



RE-FRAMING

BIRSFELDEN



CONTEXT BIRSFELDEN

Swiss modernist housing typologies

The development in Switzerland of the 60s and of the 70s, in terms of domestic architecture, can be characterized by the emergence of new mass housing typologies, strongly influenced by the paradigms of the international style. The aim of this architectural movement, which maxims were defined by the book "International Style", written by Henry-Russell Hitchcock and Philip Johnson in order to document the previous exhibition at the Museum of Modern Art in New York City, was to introduce the industrialized mass production techniques and the separation of urban functions into architecture. These new housing developments became necessary due to a rural exodus and the concentration of power within city centers, while, at the same time, population densities within the inner urban cores started to decrease due to desires by brought levels of the population to live in a green, open surrounding and to commute into the center to work. These trends were met in Switzerland through the emergence of new mass housing developments within the urban periphery, characterized by standardized floor plans and building techniques in order to create affordable, immediately available vast amounts of apartments within a leafy surrounding, which can be traced back to the ideal of the garden city.

In the following project, we will describe the case study of Birsfelden, situated in the outskirts of Basel, as one of these typical modernist-housing settlements built in the 60s. The problems and questions that emerged since its construction more than fifty years ago will be discussed through consulting references and a changed understanding and ideal of urbanism, leading into a strategy that could be considered as a universal approach how such modernist housing estates could be transformed in order to become sustainable in future times.

Lacking qualities of the open space

The combination of an architectural principal, promoting a rational approach towards the generation of housing units by using the possibilities of the industrial area, and a landscape idea of vast greenery led to an accumulation of large scale, mostly seven to eleven story buildings, preferential placed in an east-west orientation, within an open, green surrounding. Though the open spaces were probably meant to serve as a counterpart to the dense inner city and to promote a healthy and friendly environment, these areas nowadays lack of a certain program and of a function. Heavily underused and failing to create a connection between the apartments and its ambient green, these spaces could belong to anyone or no one. Confronted with this fundamental aberration, research was conducted in order to find examples how the built form and its surrounding could be transformed to create a framework of interaction and mutual benefits so that the existing situation will be improved.



La Grabelle, Genf



Regensdorf, Zürich



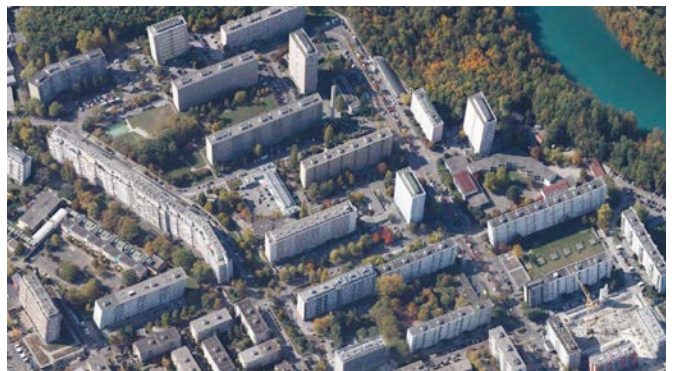
Kappelenring, Bern



Örlikon, Zürich



Birsfelden, Basel



Bois De La Chapelle, Genf



Altstetten, Zürich



Fribourg

REFERENCES

Modernist housing developments beyond Europe: Mario Pani's Unidad Habitacional Nonoalco-Tlatelco in Mexico City, 1960s

In contrast to the modernistic-housing developments in Europe and their lacking qualities of the open space the projects realised in Middle and Central America tackle the surrounding landscape in a different and more successful way.

"The Unidad Habitacional Nonoalco-Tlatelco is the largest apartment complex in Mexico, located in the Cuauhtemoc borough of Mexico City. It was built in the 1960s by architect Mario Pani. Originally, the complex had 102 apartment buildings, with its own schools, hospitals, stores and more, to make it a city within a city." (Source: densityatlas.org; wikipedia.org). Despite its current demise due to lacking maintenance work and damages caused by earthquakes, the Unidad Habitacional serves as a notable reference how a desired activation of the greenery could be achieved.

During our seminar week, we were able to visit the site, leaving us impressed with how important the control of movements caused by the inhabitants of the settlement are and how Mario Pani achieved to concentrate the flow of people and therefore creating a certain urbanity by inserting two simple elements. A network of covered pathways interlinks the entrances to each building with public plazas placed in strategic locations. These are used as playgrounds for kids, as covered meeting places, as an open-air stage for music or theater events and as green recreational facilities. The monotonously aligned slabs are diversified in this way, granting the surrounding build structure a certain identity while, at the same time, the pathways enable inhabitants to interact. Though favored by a different climate, elements used in Mexico City could be transferred to Switzerland.

