which has never been seen in urban aesthetic movements that were formerly European bourgeois, whether it was Rome or Paris. Perhaps because of the origins of Cerda sociologists, his plan did not focus on the beautiful palaces, squares, fountains and large axes of the city, but instead sought a fast-developing, equal and efficient modern urban development framework for the city. Although the final plan is far from the idea of Cerda, the control framework formed by the Cerda solution has created a unique temperament for Barcelona today.

The whole and equality are the pursuit of the Cerda program, and it is also the starting point of the program. The final implementation is precisely the richness of the city under the overall unification.



15| Size of the Eixample of Barcelona.
Drawn by Ildefons Cerdà(1863)

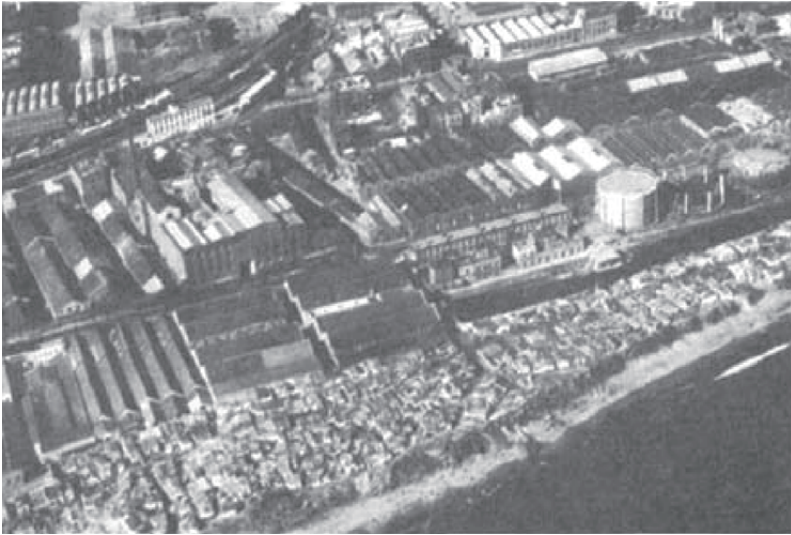
3| The Urban renewal stage (1980s to the present)

In the 1970s, Barcelona's traditional industries began to decline, and the opportunities for work were reduced. The city began to decline. Since 1980, the Barcelona government has transformed and built more than 4,500 public spaces through the events of major events.

In the early 1980s, Barcelona began urban transformation. At that time, Barcelona was the first elected government. It was urgent to start reconstruction to improve the urban structure. For economic reasons, the goal of this reconstruction is to focus on planning squares, streets and parks to improve the city. The quality of life is a project that is expensive and not very effective. During this period, Barcelona's policy was remodeled and constructed in a number of small public spaces, and the main object of the renewal was the expansion of the region that gradually declined to decline. From the small public space man, the "Acupuncture Method" was used to cut through, reconstructed and created many parks and small fields, which completely improved the city's appearance and the quality of life of the residents.

The way of urban transformation is that the government will take the lead in formulating relevant policies, and from the top down, from the central government's official departments, non-profit groups to commercial organizations, a multi-participation, multi-participation internal mechanism, regional human resources Material and cultural resources for sustainable restructuring and innovation. This full-scale social movement from the top down "sustained for sustainable development" is known as the successful "Barcelona model"

The bidding for the Olympic Games is an important opportunity for the realization of the redevelopment plan of the city of Barcelona. A series of waterfront redevelopment projects have been implemented around the Olympic Games on a large scale. A large-scale city was built throughout the old and new districts of Barcelona. The renovation included the main traffic roads in the city, strengthening the construction of the foundation, and the construction of the village in the waterfront



16| The waterfront area of the 1960s, the site of the Olympic Village and the Olympic Port today
Joan Busquets. Barcelona the urban evolution of a compact city. Harvard University, 2005



17| Planning for the Olympic Village and Olympic Port in the 1980s
Joan Busquets. Barcelona the urban evolution of a compact city. Harvard University, 2005

under the idea of “opening the city to the sea”. The construction of the Olympic Village and the Olympic Port serves as an entry point to promote the renovation project of the waterfront.

The development of this project involves a series of major processes: the removal of the railway line along the sea, the rapid movement of the ring road to the ground, the treatment of sewage discharged into the sea, and the construction and maintenance of new beaches. A number of related service facilities and hotel dining rooms have also been deployed to the area, making the entire area flourish and becoming a new urban leisure area and tourist attraction. The Barcelona Olympic Village plan fully utilizes the environmental advantages of the site, providing a more flexible and open external environment for the apartment. Success has reversed the original ruin of the region. After the end of the Olympic Games, the house of the Ouyun Village Residence was built with good location conditions and immediately became a sought-after commercial apartment. Facing the middle class of the city, it promoted the

development of the waterfront residential area. The Port of Olympia has become a bargaining platform for the private parking of the Barcelona high-incidence level. The entire area becomes one of the landmark views of the city.

After the 1992 Olympic Games, the city rebuilt the main cultural card, which was built in a pan-regional city on the basis of the first two stages. Barcelona's urban design and development concept, centered on cultural and public space, is combined with the “World Literature Forum” to continue to actively participate in or create an international event to maintain and enhance the city's attractiveness and international status. The first World Cultural Forum was held in Barcelona in 2004, and this led to another round of large-scale waterfront development projects. Barcelona became a world-class exchange center. “City is cultural culture is the city”. This is a slogan that Barcelona has put forward to the world for the comprehensive competitiveness of the city. It reflects the huge driving force of urban culture occupying a special important position in the urban development process.



18| Port of Barcelona, before and after the 1992

4| Summary of changes in Barcelona city

From the perspective of urban development in Barcelona in 2200, the sense of freedom and equality of citizens has always been reflected in the evolution of urban form. At the same time, the successful application of the Barcelona model proves that the low-rise, multi-layer high-density street-type building type and street-street system are still very effective in today's urban construction. Because this kind of building can establish the semi-public and private areas at the same time, the meaning of the daily activities and the boundaries of the space is clear and the sense of belonging is strong.

In the process of urban construction, the integration of science and science into modern elements has also protected the history of the city, the culture of the

city, and the memory of the city, so that the construction of the new city and the transformation of the old city are interdependent and develop together. Before this, Barcelona was a long-established ancient city. It was a long-established ancient city. In the rapid expansion of the city, it also faced the expansion of the new city and the protection of the old city. What is valuable is that the transformation of the old city of Barcelona is a good solution to the contradiction between human protection and urban expansion, and it has become an internationally famous tourist city.



19| Barcelona 2019

Green Points and Links

3

3.1| Green Space in Barcelona

Challenges

Barcelona Metropolitan Region is one of the most densely populated urban areas in Europe (approx. 5 million inhabitants in 3.242 Km²), also as one of the busiest tourist destinations. In 2012, the city fell well short of the European Union's recommendation on access to green space (6.82 m² per capita compared to the 26 m² per capita target recommended by the EU (Laghai, 2012)).

Air quality in Barcelona is poor. It is estimated that 3500 lives could be saved annually in Barcelona by reducing current levels of air pollution to meet WHO standards (Künzli and Pérez, 2007).

The city is also facing rising temperatures as a consequence of climate change, leading to extreme weather events, such as droughts and heat waves.

Barcelona is made geographically boundries of the Mediterranean sea to the east, the Collserola moutain to the west and two rivers (Besòs and Llobregat) to the north and south. These mountain and

river ecosystems have been the subject of restoration interventions. They act as natural borders between municipalities, so managing them requires a supra-municipal approach.

Objectives

The City of Barcelona, with its Green Infrastructure and Biodiversity Plan up to 2020 (City of Barcelona, 2013) is implementing a range of actions to bring nature into the city. The main objectives are to preserve and improve the natural heritage of the city and to conserve its biodiversity. This would ultimately bring environmental and social benefits for local people.

With a similar vision, but with different solutions, the Trees Master Plan 2016-2035 has the overall aim of maintaining a well-managed, healthy and biodiverse woodland to improve green corridors and tackle the urban heat island effect.



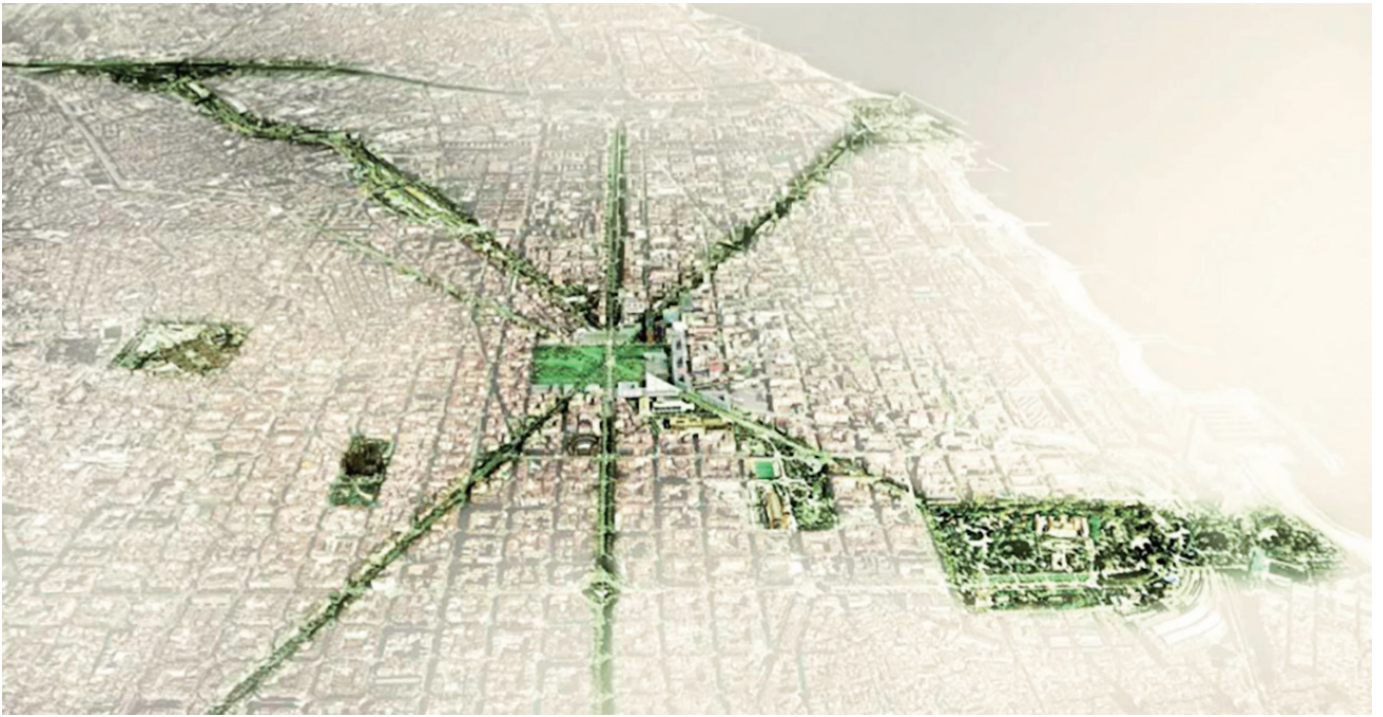
Solutions

There are totally five main solutions to solve this problem. First, building a network of street trees is helping to boost resilience and adaptation to climate change, providing direct benefits to urban people. Second, creating green corridors as an ecological connection, could enhance mobility and cycling and improve city attractiveness and wellbeing. Third, to the south of the metropolitan area, the coastal zone includes the delicate ecosystem of the dunes, which is managed by the Metropolitan Administration and provides ecosystem-based adaptation. Forth, the peri-urban forest of Collserola, in turn, is managed by the Consorci del Parc Natural de Collserola so as to provide a series of ecosystem services. The last but not the least, urban gardens are also effective solutions for this, although sometimes it seems harder to achieve. But as well as achieved, urban gardens could not only provide public green places and food supply, control air pollution, but also restore vacant and degraded areas.

For example, Barcelona City Council recently began transforming a major

traffic node of the city into a large urban park (13 ha). The Canòpia urbana (urban canopy) project won an international design contest for Barcelona's Glòries square, going beyond traditional park design by incorporating micro-climate regulation and biodiversity as key design aspects. The new park will feature a dense tree canopy cover in some areas in order to provide substantially cooler conditions inside the park, especially during summer time. The project aims to boost urban biodiversity by creating specific habitat conditions within the park, called 'biodiversity pearls'.

Currently, two main types of urban allotments exist in Barcelona. The first type, the Xarxa d'Horts Urbans de Barcelona (Network of urban vegetable gardens of Barcelona), consists of vegetable gardens that are formally managed by Barcelona City Council. These vegetable gardens are usually divided into small plots of land that are individually managed by elderly gardeners. The second type consists of self-governed gardening initiatives where land is generally managed collectively.



20| A rendering of Barcelona's planner green corridor network

3.2| Research Some Points and Links

1| Plaça de les Glòries Catalanes

Area: 72,000 sqm²

Location: Geometric Center

Use: Occupied by parking lots, part of elevated highways, shops and some concrete walls

Glòries, which was then well outside the city, was originally featured in the mid-19th-century Cerdà plan for Barcelona, intended as a large public square in a new city centre, but it remained sparsely developed,

turning into one of Barcelona's major road and railway junctions.

Beginning in the early 2000s, and as of 2007, revamping project for Glòries has started, which is aimed to give the square a new role in Barcelona and revitalize the northern districts of the city, under the name 22@.

2| Ciutadella Park

Area: 70-acre (280,000 m²)

Location: the northeastern edge of Ciutat Vella

Use: Including the city zoo, the Palau del Parlament de Catalunya, a small lake, museums, and a large fountain

Ciutadella park was built at the end of the 19th century and was the first public park in the city, a category that it has held for many years. In the park, you can find centennial

trees, more than 100 variety of plants, 19th-century buildings transformed into museums, sculptures, fountains and large areas for walking and breath.

Josep Fontserè was the creator of his original layout in 1872; with the collaboration of Gaudí. This design was modified in 1888 to house the Universal Exhibition of Barcelona and, later, to locate the city's zoo.



21| Current and Forecast



22| Fountain in the Park

3| Nova Lcària park

Length: 415m

Average Width: 81m

Location: Sant Martí

Limits: From the Olympic Port to the Bogatell breakwater

Use: Coastal park overlooking the sea, with an expansive green space, walking paths & foot bridges.

