a series of **rooms**

Possibilities of the void in Antwerp's Linkeroever

Master thesis

A SERIES OF ROOMS

Possibilities of the void in Antwerp's Linkeroever

Lorenzo Filippi
Lorenzo Gaveglio

Supervisor
Nicola Paolo Russi

Co-supervisors
Susanne Pietsch
Federico Coricelli

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ABSTRACT

A series of rooms focuses on the importance of the project of void in contemporary urban renewal. The research is based in Antwerp's district of Linkeroever, characterized by a strong persistence of voids at any scale, from landscape to urban.

The process leading to the project of the void has been developed through three fundamental moments. First, the analysis and identification of the porosity already existing and consolidated in the territory. Second, the definition, within this porosity, of a system of voids at different scales that establishes new spatial continuities. Crossing the different parts of the city and the territory means overcoming its geographical, political and symbolic boundaries. Lastly, the characterization and qualification of the single voids through the project of the ground. The public space is intended as a support for planned and unplanned activities, recognising in the contemporary urbanism a plurality of actors, times and uses.

The aim of the thesis is to develop in Linkereover a counter-discourse on the urban development of the area, not based on the built, but on the unexpressed possibilities and potentials of the void.

The title of this thesis *"A series of rooms"* is inspired by an ongoing research project by Bonell+Dòriga (aseriesofrooms.com).

INTRODUCTION

"Qualcuno ha scritto che chi progetta gli spazi tra le cose (che vuoti certo non sono) è oggi uno scrivente senza destinatario, senza un pubblico che si misuri con la città. Forse un nuovo tipo di utopista; oppure tanto realista da pensare ad essi come l'autentico tessuto connettivo della città."

"Someone wrote that whoever designs the spaces between things (which are certainly not empty) is today a writer without an addressee, without an audience to measure themselves against the city. Perhaps a new kind of utopianist; or realist enough to think of them as the authentic connective tissue of the city". [Own translation]

Vittorio Gregotti (2011) Città e Postmetropoli, p.89

From the right bank of the Scheldt river, the Antwerp's district of *Linkeroever* — Dutch for 'left bank' — looks like one of the many steamers portrayed in Le Corbusier's book *"Vers une architecture"* (1923) **(Figure 1)**. In a conference held in 1929 in Buenos Aires, the Swiss architect described the great transatlantic liners as perfect *'machines for living'*, enhancing the minimal living spaces, the communal facilities and the crowded decks similar to the Parisian boulevards (Le Corbusier 1930). These concepts will be fundamental in defining the principles of the new way of living of the famous *Cité Radieuse* (1946). The similarities between this new architecture and steamships helps us better understand what Le corbusier considers to be the relationship between nature-architecture and open space-building. If we look at the works of the Swiss architect, such as the Sainte-Marie de La Tourette convent or the Unité d'Habitation in Marseille, they appear to be like ships in a *'green ocean'* (Aureli 2012).

As will be further explained in the following chapters, the designers of the modernist quarter of Europark in Linkeroever were inspired by the CIAM's theories and the proposals that Le Cor-busier himself made for a new city in Antwerp's left bank. The sensation of being in front of a ship in the green is not only felt when walking through the tall buildings of Europark, but most of all when looking at the complex on the other side of the river. From the right bank of the Scheldt, Linkeroever appears as *"a series of high-rise buildings hovering over a green strip"* (Colenbrander et al. 2017, 6). The set of different buildings visually melts in one single object, close to the steamship's aesthetic. The horizontal scanning of the façades evoke cabins and the blind sides sprouts upwards like funnels **(Figure 2)**.

On the other hand there is the *'green ocean'*. These modernist districts were developed as a counter-discourse to the phenomenon of overcrowded city centres and the emergence of *slums* on the fringes of large cities. This resulted in great attention being paid to hygiene, sun exposure and ensuring adequate public spaces. All this has led to a preference for a vertical development of buildings in order to free space on the ground with the consequent increase in public spaces. In some projects, as in the case of Le Corbusier's proposal for Linkeroever in the 1932 com-
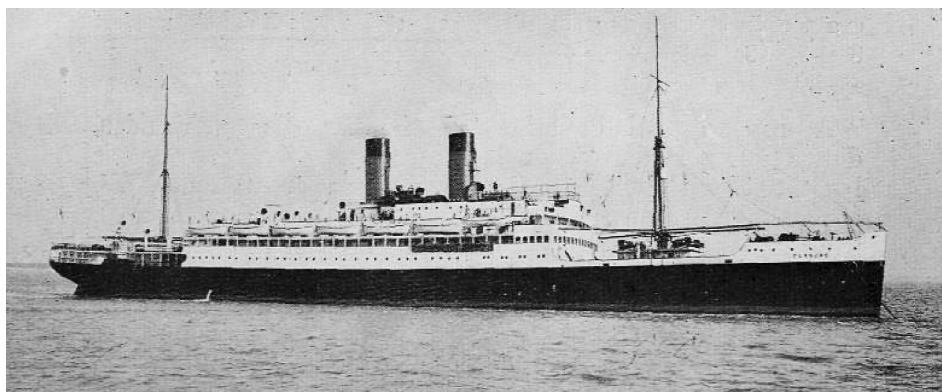

Figure 1. *The liner Flandre (in Le Corbusier 1923, Vers une architecture)*

Figure 2. *Linkeroever from the rigt bank (Richard Buijsman, boriann.be)*

petition, the buildings are built entirely on *pilotis* leaving even 100% of the ground surface space on public land (Commers and Lombaerde 1987). When criticising the heritage left by the Modern Movement, even in Antwerp, the tendency is to point the finger at austere, grey façades or too small living spaces. Actually, the reason why these districts have hardly succeeded in being perceived as part of the city lies in their connective tissue and public space.

Although Linkeroever is just on the other side of the river and just one metro stop from the central *Groenplaats*, it is perceived by the inhabitants of Antwerp as distant and disconnected from the rest of the city. This is due to the strong porosity of its urban fabric and the strong social differences that distinguish the various areas of the district, which are also reflected in the building types. The empty space in Linkeroever is perceived as a fracture within the territory; an indeterminate, disconnected void that leads to a strong crisis of identity within the urban fabric.

What is Linkeroever? City or landscape? Centre or periphery? Compact city or diffuse city?

Actually this lack of a strong identity, the fact of being something different from the compact city and the diffuse city, can lead to new discourse on living the open spaces. The porosity and persistence of voids at different scales are enormous and unexpressed potentiality of the area **(Figure 3)**. The aim of this thesis is to reflect on the qualities and the potentials of this *green ocean* in order to build a project of void that heal the wounds within the territory of Linkeroever.

The thesis is divided into three macro-sections. In the first one Linkeroever and Europark are analysed and described, historically and morphologically, focusing particularly on the voids. In the second section a system of voids is identified and defined on the basis of the qualities and potentials of the open space. The project of the void is considered as a constant, tested by future urban scenarios of densification (variables). In the third part, the system of voids that had been previously defined is characterised by the thematisation and the design of the ground. Thanks to the project, the open spaces of Europark, or *rooms*, acquire a more domestic dimension leading to a renewed identity of the place.
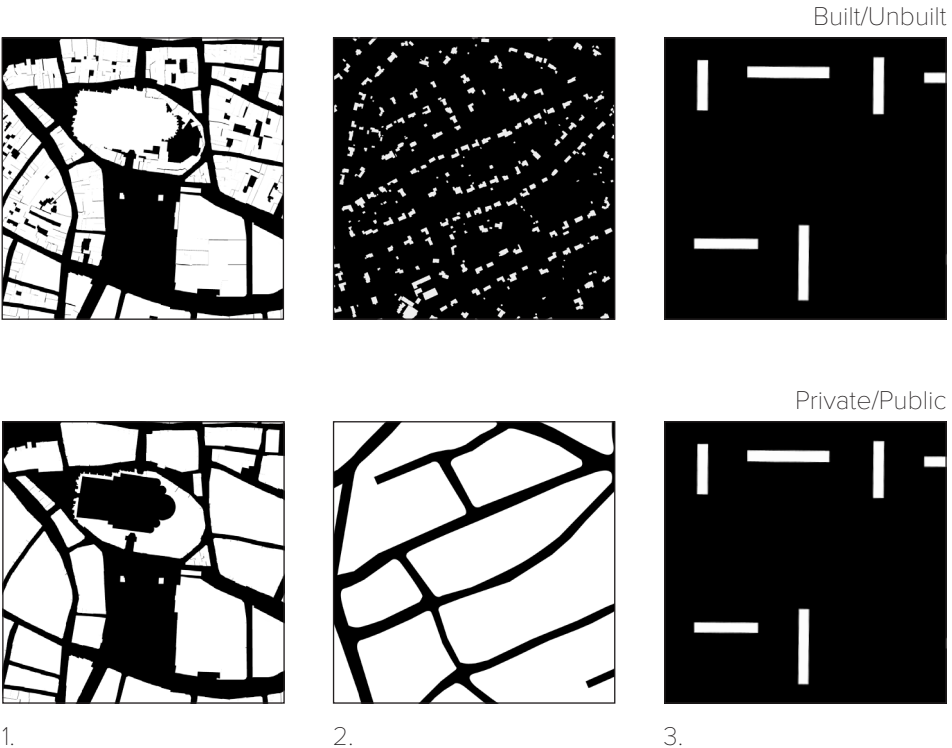
Built/Unbuilt

Private/Public

1. 2. 3.

Figure 3. *Connective tissue in the compact city (1.), diffuse city (2.) and Europark (3.)*

01

the green ocean

1.1. A porous territory

The territory where the project is located is highly complex and a study of the context cannot be limited to the neighbourhood or the sole city of Antwerp. The twentieth century concepts about the city as a single organism fail when we approach today's urban condition in Europe. Especially if one wants to realize a project in the voids. It needs to be done a transcalar investigation of the persistence of voids at different scales, from the landscape to the empty urban plot.

The European Post-metropolis

"We need no more to live in the centre of Paris to be considered 'Urban'." (Viganò 2018)

The region of Flanders in Belgium is one of the most urbanised and industrialised areas in Europe. It is the geographical centre of the most important European megalopolis that extends from Paris to Amsterdam, from the Ruhr area to London. It includes the most important production areas and commercial ports of the continent and the capital of the European Union, Brussels. This area — which can be defined as *Post-metropolis* (Soja 1999) — is characterized by dense infrastructure systems and diffuse urbanization that go beyond the limits of the city and even national borders **(Figure 1)**.

Flanders has a population density of 479 inh./km^2 and reaches the density of almost 600 inh./km^2 in the Flemish Diamond *(Vlaamse Ruit),* a densely populated conurbation between Antwerp, Leuven, Brussels, and Ghent, inhabited by more than 5 million people. This urban conurbation can be compared in terms

of infrastructure density and industrialisation with the neighbouring *Randstad* (urban network including Rotterdam, The Hague, Amsterdam, and Utrecht), where there are almost 7 million inhabitants and a density of about 1000 inh./km^2 (Meijers 2007, 54). These two areas are also very similar from a cultural and linguistic point of view, as the official language is Dutch, and Flanders was part of the United Kingdom of the Netherlands until 1830. Moreover, the ports of Rotterdam and Antwerp are the busiest container ports in Europe *(Eurostat 2018)* and are both characterized by being leaders in the diamond trade and petrochemical industry. These two urban areas are considered to be not only the political and economical centre of the European megalopolis, but of the whole Europe.

Another noteworthy definition given to this territory is that of *"Horizontal Metropolis"*, coined by the study of Bernardo Secchi and Paola Viganò, who worked on several projects in Belgium including the *Antwerp Structural Plan* and *Brussels 2040 Horizontal Metropolis*. Secchi and Viganò consider the horizontal metropolis as the place where to realize the *"radical project for the contemporary urban condition"* (Cavalieri and Viganò 2020). The project in this context must be conducted taking into account three fundamental qualities and potentials that characterise the territory. The first is *isotropy*, which allows multiple and transcalar design hypothesis in every direction. The second one is *porosity*, the recognition of the *"city as a filtering body"*, as a result of fractures, connections and frictions in space. Finally there is *horizontality*, the condition that allows to overcome the divisions within the city and create new spatial continuity within the territory (*ibid.*).

While Italian philosopher Massimo Cacciari defines this *post-metropolitan* condition as dramatic and depicts the contemporary city as a total absence
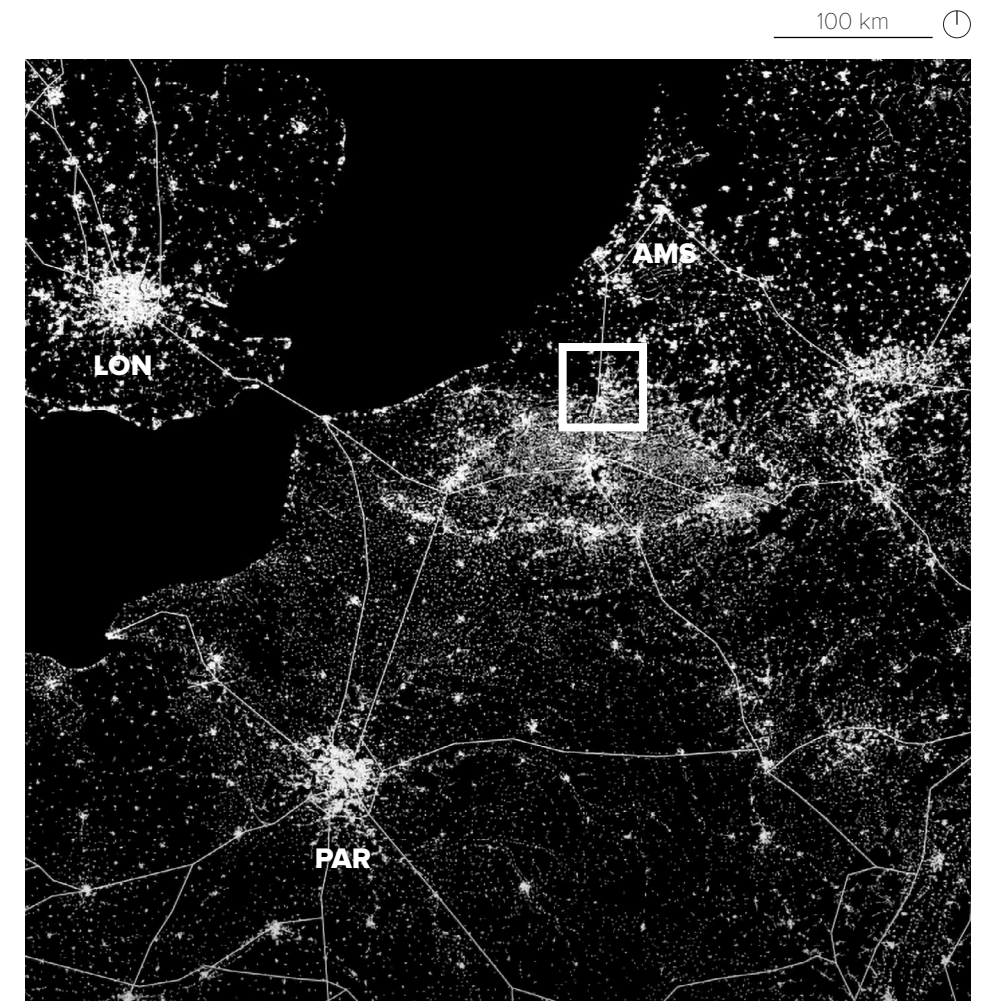

Figure 1. *Antwerp in the European Post-metropolis (Viganò 2018)*

of forms and places (Cacciari, 2009), Secchi and Viganò recognise in it the qualities listed above and exalt the democratic nature of this territory. In fact, they argue that the dense infrastructural and technological networks and the overcoming of the metropolitan dualism (city-periphery) make the territory more equal and accessible. (Viganò 2018).

Antwerp and the Porous City.

Throughout the 20th century the economy of Antwerp was characterised by a great decline due to the loss of the port's importance and its displacement to the north. In the post-war period, as in the rest of Belgium, the city-periphery binomial is overturned: the consolidated city becomes slum, the suburban territory is populated by the middle class. According to Dirk Somers (2012) *"The Flemish townscape is a European leader when it comes to heterogeneous, polycentric and diffuse ur-* *ban sprawl."* The reasons for this heavy widespread urbanisation, which led to the formation of the typically Belgian phenomenon of *nebular cities* (Davidts 2004), can be traced from Somers' point of view to *"a weak planning tradition and a political conspiracy against urban density"* (*ibid.*) **(Figure 2)**. This aspect will be further discussed in chapter 1.4.

In 2003 the firm of Bernardo Secchi and Paola Viganò was commissioned to develop the Strategic Structural Plan for Antwerp (SRA), which will be implemented in three years and approved in 2006. The plan is based on an important *thematic frame* (Fini 2017, 213) , already in use in previous master plans for Jesi and Siena, which is the image, conceived as an idea, a concept that according to Secchi (1989) is able *"to simultaneously organize both vast cognitive apparatus [...] and a complex design apparatus."* The plan for Antwerp defines seven images that act at different scales and deal
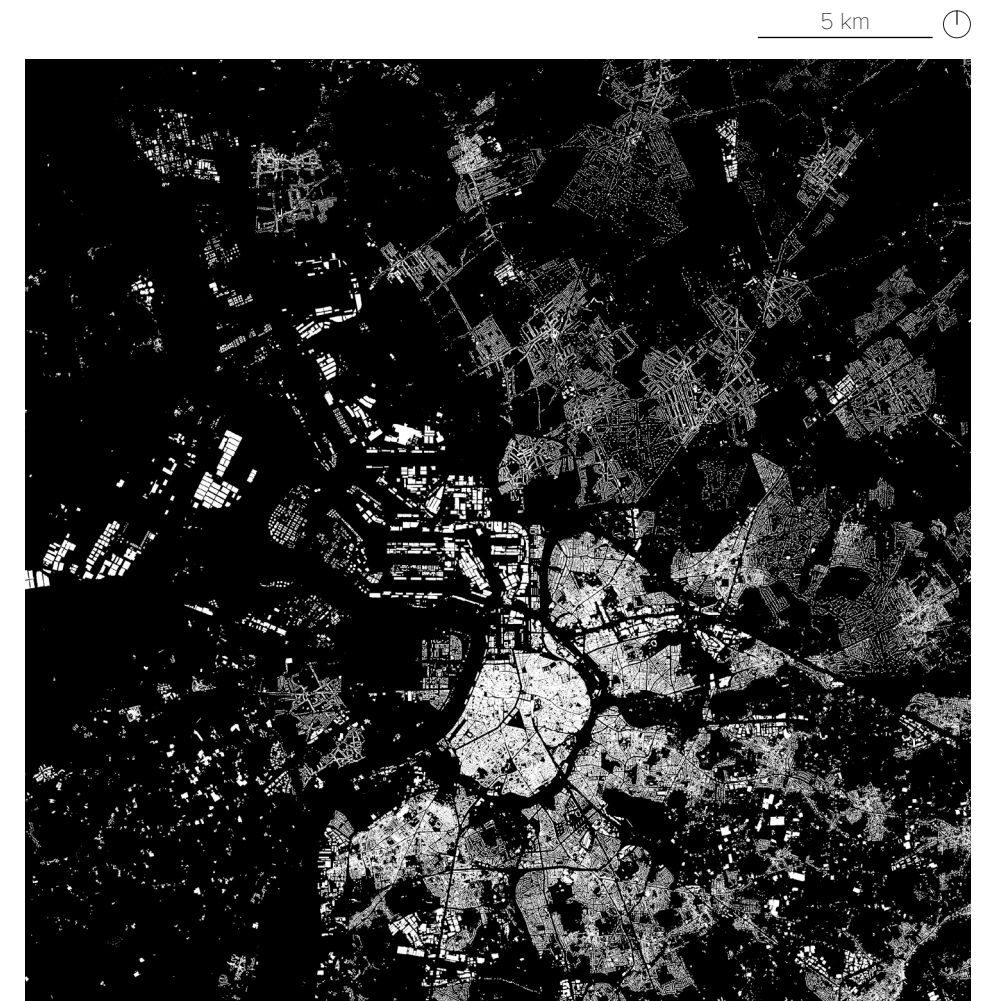
5 km

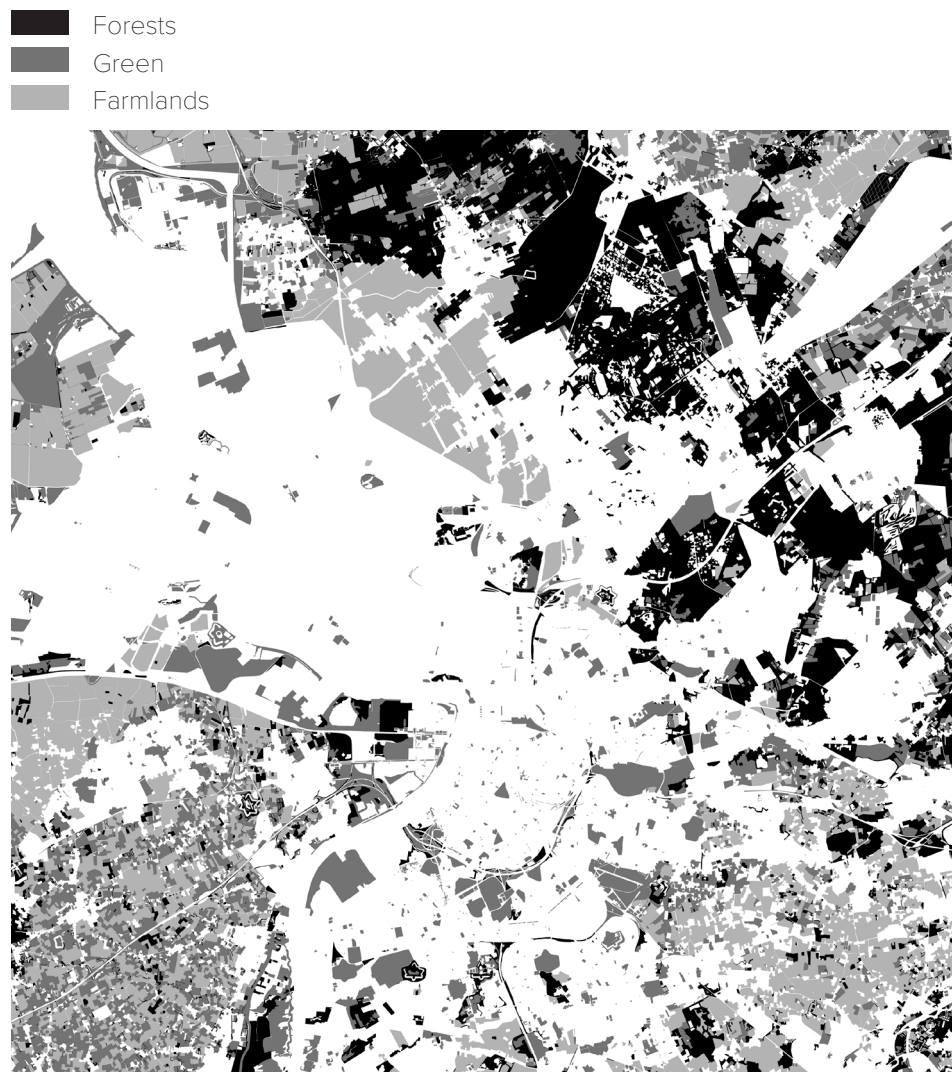**Figure 2.** *Urban area of Antwerp. The map clearly shows the nebular cities that have developed in the suburban area of the city.*

Forests
Green
Farmlands

Figure 3. *Forests, green areas and farmlands in Antwerp's territory. This map shows the high fragmentation of the landscape.*

Roads
Railways

5 km

Figure 4. *Antwerp's transport network. The dense railway tracks in the north-west area is the port, the second busiest in Europe.*

with the crucial themes of the city. The image that is more relevant for this thesis is undoubtedly the *'poreuzestad',* the porous city. Secchi and Viganò identify two different types of voids that form this porosity throughout the territory: the urban voids (single lots) in the city's urban fabric and the large disused industrial, port and railway areas. The Antwerp plan, in addition to the seven images, defines five strategic spaces characterized by specific characteristics and *"Its goal is to create the spatial conditions for the improvement of the city's ecological quality."* (Secchi and Viganò 2009, 5)

Linkeroever, the left bank

In the Structural Plan's framework, the left bank of the Sheldt river is inserted in the strategic projects of the *Soft Spine*, a network of urban and landscape parks that redefine the city's relationship with the river, and the *Groen Singel* (green ring), a set of voids on a territorial scale alongside the infrastructural ring of Antwerp (Fini 2017, 218).

In fact, the choice of Secchi and Viganò to consider the voids of Linkeroever on a territorial scale is intelligible, because the river is considered as the most important structure of the landscape (Dattomo 2017, 223). Another reason is the fact they are profoundly different from the small voids embedded in the dense historical fabric of the centre or the large abandoned industrial and port areas. However, the left bank of the Scheldt appears as something highly diverse from the territory east of Antwerp, where the landscape and the *nebular cities* merge to create an indefinite and homogeneous space. Linkeroever, despite its large open spaces, relates very strongly with the centre of Antwerp and distances itself from the uncontrolled suburban sprawls thanks to its precise structure and well-defined boundaries (and forms).

We can therefore affirm that Linkeroever represents somehow the third way to live this new urban condition, far but geographically close to the dense and chaotic consolidated city and at the same time immersed in the great landscape systems (river, lakes, parks, forests). Linkeroever represents the planned city, but within a natural and landscape context so difficult to find close to the historical centre of other major European cities **(Figure 5)**.

If comparing the map of built and unbuilt and the map of what is public and private in Linkeroever some interesting considerations can be made about the porosity of the area **(Figures 6-7)**. If only the built and open spaces were considered, one would think that the urban structure of Linkeroever is much more permeable than the city centre. Actually, as shown in the public/private map much of this 'empty' space is made up of private gardens, garages or closed blocks. They are enclosed, private or semi-private and often inaccessible. The only exception is the district of Europark and Van Eedenplein (highlighted in **Figure 7**), where the public space almost entirely coincides with the unbuilt.

Europark and Van Eedenplein

"What connotes the historical city, and in an opposite sense also the periphery, is the great articulation of the spaces. The peripheries represent a dramatic 'reduction' of all of this. [...] The peripheries are often exhausting because of an excess of separations, rather than for the opposite reason, they are squalid because of a lack of qualification." (Secchi, 1986).

The modernist district of Europark, as anticipated in the introduction, consists of a series of high-rise residential buildings emerging from a large green area. The main feature of this public space is that it is made up by well articulated and separate surfaces and paths **(Figures 8-9)**. The pedestrian paths are very

well divided from the driveways and the green areas are clearly separated from traffic thanks to the wise use of vegetation as a filter. Likewise *Van Eedenplain* has the same characteristics. It is the busiest place in Linkeroever thanks to its role as an infrastructural node (cycle/pedestrian tunnel exit, metro stop, bus terminal and interchange car park). Despite its enormous potential, due to its fragmentation of the soil, it is only perceived as *'place to go'* and not as *'place to stay'*.