Framed Garden

One of the biggest challenges we had to face was to find an answer to the problematic of the generous open spaces of the modern era, where you feel lost and alienated. How can we turn these spaces into something meaningful for the inhabitants? We found an answer to this question in the concept of the garden, which etymology wise refers always to an enclosed space, that barely exists in modernistic-housing developments, where architecture has fallen back into a state of narcissistic role in the design of objects. Instead we do not want to propose architecture in a first place, but define the relationship between architecture, its inhabitants and the surrounding landscape.

Sources

Image left top: (retrieved 25/5/2013)

<http://www.flickr.com/photos/16924714@N02/2368436696/>

Image left bottom: (retrieved 25/5/2013)

<http://dickschmitt.com/pictures/sicily99/monreale.htm>

Image right bottom: (retrieved 25/5/2013)

http://it.m.wikipedia.org/wiki/File:Monreale_Kreuzgang_neu.jpg



subdivided open space, Unidad Habitacional



framed gardens, Abbey of Monreale

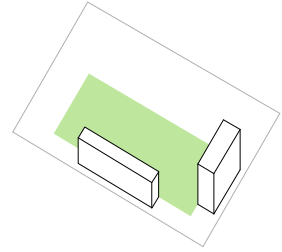


permeable open space, Unidad Habitacional Nonoalco-Tlateloco

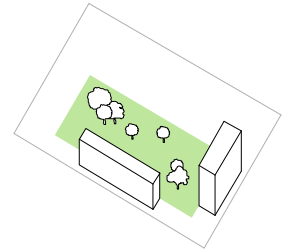


garden framed by architecture, Abbey of Monreale, Sicily, Italy

APPROACH



gardens among existing blocks are established



existing trees form identity of the garden

Re-framing Birsfelden

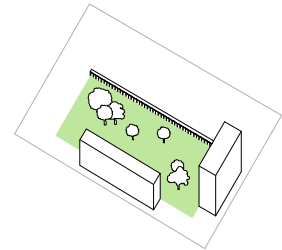
The focus of our project is concentrated on transforming the green, open space of Birsfelden. Therefore, this approach can be seen as an eversion of the paradigms of architecture in the modern era, where the focus of attention is set on the build form.

Taking into account the shadowing of the buildings, the exposure to the sun and the existing parking garages we defined neighbourhoods with a critical size and assigned to each of them a garden. These gardens are in contrast to the generous open spaces of the modern era, where you feel lost and alienated and are defined by existing trees, existing buildings that are accessed from the common open space and by a child-friendly environment.

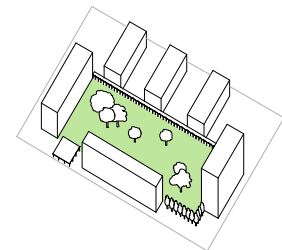
By adding a new network of neighbourhood gardens, the current conditions will be improved through the definition of a hierarchy of greenery, the connection of formerly disperse space between the existing building and the adaption to human scale.

Buildings are secondary elements, which help to define the edges of these gardens. Wherever the gardens are not framed by architecture we introduced new buildings.

As the houses from the modern era have only very small apartment sizes and the average household size of Birsfelden is 1.97 with a declining tendency we decided to introduce bigger apartment sizes that attract families. One of the newly introduced housing typology is the row house. It is not only one of the most popular among Swiss families, but is an enrichment for our area of intervention that is mostly defined by high slabs, because it has a very distinct and different relation to the surrounding space.



covered pathways enhance framing of the garden and mark major connecting paths



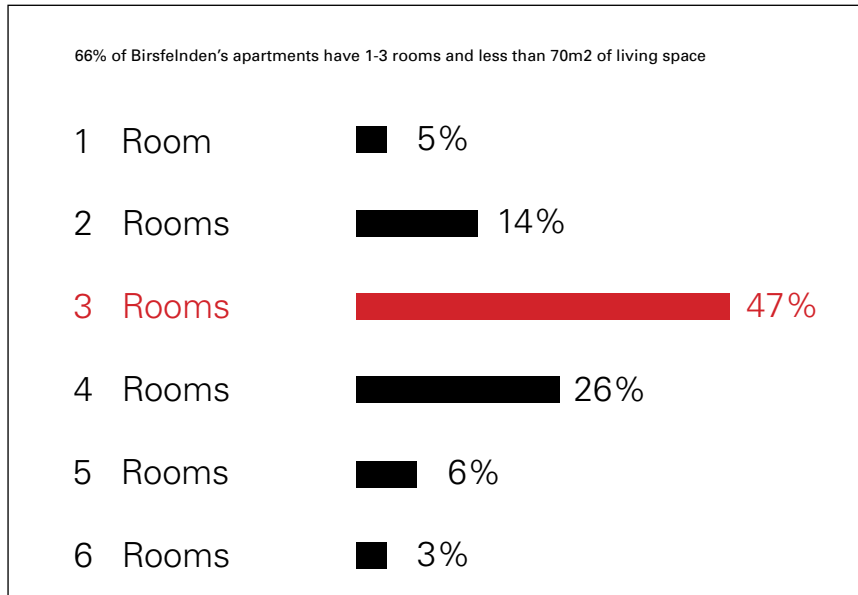
new building typologies and framing elements are introduced