Famously, the Barcelonins only discovered the beach after the 1992 Olympics, but long

days on the platja are now an essential part of summer. It is one of the beaches situated roughly halfway along the city seafront, which is also one of quietest places in the city, making people spend much time there to enjoy life.

This linear park takes a role of connecting both the Olympic Village and the crowded citylife to the beaches.

4| Güell Park

Area: a massive 19 hectares with 1.7 hectares of the core area

Location: Carmel Hill, Gracia, Barcelona

Established: 1914

Use: Gardens and architectonic elements

Originally conceived as a private residential area for affluent Catalan families, Park Güell is the work of world renowned architect Antoni Gaudí who let his imagination go wild on the gardens and architectural elements of this park. His use of natural forms

shaped into covered walkways, galleries and archways beautifully camouflage the artificial structures into the surrounding Mediterranean hillside. A designated UNESCO World Heritage Site, Park Güell is now one of the most enchanting gardens of the world and captivates thousands of tourists every day.

The more wooded park supports a wide variety of wildlife, many birds can be seen from the park.



23| Green Space



24| Green Space and Architectonic Elements

5| Can Dragó Park

Area: 12 hectares

Location: An area of transition, halfway between Avenue Meridiana and the Sant Andreu Cemetery

Use: An enormous boulevard with green spaces, places to play, sports facilities, swimming pools and walking areas.

Designed by Enric Penyes, Can Dragó was opened in the 1990s and is named after a 17th-century farmhouse. It has been

gradually expanding ever since it opened to become the multipurpose recreation park today.

The park area, specially designed for pedestrians and cyclists, can easily be crossed by the tree and bench lined avenues that separate it from the sports facilities.

6| La Sagrera Linear Park/ Camí Comtal Park

Area: 40 hectares

Location: A new green diagonal axis, facing the famous Diagonal avenue

Design & Realization: 2011–ongoing

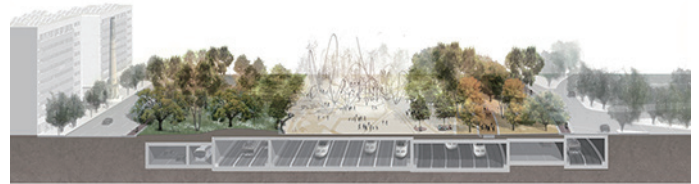
Use: A dynamic green space, resting on the public transport infrastructure

The project is being developed by the urban design and landscape architects of West 8. „El Camí Comtal will finally connect the Sea and the Mountains, Nature and City in Barcelona. It strengthens the landscape

experience for those approaching the sea from the coastal range through the city. It offers a unique opportunity to unimpeded travel from the wildest Catalan Pyrenees to the heart of its capital city” they say. This green track enters the city through the natural valley of Besós, finding continuity in the new El Camí Comtal park or La Sagrera linear park.



25| Boulevard and Small Hill



26| Park Plans

3.3| Our Proposal

On the base of the current and the future planned urban green space in Barcelona, we hope to add more green space on our site as well, to provide residents and tourists a place to enjoy nature and some other function.

In our green space, we generally divide it into two parts: natural free forest and artificial regular park. The former tend to provide people with more fresh air and places to walk or jog. The latter is more regular from shape, abundant formally, and much easier to touch and do some daily activities.

In the artificial green corridors and the museum area, there are originally mainly

factories. Considering keeping some memory of this area, we select some well-preserved factories to hold their buildings but definite them a new function, which is more related to human daily life. Also, we enrich the variety in green corridors, like introducing water and create architectural elements. From other hand, in green space we consider to give them some different forms, like botanic gardens, domestic gardens, nutrition workshops and food markets.



Inspiration

4

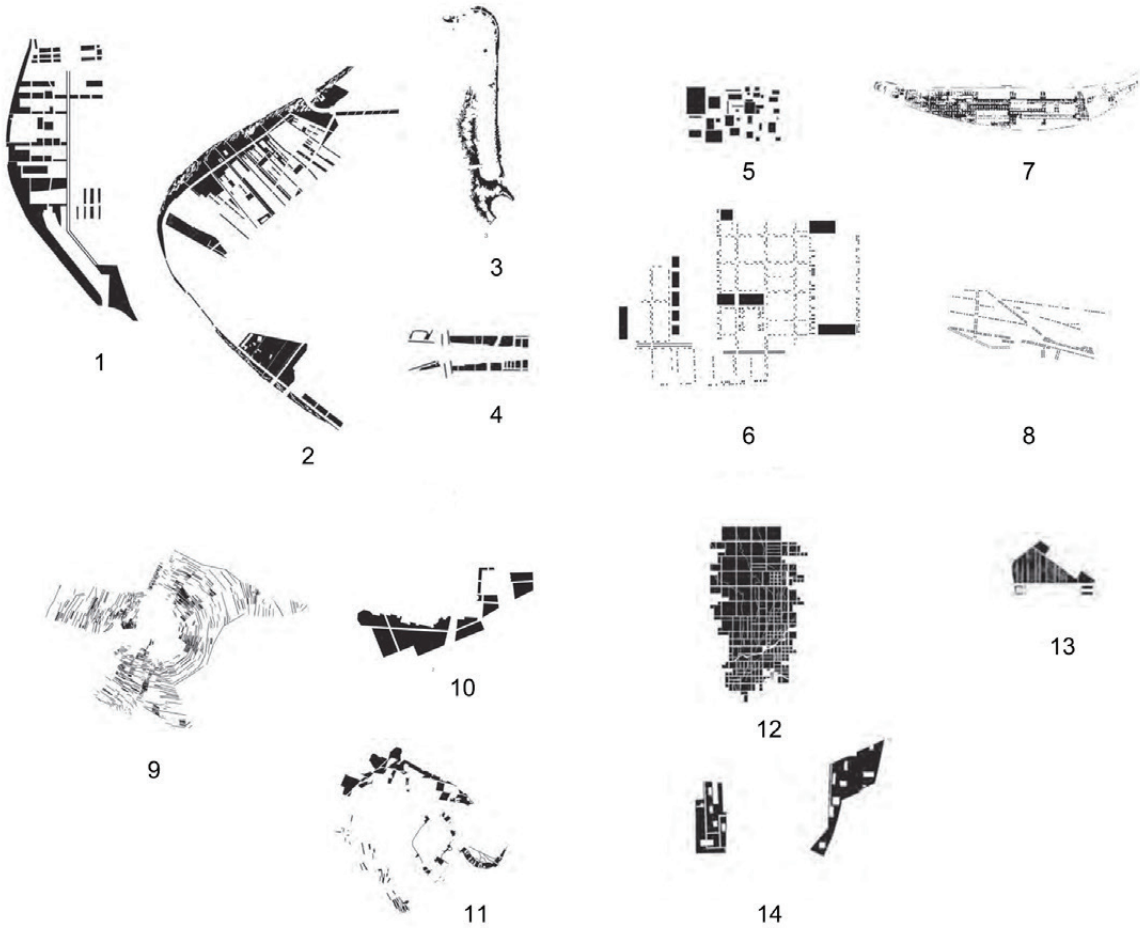
4.1 | The Conception and Inspirations of MICHEL DESVIGNE

Long fascinated with aerial photographs of the earth's surface and various land patterns, especially those that depict a moment in time in an otherwise shifting and changing ecology, Michel Desvigne approaches landscape architecture as a form of earth marking that is inevitably provisional, staged and cumulative. This provisional condition is not simply a marking or a form, however, but more a material environment that effects and propels its own development.

Desvigne's landscapes seek to propagate new sets of conditions, to grow and body-forth more complex environments over time. Inspired by agricultural fields, tree farms, and, more broadly, ecosystems such as forests and deltas, Desvigne considers landscape architecture as a living artform that is more about cultivation, process, and change over time than it is with more familiar landscape architectural practices such as formal composition and representation. With a farmer's pragmatism and a landscape architect's eye, Desvigne is able to create extremely sensible, rational, and strategic projects that

at the same time approach the poetic.

A large part of Desvigne's education and professional development over the years has been concerned with agricultural, geomorphological, and cartographic practices. Here, a sense of the land as both terroir and territory imbues his approach with a special sensitivity to the peculiarities of place, scale, and local nuance. Adept at working across both large, regional scales as well as with more intimately scaled spaces, he demonstrates a great gift for understanding how smaller units of space are tied to large geographical contexts, and vice-versa. Once the lay-of-the-land is understood, specific agricultural themes follow—themes such as site modification, improvement, planting, cultivation, and management over time. Here, a talent for technique informs the work—soil amelioration techniques, planting and transplanting techniques, land management techniques, and other technically specific practices, each often highly specific to the local environment, guide how the design strategy takes shape.



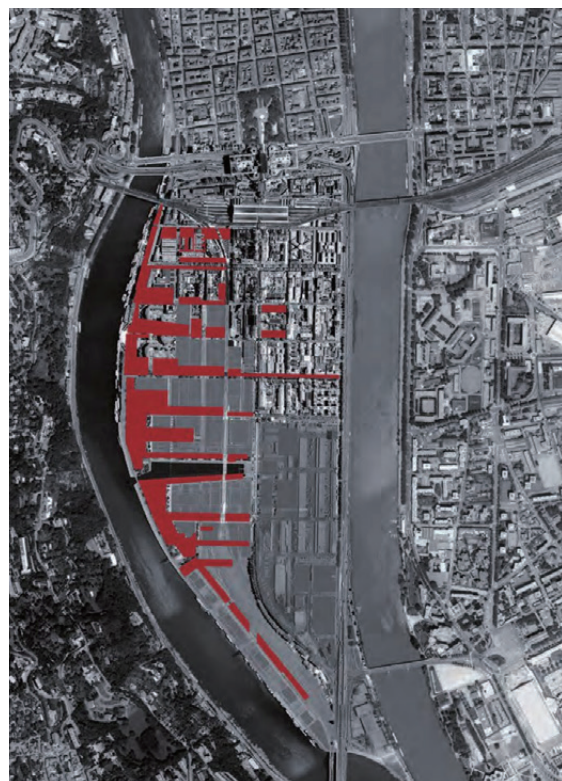
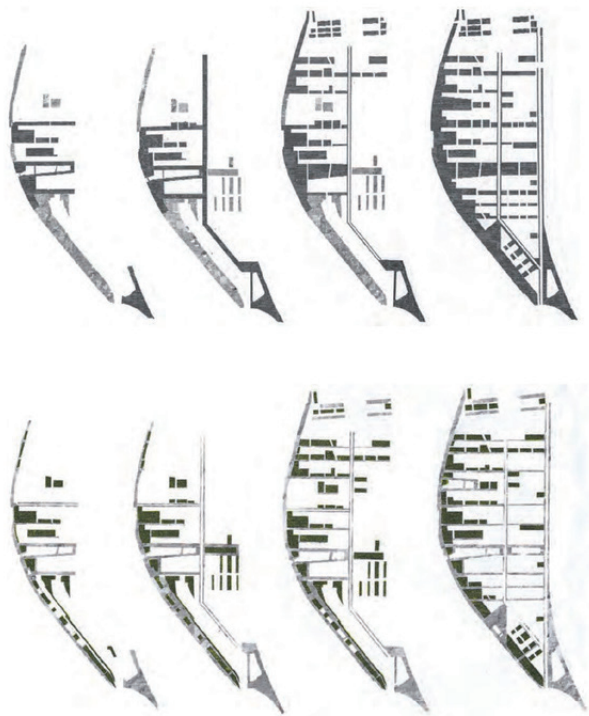
- | | |
|---|--|
| 1 Lyon Confluence, Lyon, France | 8 Aubervilliers Campus Aubervilliers, France |
| 2 The Right Bank of Bordeaux, Bordeaux, France | 9 Issoudun District, Issoudun, France |
| 3 Millennium Park, Greenwich, London, Great Britain | 10 Central Museum, Utrecht, The Netherlands |
| 4 Marianne Park, Montpellier, France | 11 Cergy-Pontoise, France |
| 5 Dallas Center for the Performing Arts, Dallas, USA | 12 Summer Park, Governors Island, New York, USA |
| 6 Reconversion of the Old Port of Eilandje, Antwerp, Belgium | 13 Cité Nature, Arras, France |
| 7 Reconversion of Seguin Island, Boulogne-Billancourt, France | 14 Extension of Sculpture Park, Middelheim, Antwerp, Belgium |

Less concerned with formal composition and design stylization, this agricultural emphasis allows Desvigne to infuse his landscapes with the capacity for growth, change, and adaptation over time, allowing for a loose flexibility rather than an overly deterministic regime. His idea of substitution is particularly relevant to this point, as he easily adapts by substituting one material for another while retaining the original cartographic lay-out—the organization and trace remain the same, but the material substitution creates a host of new or alternative possibilities. Importantly, these possibilities are less formal or aesthetic than they are active effecting transformation, as in a sort of viral agent or life-force. Practices of organizing processes and catalysts for transformation involve skills with orchestration, choreography, management, and cultivation, all time-based practices that differ from the typical static, formal compositional mode of physical design.

This process-based emphasis allows Desvigne to ignore typical landscape

architectural interests in design as formal composition and representational content. If Le Nôtre, for example, concentrated all of his attention upon shaping landscape space to produce remarkable spatial, formal, and experiential effects, each portending symbolic and metaphoric meaning, Desvigne believes more in the dissolving of spatial and referential clarity, perhaps as an eschewal to the “high culture” elitism associated with “design” and seeking instead a more pragmatic, straightforward land-based approach.

More at home in a hedgerow or thicket than in an allee or parterre, Desvigne’s practical landscapes seek to immerse the visitor in a sea of pure texture. Gently swaying trees, shimmering leaves, blustery grasses, and changing dapples of light and shade, add up to often very beautiful tactile fields of coarse and fine, near and far—landscapes without edge or boundary, lacking clear definition and shape. As with Monet or Van Gogh, or, in a different vein, Andreas Gursky, the emphasis upon generating complex field-like textures from a myriad of small multiple elements radically breaks with both



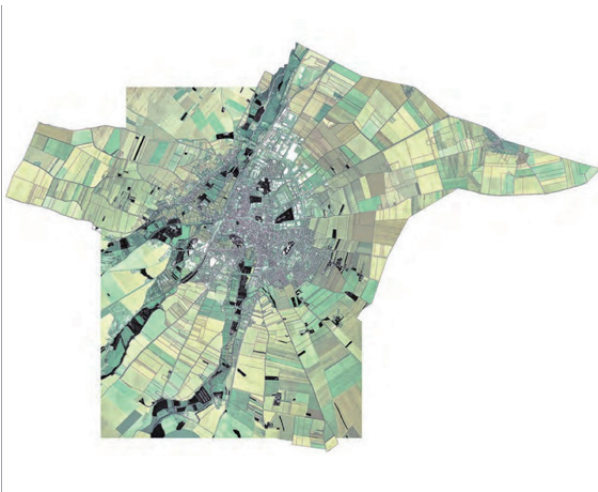
19| Lyon Confluence, Lyon, France

Classical and Modernist notions of figure-ground and hierarchical spatial composition. Instead, freed from the rigid constraints of perfect objectified geometry, Desvigne's landscapes allow for a looser, more open, and porous matrix. Here, erasure and voiding might be just as valid as filling in and adding, as he would argue that emptiness can allow for a greater sense of legibility and possibility—a "texture," if you will, of site clearance.