The problems of this area seems to be what Secchi (1986) wrote in Casabella: "excess of separation" and "lack of qualification". The void around the buildings, *the green ocean*, appears today heterogeneous from the point of view of separation and fragmentation of paths and soils, but very homogeneous if considering the plurality of uses and meanings that a public space should have.
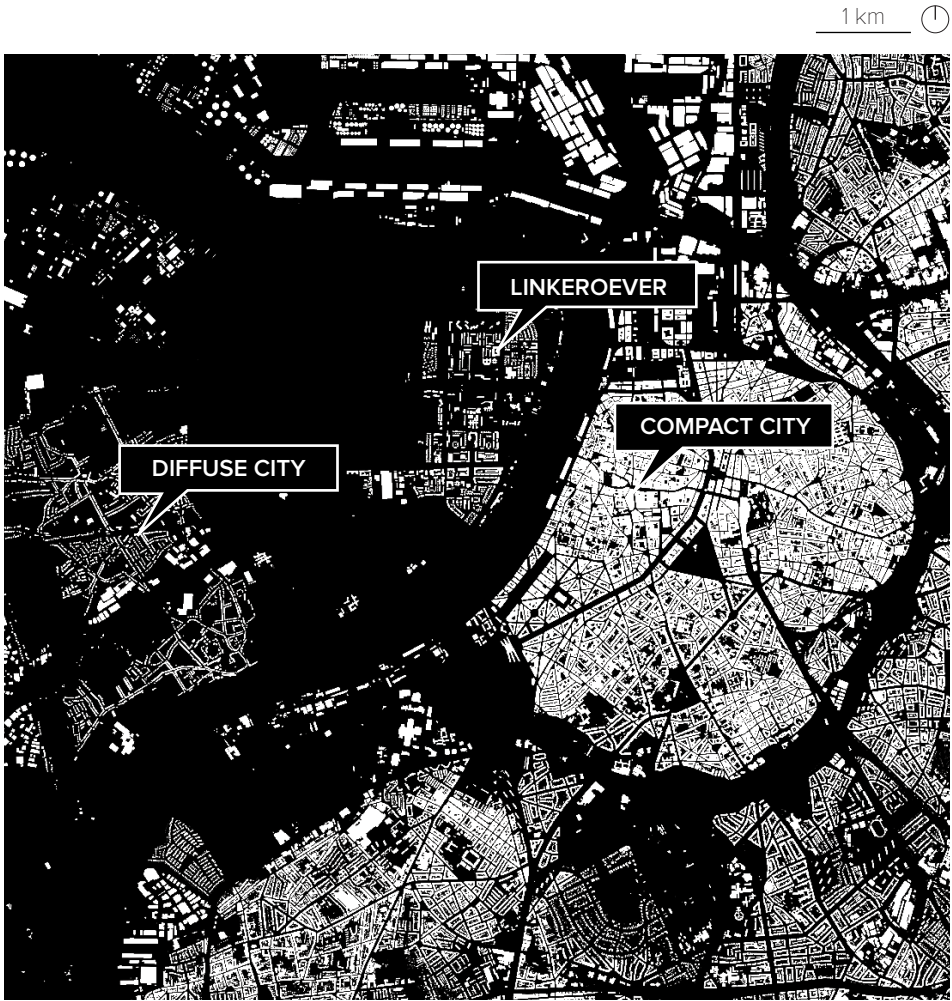

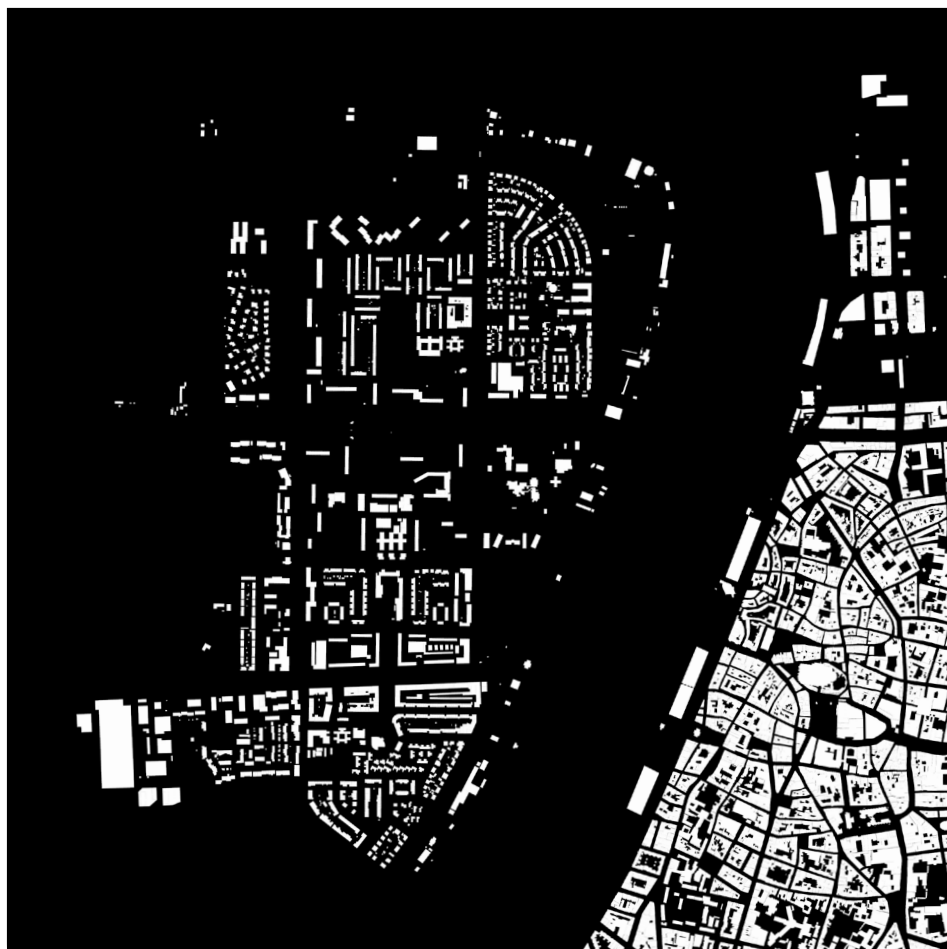**Figure 5.** *Linkeroever is halfway between the city center and the landscape, the compact city and the diffuse city.*

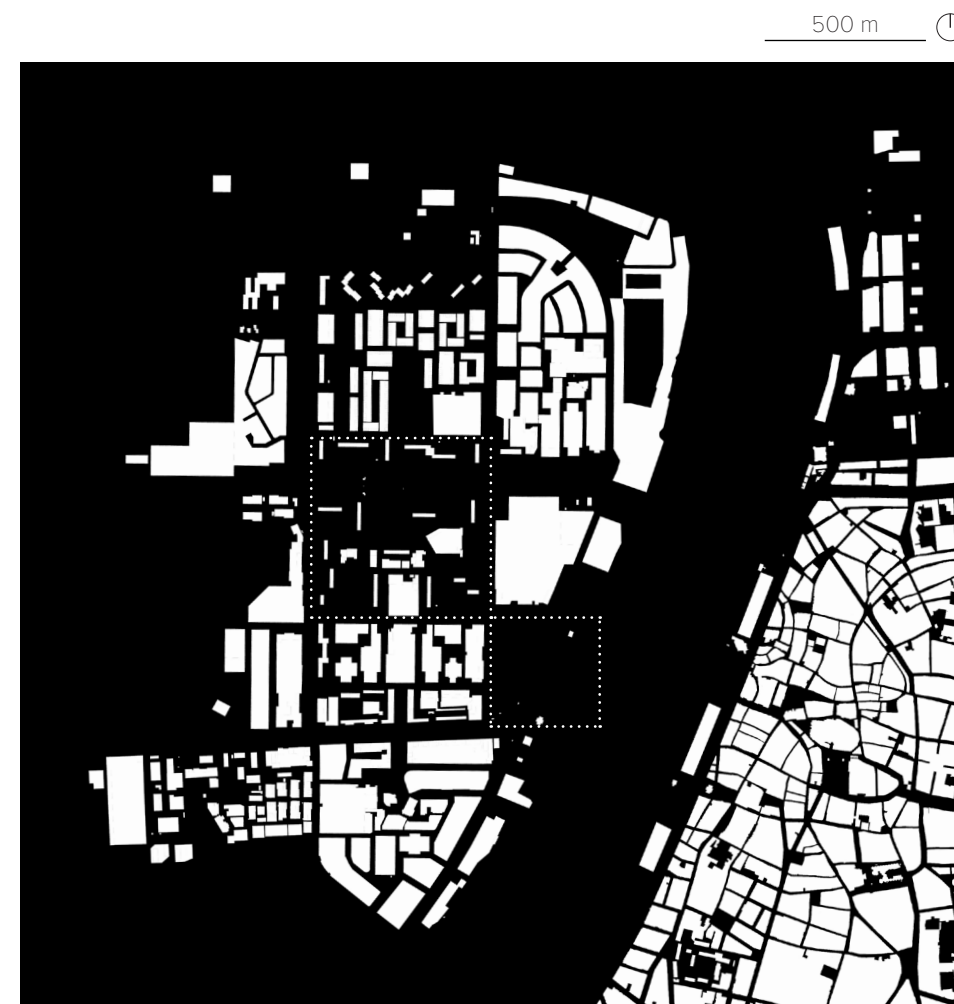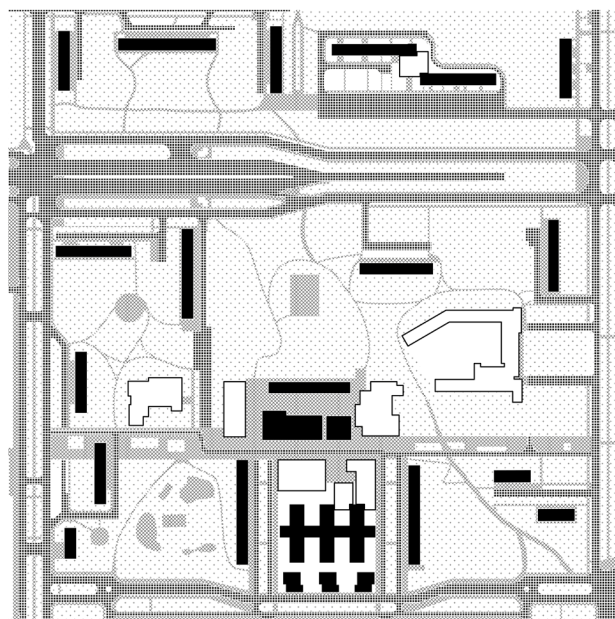**Figure 6.** *Map of Linkeroever. Built/Unbuilt.*
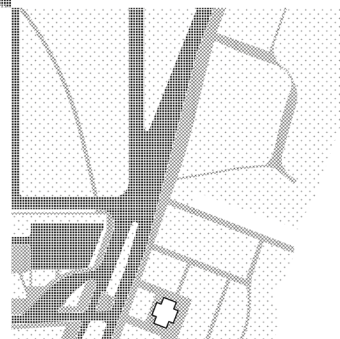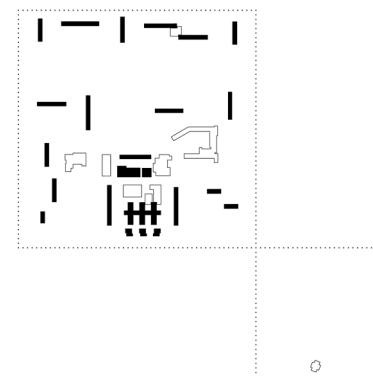

Figure 7. *Map of Linkeroever. Private/Public. (The white dotted line is marking the position of Europark and Van Eedenplein)*
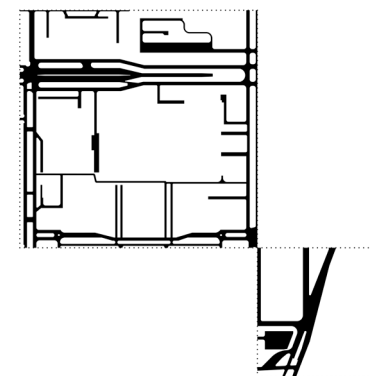
Europark

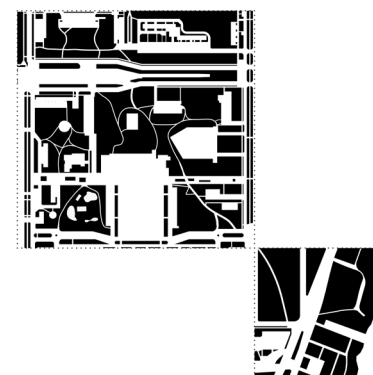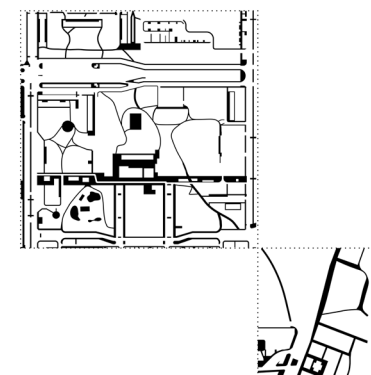*Van Eedenplein*

Buildings

Roads

Green

Paths

Figures 8-9. *Europark and Van Eedenplein. In this drawings is shown the high fragmentation and separation of soils and paths, but the lack of qualification.*

1.2. Photo Essay

This photo essay collects a series of pictures taken during two different trips to Antwerp, one in March and the other in July 2020. It shows the diversity of the neighbourhood not only in its locations but also at different times of the year. The selected shots show the variety of public spaces and landscapes of Linkeroever. From the large open space of the *Het Rot* park to the small private gardens of the houses. From a more natural and free vegetation to a more rigid and designed one.

The large open spaces of Europark are portrayed as a surreal green surface scattered with isolated objects. Here the public space is perceived as homogeneous and without identity, defined only on a spatial level by the towers. In the summer months, on the other hand, the vegetation helps to give character and confers a picturesque appearance to some spots.

The selected photos are listed without a chronological or thematic order, but in such a way as to arouse analogies and contrasts. For instance, the first two photographs show Linkeroever from the right bank and the city centre from the left one. This juxtaposition makes it immediately clear the persuasive presence of the green in Linkereover compared to the centre of Antwerp and the different urban density in the two parts of the city.
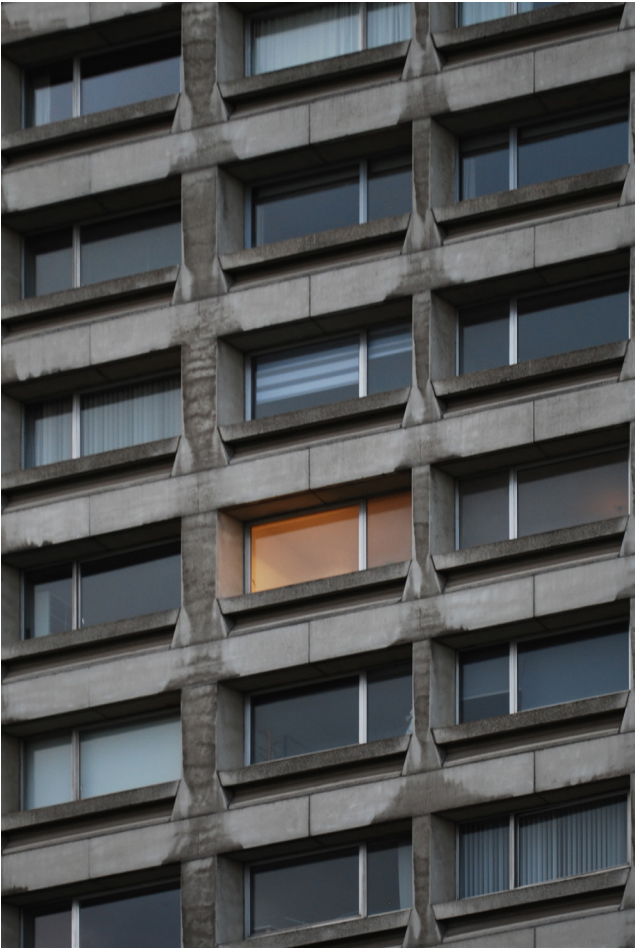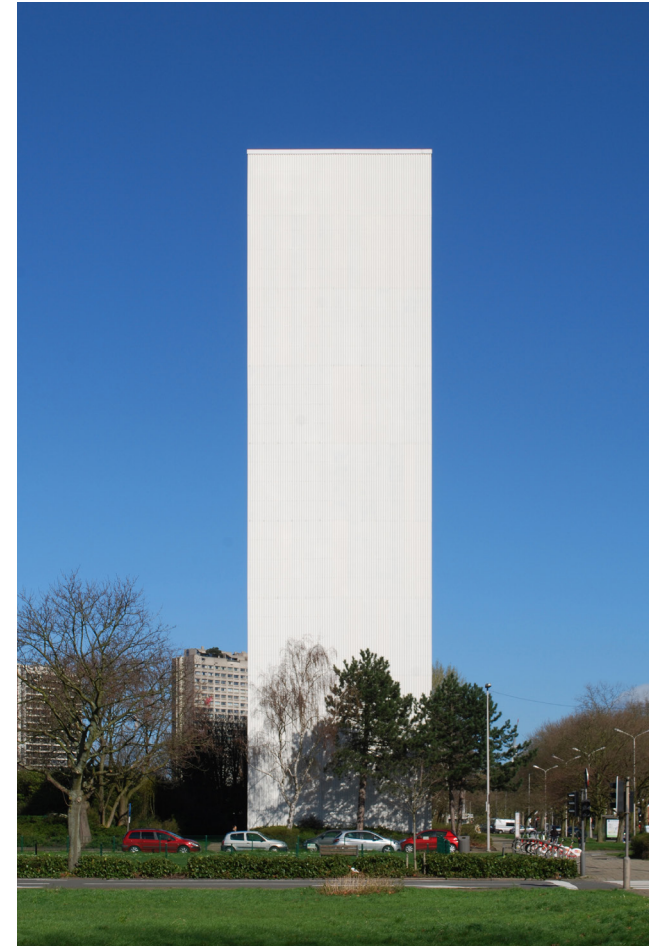
1.3. From the polder to Europark. Historical development of Antwerp's left bank

The history of Linkeroever begins after the reclamation of the *polder* on the left bank of the river Scheldt. The *polder* is a portion of land that lies below sea level and is artificially dried with drainage systems and dams in order to obtain cultivable land. Today this area is a residential district, the least densely populated of the city and is characterized by different types of buildings and large green spaces (Colenbrander *et al.*, 2017, 2). The regular street grid divides Linkeroever into areas with very different characteristics, some defined by single-family houses with gardens, others by terraced houses, others by high-rise buildings surrounded by large open and public spaces. From the right bank, Linkeroever looks like a green strip on which a series of tall buildings stand out: the residential complex of Europark, located in the centre of the district and the three residential towers in the northern area. Despite its visual impact and proximity to the city centre, Linkeroever is perceived from the citizens of the right bank as distant and disconnected.

As mentioned before, the left bank of the Scheldt was originally an agricultural land, while the urban development of the left bank is very recent, as it has only taken place since the 19th century. The legal annexation to the municipality of Antwerp dates as far back as 1923 (*ibid.* 102). Due to its strategic position, it was for centuries a space used for the defence of the city, making residential expansion on this bank inconvenient. For this reason, a permanent bridge between the two banks was nev-

Timeline of the main events that have affected the urban development of Linkeroever in the last two centuries

Louis Van Engelen, *Sunday Afternoon at St.-Anneke*, 1887.
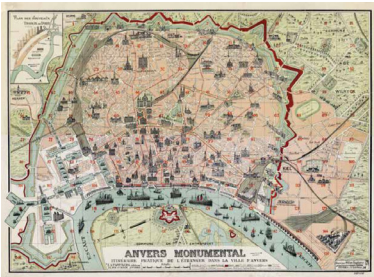
"Practical itinerary of foreigners inside the city of Anwerp" 1908 (Antwerp city archives).

1809-1813
Partial development of a fortified citadel *(Ville Marie-Louise)*.
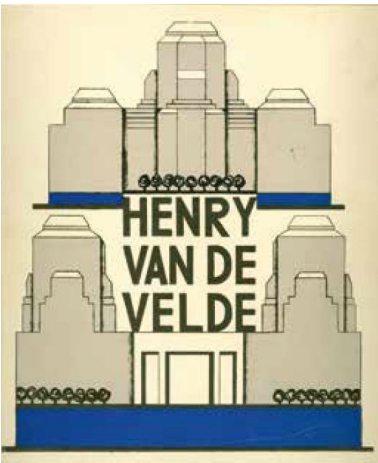
1851
Proposal for the expansion of the port of Antwerp on the left bank *(Leopoldstad Plan)*.

1885
International exhibition in Antwerp. During the *belle époque* the remains of the military citadel are transformed into places of *loisir*.

1894-1906
The *polder* undergoes a great morphological transformation. It is raised by six metres and completely drained with the addition of earth.

1906-1910
As a result of a strong population increase, drawings and plans for the expansion of Antwerp are produced. The surrounding defensive wall has been demolished

1911
Competition for the expansion of Antwerp on the left bank *(Loquet plan)*.

1923
The left bank becomes administratively part of Antwerp.

1926
Henry Van De Velde proposal for the development of a new city on the US model.

1929
IMALSO was established, a company with the aim of managing the infrastructures and the urban development of Linkeroever.

1931
Construction of the Sint-Anna pedestrian tunnel and the Waaslandtunnel connecting the two banks of the river.

1932
International competition for urban development in Linkeroever.

1967-1979
Construction of Europark district

1989
Stad aan de Stroom international competition: new visions for Antwerp and new relationships between the city and the Scheldt.

2005-2014
Densification of the Europark district. The IGLO masterplan.

2016
Last international competition of ideas for the development of Linkeroever.

Print of the *Poort van Vlaanderen* by Henry Van de Velde in the magazine *Kunst*, 1933.

er built, even though temporary bridges were built during wartime periods (Havermans 1959, 83). In addition to the defence of Antwerp, for a long time the left bank preserved exclusively its agricultural function. The area remained almost uninhabited until the first decades of the last century, apart from a few small fishermen's settlements.

At the beginning of the 19th century, Napoleon Bonaparte ordered the strengthening of the existing fortresses and a ministerial act (1809) provided for the construction of a completely new town on the left bank, the *Ville Marie-Louise*. The project for the new development is defined by a regular grid which accommodates mainly military buildings, but also a small number of private buildings with a residential and productive function (Verelst 1993). These are the first thoughts on a possible urban development for the left bank, which in the end were only partially realised and abandoned at the end of the Napoleonic period.

At the end of the 19th century the expansion of the port (*Leopoldstad plan*) on the left bank is planned; this project required the displacement of large quantities of sand on the north-east bank of the area. This artificial beach was never used for its original function, but later became a leisure destination for the citizens of Antwerp (Schoofs 2002). Even today the Sint-Anneke beach still has this function. For a short period of time the old military settlement became a meeting place for the *bonne société*, which can admire the centre of Antwerp on one side and the Flemish landscape on the other (Colenbrander et al. 2017, 100). Between the 19th and 20th centuries, more land was brought into the to raise its level regarding that of the river and promote the development of real estate in the area (ibid. 89).

The first years of the 20th century were characterised by a strong demographic increase in European cities. The theme of urban development is discussed at international conferences, exhibitions and debates. In 1910 a competition was launched for the extension of Antwerp beyond the old walls and the left bank is also considered a possible area of urban expansion (see chapter 1.5) . However, all projects were interrupted by the First World War. In 1923 the municipality of Antwerp decided to expand its administrative borders on the other side of the Scheldt by annexing the Sint-Anneke land. From this moment on the name of the area became Linkeroever (Schoofs 2002).

In 1926 Henry Van De Velde was commissioned by *Société Immobilière Belge* to design a prestigious residential and office complex on the left bank **(Figure 1)**. The layout of this massive building complex is characterised by
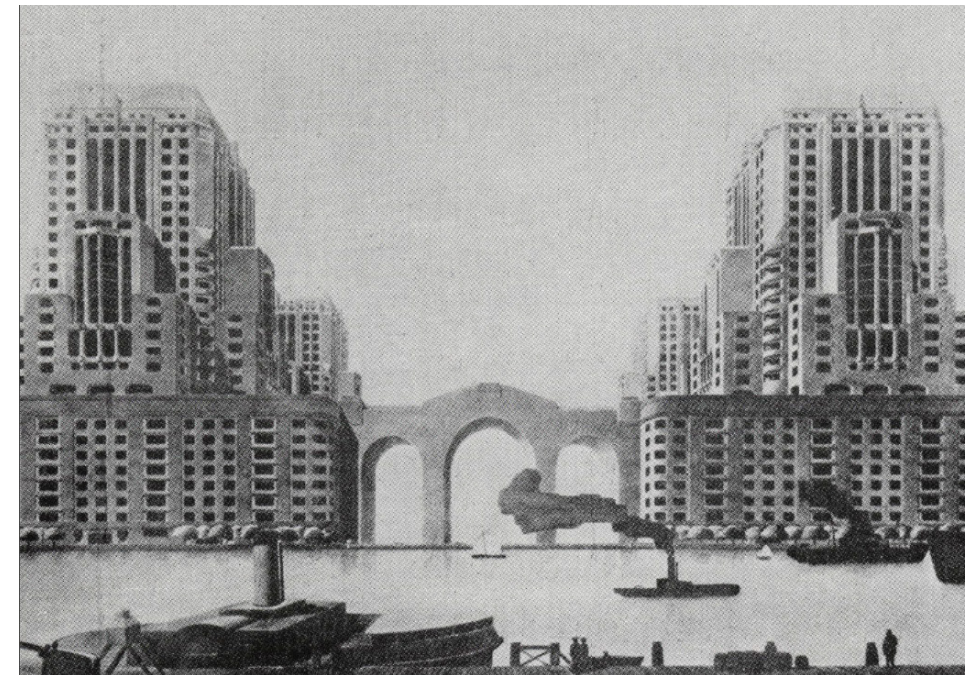

Figure 1. *Facades of the new city seen from the port of Antwerp. Drawing by Herny Van De Velde, 1926. (Eyckerman 1989, 34)*

four symmetrical towers, 100 metres high, facing a large rectangular square. The project will never be realized, but some collages and drawings of the new skyline become very popular. The designs are inspired by the vertical development of American cities, a symbol of a bright future and an immense faith in technology. This visionary project provides a clear image of the idea that European designers of the time used to have of the modern city, strongly influenced by what was happening overseas in the United States (Eyckerman 1989).

After the failure of a private company's attempt to develop the area, it becomes clear that a public institution is needed to manage projects and investments for Linkeroever. On 9 March 1929 IMALSO (*Intercommunal Company for the Left Bank of the Scheldt*) was founded, with the aim of managing the urbanisation of the left bank territories and then selling them. In order to promote and accelerate the development of

the area, the possibility of building a bridge over the Scheldt was widely discussed, but in the end it was decided to dig two tunnels: one for vehicles *(Waaslandtunnel)* and one for pedestrians *(Sint-Annatunnel*), both opened in 1933 (Schoofs 2002). This decision was dictated by the fact that a bridge would be an obstacle to the transit of large ships bound for the Port. An important initiative of IMALSO was to launch an international competition in August 1932 for the future development of Linkeroever (Pearce 2007), which had an important local and international media coverage. The results of this competition and the impact it had on the collective imagination of the city will be more fully discussed in chapter 1.5.

After the bombing of the Second World War, many European cities need to be rebuilt: it is the beginning of a very flourishing period for modern town planning. Most of the destroyed blocks in the centre of Antwerp are being rebuilt and entire neighbourhoods

are being created in the fringe of the city to make up for the lack of housing. In the 50s and 60s many social housing complexes were built in Antwerp: the most common types are terraced houses and residential towers. The various examples of social housing in Antwerp and the concern for the living conditions of the poorer class is an exception on the Belgian scene, where an uncontrolled spread of suburban single-family houses for the middle class has been encouraged since the 1950s (Bervoets 2010) (see chapter 1.4).