- unappropriated green spaces
- row house gardens
- private gardens
- perimeter block gardens
- allotment gardens
- park



unbuilt space typologies

TYPOLOGIES



Apartment sizes in Birsfelden

Birsfelden doesn't offer housing for families nor attracting better-off inhabitants



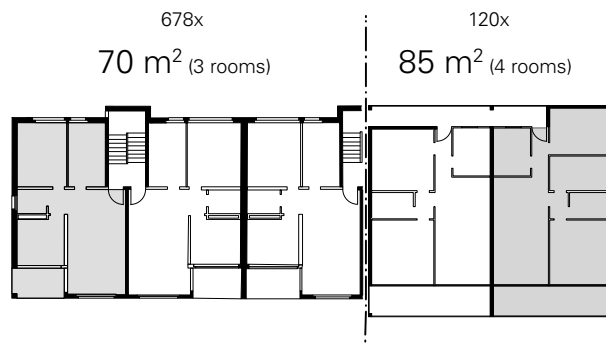
Birsfelden is shrinking

Birsfelden has a missing variety of housing typologies

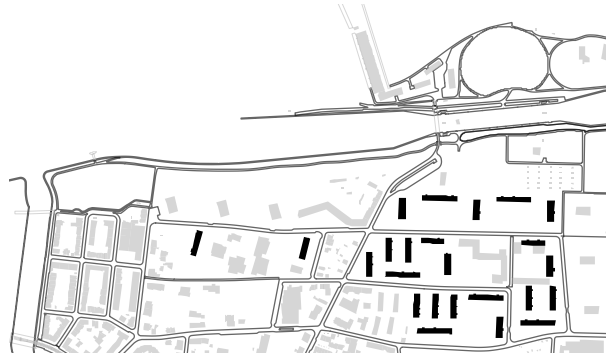
Even if the proximity to the river Rhein and Birs offer huge areas for recreation and leisure activities and the closeness to Basel is potentially really attractive for commuters, Birsfelden doesn't attract families nor better-off inhabitants, because of the existing supply of housing. Especially our area of intervention has a lacking diversity of housing typologies. Built in the 1960s from the Baugenossenschaft des Eidgenoessischen Personals Basel on a former empty land of the airport Sternenfeld that should become the airport of Basel, we can find mainly three different floorplans, that are shown on the opposite site. Most apartments have only three rooms and 73 percent of all apartments have less than 70 m² of living space.

Complementing housing and green typologies

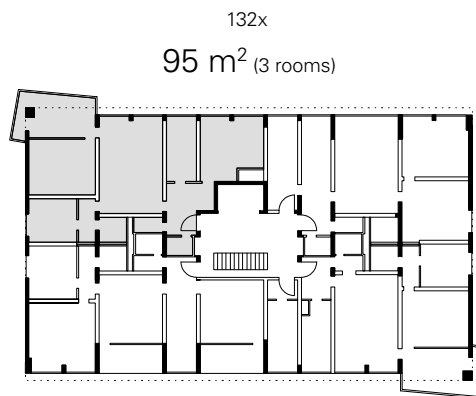
As the houses from the modern era have only very small apartment sizes we decided to introduce bigger apartments. One of the newly introduced housing typologies is the row house. It is not only one of the most popular among Swiss families, but is an enrichment for our area of intervention, because the row house has a very distinct and different relation to the surrounding space. The workshop spaces on the other hand offer additional spaces that can be rented from the residents in the existing modernistic buildings, but could also serve as accommodations for start-up companies. The newly introduced slabs do not only offer bigger apartments sizes, but have a very different relation to the surrounding compared with the existing slabs. The open space in front of the building becomes a green space, belonging clearly to the slab and offering to the inhabitants the possibility to have their own kitchen garden. The existing highrises that are right now isolated and do not have a clear orientation are complemented with a cluster of new highrises that are composed around a commonly shared open space.