In this light, what is perhaps most striking in Desvigne's work is his fascination with the unfinished. He does not seem at all bothered that a landscape architectural project may appear raw, young, still-in-development. First, there is of course a certain aesthetic appeal to unfinished landscapes, followed by an excited sense of anticipation of things yet to come, especially with young landscapes where a palpable sense of growth and change is most pronounced over relatively short timeframes. But, more deeply, Desvigne simply does not believe that any landscape—

no matter how manicured and mature—is ever really finished. As with the earth artist Robert Smithson, Desvigne views landscape architecture as a work in process, never really attaining an ideal state at any one moment in time, but always exceeding expectations when set in motion over time, when viewed as an active palimpsest accruing new properties, qualities, and potentials in time. Here, his understanding of landscape as active infrastructure suggests new ways of validating investment in landscape in cities, as these green living infrastructures can be the catalysts for new forms of development and new lifestyles, new armatures for more complex forms of urbanism to grow and evolve.

Clearly, Desvigne's work is still itself a work-in-progress. It exists more in text, images, and ideas than as a significant oeuvre of built work. Many of the claims described above are pointing to what is at stake and significant as more built projects emerge in the coming years. But there is no denying the wide influence Desvigne's ideas have



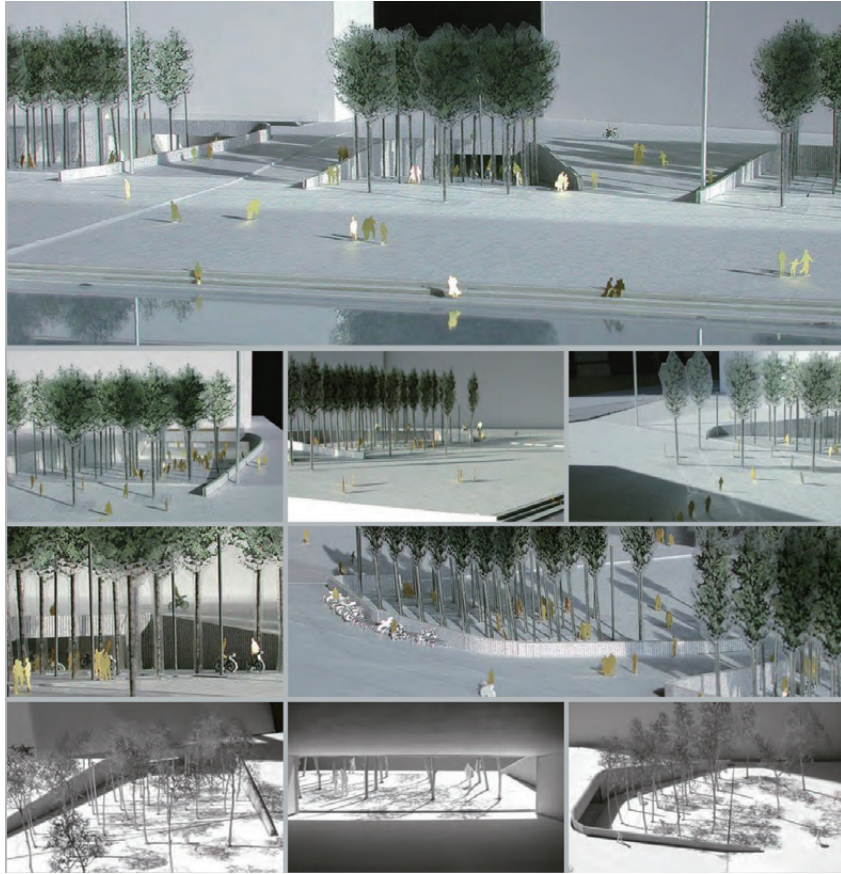
27| Lyon Confluence, Lyon, France



28| Summer Park, Governors Island, New York, USA

had on a younger generation of landscape architects around the world, where issues of territory, geography, agriculture, cultivation, management, and time-based development have been foregrounded. The difficulty in advancing this work in practice lies with convincing society that there are very real and important alternatives to the static pastoral and the merely scenic, where landscape maybe more instrumental in its effects (harvesting rainwater, improving air and water quality, enhancing species biodiversity, maturing complex ecosystems, providing space for new public uses and programs, catalyzing sustainable forms

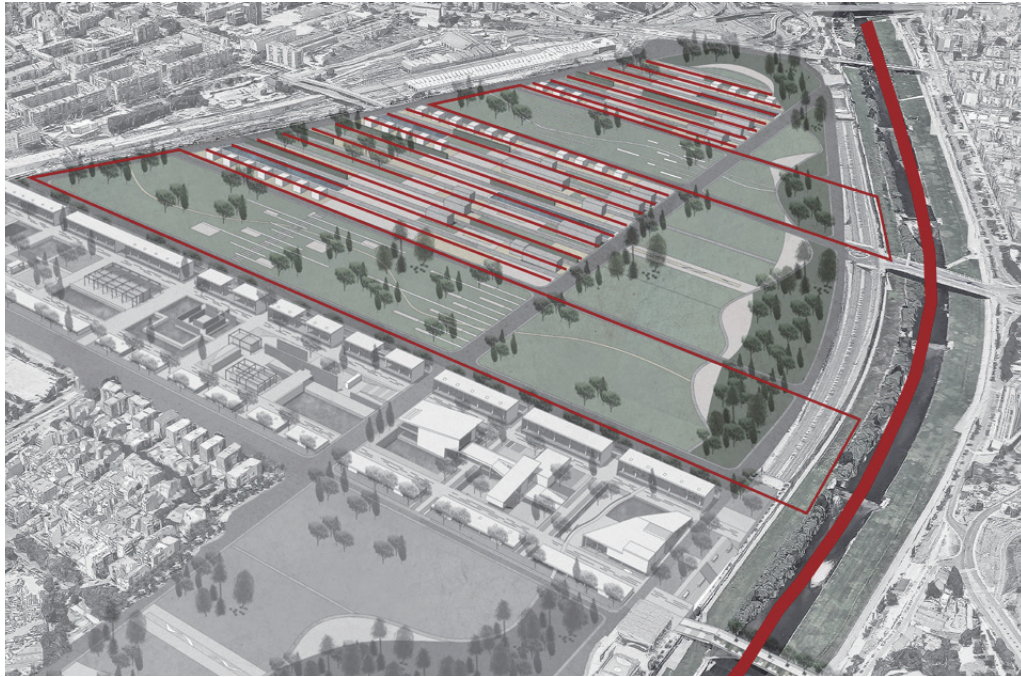
of urban development, and the like—technical performance criteria, shaped with an artistic twist that plays on site legibility and cultural forms of content) than when landscape is simply painted as a benevolent scene, perhaps beautiful but inevitably passive in its effects.



29| Almere, The Netherlands, 2000-2005



30 | Prato Central Park



31 | Cartographic layout

4.2| The Conception and Inspirations of Barcelona's Superblocks

The grid format block of the Barcelona extended area (l'Eixample) has far-reaching implications in the history of urban planning and is a model for modern urban planning. Ildefons Cerdà's gridded block plan laid out the urban landscape of Barcelona and shaped the unique urban character. No other city in Europe today has such a unique personality as Barcelona and affects everyone in the city. Barcelona has a long history of revival of public spaces in the neighborhood, from the revitalization of the interior space of the "acupuncture and moxibustion" to the current "superblock" (superclass in Catalan), constantly shaping and enhancing urban space. Publicity. Barcelona's urban "Main Street" planning innovation aims to return urban street road space to pedestrians, reduce environmental pollution by reducing people's dependence on private cars, and create a greener, cleaner and more pedestrian-friendly block city.

The implementation of the Xerda's block system was implemented in 1859, and numerous studies in China have introduced it in detail. Plan to adopt a square gridded

block layout mode. 550 blocks are arranged using geometric straight-line grid roads, each of which is constructed on two or three sides, with a depth of 20 m and a building height limit of 16 m. The planned population is evenly distributed in various neighborhoods and enjoys the greening of the center of the block, embodying the planning ideas of equality and populism. Zelda's block plan shapes the city's high-density residential land model Today, Barcelona's urban population density reaches 16,000 people / km², one of the cities with the highest population density in the continent. The layout of Barcelona's "small block and dense road network" makes the urban road density reach 11.2 km/km², which is one of the cities with the highest road density in Europe. In general, Barcelona's urban development is more than other cities of the same size in the world. Reasonable, with better traffic conditions, natural lighting, ventilation and sanitary conditions.



32| Comparison between l'Eixample and old town

1| Urban road system planning

Cerdà's new road system is divided into two levels.

The first level is designed for rapid inter-regional traffic. It is a 50-meter-wide street that defines the function of the entire plan: Gran Street, which is tangent to the Montjuic Mountain; the Diagonal avenue, connecting the Eillobregat River and Besos River ; Meridiana Avenue points to the port, which is the window between the city and the world. These avenues are a good explanation of the intent of Cerdà's city-level planning, and it can be seen that Zelda conceives a city from the perspective of the whole world "and that the different levels of functionality are well integrated throughout a plan.

The second level is the basic plan, which consists of 20 meters wide streets and one interface per 113 meters. The design covers the entire planning design and becomes the main texture of the city. This kind of road is mainly for short-distance traffic and pedestrian service.

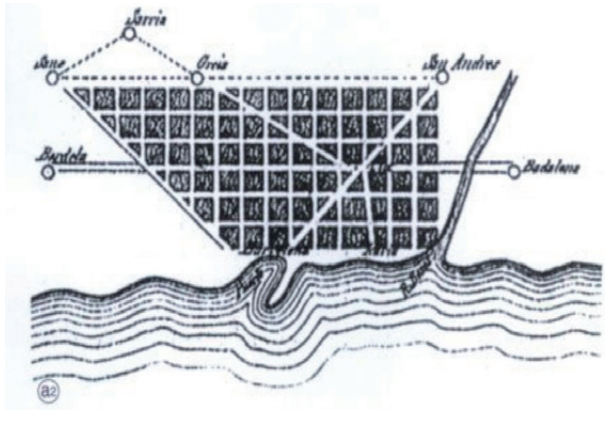
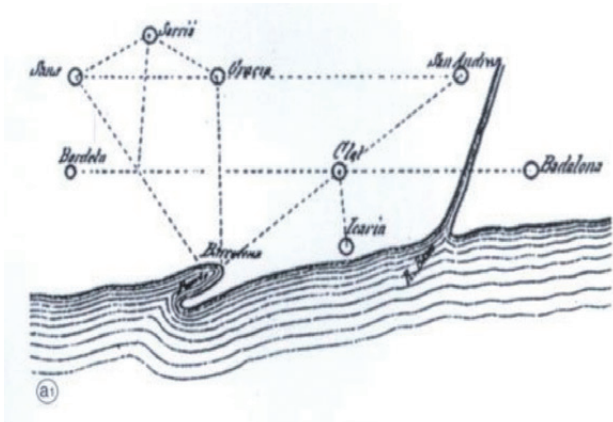
The chamfer was inspired by the old town

of Barcelona, where Zelda was chamfered at each intersection, which speeded up the flow of the car in various situations and reduced the traffic jam. This will further accelerate the speed of traffic flow and people crossing the corner, thus speeding up the circulation within the city.

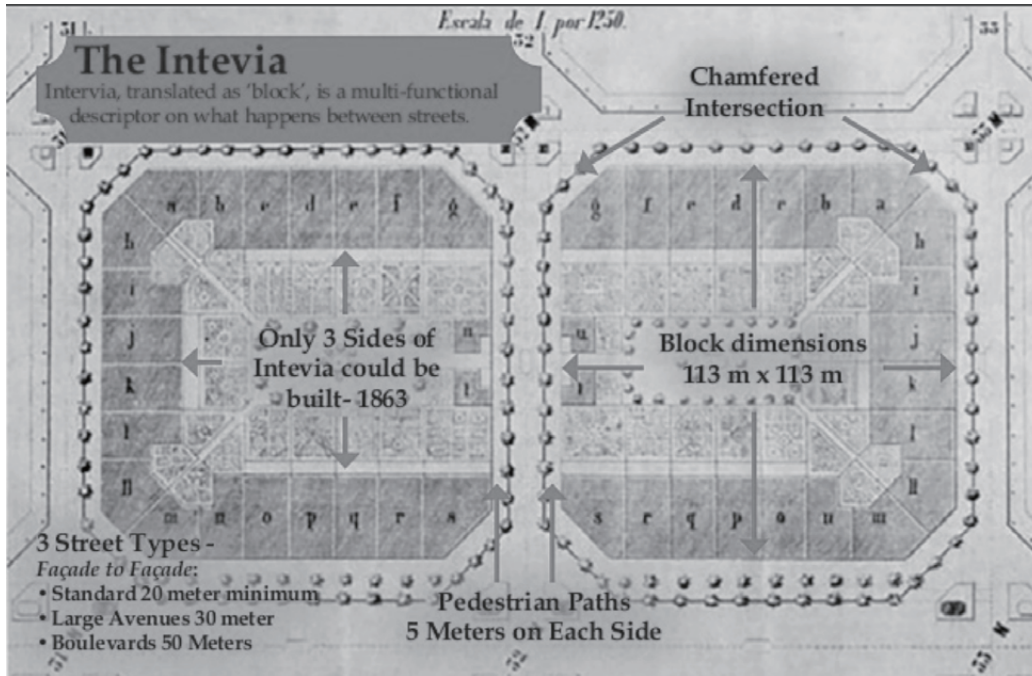
In addition, the chamfer vacates the turning space, improving the ventilation and lighting problems in the narrow streets, and at the same time, the corner of the intersection has a small square. Cerdà has not seen a car (the car was invented in 1885), but he accurately predicted that there would be a high-speed mobility machine that would completely flow people's speed and also have a certain impact on pedestrians.