Following a competition in 1961, the large residential complex of Europark (1967-1979) was built in Linkeroever **(Figure 2)**. The first prize and the work commission were awarded to Belgian architects Aelbrecht, Brunswijck,
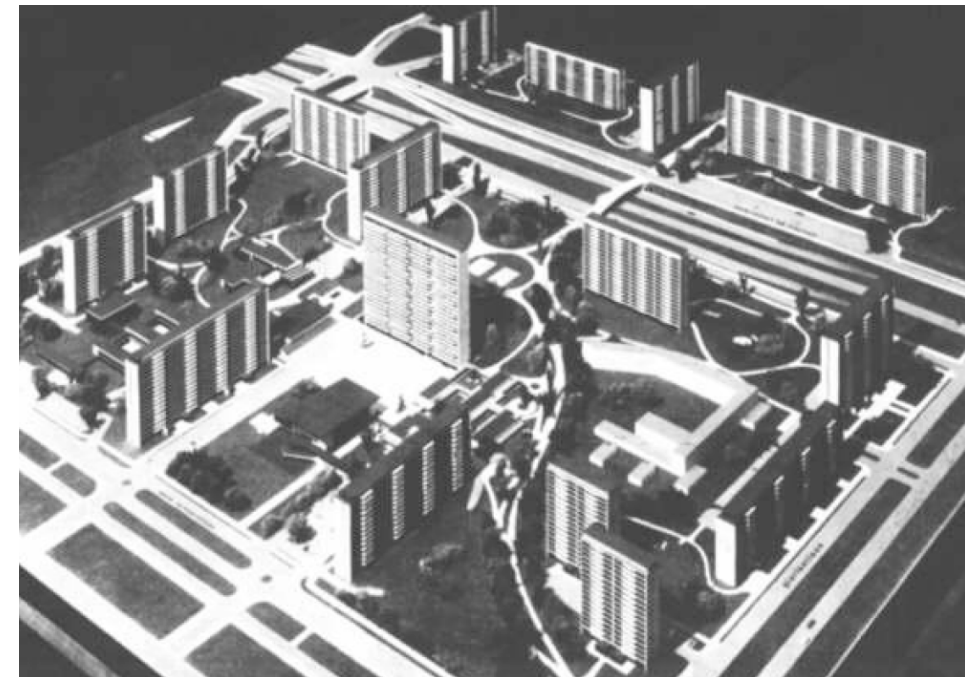

Figure 2. *Maquette of Europark, H. Aelbrecht, R. Brunswijck, O. Wathelet. (Annual report, IMALSO 1966)*

Moureau and Wathelet, whose design clearly follows the principles of the Modern Movement (Bontridder and Tanghe 1975, 46). The plan consists of a series of tower buildings, with a height between 13 and 25 floors and embedded in large green areas. The project includes not only residential buildings but also various community facilities and services for its inhabitants such as two schools, a library, a church, a shopping centre and a large banquet hall. The different buildings are connected by a dense pedestrian network, designed separately from the vehicular roads according to the principles of the Modern Movement. Another aim of the Europark project is to create a neighbourhood for everyone, for different social classes and age groups. This purpose should have been combined with the economic needs of efficiency and rationality, with the consequent creation of standardized buildings and repeated housing, which fail to accommodate individuals with dif-ferent housing needs. The project — completed in 1979 — consists of 18 residential towers that can accommodate about 2900 families (Schoofs 2002).

Europark has had a strong impact on the city, starting from its importance as a landmark easily visible from the centre of Antwerp. It also acted as a starting point for other smaller-scale interventions, bringing a considerable increase in the population of Linkeroever. It was therefore a great stimulus for urban development and made the area better known to the population of Antwerp (*ibid.*). Europark thus becomes the new geographical and visual centre of the entire *rive gauche*, but it fails to identify itself as a real part of the city due to oversized public spaces and the shortage of essential services. Europark today is almost unchanged compared to the project carried out in the 1970s. The towers, the only materialization of these '*modernist utopias*' in Linkeroever, stand out harshly on the green spaces below.

1.4. Modernist social housing in Antwerp between urban sprawl and gentrification

Despite the geographical, cultural, linguistic, and economic closeness of the region of Flanders and the Netherlands, urbanization has developed in two totally different directions from the post-war period to the present days. Both areas are fully living the post-metropolitan condition described in chapter 1.1, but The Netherlands is characterized by a great concentration in urban areas and a dense infrastruc-tural network between them, while Flanders looks more like a unique and borderless urbanization spread over the whole territory **(Figure 1)**.

In this chapter are analysed the political causes and socio-economic tools that have led to the detachment of the Flemish housing model from the Dutch one. However, some successful examples of urban planning can be observed in Antwerp that
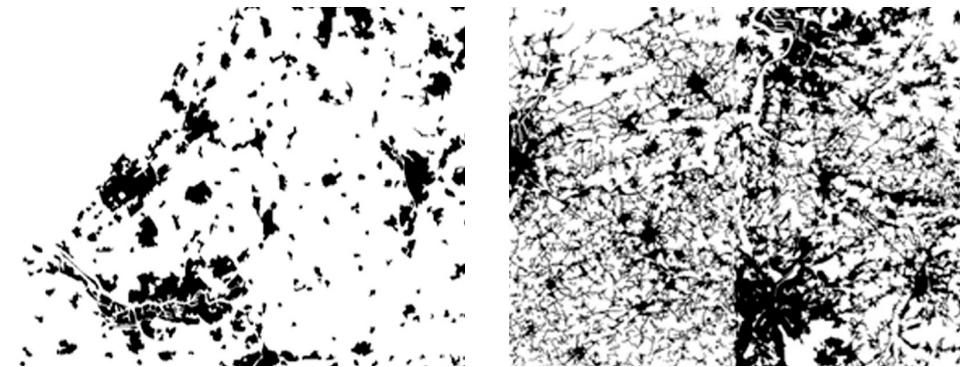
Figure 1. *Built-up areas in (a) in Randstad, The Netherlands and (b) the Flemish Diamond, Flanders. (De Geyter, 2002).*

is an exception in the national framework. this exception is represented by the city's Modern Movement that has been the counter-discourse to the phenomenon of suburbanization and later the cause of today's neoliberal policies that support gentrification.

Understanding Flemish urban sprawl. Housing policies in Flanders after WWII and comparison with The Netherlands.

In the aftermath of the Second World War all over Europe, the housing shortage has been addressed by the major expansion of the cities characterized by high-rise building (Caramellino and Zanfi 2015). In the Netherlands since the early 20th-century and particularly after the First World War, many residential neighbourhoods have developed in order to provide decent and healthy living conditions for the working class. Some examples are the districts of Betondorp in Amsterdam (by Van Lochern, 1923) and De Kiefhoek in Rotterdam (by Oud, 1926-28) (ICOMOS Netherlands 2003, 147). After World War II, this approach has continued and has been structured through numerous large-scale urban policies promoted and managed by the central government. The most important laws that have driven the expansion of Dutch public housing are the 1901 Dutch Housing Act and the 1947 Housing Law (*Woonruimtrwet*). The first one is extremely relevant as it regulates the way in which social housing should be offered and gives architecture the social role it did not have before; the second enacted the government's control of rental prices (Suzuki 1982, 387). Moreover, The Netherlands was one of the first countries in Europe to include the right to housing in its Constitution as a fundamental citizens' right. [1] As a consequence of these policies, nowadays The Netherlands is the country with the largest share of social housing in the European Union, representing about 32% of the total housing stock and about 75% of the rental stock in the country (Cecodhas 2012, 64).

In Flanders — unlike The Netherlands and most of the other European countries — the growing demand for housing after World War II has been followed by a sprawl of detached single-family houses in the suburban areas with the resulting loss of importance of the cities. Between the 1950s and 1960s, the Flemish countryside has developed into a diffuse and unplanned horizontal urbanisation that has resulted in the typically Flemish phenomenon of nebular cities. [2] According to Pascal De Decker (2011), this is *"the result of a long-standing dialectical process of political choices and actions, cultural convictions, and economic possibilities, which have reinforced each other repeatedly through and in daily practice"*.

Since the first housing law of 1889, most policies have been focused on home-ownership, driven by the ideologies of the influential Catholic Party that made the idea of home coincide with a stable family situation. This political party is particularly representative of the rich region of Flanders characterised by a rich bourgeoisie that had made its economic success thanks to the diamond trade and the petrochemical industry (Loopmans *et al.* 2007, 86).

In the post-war period in Belgium, welfare policies were strongly based on a logic of *pillarization*, which means that housing, health, and employment organisations were highly politicised. The different ideological

1. From Article 22 of the Constitution of the Kingdom of the Netherlands: *«It shall be the concern of the authorities to provide sufficient living accommodation».*

2. The term *nebular city* has been used since the early 1990s to describe the morphological structure of the sprawl and the horizontal urbanization of Flanders. (Davidts 2004)

sections of society or pillars in Belgium are mainly Socialists and Catholics. They were present in the management of welfare companies, that strongly influence state policies to have economic benefits (Vanderstraeten 2002, 133). This phenomenon affected most of the European politics of those years, not only in Belgium. For instance, in The Netherlands, the Housing Act of 1901 and all the policies on social housing that followed were strongly implemented by the housing corporations in order to receive state subsidies (Stieber 1998).

As mentioned above, the political scene after World War II in Belgium was characterised by the dualism between Socialists and Christian Democrats **(Figures 2-3)**. The most important housing law that was made at that time is undoubtedly the De Taeye Act of 1948, named after the Christian Democrat Minister Alfred De Ta-

eye. The law encouraged small private initiatives by offering subsidies to private builders and a system of state-guaranteed mortgage loans up to 90% of the value of the property (Gosseye and Heynen 2015, 558). Moreover, the fast infrastructure development and the spread of private cars has resulted in the Flemish middle class moving from the city centre to the countryside, where they can finally realize the dream of having a single-family house with a garden. [3] Only in Flanders, in the first five years (1948-1953) more than 100,000 people have benefited from the subsidies of the De Taeye Act (*ibid.*), which consequently led to an exponential increase in the number of owner-occupied houses. In Flanders, the number of owner-occupied houses in 2006 was 74.4% of the total housing stock, compared to 55.8% in The Netherlands (Haffner and Heylen 2011).

3. A 1948 survey revealed that 95% of Belgian households were aspiring to own a house with a garden. (Jacquemijns 1949)
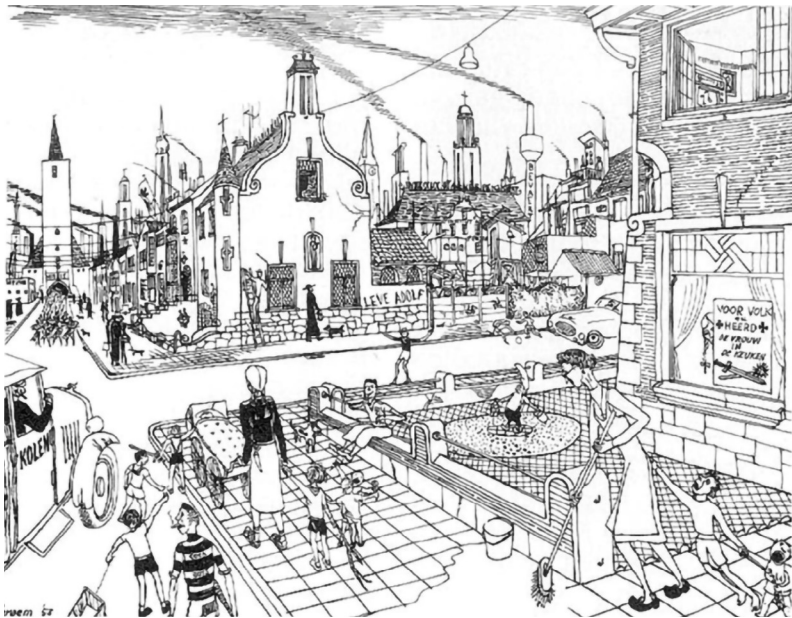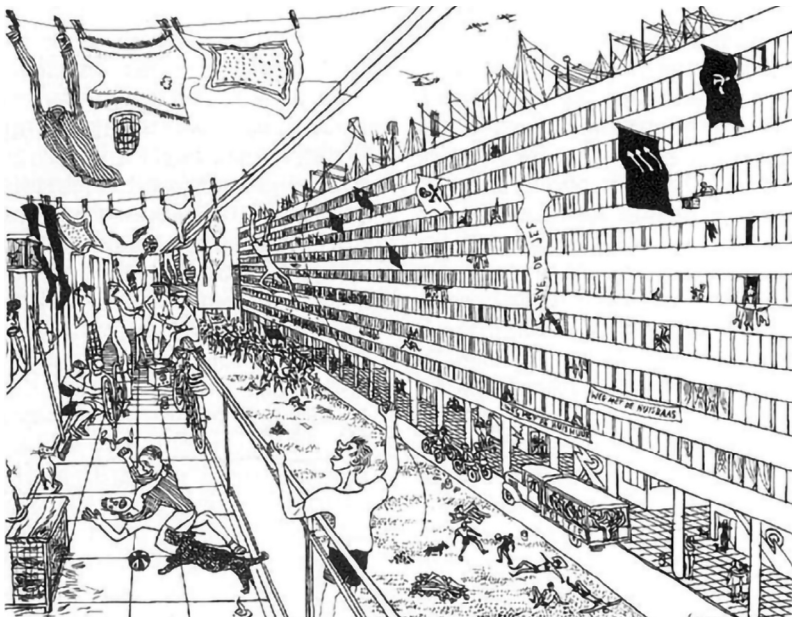
Figures 2-3. *Two drawings made by the Flemish architect Renaat Braem in 1953: the first image depicts socialist housing as seen by Catholics; the second depicts catholic housing as seen by Socialists. (Gosseye and Heynen 2010)*

Another law that has affected the urban development of Flanders is the Socialists' promoted Brunfaut Act (1949) aimed to encourage the construction of collective housing through financial support for the construction of infrastructure and the layout of public areas. Actually, the Brunfaut Act combined with the subsidies of the De Taeye Act has benefited Catholic related real-estate organizations that have started the building of large estates of single-family houses taking advantage of the economic benefits on infrastructures, such as roads and services (Gosseye and Heynen 2015, 53). This socialist law — which was intended to facilitate the development of CIAM-inspired public housing — has on the contrary contributed to the uncontrolled suburbanisation of the Belgian countryside and the spread of *nebular cities*. The Brunfaut Act not only encouraged the development of low-rise housing complexes but also of high-rise public building neigh-bourhoods. These are much less diffuse than low-rise districts and are present for the vast majority in Antwerp (this will be examined further in the next pages). In fact, in 1980 just 25% of Flemish real estate stock was made up of apartments (De Decker *et al.*, 2010, 42) and in 2011 less than 6% of Flemish housing stock consisted of social housing (it was 32% in The Netherlands) (Haffner and Heylen 2011).

These laws led to the emptying of the Flemish city centres because of the displacement of the entire middle-high class into the countryside. On the other hand, the bottom of the housing market has not undergone any changes and the working class and *lumpenproletariat* [4] remained concentrated in the slums of the inner city (Knops 1981). As a result of this socially selected urbanization, a law of 1953 proposed the slums clearance and the redevelopment of old inner-city districts in favour of high-rise social housing. In the end, even this act did not have the expected results, but on the other hand, led to the demolition of entire residential districts in favour of commercial and office buildings (Loopmans *et al.* 2007, 88). One of the examples of the effects of this law is the demolition of the residential neighbourhood of Brussels North for the construction of administrative buildings and the consequent eviction of ten thousand people (Lievens et al. 1975). The first measures concerning the urban renewal of working-class neighbourhoods had to wait until 1975.

It was more than ten years after the De Taeye Act and Brunfaut Act when the first national law on land planning — the 'Organic Law on Town and Land Planning' (*Stedenbouwwet*) — was enacted in 1962 (Hanocq 2011) Thanks to this law, every intervention in Belgian territory required a building permit, delivered based on planning plans, and had to be judged by newly created commissions. The law also introduced a hierarchical system of territorial and urban planning at national, regional, and sub-regional level, developed by the central government and local and sub-local plans, developed by municipalities (Reimer *et al.* 2014, 170). However, the problem of horizontal urbanization of Flanders has not been solved. The local authorities did not have a clear framework on how to apply the building permit and the Belgian countryside was already so urbanised that the new allotment schemes were planned following the plots already built and the roads leading to the villages, according to an unplanned and diffuse logic (De Decker 2011).

4. *Lumpenproletariat* [German, literally: ragged proletariat] (sometimes cap.esp. in Marxist theory) «*the lowest level of the proletariat comprising unskilled workers, vagrants, and criminals and characterized by a lack of class identification and solidarity.* » in Collins Dictionary Online, Accessed 26/06/2020. *www.collinsdictionary.com*

An exception in the Flemish landscape. Modernist high-rises in Antwerp.

While the national government alternated between Socialist and Catholic governments, the political stage in the municipality of Antwerp has been characterized — for the vast majority of the 20th century — by a strong Socialist presence within the institutions. In fact, the City of Antwerp has been continuously governed by Social Democrats mayors from 1932 to 2012. Certainly the most relevant were mayors Camille Huysmans (1933-1946) and Lode Craeybeckx (1947-1976) who led Antwerp to be the sole actor of modernist discourse in Belgium thanks to the influence of important local modernist architects such as Renaat Braem **(Figure 4)**, Leon Stynen and Henry van de Velde

Figures 4. *View of a Kiel housing block, drawing by Braem. 1934 (Renaat Braem Collection, Archives d'Architecture Moderne, Brussels)*

(Toubhans and Lombaerde 1993).

From the 1920s to the 1930s, social housing companies built many high-rise buildings, characterized by *art-deco* style, common courtyards, and small housing units. During the crisis of 1930s, the bourgeoisie also moved into these apartments that were cheap and at the same time comfortable. (Laureys 2004, 110). Furthermore, in the 1920s, on the initiative of John Wilms — writer and socialist alderman of city properties — many cheap plots in the fringes of the city were purchased by the municipality (Strauven, 1983). It was between the two wars that the plots on the left bank of the Scheldt — characterised only by polders and fields — were purchased (De Vos and Geerinckx 2016, 2) and in 1929 the I.M.A.L.S.O (company for the real estate development of Linkeroever) was founded. These initiatives were intended to promote the rising of social housing investment, but it did not take root until the housing boom of the 1950s and 1960s.

After the war, the City of Antwerp became a shareholder of three of the largest social-housing companies [5] and financed and built large housing estates on plots owned by the municipality. In the joint assembly of these companies there were Catholics and Socialists who made sure that the land owned by the municipality was used for both low-rise houses for families or elderly people and large social housing complexes. However, the Christian Democrats — traditionally not in favour of high-rise buildings — finally agreed to them, trying to reduce suburbanisation in the Antwerp countryside and the massive loss of citizens (*ibid.*).

Among the most important

5. The three housing companies were: Our Dwelling (*Onze woning*), Good Dwelling (*Het goede huis*) and S.M. Housing-Antwerp (*S.M. Huisvesting Antwerpen*). (De Vos and Geerinckx 2016, 2)

social housing projects of those years are the Kiel housing estate designed by architect Renaat Braem and built between 1951 and 1958, the Luchtbal district (1954-1962) built by Hugo van Kuyck, the Jan De Voslei housing estate near the Kiel, built between 1952 and 1967 by Jan Smolderen and the Europark district in Linkeroever, designed by Aelbrecht, Brunswijck and Wathelet in 1961 and built between 1967 and 1979. According to the architectural historian Bruno De Meulder (1999), the budget for the construction of the Kiel — the first major project of this type — was almost unlimited, while the resources allocated to the other projects are less and less as the years go by. This is evident in the façades and the attention to details, but especially in the services that are only slightly implemented in the Europark project (the funding ends before the construction of three schools, the elderly centre, and the large banquet hall) (Bontridder and Tange 1975). During the 1970s, the focus

has shifted to the renewal of the historical city and modernist highrise complexes have retreated into the background; the municipality of Antwerp has stopped investing in new social housing and the implementation of services in existing ones (De Meulder 1999).

From social housing to gentrification. Urban policies in Antwerp from 1970s.

Despite these sporadic cases of urban planning, massive suburbanisation during the housing boom led Antwerp to a severe economic crisis in the 1970s from which it has not fully recovered yet (Loopmans 2008, 2505). As landlords have moved outside the city, the revenue from the additional tax on the federal income tax or APB *(Aanvullende Belasting op de Personenbelasting)* has drastically reduced. The APB is the most important of the Flemish local taxes — about 48% of total revenues — and is levied by the municipality where

the taxpayer lives (not where the property is located). The non-collection of this crucial tax by the municipality of Antwerp has led to an increase in other local taxes, resulting in a further increase in social inequalities (Loopmans *et al.* 2007).

In 1983 Belgium was decentralised and the Regional Government of Flanders *(Vlaamse Regering)* was established. In the same year, the City of Antwerp expanded its borders to include the neighbouring municipalities which formed the urban agglomeration and part of the suburban area. In this way, Antwerp managed to collect part of the APB's revenues to swell the city treasury (Loopmans 2008, 2505). In trying to limit the economic damage caused by the crisis, the central government imposes rigorous financial constraints upon the city, including a ban on large housing investments. According to Loopmans (2008), this is the end of Modernism in Antwerp. The 'Global Structur-

al Plan for Antwerp' *(GSA)* was also approved in 1983 but was never implemented, but laid the foundations for all subsequent projects such as the international competition 'Stad aan de Stroom' (City on the Stream), which saw the participation of well-known architects such as Rem Koolhaas, Toyo Ito and Manuel de Solà-Morales (Smits and Lorquet 2001, 4). This last urban experiment too, which should have rehabilitated abandoned port areas and the waterfront, was shelved due to lack of funds in 1994. Finally, the firm of Bernardo Secchi and Paola Viganò was commissioned to draw up the new 'Antwerp Strategic Structural Plan' *(SRA)* in 2003, which would be developed in three years and approved in 2006 (Fini 2017, 213).

Since the beginning of the 1980s, these policies correspond to the will of the Antwerp administration to launch an urban renewal programme that would bring a return to the compact city. This has led to the

phenomenon of gentrification, an improvement in the quality of the housing stock with a consequent increase in the value of the property and the replacement of the working class by the middle class. In the last decades, the districts where this phenomenon is most evident are Borgherhout — part of the municipality of Antwerp since 1983 —and Eilandje whose radical urban renewal has occurred with the construction of the MAS Museum in 2011. For a better understanding the flows of people that this phenomenon generates, it is necessary to analyse where newly arriving migrants settle in the city. It goes without saying that this weaker and more vulnerable social class tends to move into neighbourhoods already characterised by a strong working-class presence, where housing stock is less attractive and housing prices are lower (Gsir 2016, 46). In fact, in the 1960s new migrants moved mainly to Antwer-

pen Zuid, in the 70s and 80s to the district of Borgherhout, while between the 90s and the 2000s the flow of new migrants moved to the district of Antwerpen Noord (*ibid.*). In 2011 a quarter of the new non-EU arrivals in the city — 2,521 out of 10,467 — moved to Antwerpen Noord. However, in 2012 the 'Spatial destination plan for the redevelopment of Antwerpen Noord' or *RUP Plan 2060* was developed. The aim of this plan is the redevelopment of the entire district with a consequent increase in rental prices and weaker social classes being pushed into the periphery of the city (Schillebeeckx *et al.* 2018, 12).

Conclusion

The development of housing and urban planning policies in Flanders and Antwerp from World War II to the present day shows how the Modern Movement was central to the political debate between Socialists and Catho-

lics in Antwerp until the 1970s. In fact, social housing was the sole alternative to the model of single-family houses sprawl. This phase of strong Socialist pressure and architectural debate is defined by Maarten Loopmans (2008) as *'modernist hegemony'*. As mentioned previously, this period is dominated by urban development policies characterised by slum clearing, high-rise social housing construction, and inner-city office development.

The drop of the modernist project lies in the fact that it failed to respond to citizens' demands for better liveability in the inner-city. Moreover, the loss of financial autonomy of the city and the consequent economic crisis led to a counter-hegemonic discourse that could answer the questions that Modernism could not address. After a period of non-hegemony (1983-1990) characterized by experimental policies to face the crisis immediately, since the 1990s a series of neoliberal policies have been

developed as a response to modernist hegemony. This reaction has resulted in a *'new urban hegemony'* that supports gentrification by reclaiming liveability within the city and a return to the residential function of the historical city (Loopmans 2008, 2499).

The Modern Movement, which at first glance seems to be only an isolated and meaningless phenomenon in the Flemish scenario, is instead an essential element in understanding Antwerp's urban development in its entirety. It is a fundamental link between the two most relevant phases of the city's urban history: the suburbanisation of the 50s and 60s and the gentrification of the present day.

With all this it is intended to focus on Modernist social housing as the third way of inhabiting this territory. It is true that it can be considered as a failed experiment if one look at today's return to the consolidated city and, in the meanwhile, an increasing detachment of the modernist

districts with the rest of the city. However, the legacy left to the city by these districts, especially Linkeroever, is important and significant. Of course for 'legacy' we mean the possibility of the void, which in modernist neighbourhoods is considerably larger than in the established urban fabric and nebular cities. These districts, not from the built perspective, but in terms of what public space can offer to the city and the territory, have once again the possibility to pose themselves as the counter-discourse in the urban development debate.

1.5. The New Arcadia. Three visions for Antwerp between urbanism and landscape.

The project in the void is a recurring theme in the history of the 20th century in Antwerp. The three international competitions which will be deepened in this chapter focus on three large urban voids in Antwerp, the ring around the old town, the left bank and the riverside. The competitions have had great resonance in the international debate and have resulted in many ambitious proposals rarely followed by their implementation. They show an inability or at least a tendency of the city to prefer punctual interventions to large-scale plans.

Antwerp as an *urban laboratory*

European cities in the early 20th century are expanding rapidly, and this strong population growth is perceived as a new challenge for municipalities and urban planners. The quality of public spaces, health and well-being of citizens, urban greenery and mobility become key issues. These topics, which are widely discussed at international conferences and exhibitions, produce the first images of the of the 20th century city (Meller 1995, 295-310).

During the *World Fair in Ghent* (1913), the winning plan of 1910 ideas competition, are exhibited. The city emerges among others as an *avant-garde* laboratory for urban development. The winning project, designed by architect Henri Prost, features a green ring around the historic centre consisting of a series of parks and gardens. Thanks to his proposal, characterised by wide streets, rows of trees, parks, forests and

districts for workers surrounded by greenery, Prost impressed the jury and the city committee. With the demolition of the unused boundary wall, the citizens of Antwerp begin to imagine this great void as a circular park that connecting the consolidated city and the new growth areas (Tritsmans 2016).

The project generates a strong optimism in the community and a willingness to continue this debate. In fact, the following year another competition is launched (Plan Loquet - 1911) which aims to expand the city of Antwerp also on the left bank **(Figure 1)**, where the project of large parks and green spaces seems easily feasible. This time the winning project by German Architect Josef Stubben proposes a vision of a city similar to that of the previous competition, where citizens can have more light, air and green ar-

Figure 1. *Plan Loquet (1911). The "green ring" of Antwerp is linking Linkereoever to the historic city.*

eas at their disposal, thanks to the construction of large boulevards and urban parks (Stubben 1915). The two plans are much appreciated in the congress in Ghent (1913) and have a great influence on the European debate. The design of a green ring that establishes the boundary of the city and prevents its uncontrolled expansion, as well as guaranteeing a green lung, becomes the new development model for the great metropolises of the 20th century. This principle is incorporated in the design of the expansions of cities such as London, Cologne, Vienna and Paris in the following years (Amati 2008, 1-18).

Nevertheless, the *green city* presented in these projects is still a dream for Antwerp. With the outbreak of the First World War the plans for the demolition of the Brialmont wall (former city wall) and the development of a park around the city were abandoned (Gils 2006, 7). However, the theme of a green ring around Antwerp is still much discussed today and it is brought up by the competition *Stad Aan de Stroom* (1989) and the *Strategic Plan* of Secchi and Viganò (2006).

This is the first example of a great urban plan for Antwerp's big voids, which is very successful on paper but has no design follow-up. Nonetheless, the two competitions were significant for the European debate on the city of the future, giving some small but important inspirations for the future growth of the Flemish city. Moreover, Linkeroever enters for the first time into the collective imaginary as the *tabula rasa* ready to accommodate the development of the new city of the 20th century.

The *Ville Radieuse* on the left bank

After the First World War, thanks also to Van de Velde's vision (1926), the desire to see a modern city in Linkeroever is renewed (Baillieul 1985). The 1932 competition, launched by the municipality of Ant-
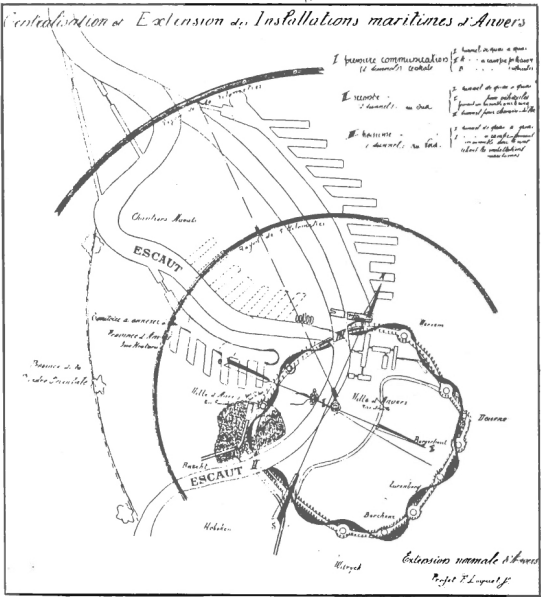
werp is a new opportunity to create a modern district on the left bank. This project is perhaps meant to remain on paper even before the competition, as population growth slowed in the post-war period and many houses in the centre of Antwerp were abandoned. Nevertheless, the competition has a huge media coverage in Europe and turns to be also a source of great debate between the population and the institutions.