Cerdà wants ordinary residents in the city to have a good natural ecological environment like a village, so the greening system is very important.

In Cerdà's vision, the green coverage of the new city should reach 50%, and Zelda's green space planning is also systemic.



33| Street layout





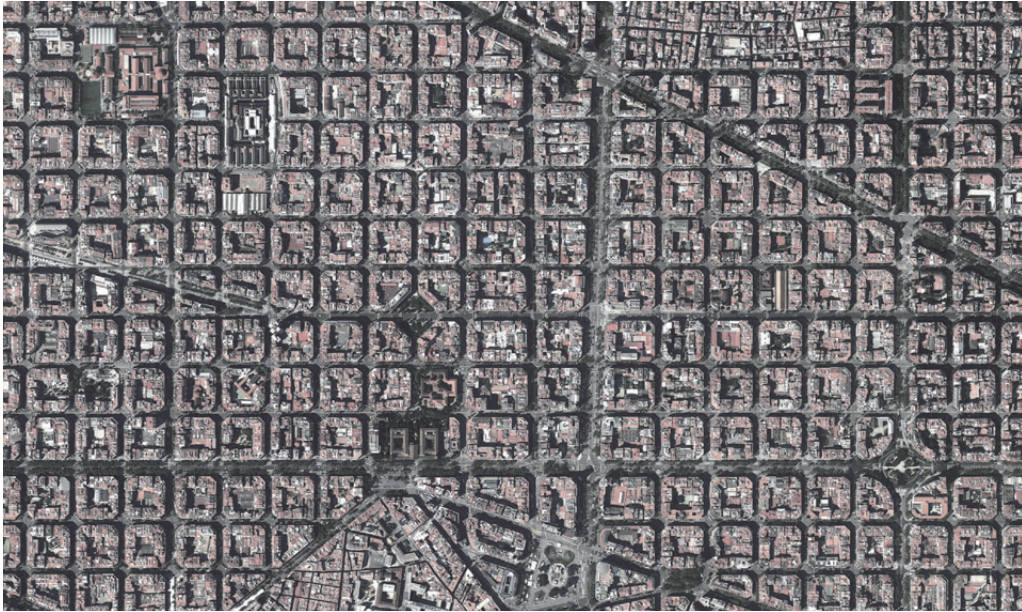
35| Block dimension diagram

2| Block planning

The block planned by Cerdà is a block with a side length of 113m. Due to the chamfering of the corner of the road, the single block of Cerdà's plan is not a cube but an Octagon. The design of the interior of the octagonal block, Cerdà thought of a variety of options. One of the most frequently mentioned figures is the picture, the gray part is the building, and the white space is the green space and the public space. The buildings only occupy the sides of the block, with a depth of no more than 24 meters and a height of up to 4 stories. In this way, good ventilation and lighting can be ensured, and Barcelona has plenty of green space. Buildings are not too dense, and sanitary conditions can be improved. People communicate and enjoy life here.

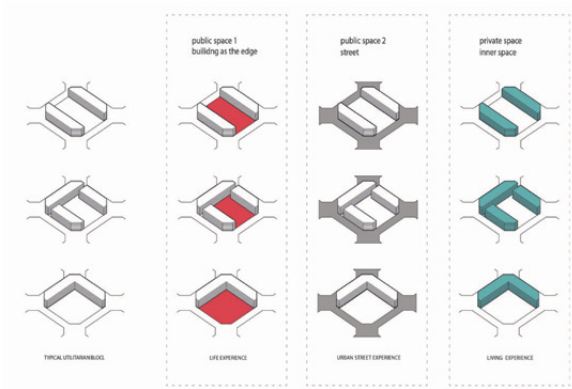
Inside each of the octagons, there is a courtyard above the square with a side length of 50 meters, giving the residents in the block sufficient ventilation and sunshine. This will enable residents to have natural small spaces in their own plots, so that they can have the same opportunities as rural life in the city.

In the planning of the Cerdà New Town, his block unit is the bottom floor business, the second floor office, and the design of the house. Therefore, each block is a mixed function, which can integrate work, life and leisure. One block is a miniature city. Residents can solve work and entertainment needs in the neighborhood where they live, reducing the flow of urban traffic and facilitating the lives of residents.

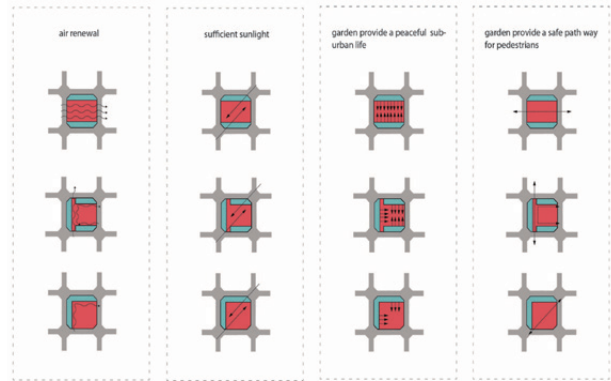


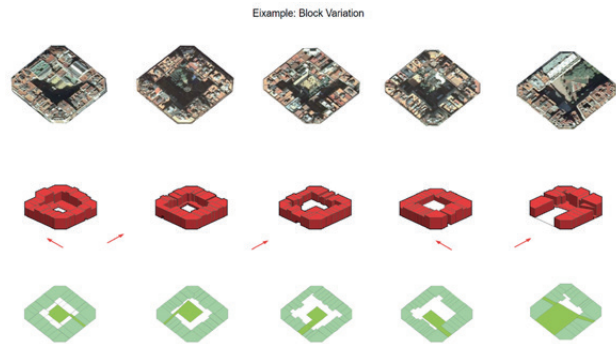
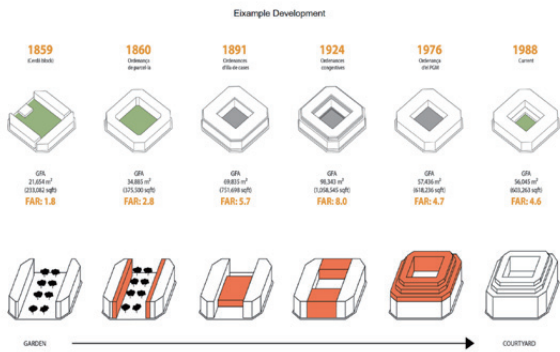
36| Barcelona status

Interway Elements



Interway Criteria





Bon Pastor

5



- Main Road
- Road
- - - Train Road
- Bridge

Strategy

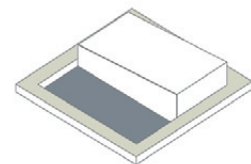
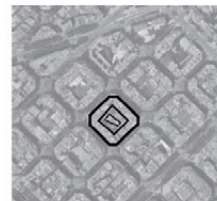
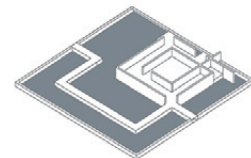
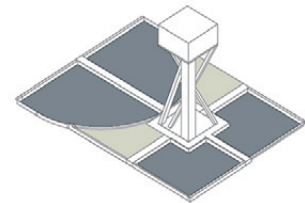
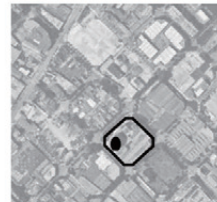


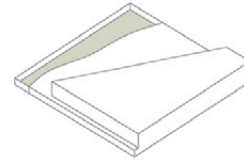
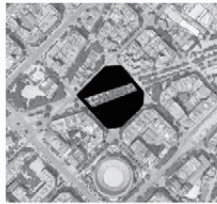
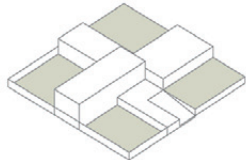
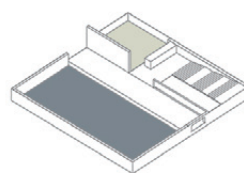
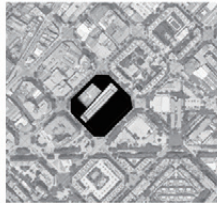
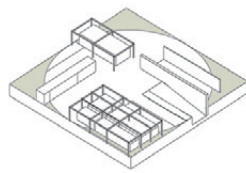
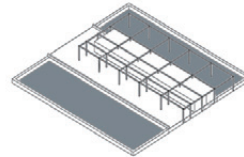
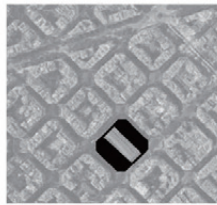
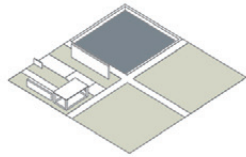
Concept of Designing Nine Blocks

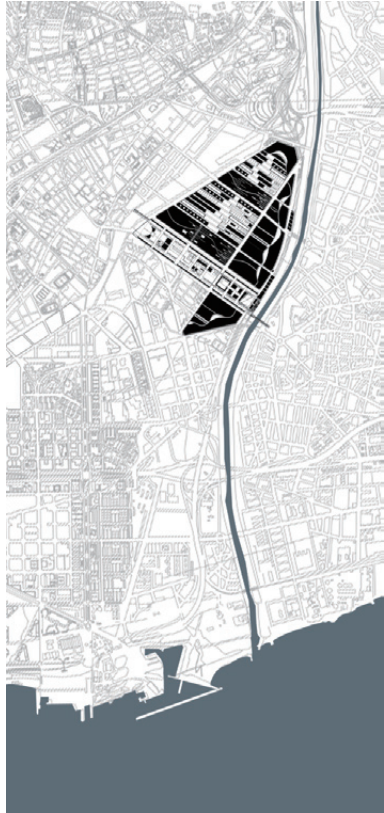
Extraction and Translation

In our museum area, we design nine blocks in a measurement nearly same with the blocks in Barcelona. After researching the urban texture, there are some interesting organic formation and geometric compotion, which is a manifestation of seeking freedom and art in urban life.

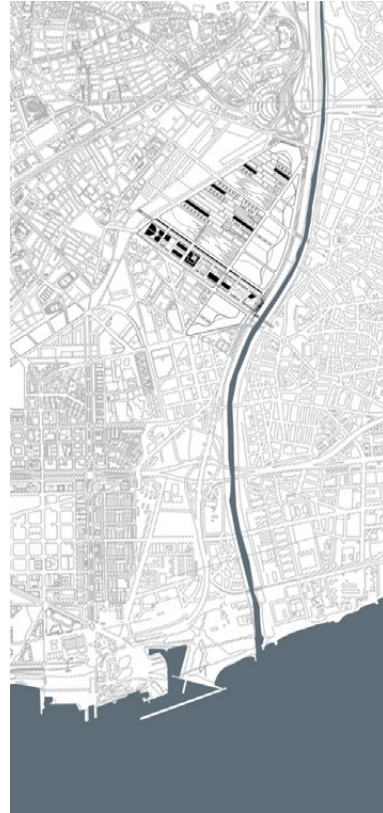
Thus, we extract some typical or special texture to insprite our blocks, and tranlate them in some architectural way into our design, responding to the local traditional formation and also creating a kind of new modus, which enrich the whole city texture.



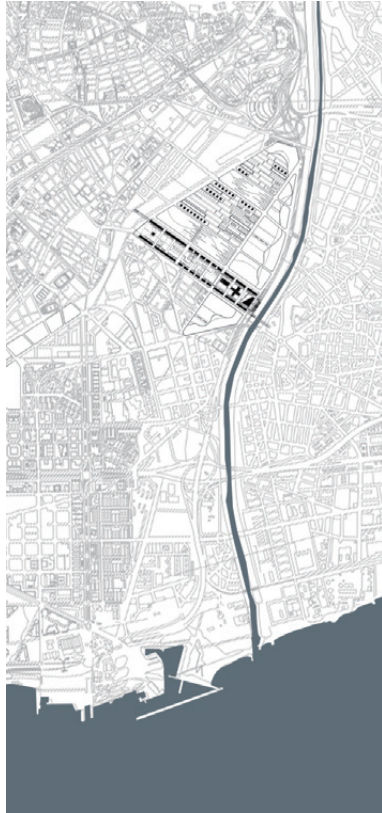




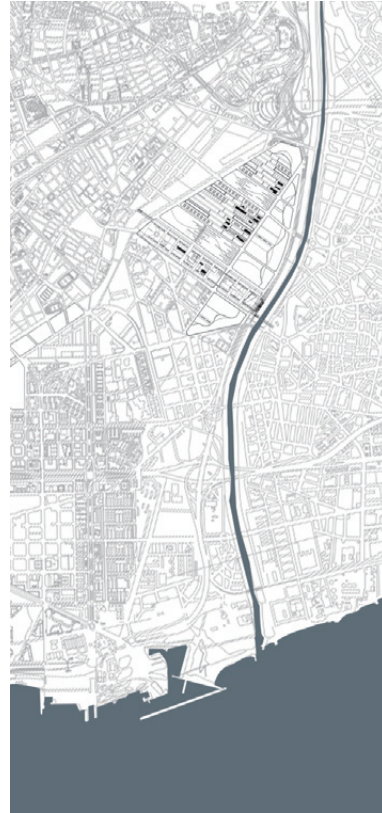
Green Space



Water System



Newly Built



Original Building

Matsterplan Design



Project Panels

6



Mediterranean Coastline



Main Harbor City



Spanish Provinces around





Barcelona is a maverick in the construction of European cities. In particular, Barcelona's structured extension of the texture is not like a city that can appear in Europe, enough to surprise anyone. Barcelona can be clearly divided into three levels - the medieval old town, the mid-19th century Cerdà expansion plan and the revitalized waterfront of the 1992 Barcelona Olympics. Barcelona Port is the largest port on the Mediterranean coast and the largest container terminal. Spain's largest integrated port. The Gothic-style old buildings and high-rise buildings complement each other to form the fascinating skyline of Barcelona.

SKYLINE

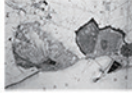


1| The urban formation stage(230 BC - 1850s)

From 230 BC to 1850 AD, 2000 years ago, Barcelona developed from a 10-hectare residential area to a colonial fortress of 260 hectares. In the 5th century BC, due to trade reasons, the earliest settlements in the Barcelona area emerged in the coastal zone and developed into a trading port.



It is not only a port city with the Romans of Lun Bula, but also a colony with the densely populated fortress and the encircled La Barceloni. With the decline of the rule of the kingdom of Spain, the city of Barcelona was once again prosperous.



2| The Urban expansion stage (1850s-1980s)

In the middle of the 19th century, with the development of the industrial revolution, the population of Barcelona increased sharply. In order to meet the needs of the new development of the city, Barcelona has broken through the walls and developed outwards. The two options came from the **two political forces behind the Antai Rovira and Ildefons Cerdà.**



The Eixample master plan was devised as a necessary extension to Barcelona's medieval city walls during the second half of the 19th century. By 1865, the wall of the city of Barcelona was basically completed. At the core of Cerdà's master plan was the creation of the manzana – a city block structure that had been meticulously studied and detailed. Into this came Cerdà.

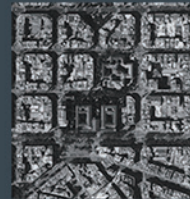
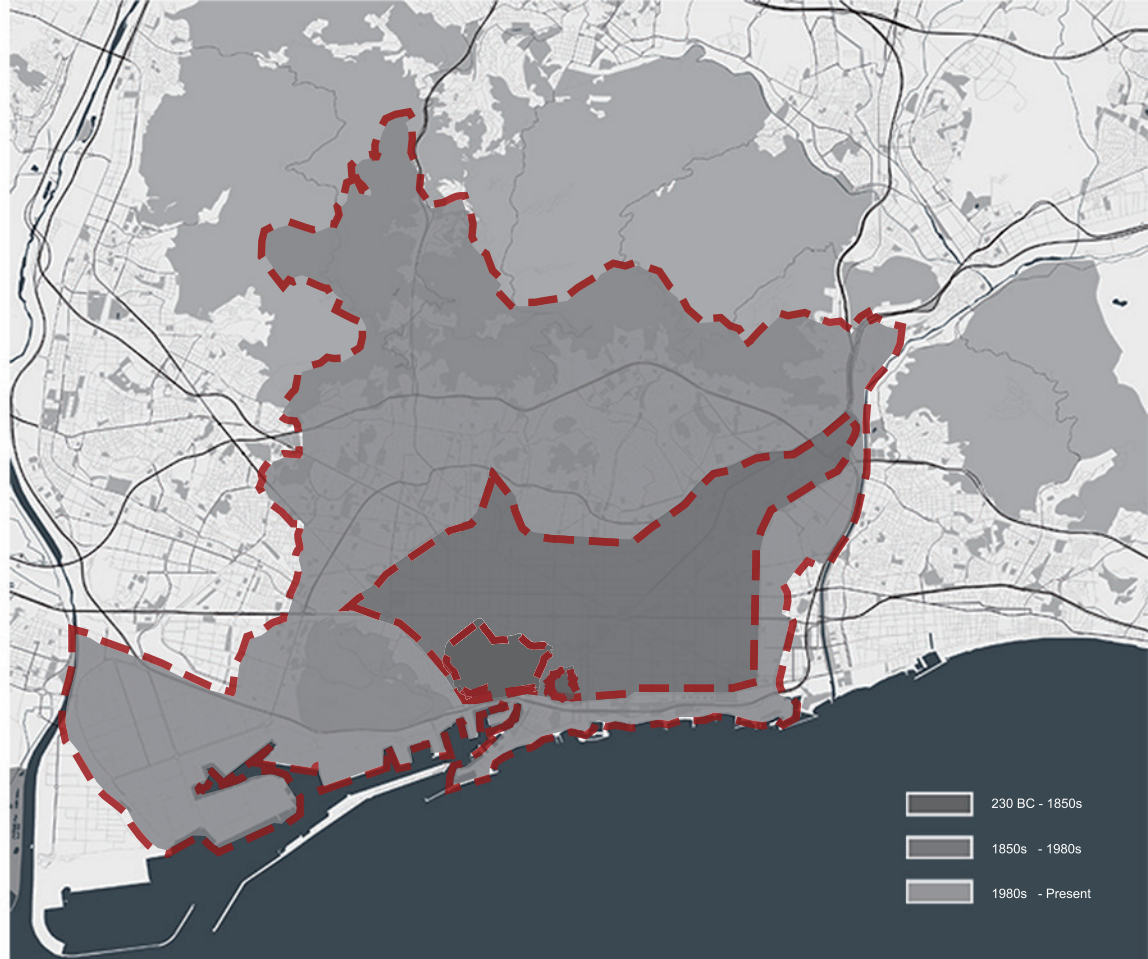


3| The Urban renewal stage (1980s to the present)

In the 1970s, Barcelona's traditional industries began to decline, and the opportunities for work were reduced. The city began to decline. Since 1980, the Barcelona government has transformed and built more than 4,500 public spaces through the events of major events.



The bidding for the Olympic Games is an important opportunity for the realization of the redevelopment plan of the city of Barcelona. A series of waterfront redevelopment projects have been implemented around the Olympic Games on a large scale. A large-scale city was built throughout the old and new districts of Barcelona. The renovation included the main traffic roads in the city, strengthening the construction of the foundation, and the construction of the village in the waterfront.



1| The urban formation stage(230 BC - 1850s)

2| The Urban expansion stage (1850s-1980s)

3| The Urban renewal stage (1980s to the present)



Research Green Points and Links



1] Plaça de les Glòries Catalanes

Area: 72,000 sqm²
Location: Geometric Center
Use: Occupied by parking lots, part of elevated highways, shops and some concrete walls
 Glòries, which was then well outside the city, was originally featured in the mid-19th-century Cerdà plan for Barcelona, intended as a large public square in a new city centre, but it remained sparsely developed,

turning into one of Barcelona's major road and railway junctions.

Beginning in the early 2000s, and as of 2007, revamping project for Glòries has started, which is aimed to give the square a new role in Barcelona and realize the northern districts of the city, under the name 22@.



2] Ciutadella Park

Area: 70acre (280,000 m²)
Location: the northeastern edge of Ciutat Vella
Use: Including the city zoo, the Palau del Parlament de Catalunya, a small lake, museums, and a large fountain
 Ciutadella park was built at the end of the 19th century and was the first public park in the city, a category that it has held for many years. In the park, you can find central

trees, more than 100 variety of plants, 19th-century buildings transformed into museums, sculptures, fountains and large areas for walking and breath.

Josep Fontserè was the creator of his original layout in 1872; with the collaboration of Gaudí. This design was modified in 1888 to house the Universal Exhibition of Barcelona and, later, to locate the city's zoo.



Green Space in Barcelona



Our Proposal



3| Nova Llària park

Length: 415m
Average Width: 61m
Location: Sant Martí
Limits: From the Olympic Port to the Bogatell breakwater
Use: Coastal park overlooking the sea, with an extensive green space, walking paths & foot bridges.
 Famously, the Barcelonins only discovered the beach after the 1992 Olympics, but long

days on the plaza are now an essential part of summer. It is one of the beaches situated roughly halfway along the city seashore, which is also one of quietest places in the city, making people spend much time there to enjoy life.

This linear park takes a role of connecting both the Olympic Village and the crowded citylife to the beaches.



5| Can Drago Park

Area: 12 hectares
Location: An area of transition, halfway between Avenue Meridiana and the Sant Andreu Cemetery
Use: An enormous boulevard with green spaces, places to play, sports facilities, swimming pools and walking areas.
 Designed by Enric Penyas, Can Drago was opened in the 1990s and is named after a 17th-century farmhouse. It has been

gradually expanding ever since it opened to become the multipurpose recreation park today.

The park area, specially designed for pedestrians and cyclists, can easily be crossed by the tree and bench lined avenues that separate it from the sports facilities.



4| Güell Park

Area: a massive 19 hectares with 1.7 hectares of the core area
Location: Carmel Hill, Gracia, Barcelona
Established: 1914
Use: Gardens and architectonic elements
 Originally conceived as a private residential area for affluent Catalan families, Park Güell is the work of world renowned architect Antoni Gaudí who let his imagination go wild on the gardens and architectural elements of this park. His use of natural forms

shaped into covered walkways, galleries and archways beautifully camouflages the artificial structures into the surrounding Mediterranean hillsides. A designated UNESCO World Heritage Site, Park Güell is now one of the most enchanting gardens of the world and captivates thousands of tourists every day.

The more wooded park supports a wide variety of wildlife, many birds can be seen from the park.



6| La Sagrera Linear Park/ Camí Comtal Park

Area: 40 hectares
Location: A new green diagonal axis, facing the famous Diagonal Avenue
Design & Realization: 2011-ongoing
Use: A dynamic green space, resting on the public transport infrastructure
 The project is being developed by the urban design and landscape architects of West 8. 'El Camí Comtal' will finally connect the Sea and the Mountains, Nature and City in Barcelona. It strengthens the landscape

experience for those approaching the sea from the coastal range through the city. It offers a unique opportunity to unimpeded travel from the wildest Catalan Pyrenees to the heart of its capital city' they say. This green track enters the city through the natural valley of Brúx, finding continuity in the new El Camí Comtal park or La Sagrera linear park.

Strategy

The City of Barcelona, with its Green Infrastructure and Biodiversity Plan up to 2020 (City of Barcelona, 2013) is implementing a range of actions to bring nature into the city. The main objectives are to preserve and improve the natural heritage of the city and to conserve its biodiversity. This would ultimately bring environmental and social benefits for local people.

With a similar vision, but with different solutions, the Trees Master Plan 2016-2035 has the overall aim of maintaining a well-managed, healthy and biodiverse woodland to improve green corridors and tackle the urban heat island effect.

On the base of the current and the future planned urban green space in Barcelona, we hope to add more green space on our site as well, to provide residents and tourists a place to enjoy nature and some other function.

In our green space, we generally divide it into two parts: natural free forest and artificial regular park. The former tend to provide people with more fresh air and places to walk or jog. The latter is more regular from shape, abundant formally, and much easier to touch and do some daily activities.

In the artificial green corridors and the museum area, there are originally mainly factories. Considering keeping some memory of this area, we select some well-preserved factories to hold their buildings, but define them a new function, which is more related to human daily life. Also, we enrich the variety in green corridors, like introducing water and create architectural elements. From other hand, in green space we consider to give them some different forms, like botanic gardens, domestic gardens, nutrition workshops and food markets.