Between all the proposals, the one that has had more resonance to local and international level is the one of Le Corbusier and Paul Otlet. Both architects see the possibility of accomplishing their dream here, the *ville radieuse* and the *cité mondiale* respectively. The project includes a series of towers zigzagging over a green field **(Figure 2)**. These towers are all suspended on *pilotis* that make the ground

Figure 2. *Maquette of Le Corbusier's proposal for Linkeroever. 1932 Competition. (Commers and Lombaerde 1987, 10)*

floor virtually free and completely public. Le Corbusier also states that the new city could reach 111 per cent green area, taking into account the empty ground floor and the garden roofs (Woudstra 2000, 142).

The Swiss architect's plan consist in a new city of half a million inhabitants. Despite the appreciation of the project in an international context, the plan is judged by the commission as *"still in the future"* (Commers, Lombaerde 1987). Not digesting this personal defeat, in 1939 Le Corbusier designs a new masterplan besides the competition, which was published only in 1950 by the magazine *"Bouw"* (De Braej 1933). This new vision for Linkeroever, realized in collaboration with Otlet, Jeanneret, Hoste and Loquet, is more modest then the first masterplan and is characterized by an extensive presence of terraced houses in the northern part and by a series of towers that are overlooking the river.

Although its outcome is

now considered positive, the competition has at the time received a lot of criticism for the controversial way in which it was conducted and for the total absence of guidelines. In fact, the competition was launched as an executive project to enlarge the city, only to be later labelled as an ideas competition (Hoste 1933). In addition, the only fixed elements of the competition are the two tunnels, which construction began the previous year, while the rest of the left bank is *carte blanche* for the designers. Most of the participants present projects that count between 100,000 and 250,000 new citizens; huge numbers taking into account that at that time the population of Antwerp was only half a million inhabitants. Actually, some megalomaniac projects present proposals for 2.5 million inhabitants (Commers, Lombaerde 1987). Although the competition is intended to support and absorb a strong real estate interest, such a high pop-

ulation growth is absolutely un-sustainable. Moreover, the decision of the selected projects (no overall winner was chosen) has been contested by many as too traditionalist, as none of the *modernist* projects, which make up 45 percent of the total **(Figure 3)**, is rewarded (Schoofs 2002). The jury decided not to award any of the projects submitted on the following reason: *" [...] none of the projects*

submitted provided a complete solution." (IMALSO 1933).

The desire to create a new district across the river is not only driven by the need to support the demographic growth, but also by the possibility of improving housing standards and living conditions, as opposed to the decadence and poor hygiene conditions of the historical centre. Many designers in fact see in Linkeroever the possibility of cre-

LE LOTISSEMENT.

HISTORIQUE   RENAISSANCE   HAUSSMANN

PAYSAGISTE   EN FONCTION DE QUELQUES M² DE TERRE   MODERNE

Figure 3. *A drawing by Victor Burgeois that summarizes the six different approaches adopted by the designers. 'Le lotissement moderne' make up more than 45% of the entries. Jury report of 1932 competition. (Van de Voort 1934, 133)*

ating a new modern metropolis, self-sufficient from the right bank. De Braej (1933) quoted Le Corbusier's words during the presentation of his project for Linkeroever: *"Antwerp, with its left bank, has a unique and free opportunity to do something completely different. To create and build a model city."* He will eventually achieve his dream to build a model city in a *tabula rasa* condition twenty years later in Chandigarh, India. [1]

Despite the fact that none of the proposals has been realised, the competition can be considered a success, because of the large number of projects presented and the important debate they generated. Some of the competition projects were selected and reworked in the following years by engineer Paul De Heem and city architect Emiel Van Averbeke, who outlined the new plan for the future development of

Linkeroever. This plan was partly built after World War II by sectors, defined by the new road grid (Colenbrander et al. 2017, 88). This subdivision is still legible in its present-day form. The decision to take the most feasible parts of the projects and make them a unitary project seems reasonable, if we consider the actual needs of the city, not fully described in the call of the competition.

The debate following the competition reflects the Belgian political debate of the period, the dispute between Socialists and Christian Democrats (see chapter 1.4). The Socialists are promoters of social housing projects, while the Christian Democrats favour policies for the development of suburban single-family houses with private gardens (Loopmans 2008). The two positions are however united by the desire to drift from the uncomfortable
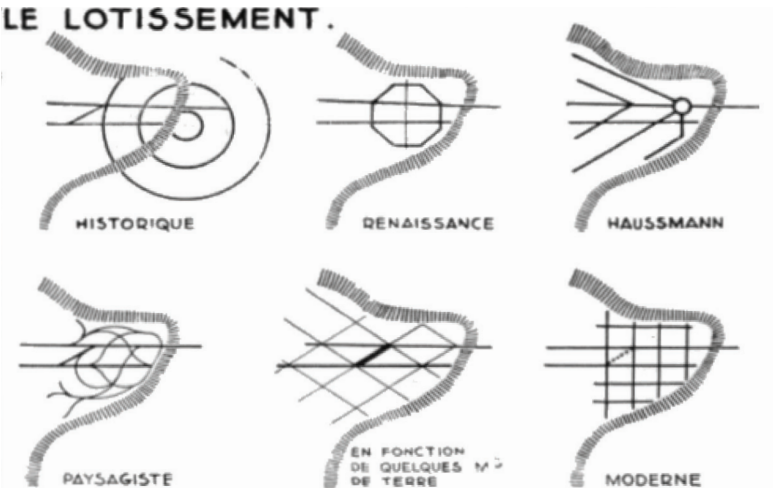
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1. Le Corbusier's projects for Linkeroever and Chandigarh were presented in an exhibition entitled "Le Corbusier - Linkeroever & Chandigarh" at the MAS museum in Antwerp between 6/04/2019 and 18/08/2019. Curator: Sandra Lintermans.

conditions of the city centre. The current form of Linkeroever seems to be the perfect compromise between the two solutions, some districts are defined by single-family houses with gardens, others by towers surrounded by vast green spaces.

The construction of modernist social housing buildings is practically non-existent in Belgium, with the only exceptions being the city of Antwerp (Toubhans, Lombaerde 1993). This was certainly possible thanks to a strong socialist presence in the city's administration, but also thanks to the debate following the 1932 competition.

The *New Arcadia*

The development of Antwerp after the Second World War is based on purely economic-managerial principles. The harbour expands over suburban parks, historic buildings in the centre are replaced by new offices and green areas give room to roads and infrastructure. This development is perceived with scepticism by the citizens, who demand the liveability of public spaces and the preservation of historical monuments and city parks (Colenbrander et al. 2017, 90).

In the 1980s, residents' renewed interest in degraded areas of the city led to the establishment of *"Stad aan de Stroom"* (City on the River), a non-profit association formed by a group of independent architects and planners. Some neighbourhoods in Antwerp have in fact undergone a series of growths and shrinkages due to population variation or changes in their function, leading to the abandonment of entire parts of the city (Aerts 2014). Among these 'abandoned' areas we find the riverside of the right bank of the Scheldt and the ring road. The first slowly lost its port function in the 20th century, while the second, a former city wall, has now become a large road infrastructure that divides the city and defines a large ring-shaped void.

These two urban spaces were the subject of a competition organised in the late 1980s by the Stad aan de Stroom organisation (Aerts 2014). This time the competition is by invitation only, and internationally known architects, such as Manuel de Solà-Morales, Toyo Ito and Rem Koolhaas, are called to design in defined project areas along the river. The competition receives a lot of attention in Flanders but also at European level and expectations are very high; the relationship of cities with water is in fact a very relevant theme in the architectural debate of the late 1980s (Cools 1990).

The area of the ring is not explicitly mentioned as a project area, but many participants incorporate it autonomously in their visions **(Figure 5)**, as they
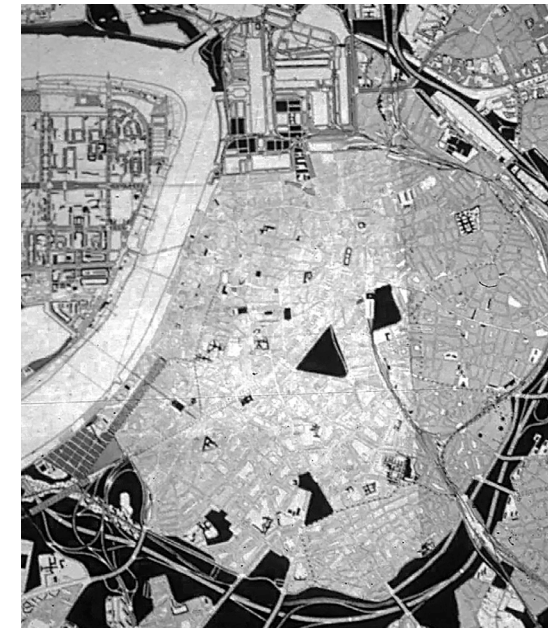

Figure 5. *Map of Antwerp that highlights the urban voids of the city. In the down-left corner Rem Koolhaas proposal. OMA, Stad aan de Stroom, 1989 (OMA, oma.eu)*

understand its importance as a possible link between the city and its suburbs (Colenbrander et al. 2017, 101). These projects renew the interest on the planning of the ring, already conceived in 1910 with Prost's plan.

Even in this case, the competition can still be considered a success in terms of the debate it has provoked. About 30 years later, the competition has resulted in a number of punctual projects, such as the MAS museum (*Museum aan the Stroom*), which is based on the urban plans of Solà-Morales. None of the projects proposed for the left bank has been realized (Aerts 2014).

However, Rem Koolhaas, in the text that accompanies his project proposal (1990), defines Linkeroever as *"The New Arcadia",* the city of the future or the place where man and nature can live together (Tritsmans 2016). In the 1990s, the left bank was no longer the *tabula rasa* of 1910 and 1932 competitions. Nevertheless, Koolhaas recognises in the area a great persistence of voids and a strong relationship with the urban sphere and the different landscape systems. For this reason he sees Linkeroever as the place where it is still possible to found a city where man and nature live in perfect harmony.

Conclusion

With the 1910 competition, visionary plans for the green ring around the historic centre were presented for the first time. Antwerp presents itself in Europe as the *experimental laboratory* that will inspire future expansions of European metropolises. Henri Prost's unrealised project was so powerful and evocative that it continues to be strongly present in the city's historical memory. The theme of linking the centre and the suburbs through a system of parks has been addressed in all the city's urban plans from the Second World War to the present day.

The 1932 competition in Linkeroever is an important episode not only for Antwerp, but above all for the debate it has provoked on the modern city. However, the sector-based development of De Heem and Van Averbeke's project shows that the municipality would not have been able to support such ambitious plans. Still, visionary images remain in the collective imagination, while the project actually completed is little appreciated by citizens.

Finally, the criticism following the 1989 idea competition has clear parallels with that of 1932. The most practical design solutions are again preferred and scenarios that include ambitious transformations are ignored. Once again the jury selects some ideas to be incorporated into a masterplan, then only partially realised.

The results of these competitions and the following debates suggest that Linkeroever still has the potential to become the city that several generations have dreamed of. A city that combines the Flemish countryside and the density of the historic centre, where man and nature can coexist in harmony and where large landscape systems meet the urban dimension. As Rem Koolhaas states in 1990 (Tritsmans 2016), Linkeroever still has the potentials to become *"The New Arcadia"*, no longer starting from a *tabula rasa*, as at the beginning of the century, but as a system of urban voids at various scales.

1.6. Critical comparison of the 2016 ideas competition winning proposals [1]

The aim of the competition, launched in 2016 by the city architect Christian Rapp, is to propose new ideas that will feed the social and cultural debate on the future urban transformation of Linkeroever.

The history of the left bank shows how the area became a mosaic of different districts. (see chapter 1.5). The 2016 competition represents the most recent attempt by the municipality of Antwerp to carry out a unified project that would return a strong and distinctive image of the left bank. The programme of the new proposal should contain new residential areas, based on the projected growth of the city of Antwerp until 2030. In fact, it is expected the necessity of new houses for 30.000 residents and the related new services and facilities. According to the brief of the competition, the green character of the left bank has to be manteined. The relationship with the Scheldt river is also an important design theme that must be taken into account in the definition of the masterplans. In fact, the left bank was considered in the Structural Plan of Antwerp by Secchi-Viganò as part of the Soft spine, a network of strategic projects along the river (see chapter 1.1) (Secchi and Viganò 2009). Whereas Antwerp has no bridges, the 15 offices taking part in

1.   All the information contained in this chapter has been taken from the book *"Linkeroever - Across the river"* (Colebrander et al. 2017) and reproposed critically. The book, published by the Flemish Institute of Architecture, is the only official publication of the 2016 competition results.

the competition are also asked to think about possible physical connections between the two banks.

In the following pages the five winning projects will be briefly explained and critically compared. The purpose is to highlight the strengths and critical aspects of each of them paying particular attention to the voids and the pubblic spaces.

1. K(New) Antwerp
Albers, Vogt, Arup

The project proposed by the three firms is mostly focused on creating a new relationship between Linkeroever and the historical city Antwerp through a new visual landmark: an amphitheatre on the river that faces the cathedral. However, this openness towards the city is not reflected in the landscape.

In fact, a strong point in the project is the sharp new border of the new urbanisation, a clear separation between the city and the landscape. The project is also aiming to give Linkeroever a new centre, defined by the amphitheatre and the *piazza* that is facing it. Europark and its open spaces are left untouched. The void is designed as a unique infrastructure that includes the waterfront, the new square with the amphitheatre

and a link to the Het Rot Park. This system, although fully integrated, does not take into account other public spaces on different scales or axes that already exist such as IGLO's.

2. Possibilities
DOGMA

Possibilities study in depth Linkeroever in terms of new typologies of buildings and to put

Figure 1. *Anchoring. K(New) Antwerp. Albers, Vogt, Arup*

Figure 2. *Possibilities. DOGMA*

them in sharp contrast with the existing ones. The proposal aims to give a clear form to the left bank by reinforcing its boundaries and retrofitting its fabric. It consists of highly defining a main strip made of four quadrants. The project is very radical: the densification only takes place inside this strip. The riverbank is conceived as a linear park that runs parallel to the strip. Linkeroever becomes a laboratory to experiment new typologies of (co)living and (co)working. The difference of urban tissues, already present in the neighborhood is radicalized by DOGMA to respond to the different ideas of living and working of every citizen. Each of the four different quadrants is thus densified with one specific typology: (starting from North) terraced houses in the first, lofts and workshops in the second, patio houses in the third and towers in the fourth. DOGMA's proposal is the one that most relates to the rationalist grid of Linkeroever and enhances the qualities of Europark's modern-

ist project by making it interact with new low-rise buildings (patio houses, workshops, boarding houses and short-term residences). The most evident weakness of the project is the lack of relations with the right bank, except for the proposal of a linear park on the bank which, however, seems not to have been deepened enough. The voids inside the strip are small, fragmented and isolated and certainly more importance has been given to the built than to the open spaces. However, the radical densification in the project not only strengthens the built but, by contrast, gives a new dignity and identity to the large void systems that surround the strip.

3. Anchoring

Graeme Massie, Sutherland Hussey Harris, Avantgarden, Aecom

This project aims to preserve and augment the existing qualities of Linkeroever, such as his extensive green space, a

wide variety of living conditions, proximity to the river Scheldt. The main strategy focuses not only on physical connections with the city and the waterfront but also on Europark, proposing a rich tapestry of urban forms in the district. A new designed island in the Scheldt creates a 'stepping stone' in the river reducing the perceived distance from the two banks. The island contains mixed-used buildings for housing, public amenities

and visitor destination. In this case the open space consists of a large park facing the river and four pedestrian links that anchor Linkeroever to the historic centre and the landscape. These four links lead to four landmarks, two already existing on the right bank (MAS and the cathedral), two designed west of Linkeroever. The large central public space is a great idea and is richly designed but the fact that it is anchored to few iconic build-

Figure 3. *Anchoring. Massie, Sutherland Hussey Harris, Avantgarden, Aecom*

ings is weak. Perhaps a more in-depth study of the landscape systems and its possible connections would have strengthened the central park on the river.

4. Thinning Out and Densifying
Carlo Moccia, Uwe Schröder, Wim van den Bergh

This plan should be read as an ideography, as a spatial scenario and not as an urban plan.

The three firms interpreted the Linkeroever as a general spatial condition we generally find in the periphery of the contemporary European city. The aim is to show how in these circumstances some spatial order and urban form might be created by making a clear distinction between two spatial identities: "space defined by objects, or space within volumes" and "space surrounding objects, or space between volumes".
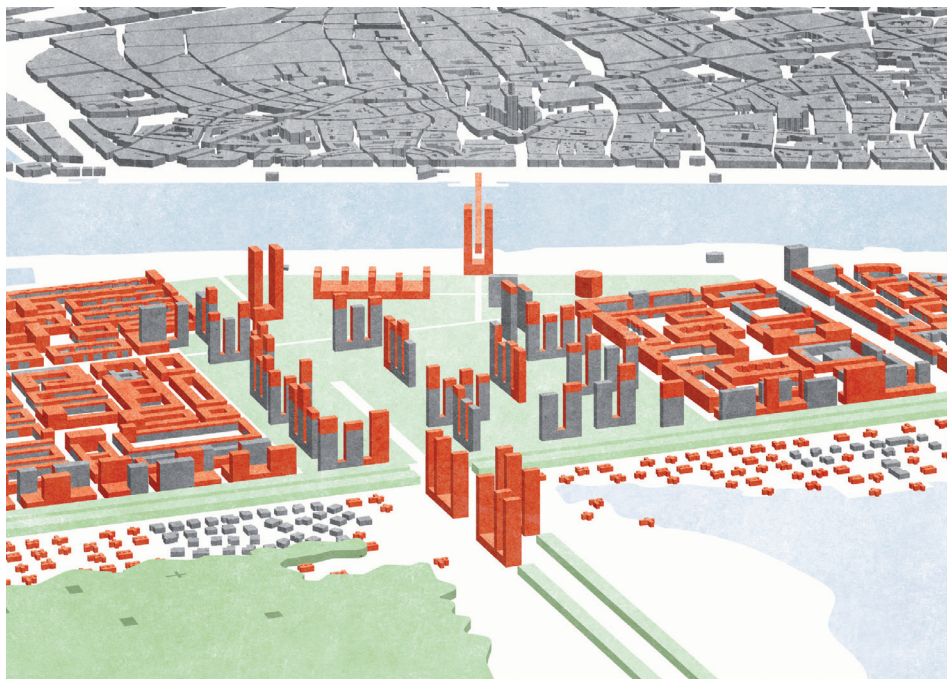
Figure 4. *Thinning Out and Densifying. Moccia, Schröder, Van den Bergh.*

The addition of volumes is applied to all the area apart from Europak, where on the contrary there is a reduction of volume from the existing towers. It is undoubtedly the most abstract proposal, but also the one that goes into the most detail at the level of poetics and images produced when one is within the urban fabric. The actions of adding and subtracting define new objects and new spaces among the objects, enhancing the identity and spatiality of Europark (even though volume subtraction from the towers seems unnecessary). Moreover, it is wrong to consider Linkeroever as a *"generic periphery of a European city"* (Colebrander et al. 2017) because its rational urban planning is unique in Belgium, but also for its physical and visual relationship with Antwerp's old town.

5. The Archipelago of Antigoon
De Urbanisten

The Archipelago is the most extensive of the five projects, it has a wider view of the city and the landscape that surrounds it. Linkeroever is imagined as a natural biome, an urban island surrounded by the river Scheldt and characterized by nature, forests and parks, an *"empire of a great ecological wealth"* (Colebrander et al. 2017). The image that this proposal provides is very similar to the *green belt* projects dating back to 1910 (see chapter 1.5). The project takes into account the possible events that could occur due to climate change, such as the rising of the water level. From a wider point of view, Linkeroever is finally 'part of the city' thanks to the closure of the ring road that would somehow embrace the two banks.

The project by the Dutch office De Urbanisten, is the one that acts most radically on the landscape. It focuses on eco-sustainability and environmental issue of Linkeroever in a long term forecast on climate change, even though the overall picture, with reckless shapes and functions such as spa and "water castles",

makes it looks more like a Dubai resort. Closing the ring road to reconnect left and right bank is a strong gesture to make Linkeroever part of the city, but then the development of a secondary canal paradoxically transforms the neighbourhood into an island. In the end the proposal seems to be financially expensive and to not respond to the real needs of Linkeroever and Antwerp. The public space at the urban scale are small and fragmented, while the big new landscape figures are used more as a environmental tool rather than spaces for the citizens.

Final critique

The five selected projects all have both positive and negative aspects. The proposals are presented at the masterplan level, trying to provide a global answer to the problem, without rarely addressing more specific issues of the place (e.g.: images and poetics, strategy for public spaces).

The analysis on the winning masterplans for the ideas competition of 2016 helped us to understand what were the expectations from the city architect and Antwerp municipality and what are the actual needs of new housing of Linkeroever and the city as a whole. As we said before, according to some researches carried out in 2015, Antwerp will grow by about 30.000 people before 2030. According to the curators of the competition, Linkeroever seems the best place where this urban expansion could take place. This has been useful for this thesis in order to develope realistic urban development models in which to insert the project (see chapter 2.4). Moreoever, investigating the results of the competition gives us an idea of how established architectural firms would treat the area and which are their different points of view. The competition

of 2016 aimed to collect different ideas and revive the discussion on the left bank, often forgotten and viewed as something different from Antwerp.

The competition got the result that Chirstian Rapp, the city architect, was expecting. This collection of new ideas has brought back the discourse about the topic: the outcomes have been presented in an exhibition that took place during the Festival van de architectuur 2017 organized by the Flemish Institute of Architecture and the book *"Linkeroever - Across the river"* has been published. The book is concluded with a conversation between curators Bernard Colenbrander, Christoph Grafe and the city architect Christian Rapp on the outcomes of the competition, which gives us even more information on how the competition was perceived by the curators and the administration. Below are some excerpts from this debate.

Christian Rapp: *"However, the question is whether this Flem-*

Figure 5. *The Archipelago of Antigoon. De Urbanisten*

ish 'slow urbanism' [...] provides enough tools for the transformation that is possible and necessary on the Linkeroever. I think that the scale of the area and the urban planning approach literally require a leading image on which the results can be tried. The purpose of the competition is also the formulation of a concrete, but flexible idea towards which the city can work."

Christoph Grafe: *"It is remarkable that none of the design proposals were conceived on the basis of landscape architecture. And I mean that very concretely. At this time, the plant life on the Linkeroever is extremely poor."*

Christian Rapp continues: *"To realize this new urban design, some steps need to be taken first. The submissions mainly focus on physical entities and spatial constellations, rather than on social components and strategies."* (Colebrander et al. 2017)

This debate raises some points that have been very helpful for the   project proposal.

First of all, they emphasize the importance of a strategy, or as Rapp said *'a leading image'*, that brings attention to the specific problems of the neighbourhood. Another stressed aspect is the need for a project that focuses on the naturalistic aspect and enhances Linkeroever as a piece of the city halfway between the dense historic centre and the landscape.

As we have seen from the failure of many design proposals for Linkeroever over the last hundred years, we can state that the large-scale global planning of the area has never been very successful. This happened for many reasons, first of all because of the vastness of the area, comparable to the centre of Antwerp, which in contrast can count on houndreds years of history and development. Other reasons for such a slow development of the district is the physical boundary of the Sheldt and the trend of Belgian *'slow urbanism'* mentioned by Christian Rapp.

As said before, a great lack of the 2016 projects is to present a top-down plan, with the same attitude that modernists used to do in the last century (see chapters 1.4. and 1.5.). We can therefore say that the design proposals of DOGMA and that of Moccia, Schröder and van den Bergh are noteworthy: the two firms tried to develop an intervention strategy and not just a masterplan. In the first case a typological strategy and in the second a volumetric one, in both cases trying to enhance and confront the existing fabric and the morphological qualities of the neighbourhood. In fact, these two projects have the quality of being able to be developed only partially, or in different periods of time, without losing their strength or their potential. The second one even deprives itself of the architectural element, making the planning strategy timeless.

What the history of Linkeroever suggests is that large scale and generalized masterplans have not worked so perhaps a more focused strategy for the area would be more effective. It should be a project that allow the neighbourhood to establish new relationships between space and society, man and nature and city and landscape. Could a project in the porosity of Linkeroever be one of the possible answers?

Systems of voids in 2016 competition (linear comparison between the five winning proposals and the new project 'A series of voids')
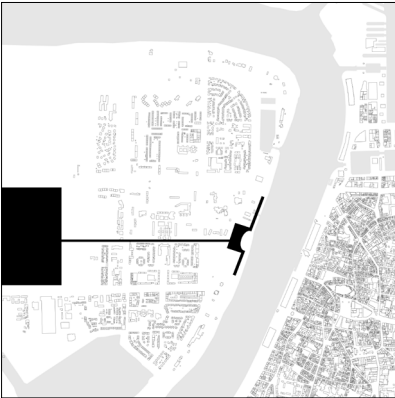

1. K(New) Anwerp
- City square
- *Promenade* along the river
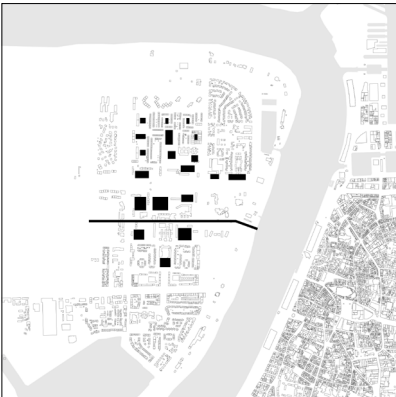- Boulevard through Europark
- Park for open-air events

2. Possibilities
- Small interventions in the dense urban fabric (small green areas, playgrounds, …)
- Park with open-air sport facilities in the northern area
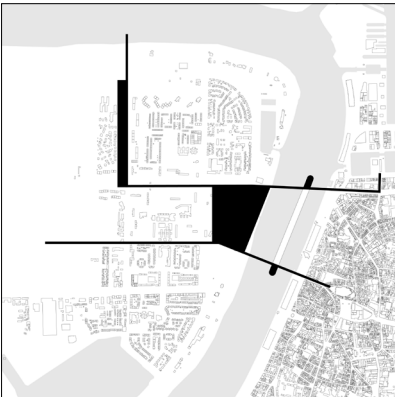
3. Anchoring
- New city park on the riverside (Westpark): new culture, recreational and sports amenities
- Pedestrian promenades
- New island with public spaces and visitors destinations
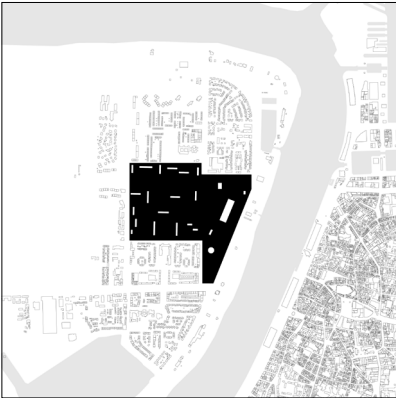
4. Thinning Out and Densifying
- *"New urban outside space: field and objects"* (Central park within Europark buildings)

5. The Archipelago of Antigoon
- Small interventions in the dense urban fabric (small green areas, playgrounds, …)
- Boulevard through Europark
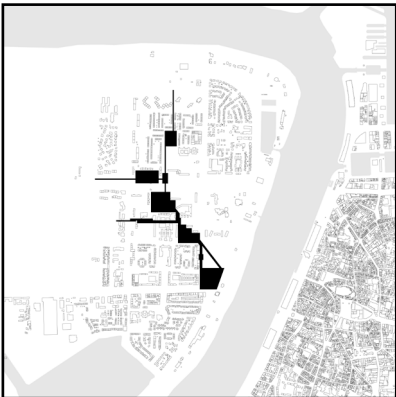
A SERIES OF ROOMS
- An integrated system of voids within the porosity of the city. From city centre to landscape

02

a
system
of
voids

2.1. Possibilities of the void

So appeared architecture for Adolf Loos: *"If we find in the forest a mound, six feet long and three feet wide, raised by a shovel to form a pyramid, we turn serious and something in us says: here someone lies buried. That is architecture."* (Loos 1962). If a person had been buried in the same forest, but the ground above it had been flat or there had been a shapeless mound, the narrator would not have stopped and nothing would have moved inside him. The mound is more significant than the body itself and its being immediately recognisable is its shape, its limits, its architecture (six feet long and three feet wide, pyramid-shaped).