Green Space



Water System



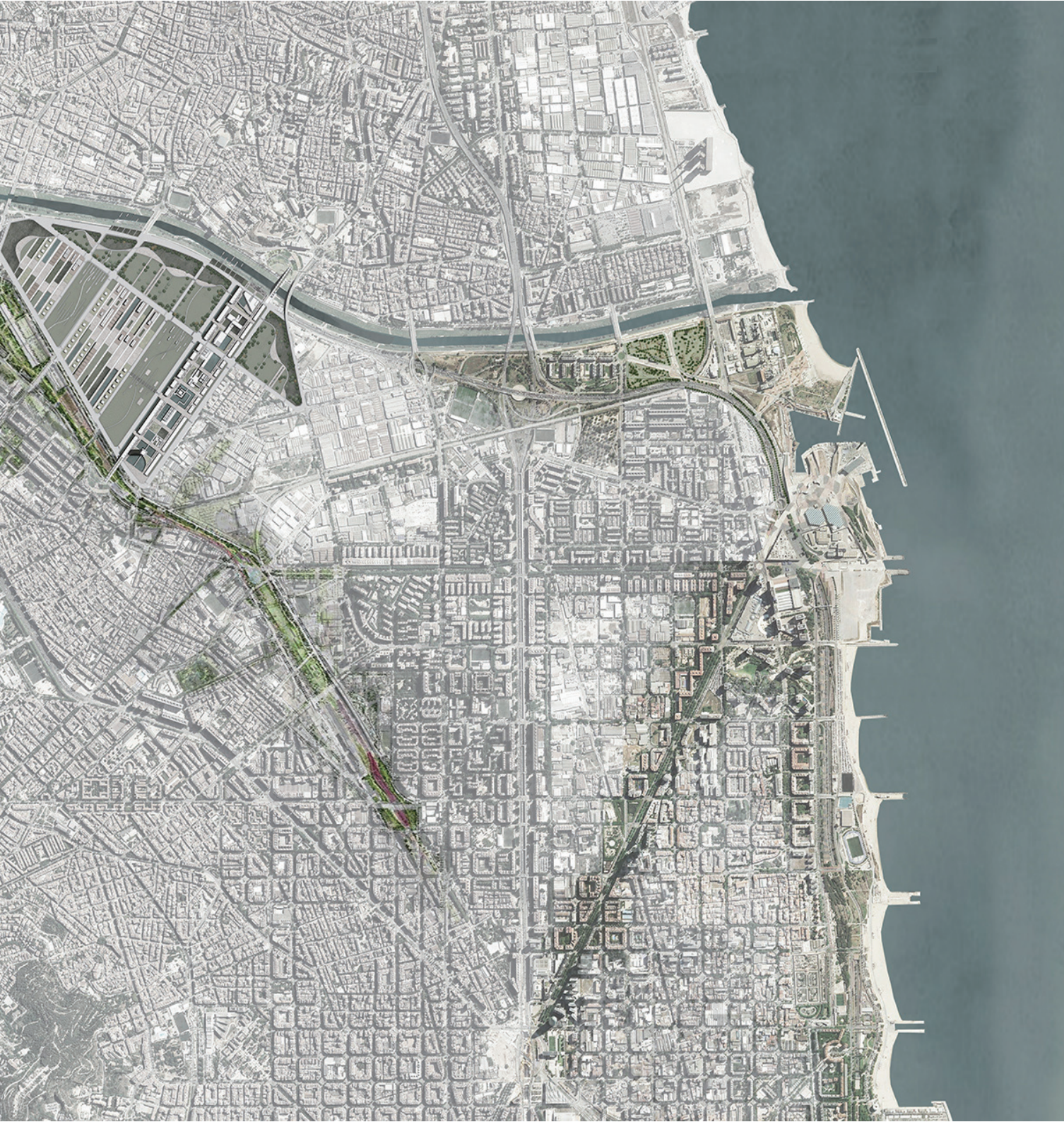
Newly Built



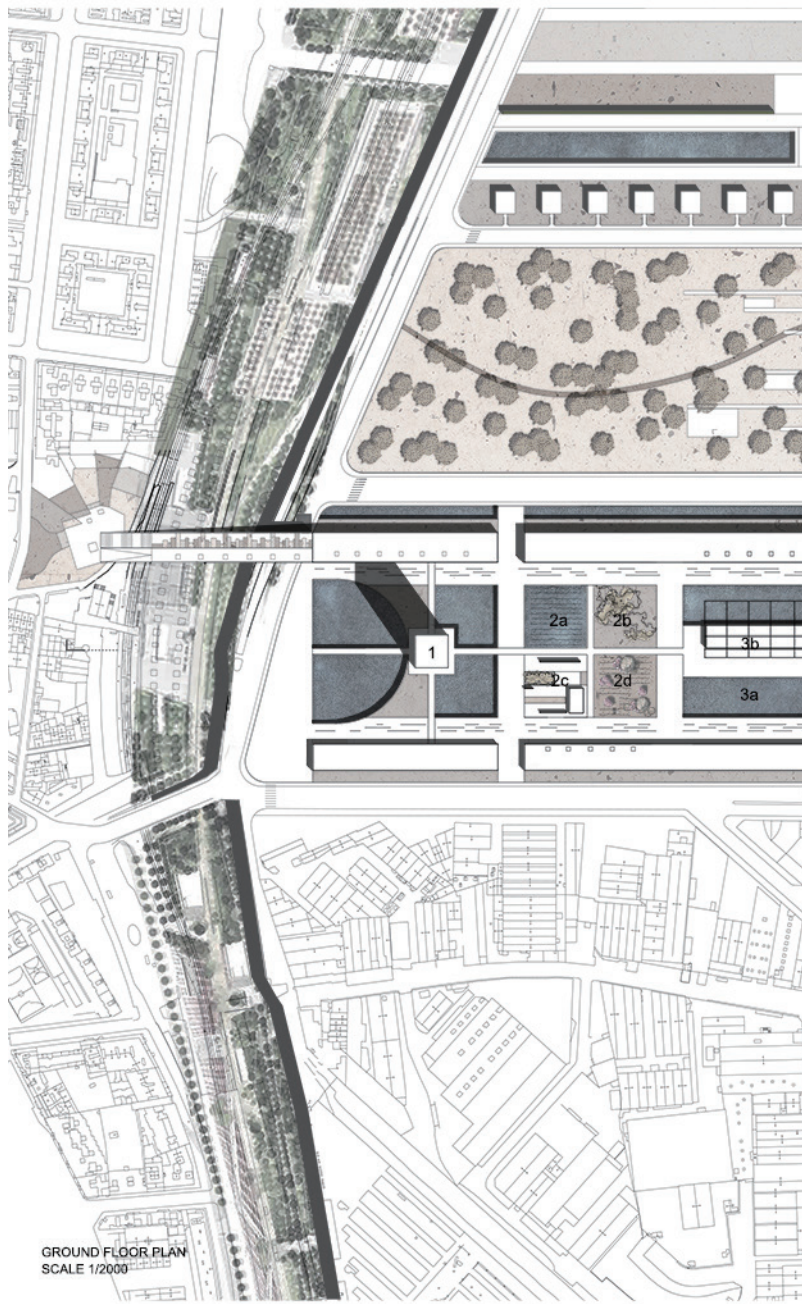
Original Buildings





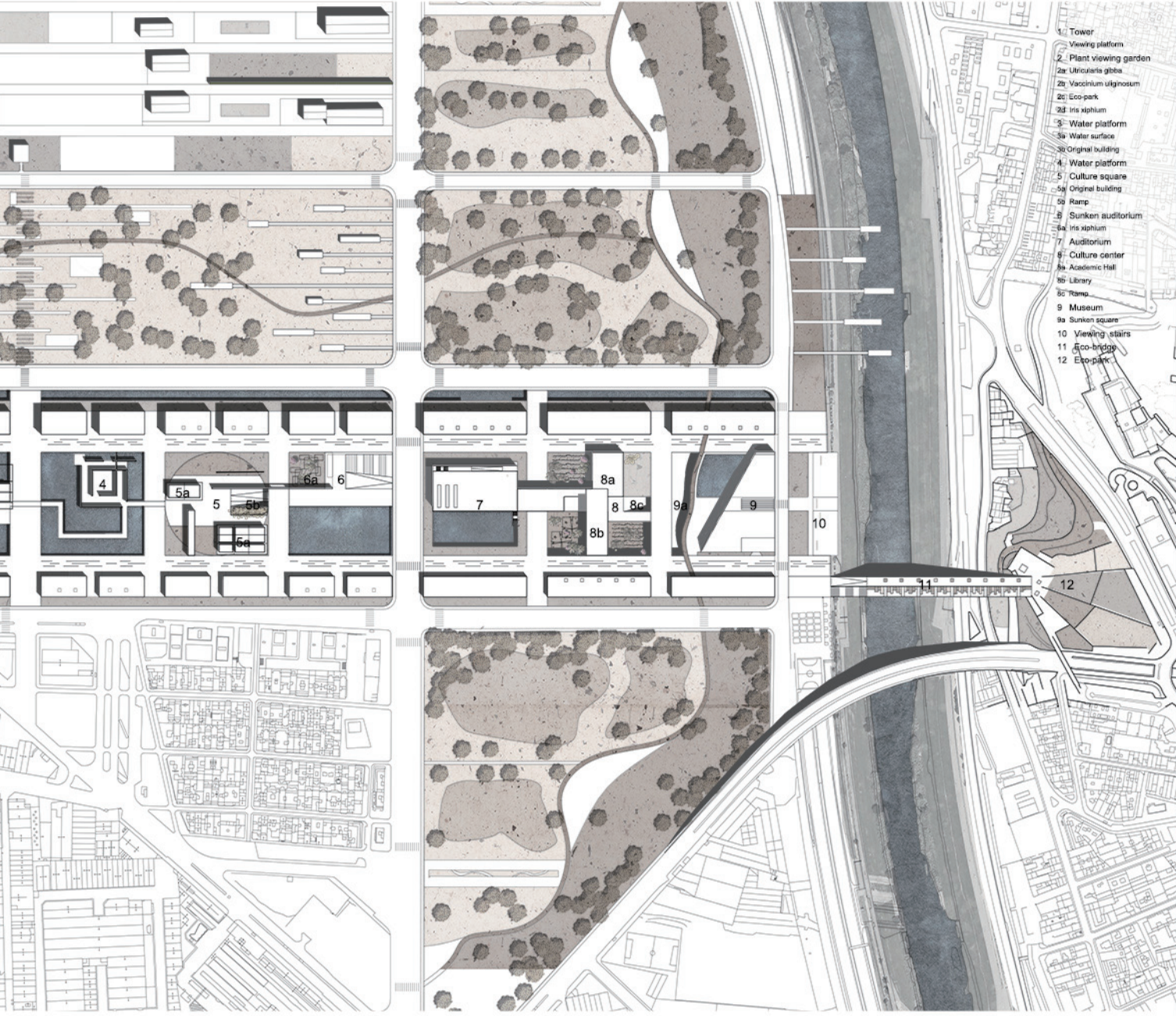




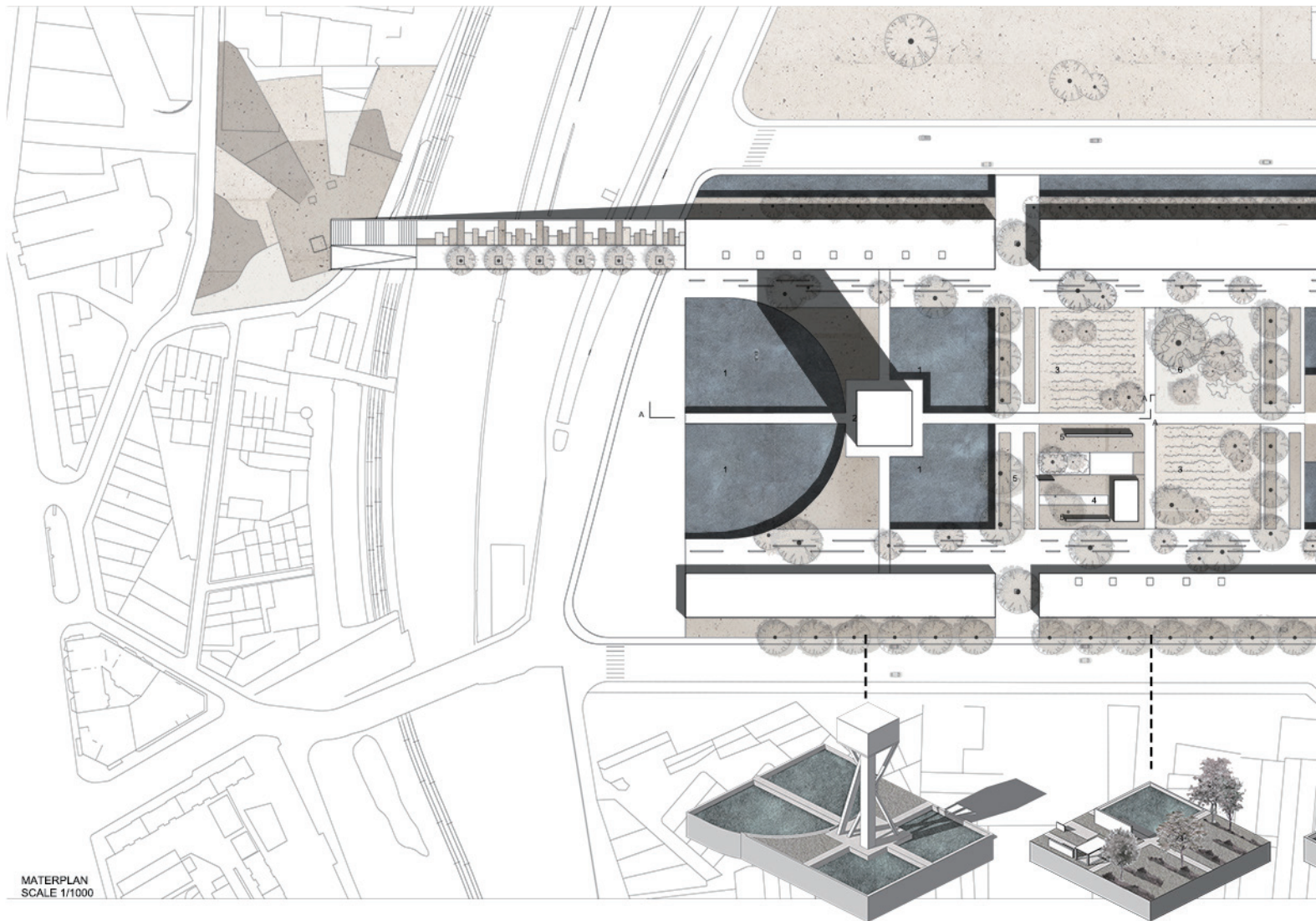


GROUND FLOOR PLAN
SCALE 1/2000

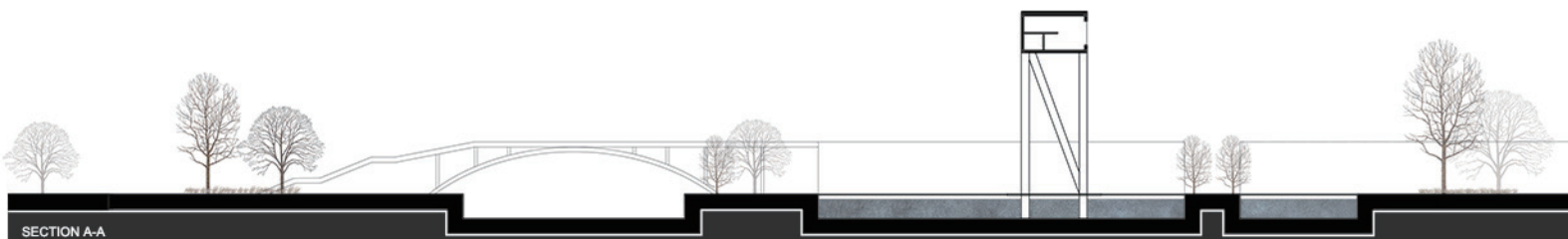
SECTION
SCALE 1/2000



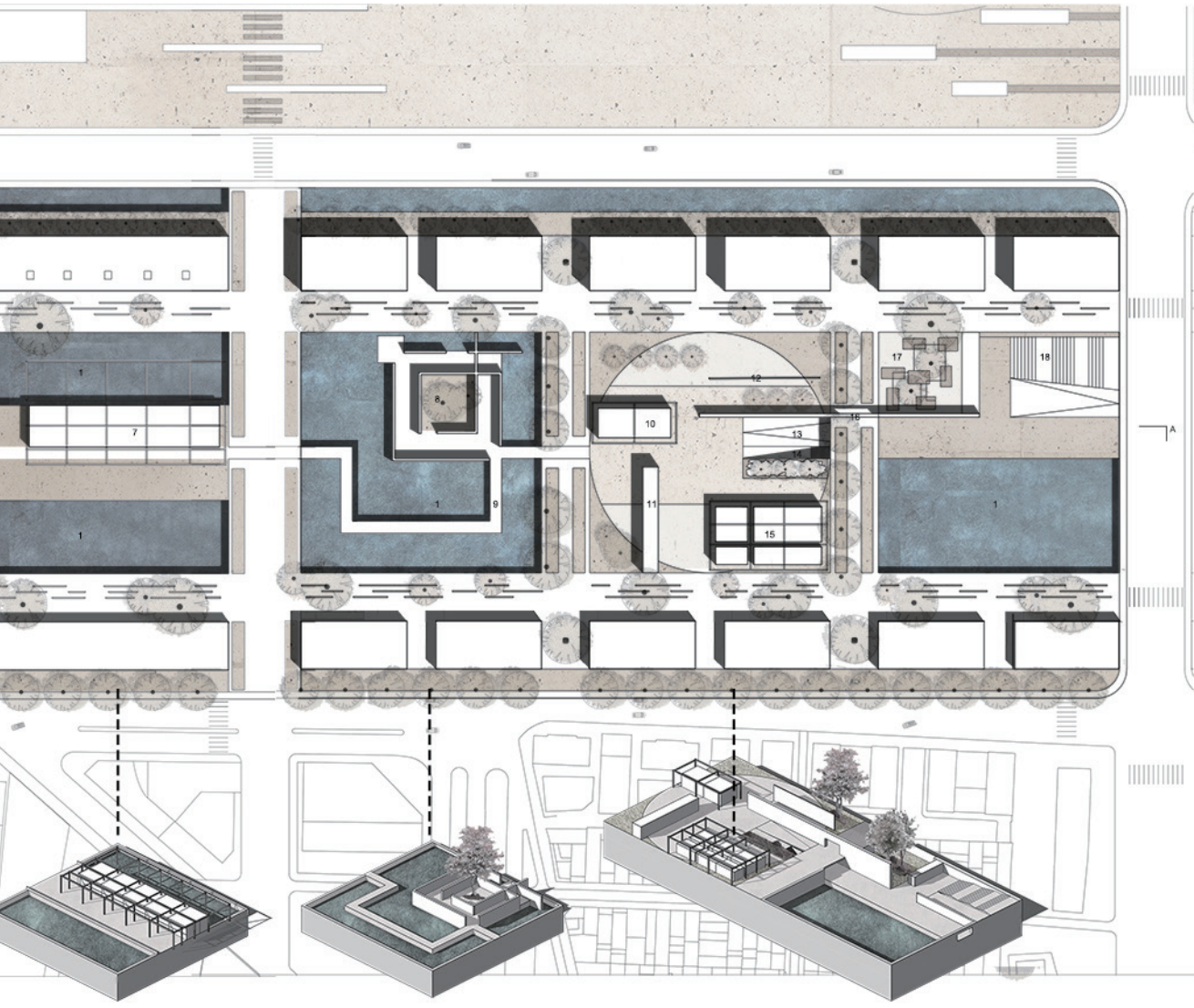
- 1 Tower
- 2 Viewing platform
- 3 Plant viewing garden
- 2a Urticaria gibba
- 2b Vaccinium uliginosum
- 2c Eco-park
- 2d Iris siphium
- 3 Water platform
- 3a Water surface
- 3b Original building
- 4 Water platform
- 5 Culture square
- 5a Original building
- 5b Ramp
- 6 Sunken auditorium
- 6a Iris siphium
- 7 Auditorium
- 8 Culture center
- 8a Academic Hall
- 8b Library
- 8c Ramp
- 9 Museum
- 9a Sunken square
- 10 Viewing stairs
- 11 Eco-bridge
- 12 Eco-park



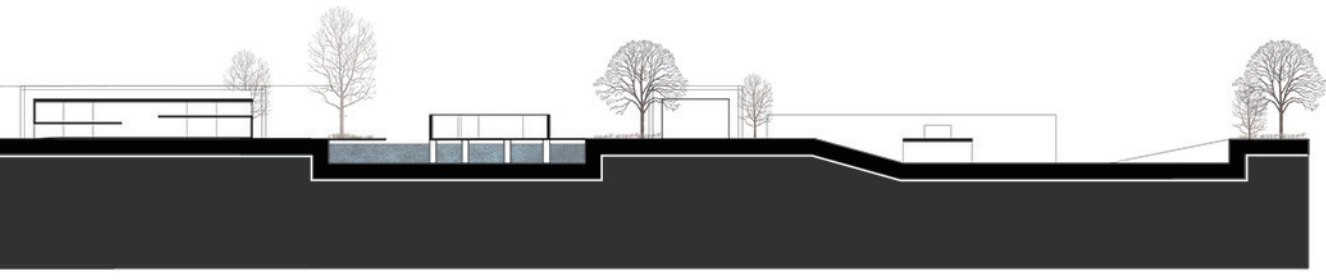
MATERPLAN
SCALE 1/1000

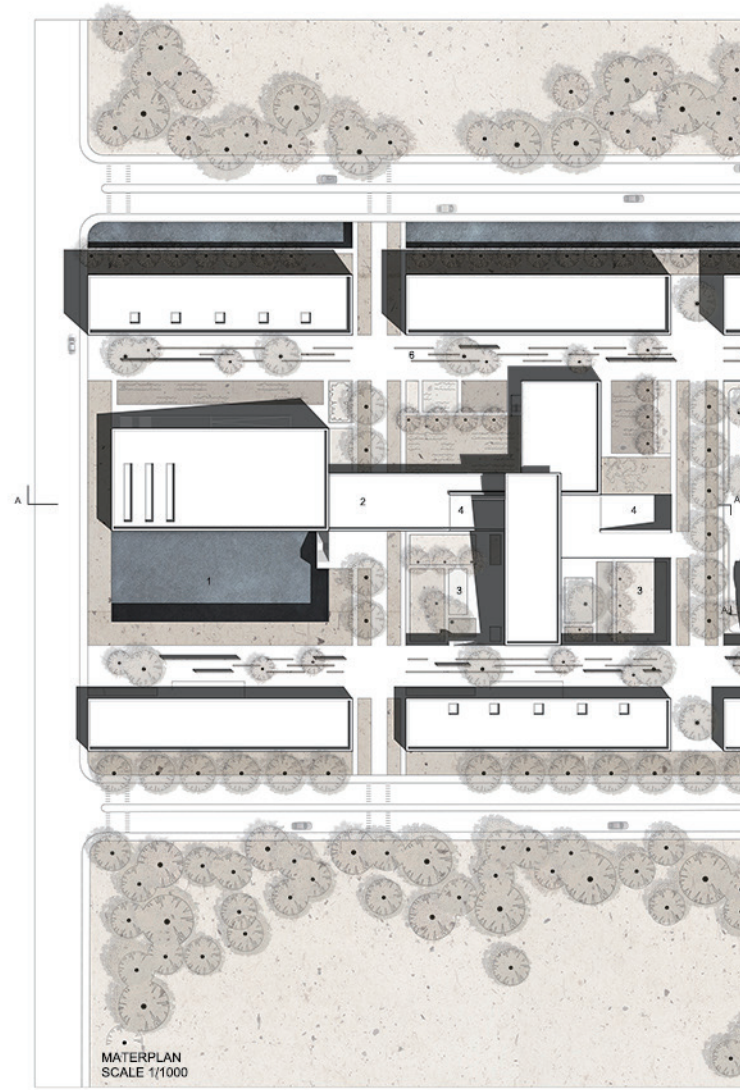


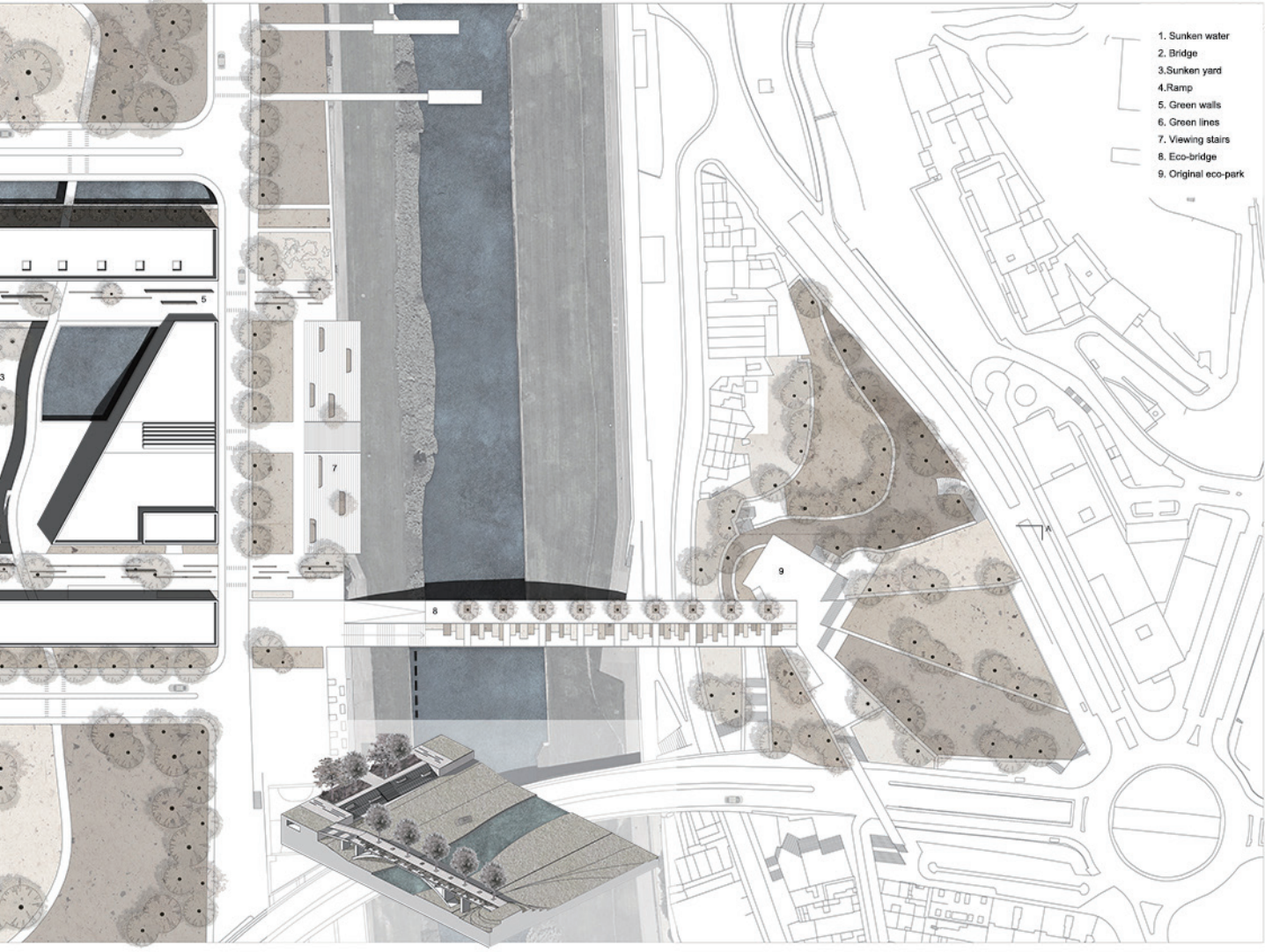
SECTION A-A
SCALE 1/1000



1. Sunken water
2. Tower
3. Biological yard
4. Pavilion(original building)
5. Green walls
6. Biological grove
7. Creative market(original building)
8. Biological yard
9. Covered bridge
10. Pavilion(original building)
11. Pavilion
12. Green walls
13. Underground ramp
14. Underground stairs
15. Creative market(original building)
16. Corridor
17. Creative grove
18. Sunken auditorium



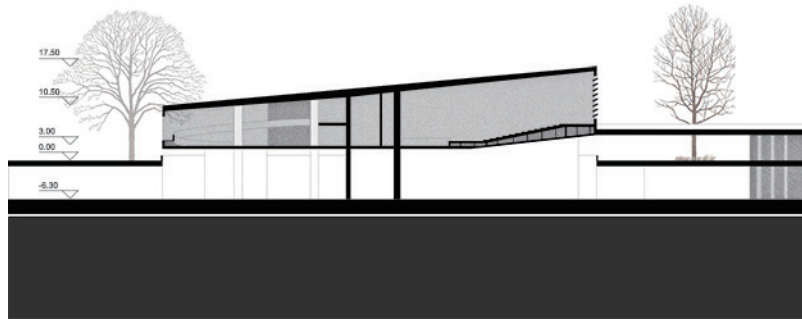
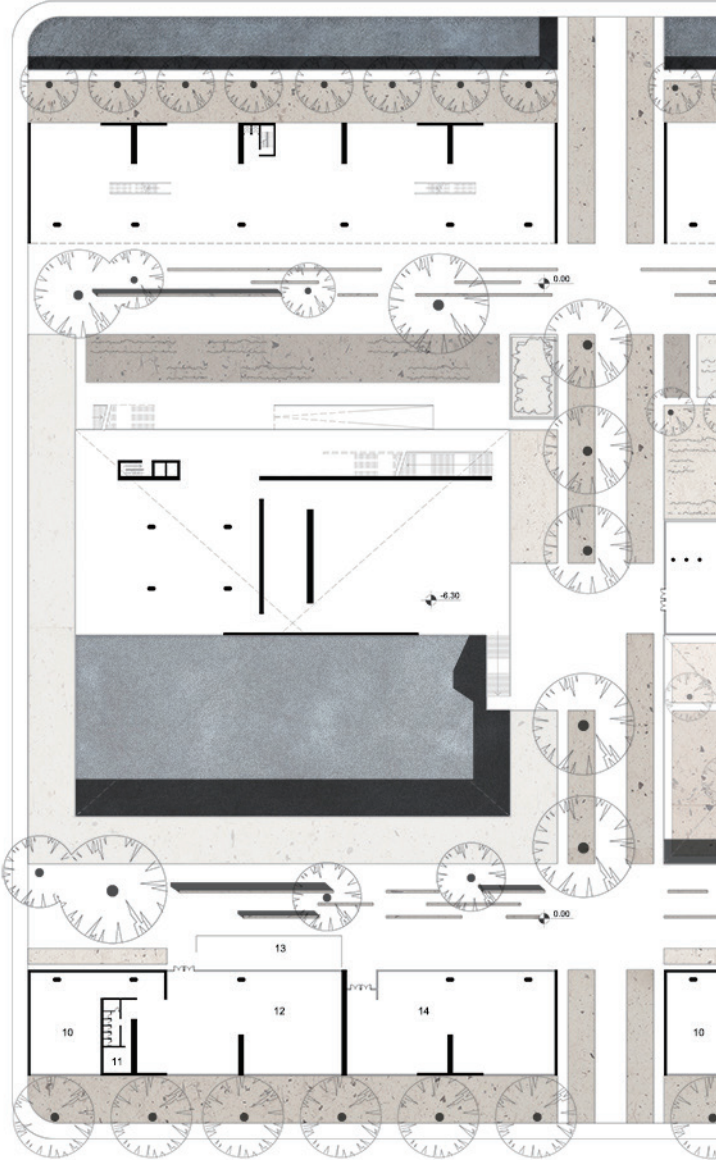