The relationship between form and limit is closely linked, indeed, as the German philosopher Georg Simmel (1918, 79) argued, the two concepts exist simultaneously and one cannot exist without the other. The 'problem of the boundary' originated in the formation of the first human settlements, in the first cities, as an instrument of jurisdiction to favour cohabitation in the same territory (Aureli and Tattara, 2011). In fact, the resolution of public-private conflict through forms and limits has always been the central theme in designing the city. Therefore it is impossible to talk about cities or urbanism without taking into account its shapes and boundaries. As written by Calvino (1974, 139) in its famous novel *Invisible cities* *"The catalogue of forms is endless: until every shape has found its city, new cities will continue to be born. When the forms exhaust their variety and come apart, the end of cities begins."*

To better understand why the concept of *form* it so crucial

when talking about cities, it is first necessary to understand the difference between the *city* and *urbanisation* and how the latter has historically come to prevail over the city. The principle on which the existence of the Greek *polis* was based was the *tecnè politikè*, or politics, which was opposed to the tecnè *oikonomikè*, or economy (from *oikos*, private house) (Aureli 2011, 2). The space of the *polis* is where people meet to exchange opinions, take collective decisions, where conflicts are transformed into coexistence: this place is the *agora*. The Roman *civitas*, from which the word 'city' derives, is also based on political and collective decisions, but differs from the *polis* in the idea behind its legislative system. The law of the *polis*, *nomos*, regulates the politics of the city-state, within certain boundaries that are established by the *genos*, the race, the roots. The Roman *lex*, on the other hand, is a political instrument serving the expansionist aims of Rome, which groups different populations under the same laws (*Ibid.*, 5). While the Greek city-states consider as dramatic the expansion of borders, the aim of Rome is the *'imperium sin fine'*, an empire without spatial and temporal limits (Cacciari 1987. Cacciari 2009, 14). In fact in III A.D., with the Antonian Constitution of Caracalla, all the inhabitants of the empire are Roman citizens (*cives*): the *civitas* becomes *urbs*. The *Urbs* (with the first letter capitalized refers to Rome, the city *par excellence*) became a model for all the other cities of the world and the concept of globalization was born; *"to shape the orbis [world] as the Urbs [Rome]"* (*Ibid.*, 15). As a matter of fact, from the word *urbs* comes the late 19th century term *urbanisation* which differs from *city* because it corresponds to a generic cohabitation of people independent of any sense of belonging.

Today's city is an indefinite, homogeneous space, a *'non-place'*. As Massimo Cacciari (2004) says *"the city is every-where and therefore no longer a city"*. The city therefore ceases to exist when its boundaries are no longer clear and is merely an unrestrained sprawl made up of fragmentation and parcelling. Urbanizations, only conceived more as economic and managerial devices, completely lose their political connotation and, consequently, can do without the public space that was the fulcrum of the *polis*: the *agora*. In fact, according to Aristotle, Hippodamus of Miletus (Greek political theorist and architect) used to consider the geometry of the city as a symbol of the rationalisation of public relations. (Gregotti 2011, 89).

In the contemporary city it is necessary to rethink the public space as the rationalisation of public relations, as a space with a strong symbolic and identitarian connotation. It is a void clearly defined by boundaries not shaped by specific functions or programmes, but by relations in space. This gives the opportunity to imagine the open space as a background that is capable of resisting the rapid dynamics that are affecting the city. Starting from this concept it is possible to think of the void not as the lack of a project, but as a support capable of welcoming and backing free forms of occupying space (Russi 2019).

The aim of the design of open spaces is, according to Vittorio Gregotti (1986): *"the necessary and legitimate articulation of the parts and of their reciprocal relationship, through hierarchies, separations, conjunctions, differentiations of the main characters, through superimpositions of functions and meanings: against all reductive designs, typical of the urban peripheries of our times, of their indifference towards identity"*.

These are the infinite possibilities of the void, that can led to places with renewed meaning and identity.

2.2. Qualities and Potentials

When approaching the project of the void in Linkeroever, and in particularly in Europark, it is necessary to assume that the workspace is not a blank sheet, but a hyper-designed space (even the void) composed by several layers. Europark's public space reveals many qualities at the most diverse scales that result in a series of unexpressed potentials of the area. Among these are the macro-qualities, which correspond to the general characteristics of the entire neighbourhood and its relationship with its surroundings, and the micro-qualities that represent the different elements that characterise the void that develops between the high-rise buildings.

Macro-qualities

As we have already said in chapter 1.1., the most important potentiality of Europark and Linkeroever is the porosity and persuasiveness of its voids. This porosity is articulated with very defined and rigorous boundaries and shapes within the neighbourhood.
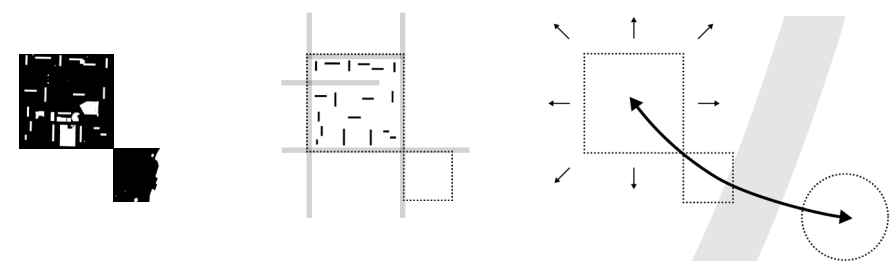
Figure 1. *Macro-qualities: High porosity, Regualr scheme, Location and connections.*

Moreover, the rigid modernist street scheme and the buildings organize the public space into *'rooms'* and hierarchical voids. Modernist ideology is also reflected in the rigid division of streets that create a huge pedestrian island within the neighbourhood.

Another very important quality is the physical and visual continuity with the city centre. In fact, Europark is easily visible from every point on the right bank and can be reached easily and quickly by public transport or the cycle/pedestrian tunnel. As previously pointed out, Linkeroever is halfway between the city centre and the landscape systems and Europark is the hub of this connection. The district is centrally located in Linkeroever. Its centrality and importance has increased over the last ten years with the construction of IGLO, which thanks to its mix of functions and high density of services, is now the heart of the left bank.

Pedestrian diagonal trough Europark

The pedestrian diagonal that crosses Europark from the south-east corner to the north is the most important track in Europark's public space system. It has been present since the first drawings and maquettes presented in 1961 **(Figure 2)** and today follows approximately the original route. The aim was to create an entirely pedestrian connection from the Sint-Annatunnel through the whole district. Unfortunately, due to a lack of funds, the pedestrian bridge over the Waaslandtunnel was not built, resulting in the isolation of the northern area of Europark. This path is very significant because it marks the physical connection between the city (exit of the cycle/pedestrian tunnel and metro/tram stop) and the landscape systems in the north-west.

IGLO street

The street is the most recent 'layer' in the public space of Europark. It was designed as part of the IGLO project by architecture firms De Smet Vermeulen Architecten, Architecten de Vylder Vinck Taillieu and Tom Thys Architecten. It is a street that cuts east-west across the entire neighbourhood at the level of the Chicago Block, Europark's tallest and most central building **(Figure 3)**. Its greatest quality lies in the fact that it is not a proper axis connecting two points, but it has more of a square character on which all Europark's public buildings face (most of them built together with the axis between 2010 and 2020). Today it represents the central hub of Linkeroev-
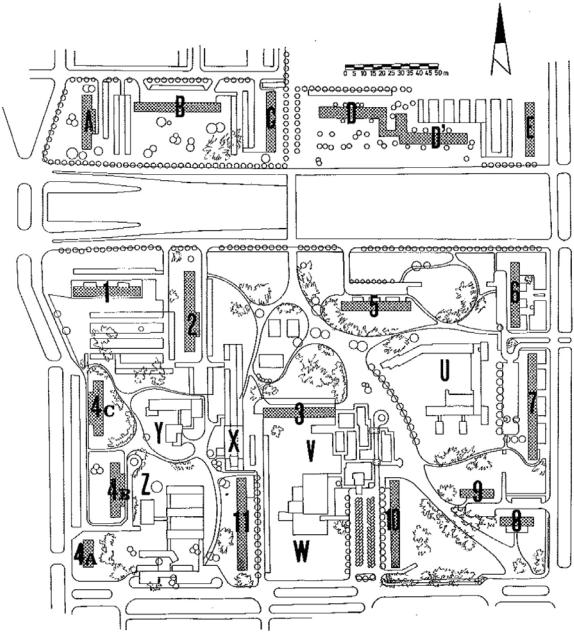
Figure 2. *Europark masterplan 1961, H. Aelbrecht, R. Brunswijck, O. Wathelet. (In Wonen 64-65, Bontridder and Tange 1975)*

er due to the fact that it is the only paved space in the green ocean of the modernist project.

Small qualities of the rooms

As stated above, Europark's room are mainly characterised by green areas, vegetation, pedestrian paths and hillocks (above the underground car parks). The parking system is designed to be almost invisible as the entrances are always hidden by vegetation or are at different levels compared to the pedestrian walkways. These car parks form hillocks on the surface that naturally integrate with the greenery of the rooms creating a ground that is articulated at different heights. The vegetation is arranged either in regular rows (often as a filter with vehicular roads), or in a pic-

Figure 3. *Plan of IGLO axis, De Smet Vermeulen Architecten, Architecten de Vylder Vinck Taillieu and Tom Thys Architecten, 2014 (www.dbpubliekeruimte.info, Technum)*

turesque way, creating more rare areas and more wooded conditions. In some spots the vegetation is so dense that it feels like entering a green tunnel. The pedestrian walkways are sinuously articulated in contrast to the regular layout of the buildings and the modernist road system.

Van Eedenplein

Frederik van Eedenplein is the great urban void encountered when arriving from the centre of Antwerp to Linkeroever. In this square is located the exit of the metro/tram and the cycle/pedestrian tunnel, a large car park and the bus terminal. Although not formally part of Europark, Van Eedenplain is the entrance from the city and is also crossed by the pedestrian diagonal from the exit of the tunnel to the northwest corner. The Sint-Annatunnel (cycle/pedestrian) was built between 1931 and 1933, is more than 30 metres below the ground and 572 metres long. At both sides there are wooden escalators (still the original ones) and two lifts for 40 people. Van Eedenplein metro station is only one stop and less than 5 minutes from Groenplaats in the heart of Antwerp.

2.3. Building the void

As widely discussed in chapter 1.3. and 1.5., throughout its short history the left bank is often seen as a land of conquest, to be 'filled' with the expansion of the city. The *polder* was the *tabula rasa* where new buildings and new cities could be established, from the Van de Velde skyscrapers to the Europark project. After the foundation of a proper residential settlement on the left bank in the 60s and 70s there has always been debating about the densification and construction of new residential areas. This pro-cess has carried on until recent history; some examples are the *Regatta district* in the south, the *IGLO project* (see chapter 2.4.) and the *2016 competition* (see chapter 1.6). The only exceptions in which the major voids in the city have been debated are the competitions analysed in chapter 1.5.

All this shows how the approach to the left bank planning has almost always been a "project of built" rather than a "project of voids" that could exalt its main quality which is that of being at

the centre between man (city) and nature (landscape). The void project in this context therefore represents a counter-discurse against the tendency towards densification, as the void is *"empirically recognised as relevant"* (Viganò 2018). An inclusive project that takes into account all the open spaces of Linkeroever, from the landscape to the small piazza, is necessary *"in order to unveil cultural hegemonies, to crack and fracture homogenising tendencies"* (*ibid.*).

This counter-project then begins by mapping and analysing the voids already present in the territory **(Figure 1)**, and then connecting and characterising them based on the qualities and potentials identified in the previous chapter. The project of the void in Europark is based first of all on the recognition of the pedestrian diagonal and the car-free island of the modernist district as a starting point for a connection between voids. The diagonal, in fact, crosses four of what we have called

"rooms", and which correspond to very large open spaces defined by modernist buildings. This sequence of rooms is crossed by the IGLO axis, which represents a very interesting public space because of its configuration halfway between a square and a street. IGLO itself constitutes a micro-system of voids already established within the wider system of voids that is being designed. The next step is to anchor these voids at the local scale with their surroundings, through the widespread porosity and dense infrastructure network of the area. In fact, the two squares in the old town centre Sint-Jansvliet and Groenplaats can be considered as an integral part of this system, as they are directly and very fast connected to Van Eedenplein by the cycle/pedestrian tunnel and the metro-tram. In addition, the nearby landscape figures are integrated into the project of the void through the extension of existing axes.

Big voids

Small voids

Landscape
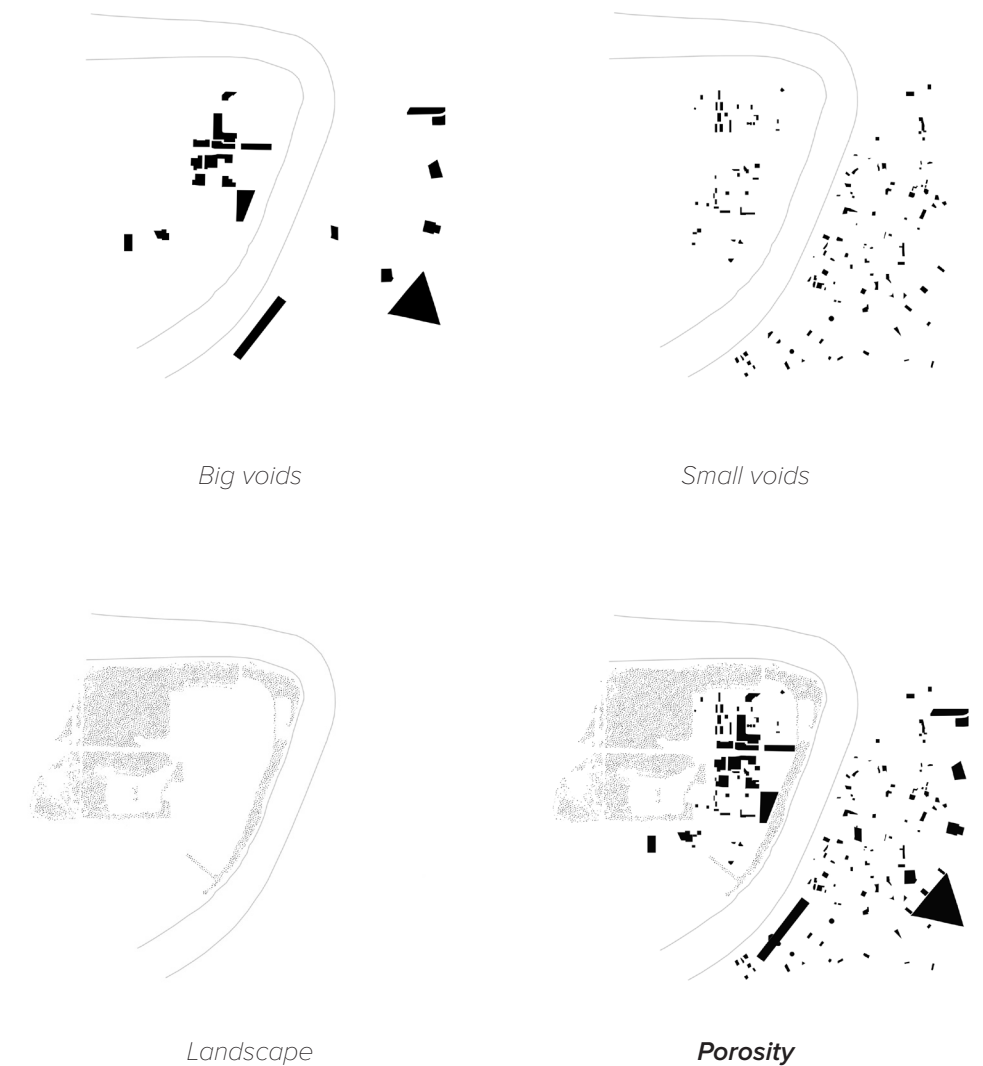
Porosity

Figure 1. *Existing porosity in Antwerp's Linkeroever and old town.*
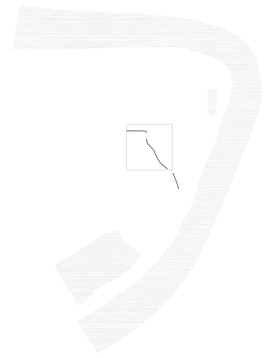
1. Pedestrian diagonal
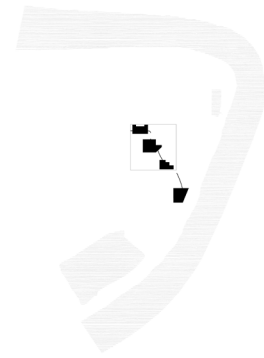
2. Rooms
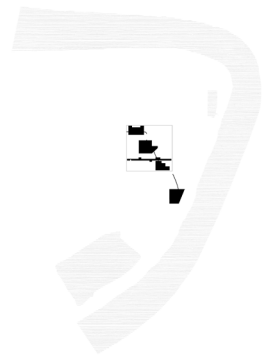
3. IGLO street

4. Landscape
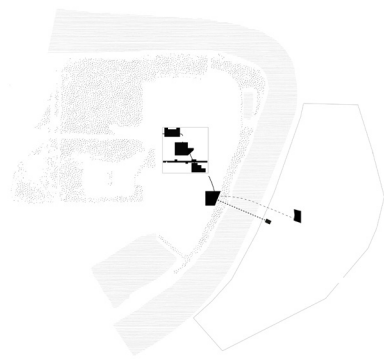
5. City centre

6. Connections to wider systems
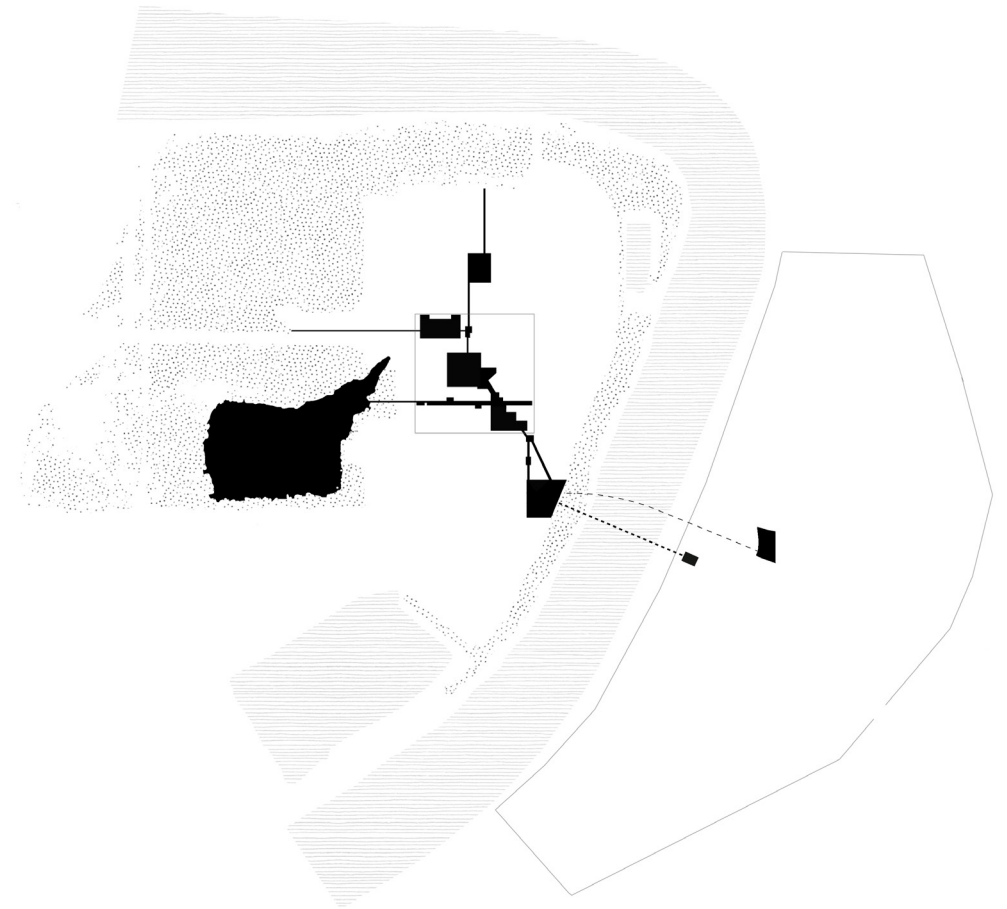
The project of the void in Linkeroever is firmly anchored to the city centre and the landscape by building a unique, complex and integrated system in the territory.

2.4. Scenarios of urban development. Void as a constant, built as a variable

The urban project cannot be considered as a point, but as a segment in the timeline. According to Branzi (2006, 125), it is necessary to *"reintroduce the concept of time into architecture"*. In order to design a public space in a developing area such as Linkeroever, the project must be considered as something to be inserted in a context that does not yet exist .

So how can a background be built, a plausible future in which to insert the project of the void? In order to imagine this future development it is first necessary to analyse and consider into the design process the present and future dynamics of urban development within the city of Antwerp.

Three urban scenarios

Concerning Linkeroever, the ongoing development is char-

acterised by a slow, low-density urbanisation, made of ow-rise residential buildings and few facilities (e.g. the district of Regatta). On the other hand, other areas of the city are developing faster around landmarks or iconic buildings, as has already happened around the MAS and as will happen in the foreseeable future close to Zaha Hadid's Port Huis. The dynamics to consider are not only those that we can observe today within the city, but also those that are being debated and that could change the future image of the city. For example, the construction of one or more bridges over the Scheldt would certainly lead to a faster and denser development of the left bank, especially next to the river or along the infrastructures that are connected by bridges. The question of the bridge is a debate that has characterised the whole

history of the development of Linkeroever and has been revived thanks to the 2016 competition.

In the light of these dynamics, three hypotheses on the urban development of Linkeroever in 50 years are made:

1. **Sweet Home Linkeroever.** Urban development follows today's dynamics that mainly consist in low-rise densification through single family houses **(Figure 1)**.

2. **Spotted Linkeroever.** One or more landmarks are built on the left bank and the development takes place "in spots" around these objects **(Figure 2)**.

3. **Linked Linkeroever.** One or more bridges are built and the development of the left bank becomes denser and faster **(Figure 3)**.

These hypotheses represent three radical visions that simplify the direction in which the future development of Linkeroever could go. Actually the history of the left bank itself teaches us that urban dynamics are much more complex and tend to overlap in a conflicting way in the city structure. In fact, the outcomes of the 2016 competition show us that the way of conceiving urban development is very different today than it was in 1932, when Linkeroever was a *tabula rasa* on which a unitary project could come top-down. We therefore imagine that these three hypotheses could coexist in a single scenario and that this could be the most representative model of urban development on the left bank over the next 50 years.

If, as already said, we recognize the void as the fulcrum of the redevelopment of the whole area, it represents the constant, while the built represents the variable. The different hypotheses of built serve to provide a background for the project. Any or all of these hypotheses can occur at the same time, but in any case the void project resists the urban development (the variables exist in order to test the constant).
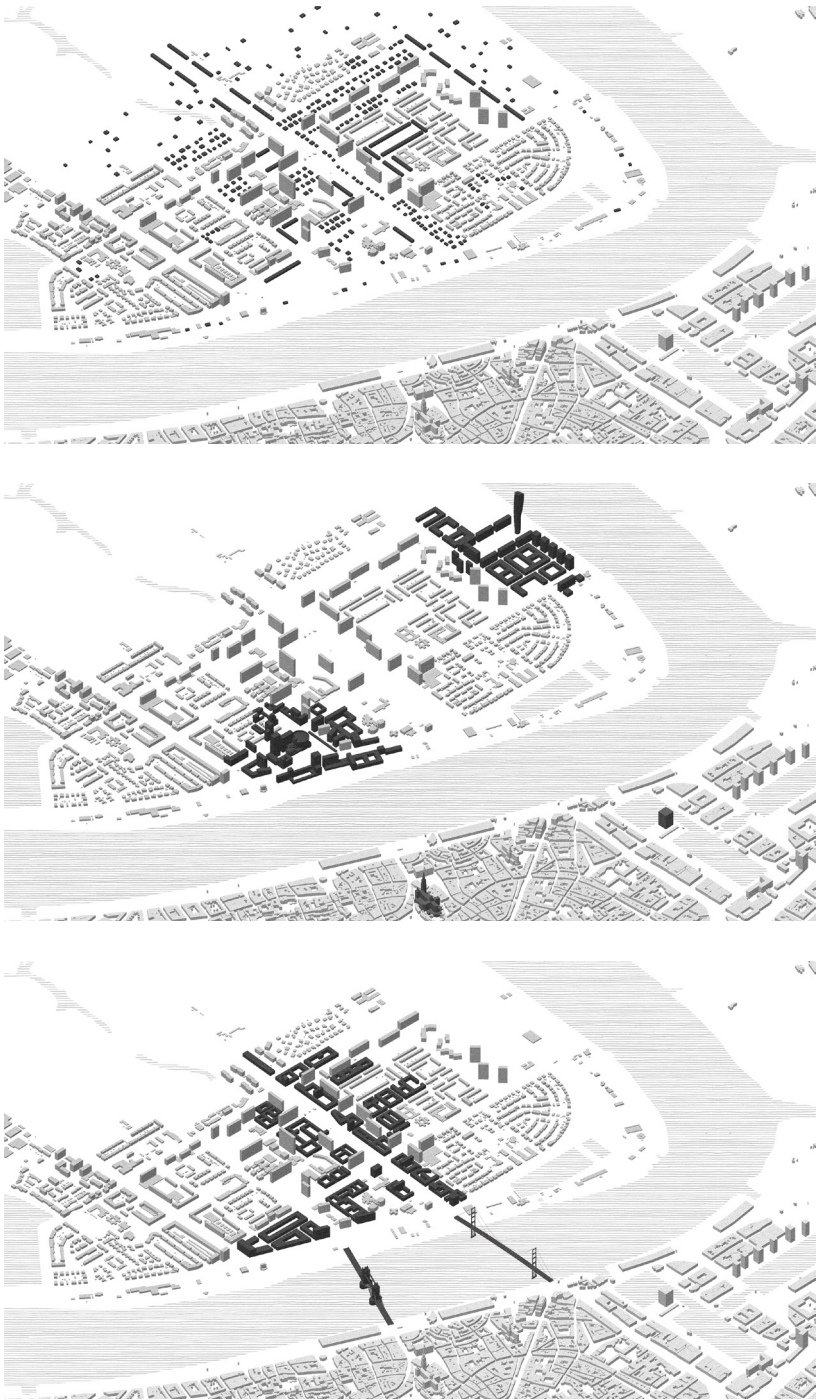
Figure 1-2-3. *Three urban development scenarios.*

Densify the room

In defining the project of the void in the previous chapter (2.3), the rooms crossed by the pedestrian diagonal were selected as the most adequate to support a project in the porosity of the Europark. The other rooms, which are not directly involved in the void project, could develop within the three scenarios previously hypothesized. However, moving into a more adequate scale makes it clear how the densification of the single room in the modernist neighbourhood can be considered a dynamic in itself. In fact, if we restrict the analysis to Europark, we can observe that there is already an example of densification of one of the rooms.

This is the Intergenerationeel Project Linkeroever (IGLO) project, whose masterplan was presented in 2006 and completed in 2014. The building complex is located among three modernist high-rise buildings and includes a mix of residential buildings and community services **(Figure 4-5-6)**. The residential care centre built by De Smet Vermeulen Architecten can accommodate 126 people, while the two residential complexes, by Architecten de Vylder Vinck Taillieu and Tom Thys Architecten contain 125 apartments.

Learning from IGLO, the future densification of Europark can be imagined to occur into the different rooms through unitary projects characterised by a mix of residential and services. Like the three scenarios analysed above, room densification represents a series of variables that provide support and reinforce the project, but do not distort its constant: the void.

Figure 4. *Intergenerationeel Project Linkeroever (IGLO). De Smet Vermeulen Architecten, Architecten de Vylder Vinck Taillieu and Tom Thys Architecten. 2014. (Photo by Filip Dujardin)*
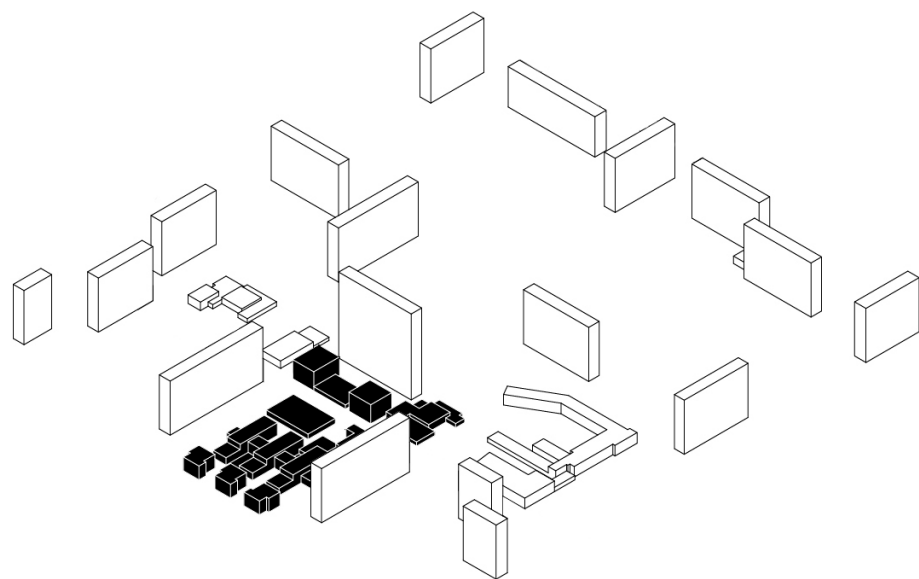
Figure 5. *IGLO project in Europark (2014). The project has entirely filled one of the room defined by the high-rise buildings.*

Apartments

Kindergarten

Apartments

Community Centre

Supermarket

Residential care centre
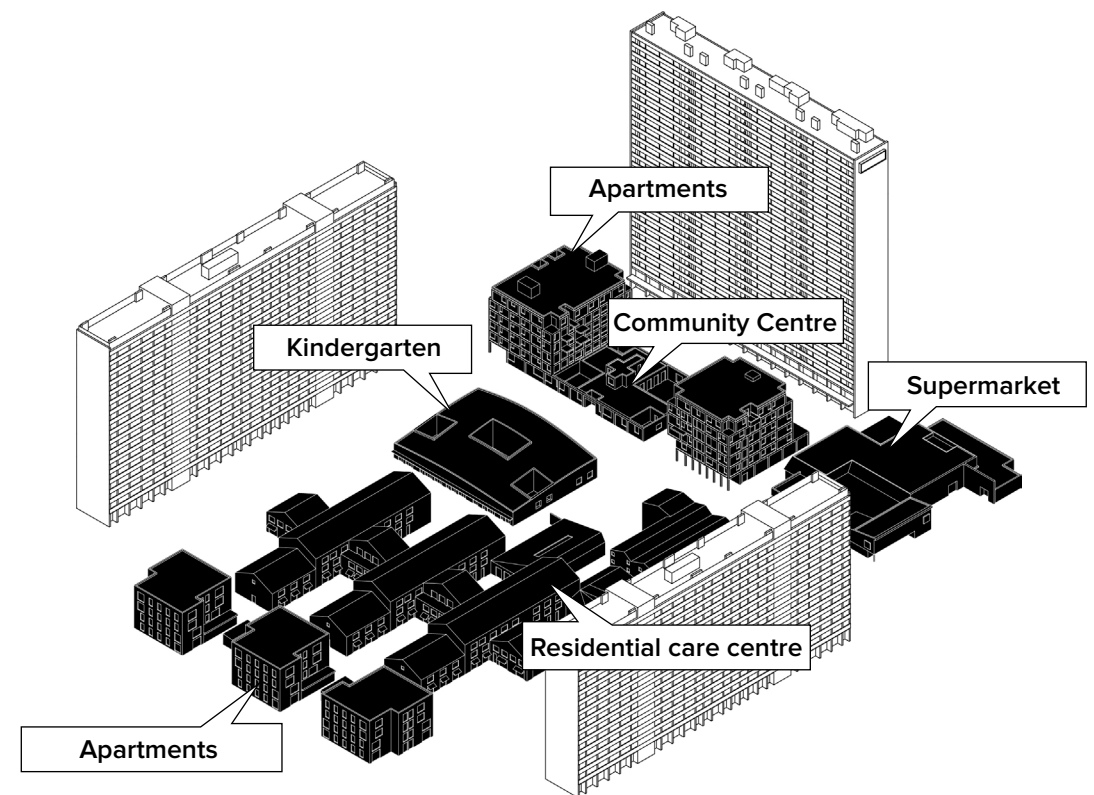
Figure 6. *IGLO project (2014). New apartments and new services for locals.*

**Four different hypothesis of densification of one
Europark's room (18.000 m²)**
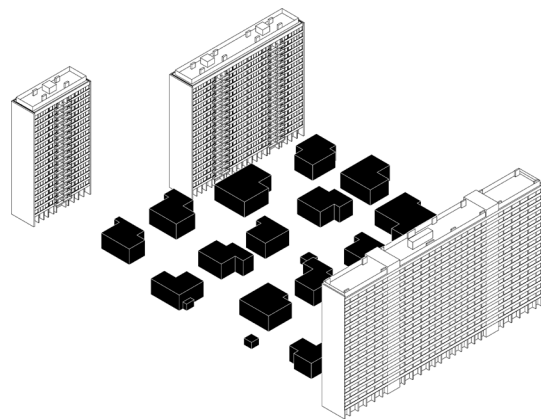
Low-density

Built volume: 24.000 m³
Ground surface: 4.000 m²
Total built area: 8.000 m²
Empty land area: 14.000 m²
Num. of apartments: 18
Num. of inhabitants: 54

High-density

Built volume: 53.000 m³
Ground surface: 1.600 m²
Total built area: 17.000 m²
Empty land area: 16.400 m²
Num. of apartments: 220
Num. of inhabitants: 660

Medium-density

Built volume: 43.000 m³
Ground surface: 5.000 m²
Total built area: 13.000 m²
Empty land area: 5.000 m²
Num. of apartments: 52
Num. of inhabitants: 156
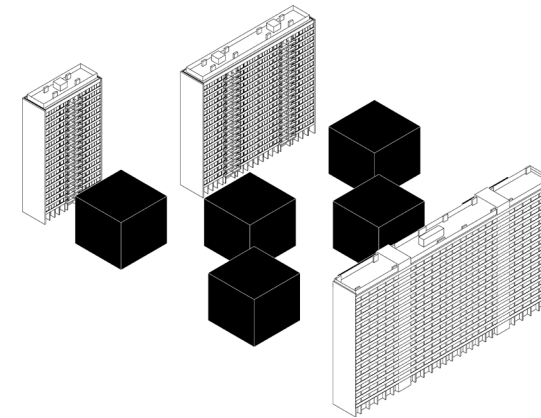
Super-density

Built volume: 84.600 m³
Ground surface: 4.000 m²
Total built area: 28.000 m²
Empty land area: 14.000 m²
Num. of apartments: 360
Num. of inhabitants: 1080

2.5. Project in the porosity

The result of the process described in this section of the thesis is a system of voids that appears as a fluid that develops through the porosity of the territory. This fluid expands and contracts when it encounters open spaces at different scales. The void is no longer perceived, as a mere *"technical space"* (Secchi, 1986) between buildings, but is conceived as the true connective tissue of the city, able to overcome its political and geographical boundaries. The project of the void transforms the fractures of the territory into a link between right and left bank, city and landscape, centre and suburbs, man and nature. This void is meaningful regardless of the built, but for its inherent capacity to be infrastructure, background and support of planned and unplanned activities (Russi 2019).

Festivals Concerts

Urban park

Sport facilities

Student housing

New pedestrian bridge

Forest

Leisure

Local market

Piazza

Water-taxi

Riverfront

Bike line

To the city centre
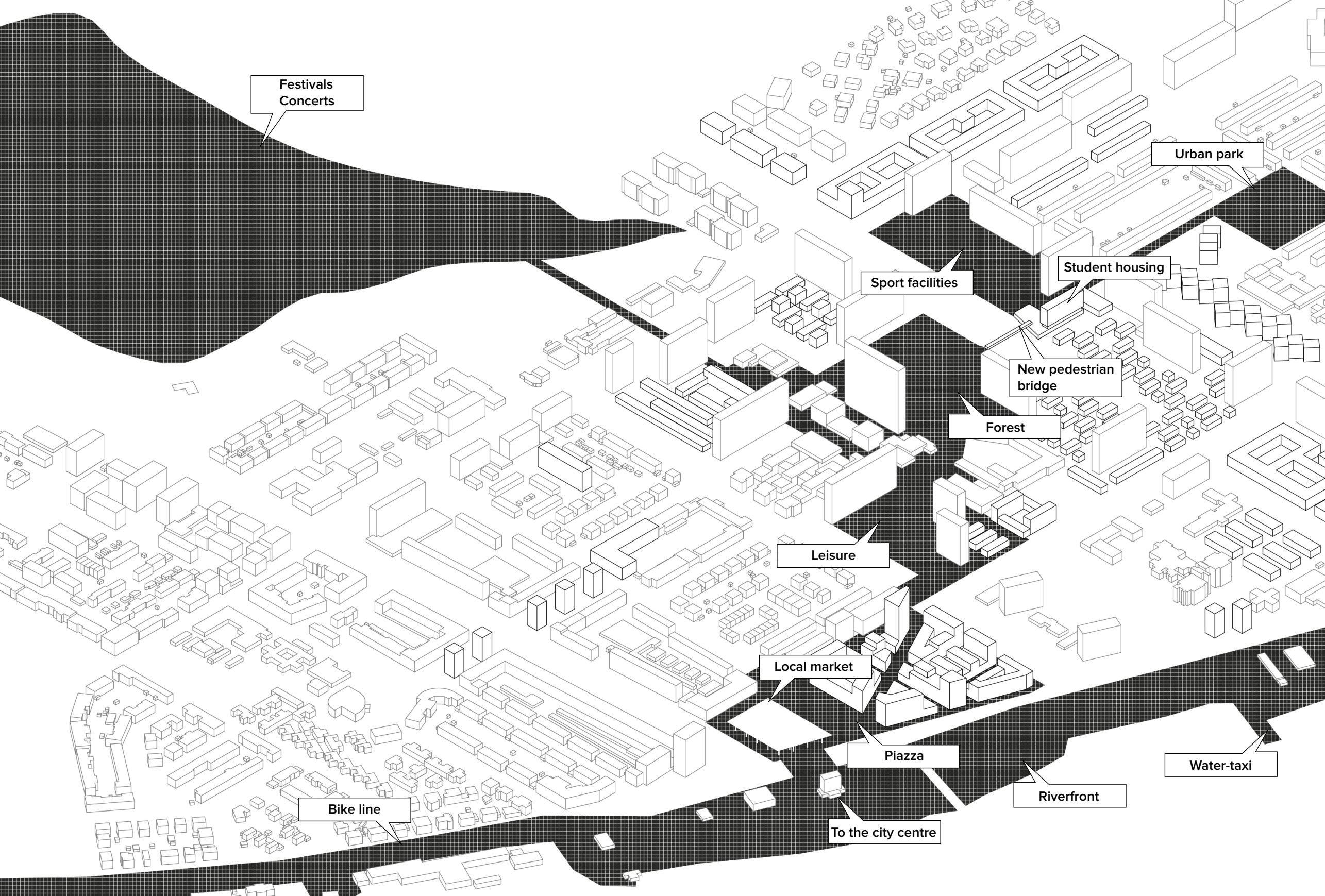
03

four domestic exteriors

3.1. Room approach

"The room is perhaps the most obvious form of architecture, and yet it is the least investigated. [...] If the purpose of architecture is to make space, then the room is the most direct architectural form that responds to those intentions."

Pier Vittorio Aureli and Martino Tattara, DOGMA (2017*) "The Room of One's Own. The Architecture of the (Private) Room", p.4*

The *room approach* is an anti-ideological approach to face the problem of undefined and unqualified voids in Linkeroever and Europark. The issue of open spaces in Europark consist, as we have already said, in large voids characterised by *"excess of separation"* and *"lack of qualification"* (Secchi 1986). This modernist approach to public space, as we have seen in Le Corbusier's plans for Linkeroever (1932, 1939) and later in Europark project (1961), is a top-down process that leads to equal and un-distinguished spacial conditions. These are nowadays considered as *non-places* (Augé 1992, Cacciari 2004) due to their lack of identity and non-qualification of the ground. These places are used mainly for transit and can't allow the variety of uses typical of contemporary public spaces.

This approach consists in the diversification and characterization of the modernist *'green ocean'* through the different spatial configurations, or *rooms*, defined by the high-rise buildings of Europark. Starting from the small

qualities listed and described in chapter 2.2, the aim of the project is to characterise the individual rooms through the design of the ground and the definition of forms and limits.

Rooms

The word 'room' comes from the Old English *rum*, which means — like to the German *raum* — 'space' (Aureli and Tattara 2017). When thinking of a room, this often coincides with a box defined by four walls, floor and ceiling, with one or more doors and windows. Actually, what we consider to be a room is more a specific spatial condition that can be found in the private home as well as in the urban context **(Figure 1)**. The characteristic of this space are privacy, comfort and independence, conditions that are universally recognised as *'home'*, or domestic (Evans 1978, 56).

The north-south and east-west orientation of the Europark buildings favours this *room config-*

uration. In fact the high-rise buildings can be considered as vertical partitions that give privacy and independence to the rooms.

Once defined the open spaces, the next step is their thematization. In fact, according to Bernardo Secchi (1984), *"the difficulties* [of the project in the void] *do not rest primarily or in finding adequate and well proportioned functions, or is accurately exploring the world of the probable, but also in identifying a possible sense"*. The process of thematization of these voids has been conducted into two different but related ways. First of all, urban rooms are considered with a domestic connotation, which is also reflected in their given name. What was previously an undifferentiated *'green ocean'* becomes a system of *'domestic exteriors'*: a *hall*, a *living room*, a *patio* and a *playroom*. A series of rooms **(Figures 2-3)**. The decision to give a specific name to each room has been made to define them with a precise identity. On the other hand, a 'possible sense'
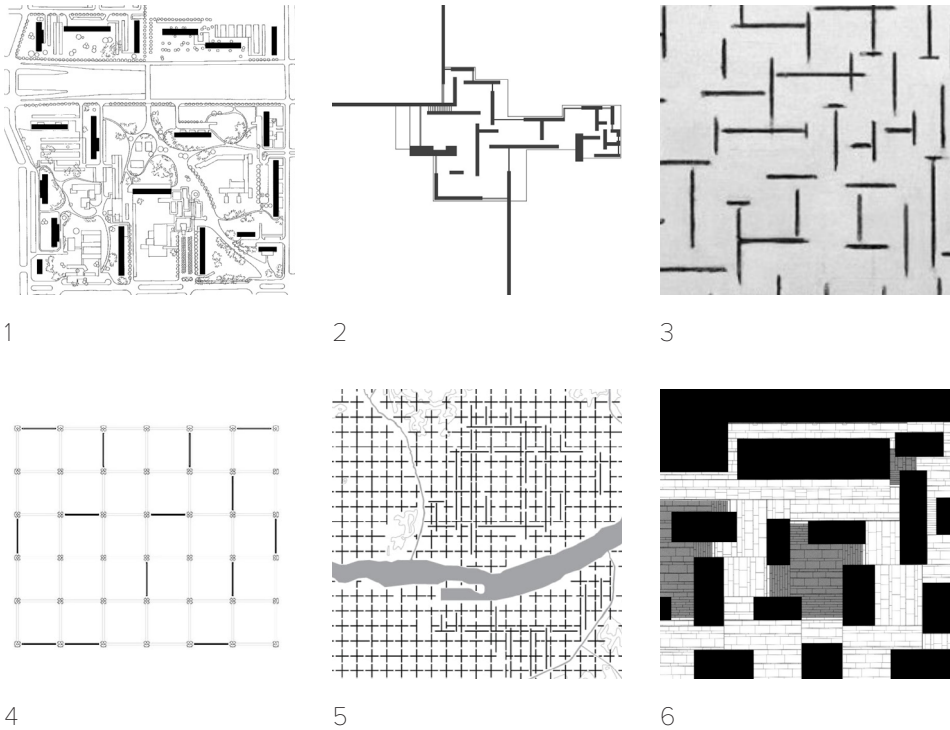
Figure 1. *Europark's scheme is recognisible in other similar spatial configurations, from architectural to urban scale, from paintings to city planning.*

1. *H. Aelbrecht, R. Brunswijck, O. Wathelet, Plan for Europark (Linkeroever), Antwerp. 1961*
2. *L. Mies van der Rohe, Brick Country House. 1924*
3. *Piet Mondrian, Composition 10 (Pier and Ocean). 1915*
4. *Fala Atelier, Anticlimax Exhibition, Tokyo. 2013*
5. *DOGMA + Office KGDVS, A new Grammar, Masterplan for a new Administrative Capital, South Korea. 2006*
6. *Peter Zumthor, Therme of Vals. 1996*

playroom

patio
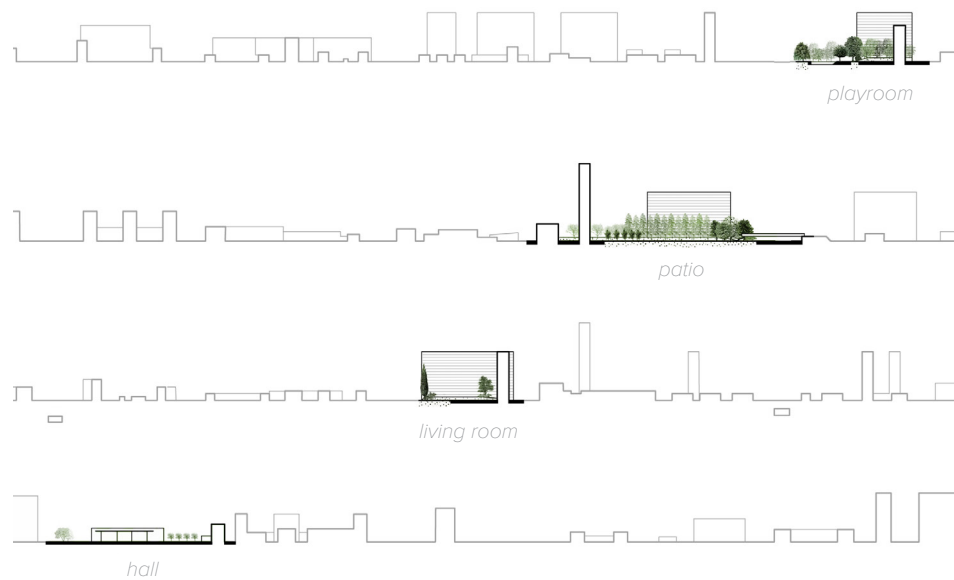
living room

hall

Figures 2-3. *A series of rooms. Urban sections and axonometric view (next page).*

From ground up: Hall, Living room, Patio, Playroom.

is given to each room through the project of the ground and the vegetation. The project of the ground has the purpose of replacing the small pedestrian paths with broad thematic areas, to confer a spatial dimension to the rooms, rather than a mere circulation space. If *"the purpose of architecture is to make space"* (Aureli and Tattara 2017), different soils and grounds or denser and sparser vegetation can be the core of new spacial configurations.

In the following chapters the single rooms will be illustrated, among other drawings, through perspective plans. This type of representation provides us with an image of a room seen from above, whose roof has been removed. Likewise, in the novel *"Life a User's Manual"* by Geoges Perec (1990) it is described a fictitious Parisian apartment block, as if the facade was removed to see what is happening inside **(Figure 4)**. *"I imagine a Parisian apartment building whose façade has been re-moved [...] so that all the rooms in the front, from the ground floor up to the attics, are instantly and simultaneously visible."* (Perec 1999, 40). The domestic situation described by Perec's novel is characterized by relationships (peaceful or conflicting) between its inhabitants and different ways of living the same spaces. This is what the project of public spaces should be: the background that supports the infinite possibilities of living the space and the city. Thus public spaces that used to be *non-places*, or mere places of transit, become inhabited spaces.

Doors and passages

This system of voids is characterised not only by the rooms, but also by the connections between them. The nodes of this system, or *'doors and passages'*, are not just places of transit but proper distributive spaces.

"It is also convenient to place the doors in such a manner that they may lead to as many parts
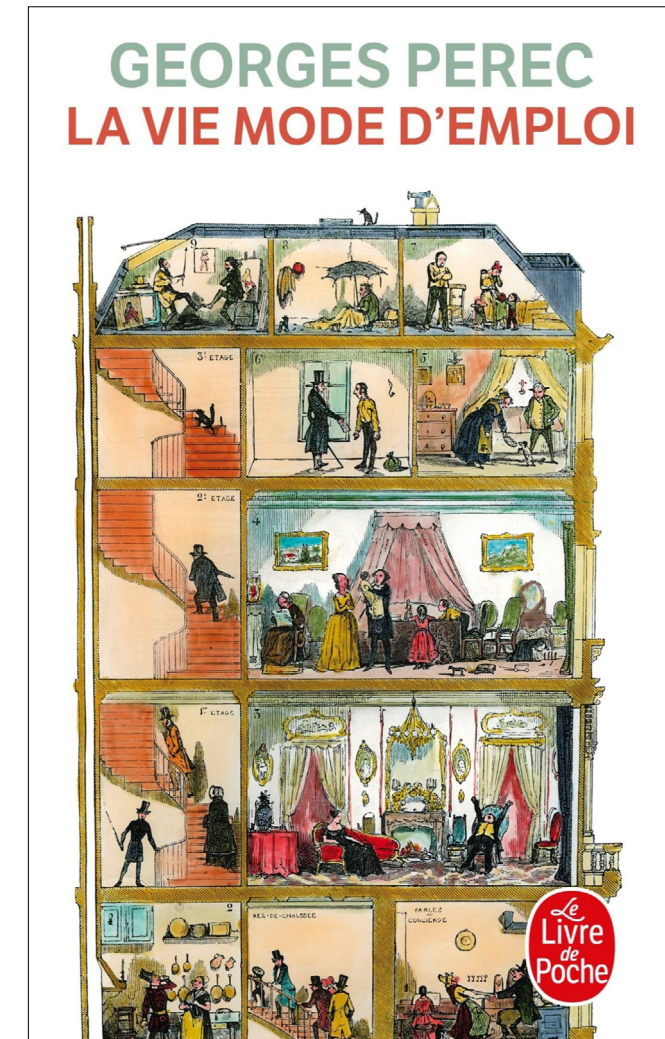
Figure 4. *Cover of the book "Life a User's Manual" by Georges Perec (La vie mode d'emploi. 2013 French ed.)*

of the edifice as possible." (Leon Battista Alberti, *"Ten Books of Architecture"*, in Evans 1978, 63). In Europark's project the doors between two different rooms are never a two-dimensional object, but a more complex device **(Figure 5)**. Just as the rooms represent a space of expansion, the nodes are spaces of compression, defined by the buildings that overlook them. While the rooms are characterised through the project of the ground, the small, thin voids of the doors and passages are meaningful just as the threshold of the buildings that overlook them **(Figure 6)**. In fact, the intersections between the infrastructural axes (Waaslandtunnel, IGLO), shops, sport halls, or new facilities are concentrated in these nodes. These are places where people come and go, but they also stop to chat or have a beer on the steps. The strong spatial connotation of these small voids makes them an integral and fundamental part of the city's new connective tissue.
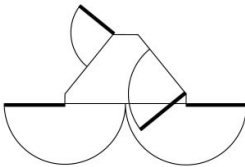
Figure 5. *Luigi Caccia Dominioni, door in Villa San Valerio. (CN10architetti, cn10.it)*
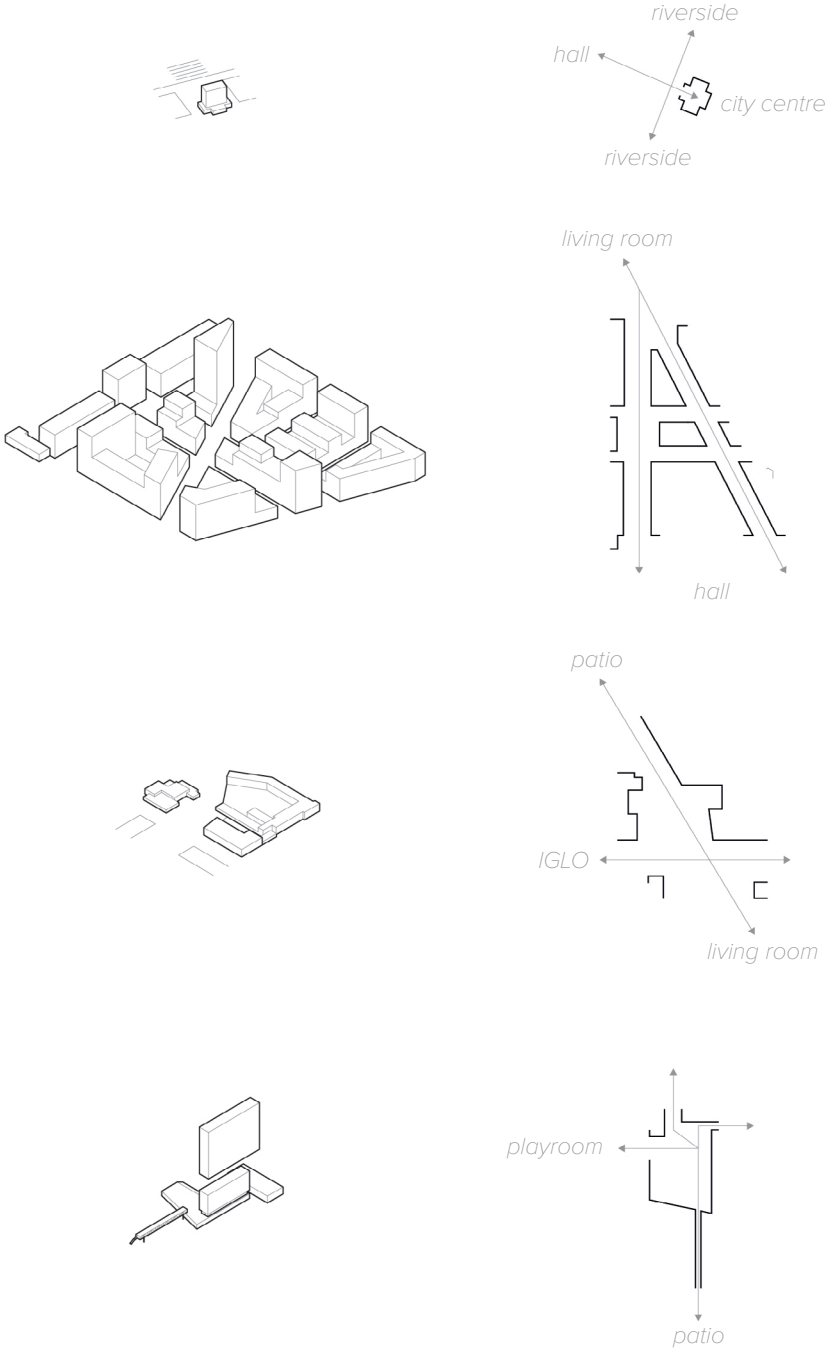
Figure 6. *Doors and passages.*

3.2. Hall

Figure 1. *Scene from Luca Guadagnino's movie "Io sono l'amore" (I am love). The film is shot in Villa Necchi Campiglio (Milan) by Pietro Portaluppi and many of the scenes are set between the external canopy and the big hall.*

The hall is the main entrance of Linkeroever. It is the first big open space one encounters when visiting the left bank by feet or by bike. Leaving Sint-Annatunnel it immediately feels like you are in a completely different place from the city centre: the spaces expand, the streets widen, the buildings are taller. The visitor's first approach coming out of the cycle/pedestrian tunnel is the riverside, a very extensive linear park overlooking the Scheldt and the historical city. The hall is a large paved space with a large canopy. This canopy is a very important distributive element because it is the point of intersection between the *piazza*, the exit of the pedestrian tunnel and the riverside, the metro stop and the bus terminal. The canopy, like the whole square, is no longer just a 'place to go' but more a place where markets, events and other unplanned activities can be held. Among the four rooms this is the most 'urban'; it is a terrace overlooking the old town, surrounded by the green of the riverside. In fact, the *piazza* has stone paving and all of Van Eedenplein's trees and lawns have been removed to enhance the stripe of vegetation of the river bank. If you go northwards from the hall towards Europark you will find a new residential district, cut off from the diagonal (before it was just a pedestrian path in a lawn) leading from the pedestrian tunnel to the south-east corner of Europark, the living room.