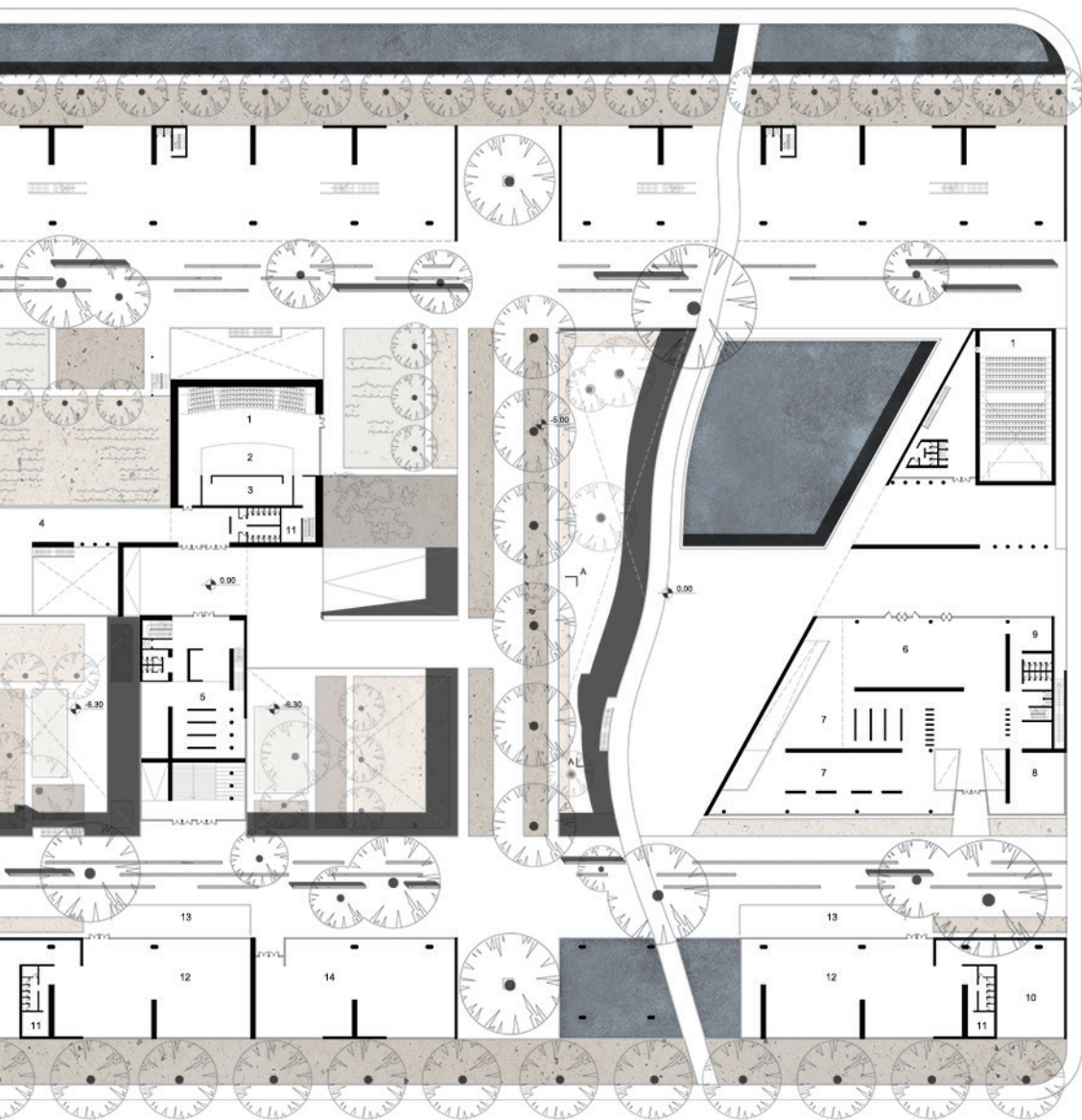


- 1. Sunken water
- 2. Bridge
- 3. Sunken yard
- 4. Ramp
- 5. Green walls
- 6. Green lines
- 7. Viewing stairs
- 8. Eco-bridge
- 9. Original eco-park



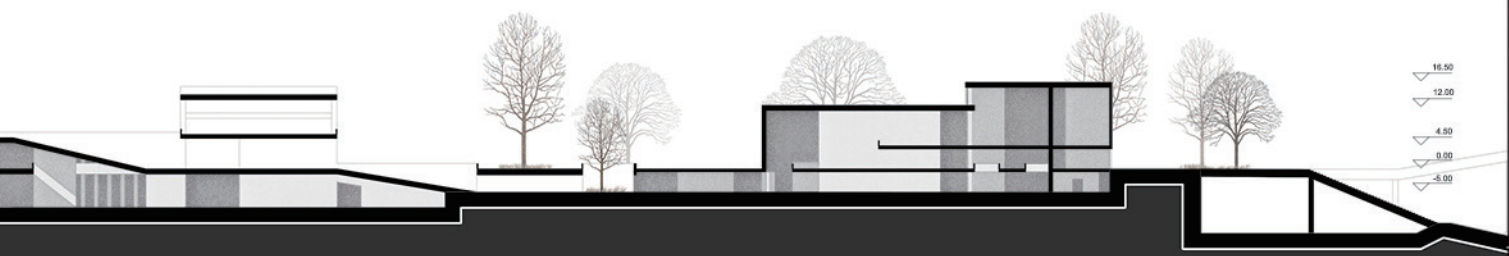
A



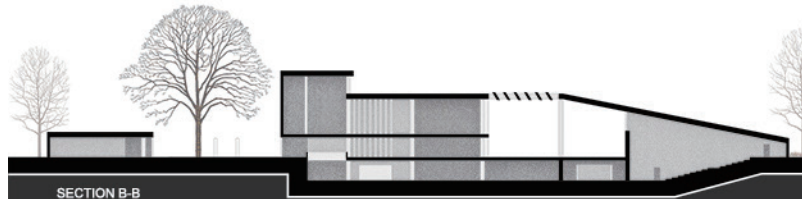


1. Auditorium
2. Stage
3. Preparation Room
4. Exhibition Corridor
5. Reading Ramp
6. Entrance Hall
7. Exhibition
8. Souvenir Shop
9. Office
10. Kitchen
11. Storage
12. Restaurant
13. Outdoor Table
14. Commercial Shop

GROUND FLOOR PLAN
SCALE 1/500

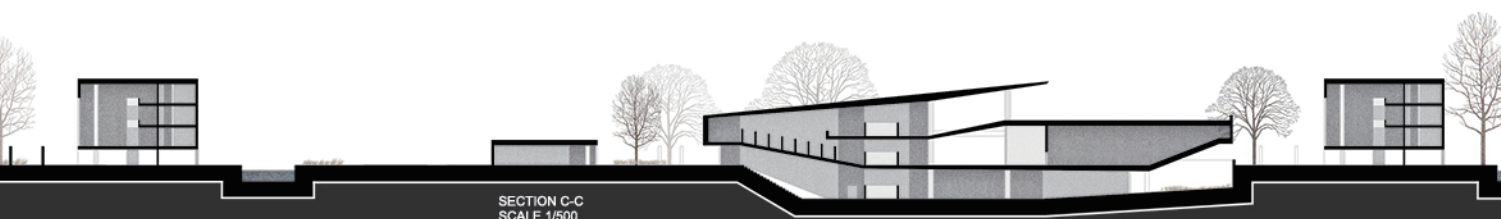
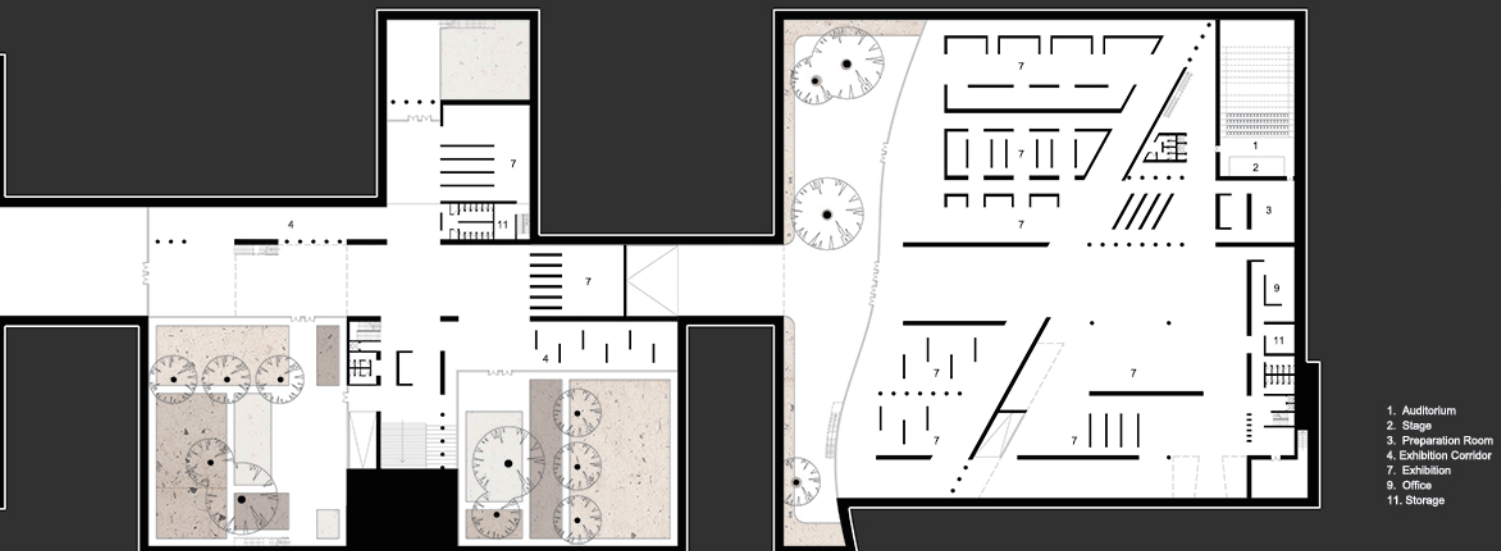


SECTION A-A
SCALE 1/500



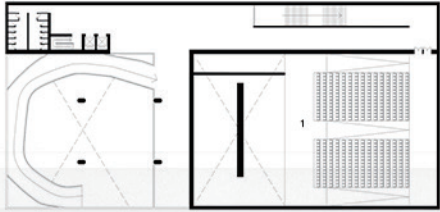
SECTION B-B
SCALE 1/500



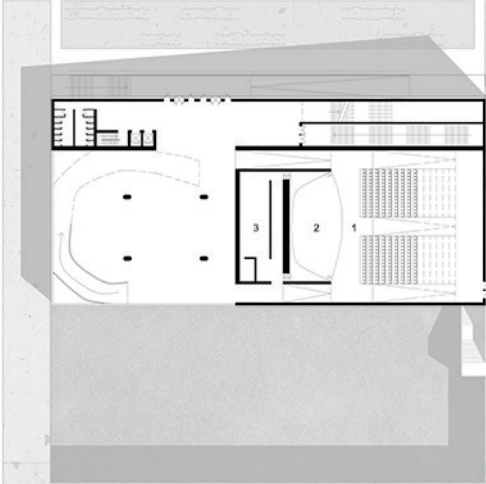
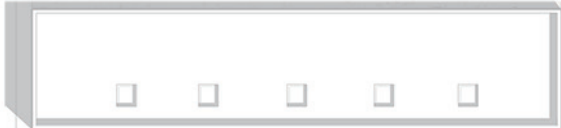
SECTION C-C
SCALE 1/500

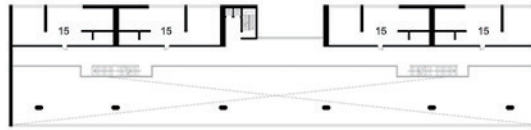
1. Auditorium
2. Stage
3. Preparation Room
4. Exhibition Corridor
7. Exhibition
9. Office
11. Storage

BASEMENT FLOOR PLAN
SCALE 1/500

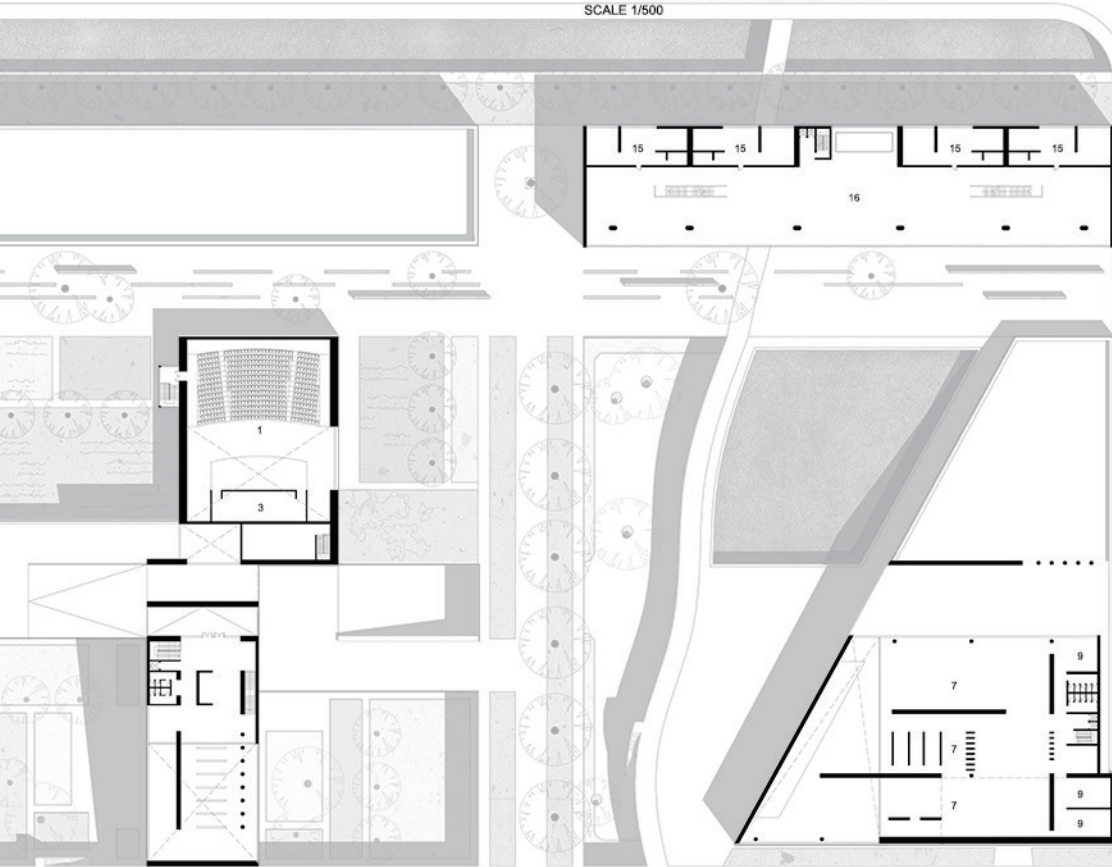


SECOND FLOOR PLAN
SCALE 1/500





SECOND FLOOR PLAN FOR SPECIAL HOUSING
SCALE 1/500



- 1. Auditorium
- 2. Stage
- 3. Preparation Room
- 7. Exhibition
- 9. Office
- 10. Kitchen
- 11. Storage
- 15. Special Housing
- 16. Co-living Space

FIRST FLOOR PLAN
SCALE 1/500



SOUTH ELEVATION
SCALE 1/500







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