The canopy is inspired by the one in Theaterplein, also in Antwerp. Although it has been adapted to the proportions and shape of the square, the project of Secchi-Viganò is reproposed as it is in terms of formal and technological aspects. This canopy as an architectural object represent the archetype of a generic covered public space.
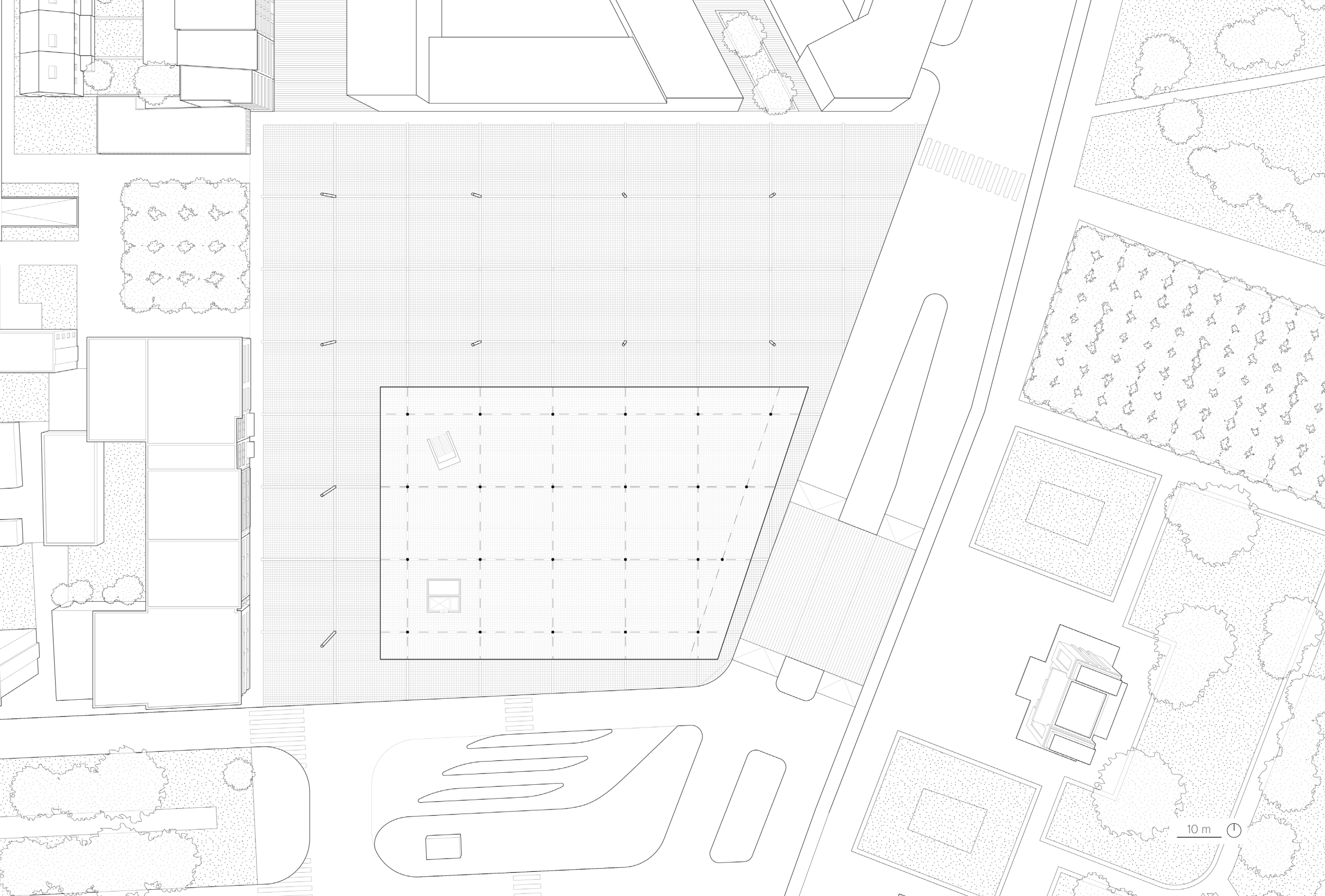
Project of the ground

Trees

Green
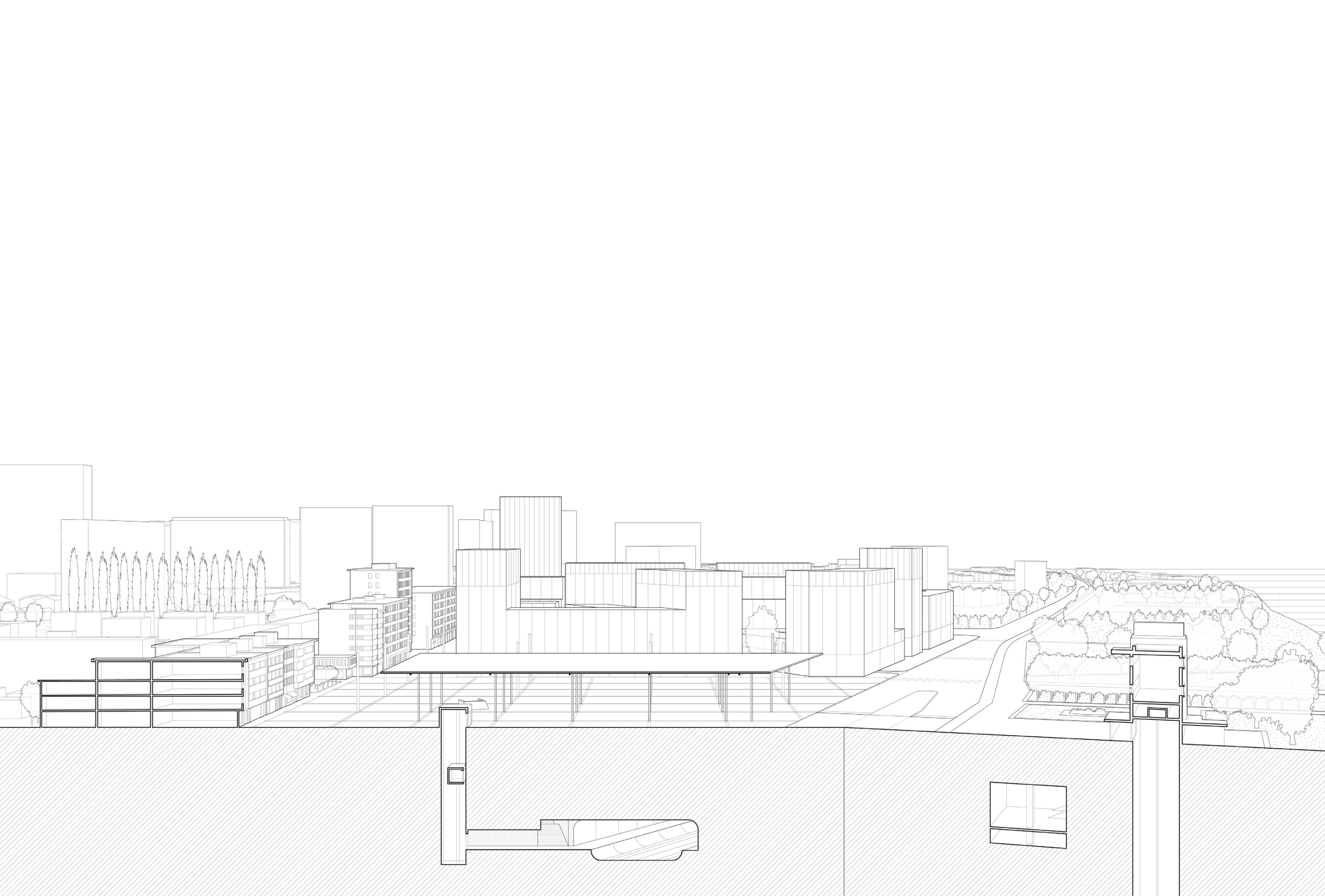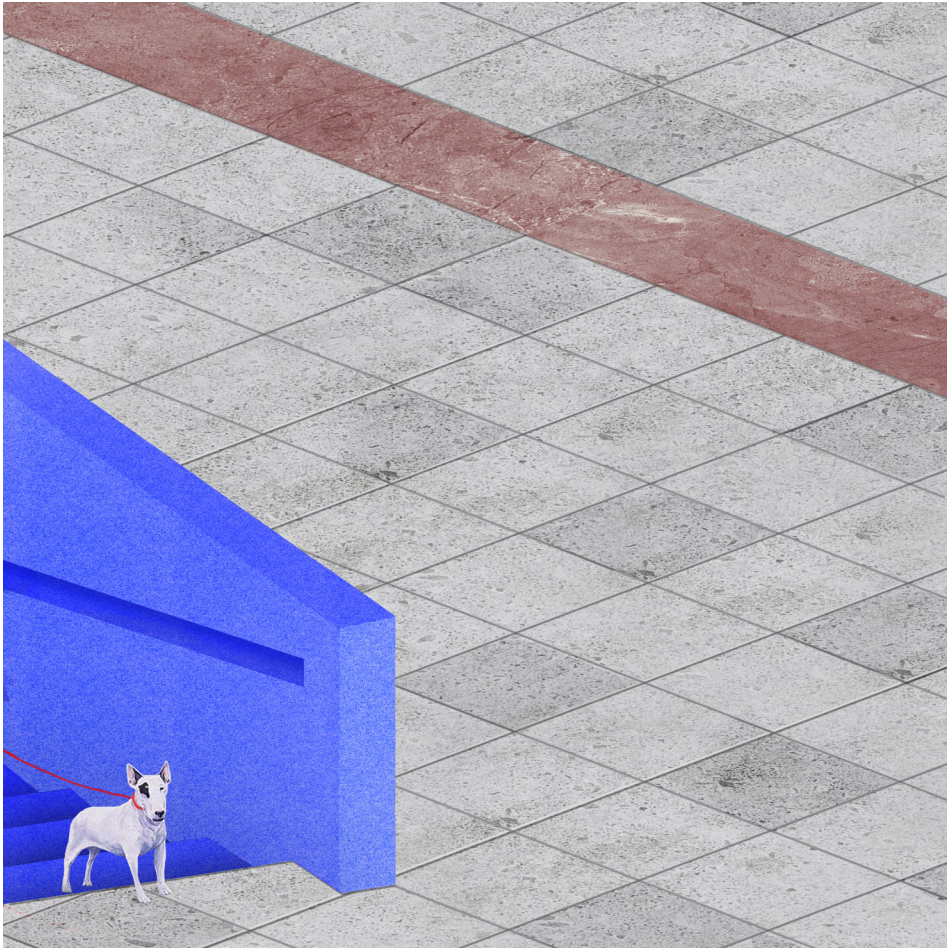
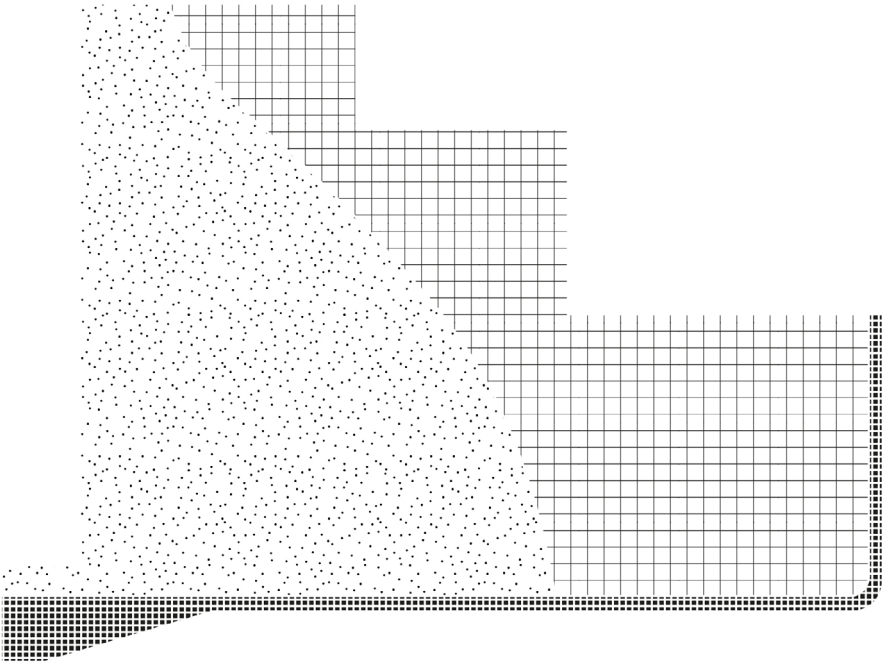Paved

Paths

10 m
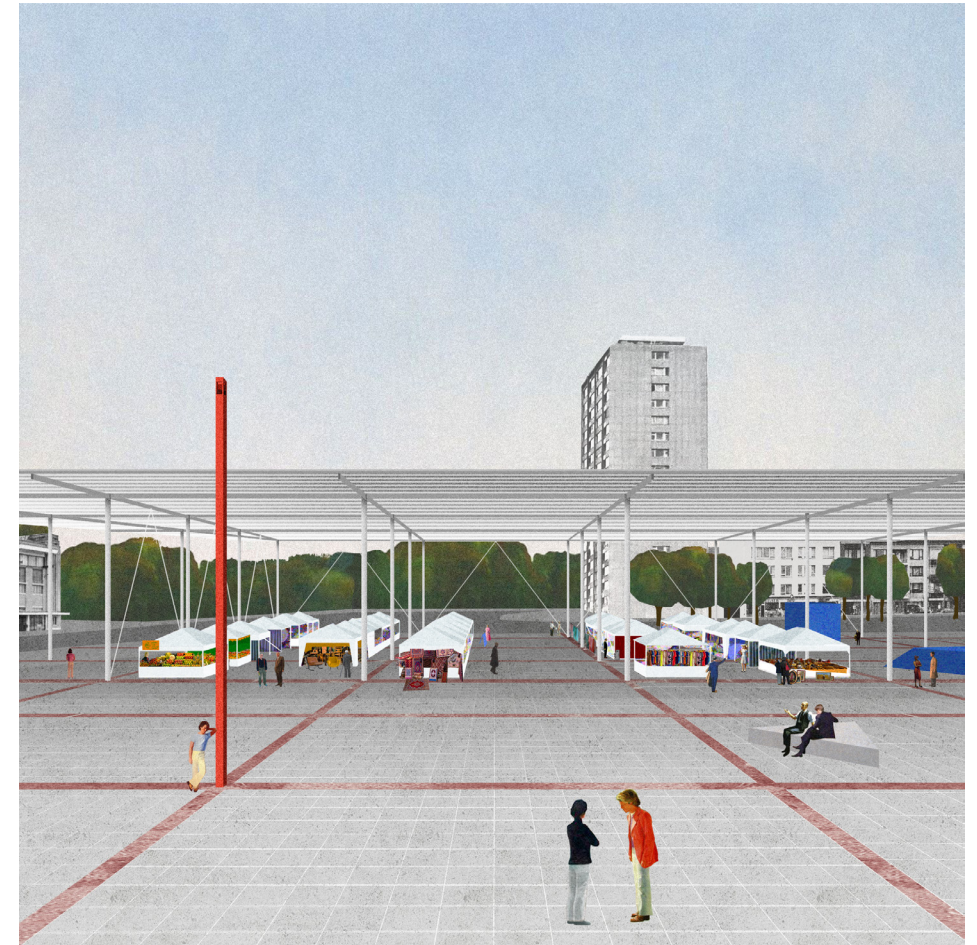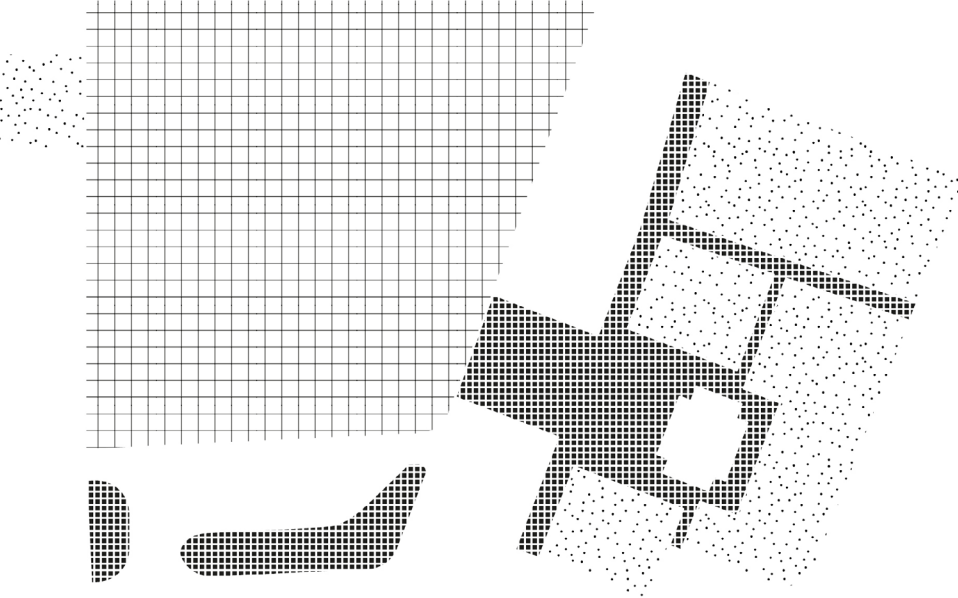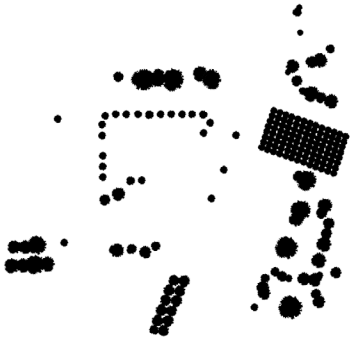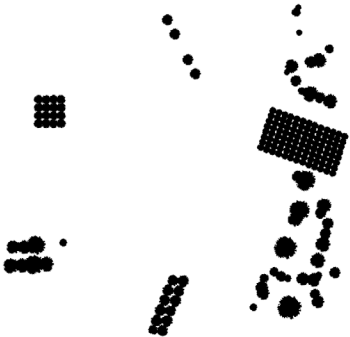
3.3. Living Room

Figure 1. *Gio Ponti's apartment in Via Dezza, Milan.* (Gio Ponti Archives)

The living room, together with the patio, is the core of the house as well as the centre of the system of voids. It is a large single space whose ground is treated in two different ways. The hillock above the underground car park has been maintained and is characterised by strips of lawn alternating with flower beds and low shrubs. The soil under the two high-rise buildings is replaced by stone paving. Although it is perceived as a single space, the two modernist towers divide the paved space into three more private and intimate areas (same as the curtains and furnitures in Gio Ponti's apartment. **Figure 1**). These areas are "furnished" with small parterres, benches, tables, children's games. Moreover, there are two small pavilions next to the blind sides of the towers that can host small commercial activities such as a bar or a bicycle shop. Here people can eat lunch sitting down while the children play on the lawn of the hill, sunbathe, read a book, study.

The cypresses and other large trees that marked the perimeter have been kept as buffer zones (acoustic and visual) between the room and the roads. Northwards the room is cut off from the IGLO pedestrian street on which many of the facilities of the neighbourhood overlook. Between IGLO's axis and the patio there is a small paved square defined by the supermarket and the sport hall. This space represents the "door" between the living room and the patio. The regular rows of trees, leaving the door and entering the patio, become a dense forest.
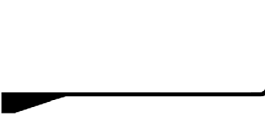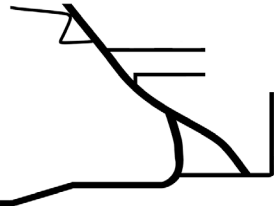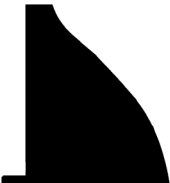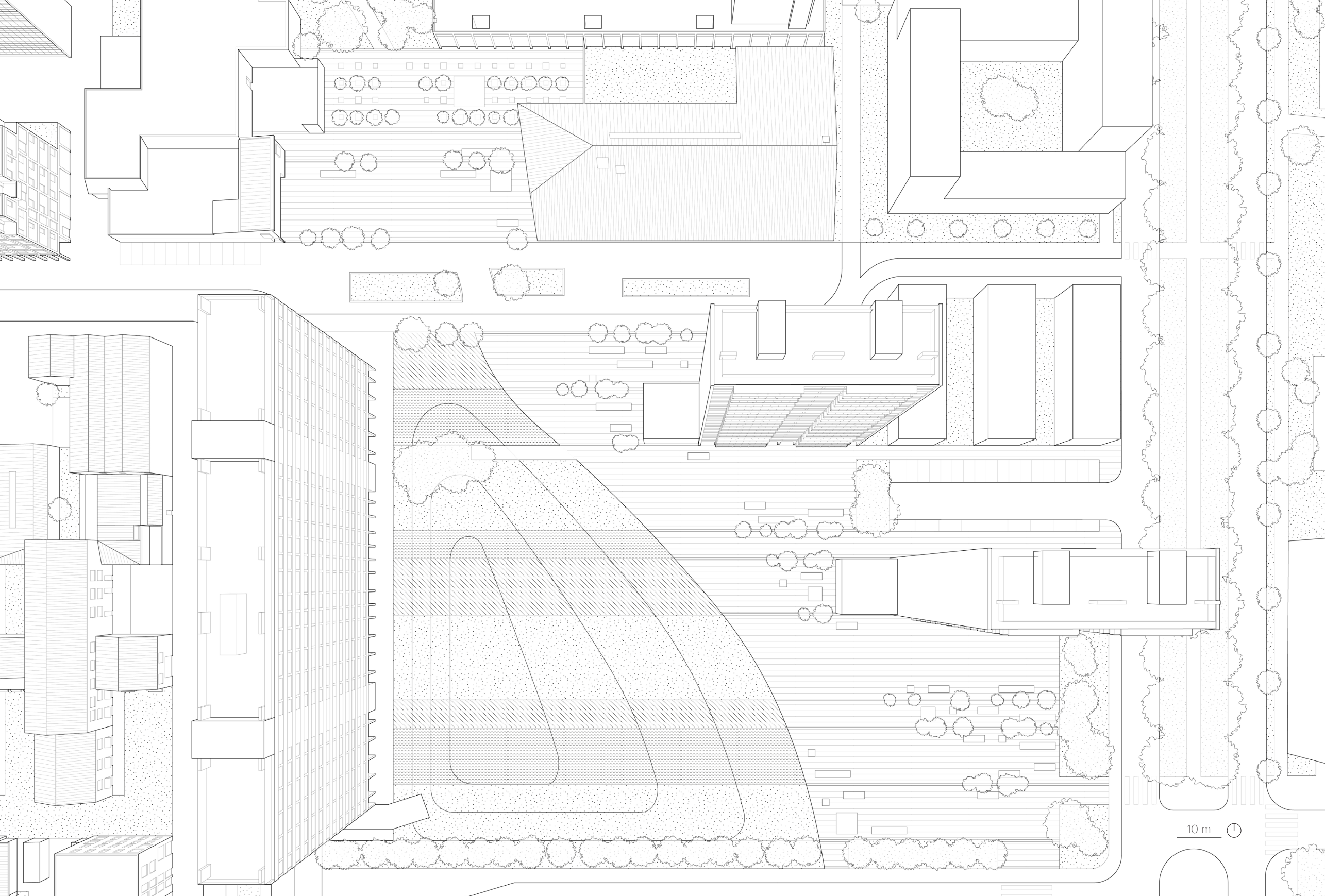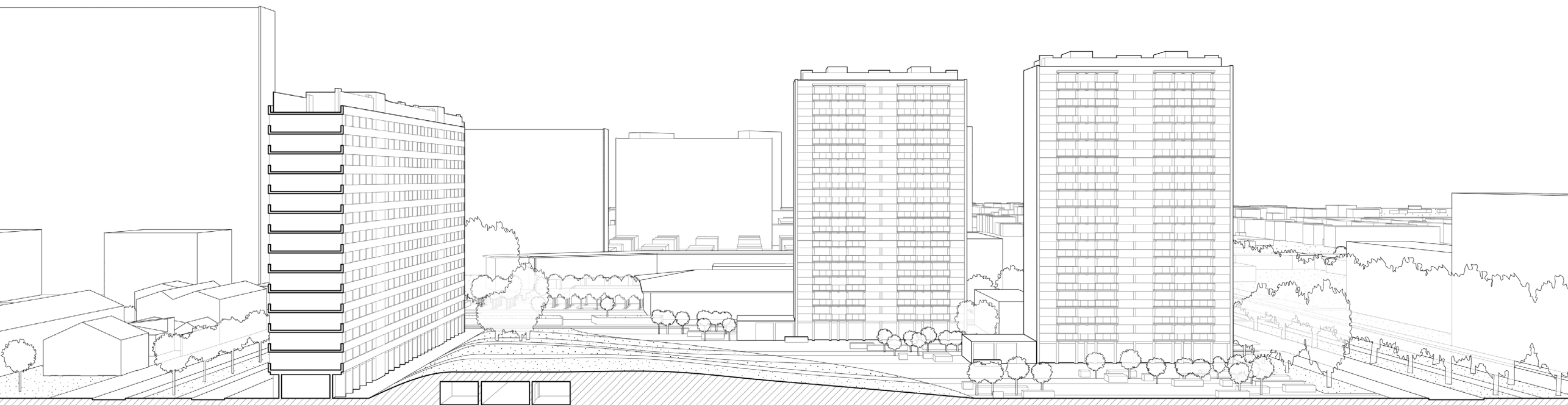
Project of the ground

Trees

Green

Paved

Paths

10 m
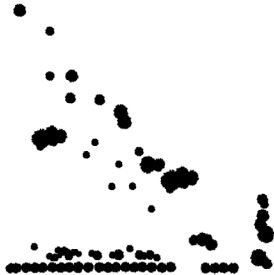
3.4. Patio

Figure 1. *Josep Lluis Sert. Sert house in Cambridge MA, 1958* (in Kinoshita, T. and Oshima, K. *Visions of the Real: Modern Houses in the 20th Century.* A+U special issue 2003)

The patio is an outdoor space, but it actually represents the most private room in the house. In fact, in ancient Rome the *atrium* was a large void in the centre of the house overlooked by all the smaller bedrooms (*cubicola*). In the *atrium* used to burn the domestic fireplace around which family life took place.

The patio of Europark is not defined by the building, but by the trees. The "outside" space where you can see the sky is a square-shaped clearing among the vegetation. The pedestrian paths that used to branch off in all directions are now regulated and ordered by the central square. Some large trees that define some areas of dense forest are maintained, as in contrast to the new smaller trees arranged in a regular grid and the large clearing. The room is characterised by many small hills in addition to the larger one above the underground car park to the west. The only paved areas are the threshold spaces in front of the high-rise buildings. The patio is delimited to the north by the urban motorway which leads into the Waaslandtunnel and than to city centre. A suspended pedestrian walkway has been designed to cross this barrier. A similar walkway was already present in the original Europark project (1961), but was not built due to lack of funds. The bridge lands on the opposite side of the tunnel on a raised public space that represents the *door* between the patio and the playroom.
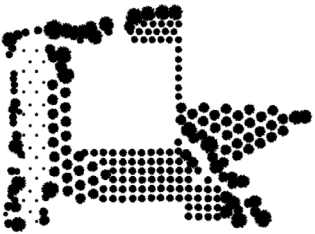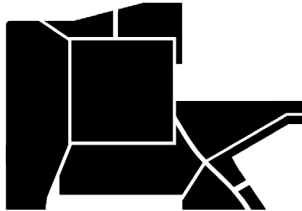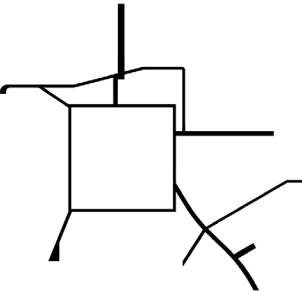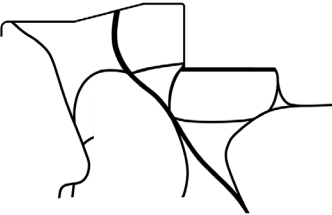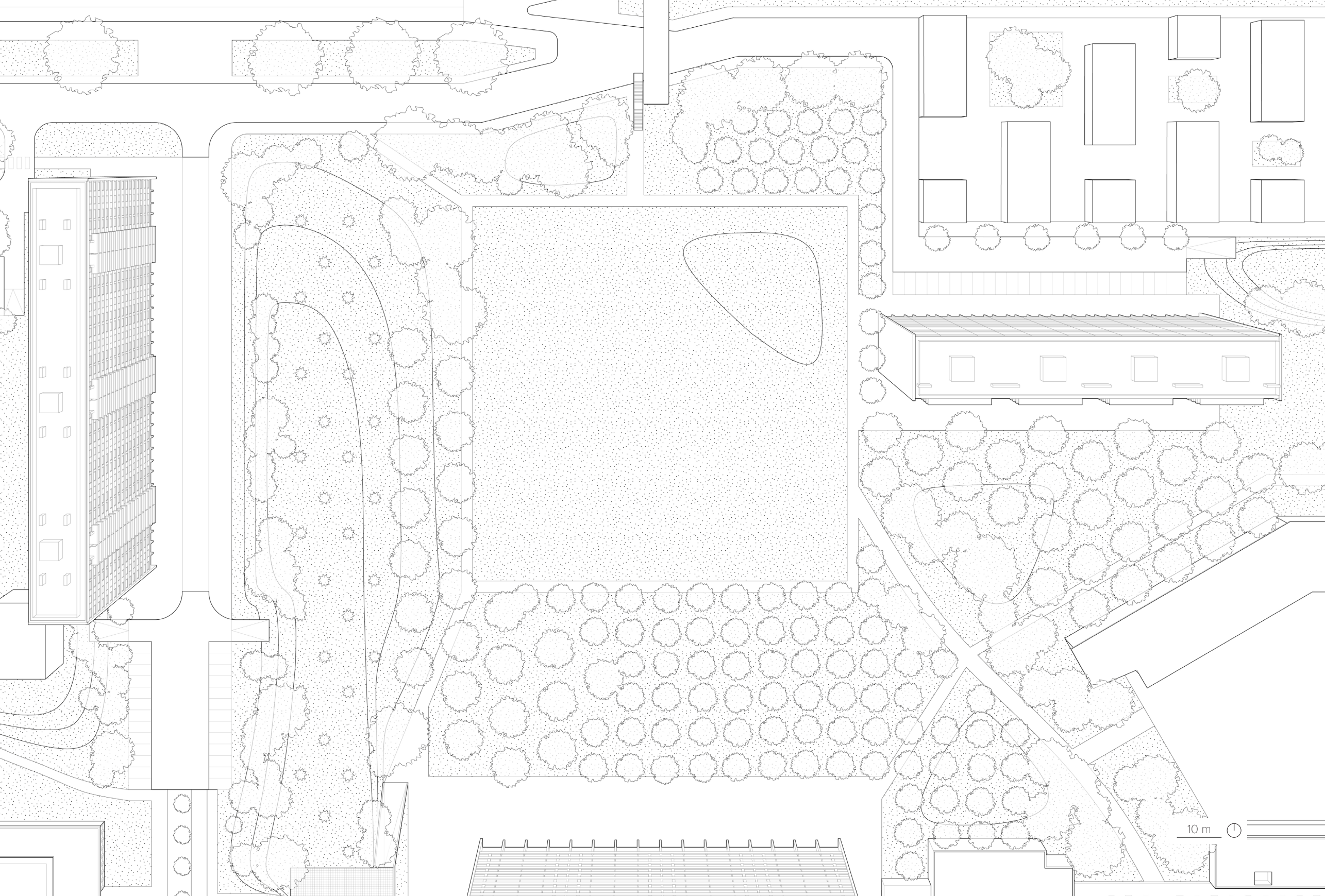
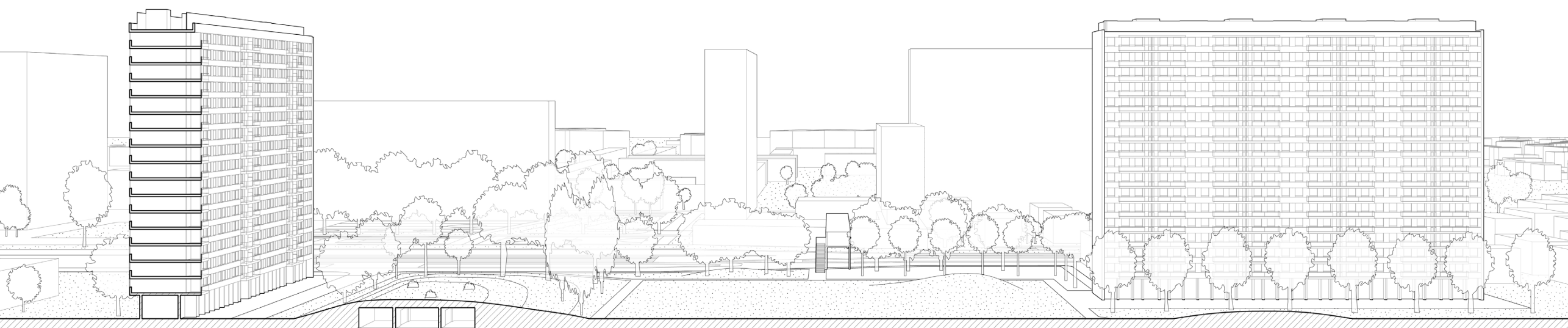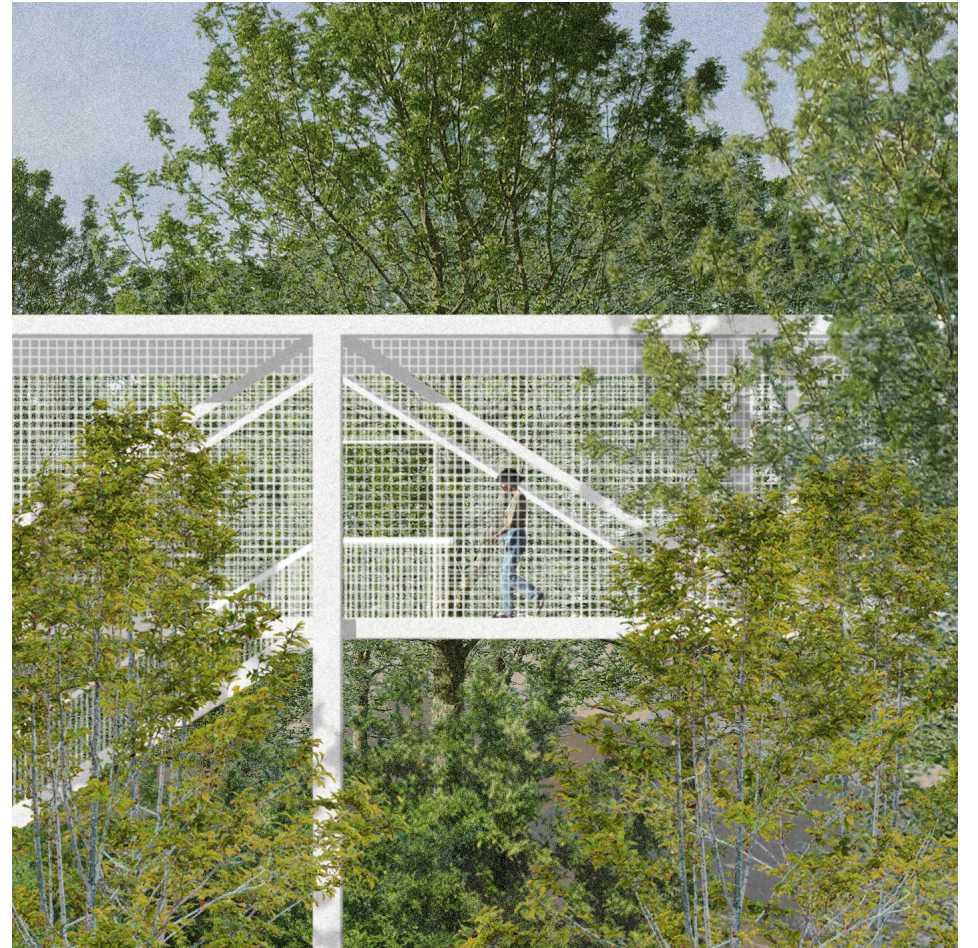**Project of the ground**

Trees

Green

Paved

Paths

10 m
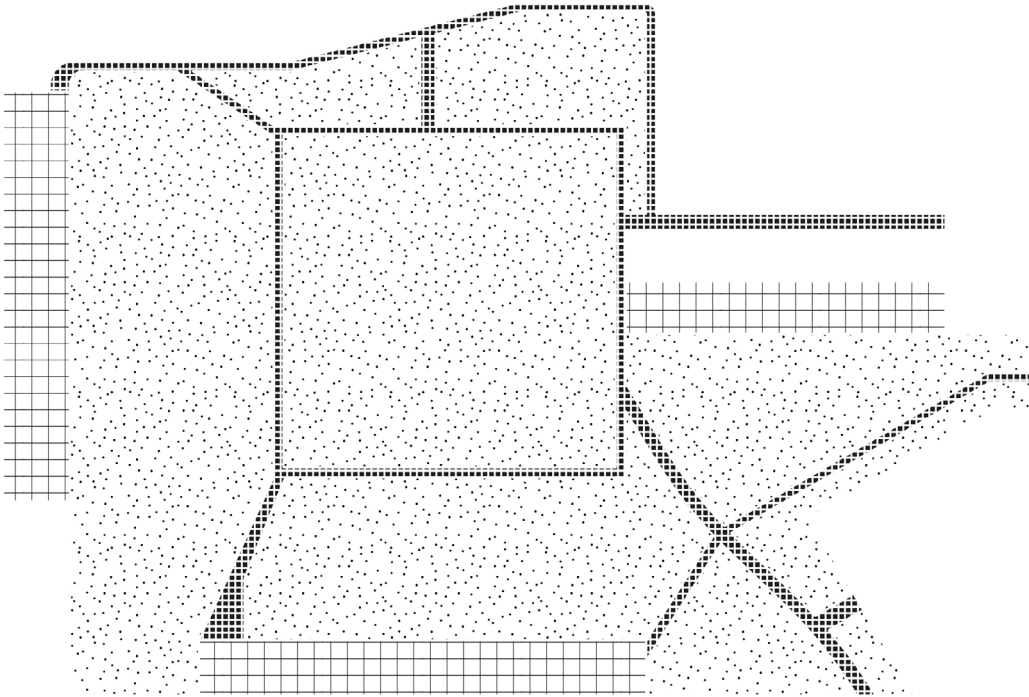
3.5. Playroom

Figure 1. *Aldo Van Eyck, Circle Terrace in Amsterdam Orphenage. (Aldo van Eyck archive)*

The last room is the playroom. Here trees are the ordering element of the space. In fact, by densifying or thinning out the vegetation, a cross of trees is designed in order to defines different areas of the room. In particular, the longer axis that defines this cross separates a strip of sports fields with a wider and more flexible open space. In addition to the dense row of trees, the room is also cut lengthwise by a pedestrian axis that distributes the different sports fields, the central square and the entrances to the high-rise buildings. The hills of the underground car parks become green stands overlooking the central square. During events the hills thus become the stands while the square is used as the stage. Therefore, the urban furniture of the square should be as flexible as possible to allow events and free forms of space appropriation. The strip of sports fields is at a lower level than the road, so that it is shielded from the noise of cars passing near-

by. This small excavation of the ground allows the placement of concrete steps overlooking the various sports fields.

The playroom is the last room before the large landscape voids that are located in the west/north-west (parks, forests, lakes, ...) and that can also be reached by pedestrian and cycle routes.

Project of the ground
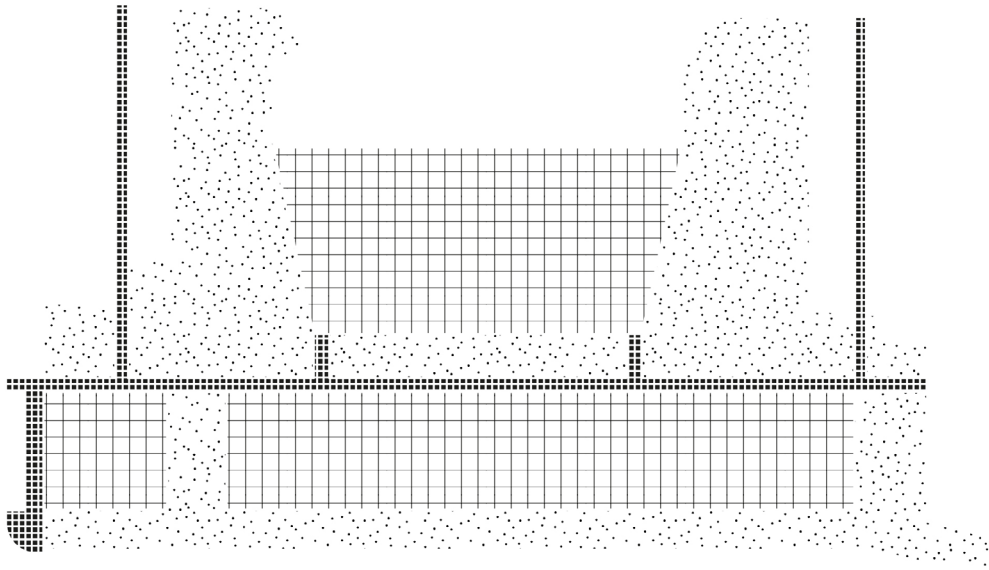
Trees

Green

Paved
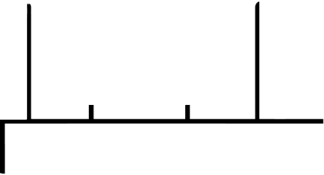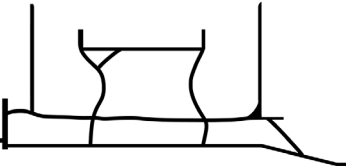
Paths
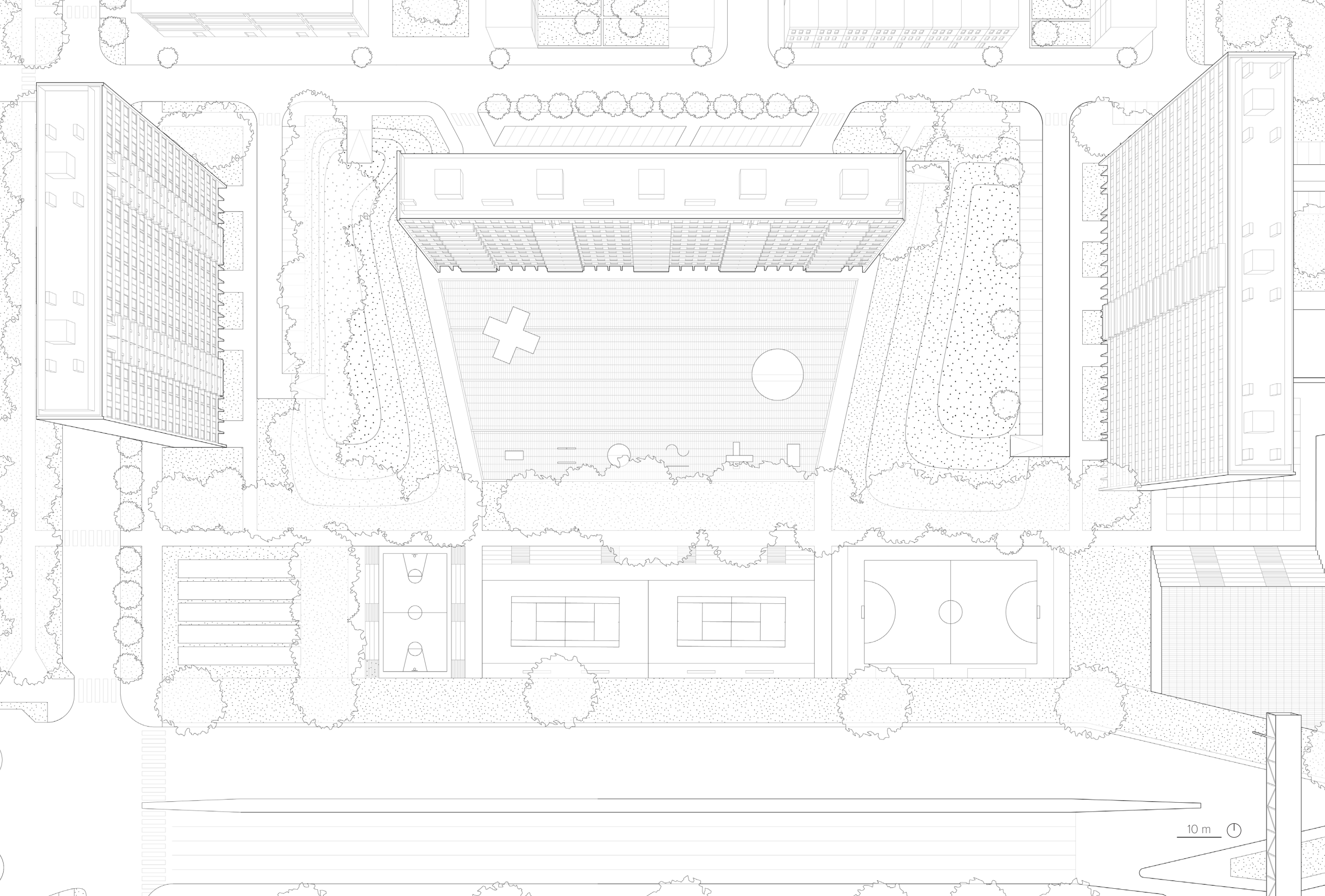
10 m
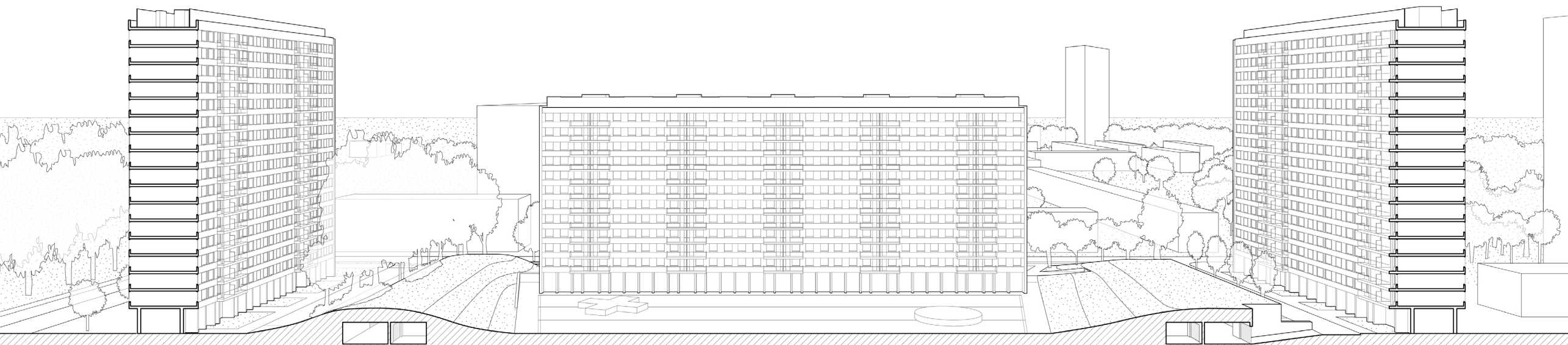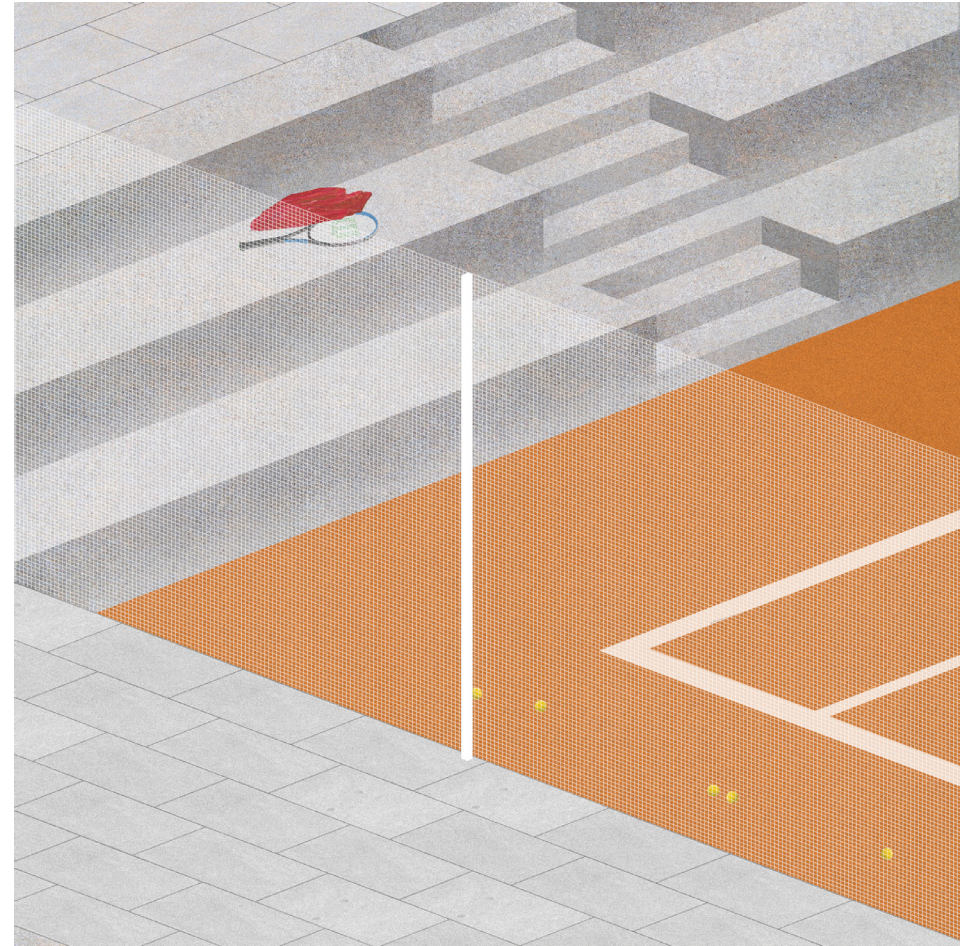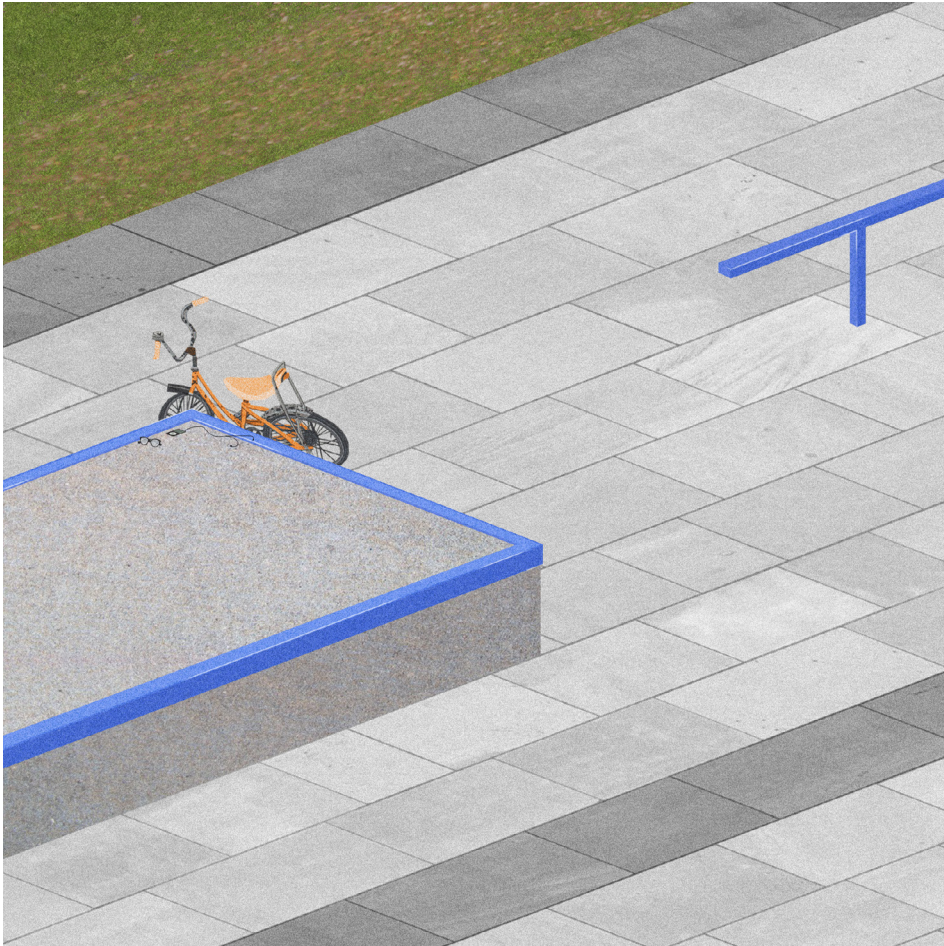
CONCLUSION

"I have several times tried to think of an apartment in which there would be a useless room, absolutely and intentionally useless. It wouldn't be a junkroom, it wouldn't be an extra bedroom, or a corridor, or a cubby-hole, or a corner. It would be a functionless space. It would serve for nothing, relate to nothing.

For all my efforts, I found it impossible to follow this idea through to the end. Language itself, seemingly, provided unsuited to describing this nothing, this void, as we could only speak of what is full, useful and functional.

A space without a function."

Georges Perec (1999) "Species of Spaces and Other Pieces", p.33

The project intended to develope a urban strategy for Linkeroever, not based on the built, but on the unexpressed possibilities and potentials of the void. We have identified three major stages that have characterised and we have made these coincide with the three macro-sections of the thesis.

1. The identification of the existing and consolidated porosity of the territory.
2. The definition, in terms of forms and limits, of a system of voids at different scales.
3. The characterization and thematization of the single voids through the soil design.

The analysis of the existing porosity was carried out through a transcalar approach that included not only voids on an urban scale but also landscape and territorial scale. This led to the extension of the field of research outside Linkeroever, outside Antwerp, and even beyond national borders.

This has been useful to us to identify Linkeroever and its voids as something unique and exceptional not only in the context of Antwerp or Belgium, but in the more general post-metropolitan condition. This process does not want to be a manifesto that can be implemented for every public space project in the European context, but only for Linkeroever. In fact, the project is based on the unexpressed quality and potential of the neighbourhood, which have strongly influenced every aspect of this design process, from the definition of the system of voids to the room approach.

The theme of creating a project in the porosity of the city has certainly been as fascinating as it was extremely complicated. In fact, as Georges Perec (1999) says, the language itself seems to be inadequate to describe the void almost as if we could only speak of what is full. However, in this project we have not forgotten about the built, but it has been subordinated to the void.

The public space is in fact the constant of Linkeroever's future urban development, while the diverse dynamics of real estate development are reduced to variables, with the aim of verifying the effectiveness of the constant.

Our approach to the project of the ground has been strongly influenced by the writings of Bernardo Secchi and Paola Viganò and by the projects carried out by their firm in Antwerp (Spoor Noord Park and Theaterplein). Secchi (1984) criticises the tendency in contemporary urban planning to fill voids, not only with objects, but with more meanings, more functions. The approach to this project has been, as far as possible, not to define functions, but only to define voids through their thematization. The *room approach* was helpful because it provided these spaces with a connotation that we usually find in the domestic context, depriving them of their most immediate meanings (park, square, street). The rooms, indeed, are not iden-

tified with the more traditional functions they could host, but for the intrinsic qualities of the void and its qualification. In fact, according to Perec (1999), conceiving a space without functions is extremely difficult if not impossible. However, Rem Kolhaas (1991) theorizes how *"imagine nothingness"* is a fundamental condition for imagining transformation processes in the contemporary city. In fact, according to Russi (2019), *"imagining nothingness can free up space from barriers, even intangible ones, but it can also correspond to the definition of boundaries and frames that highlight its present absences [own translation]"*. Therefore, the project of the void that does not provide for specific functions should not be understood as an absence of design, but rather as infrastructure, background and support for planned and unplanned activities and uses.

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