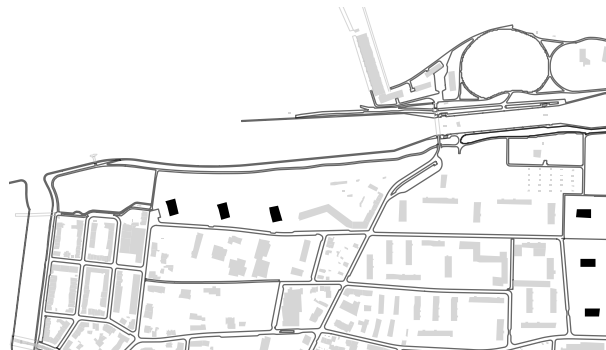
regular floor plan 1:500



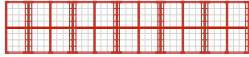
site plan 1:20.000



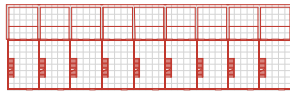
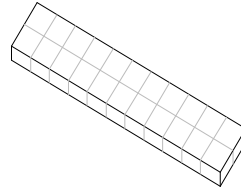
regular floor plan 1:500



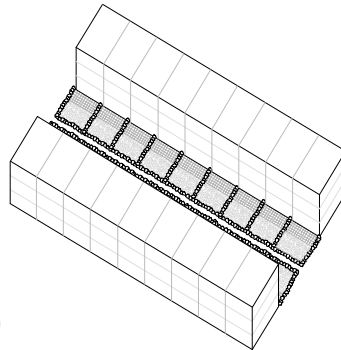
site plan 1:20.000



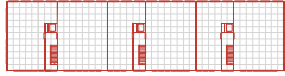
workshop spaces
11 - 15 m²



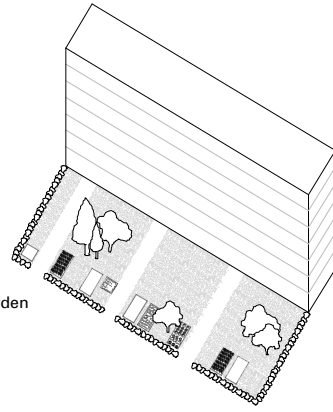
row house
120 - 170 m²



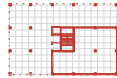
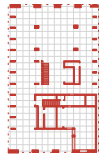
private garden



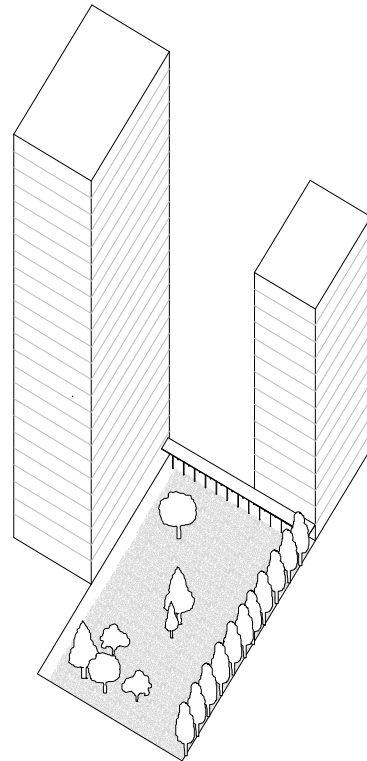
slab
90 - 100 m²



kitchen garden



highrises
50 - 130 m²



garden

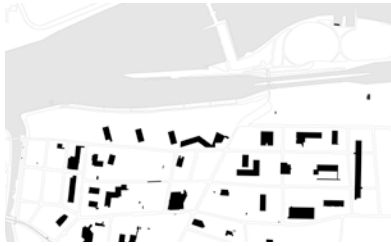
CONSTRAINS



constrains: existing buildings



constrains: shadowing



constrains: footprints underground



geometriacl rule: fill in perpendicular to the garden

Placement of the gardens following constrains

Taking into account the shadowing of the buildings, the exposure to the sun and the footprints underground we defined neighbourhoods with a critical size and assigned to each of them a garden. These gardens are in contrast to the generous open spaces of the modern era, where you feel lost and alienated.

By adding this new network of neighbourhood gardens, the current conditions will be improved though the definition of a hierarchy of greenery, the connection of formerly disperse space between the existing building and the adaption to human scale.

As mostly our designated gardens are not enclosed spaces we established a geometrical rule how the newly introduced buildings should be introduces towards the garden, namely perpendicular, increasing the permeability toward the gardens.

Implemented housing and green typologies

Following our geometrical rule of infill we started to implement the new housing typologies to the project site, framing the proposed gardens. On the other hand we changed the ground floor plan of the existing buildings in a way that you can always access the buildings from the gardens, whereas today the entrances are only facing the streets.

The remaining green space, nearby the buildings, that operates most of the time as a distance space, is treated in a different way assigning each building, including the existing ones, its own outdoor space that can be used by the respective inhabitants as kitchen gardens.

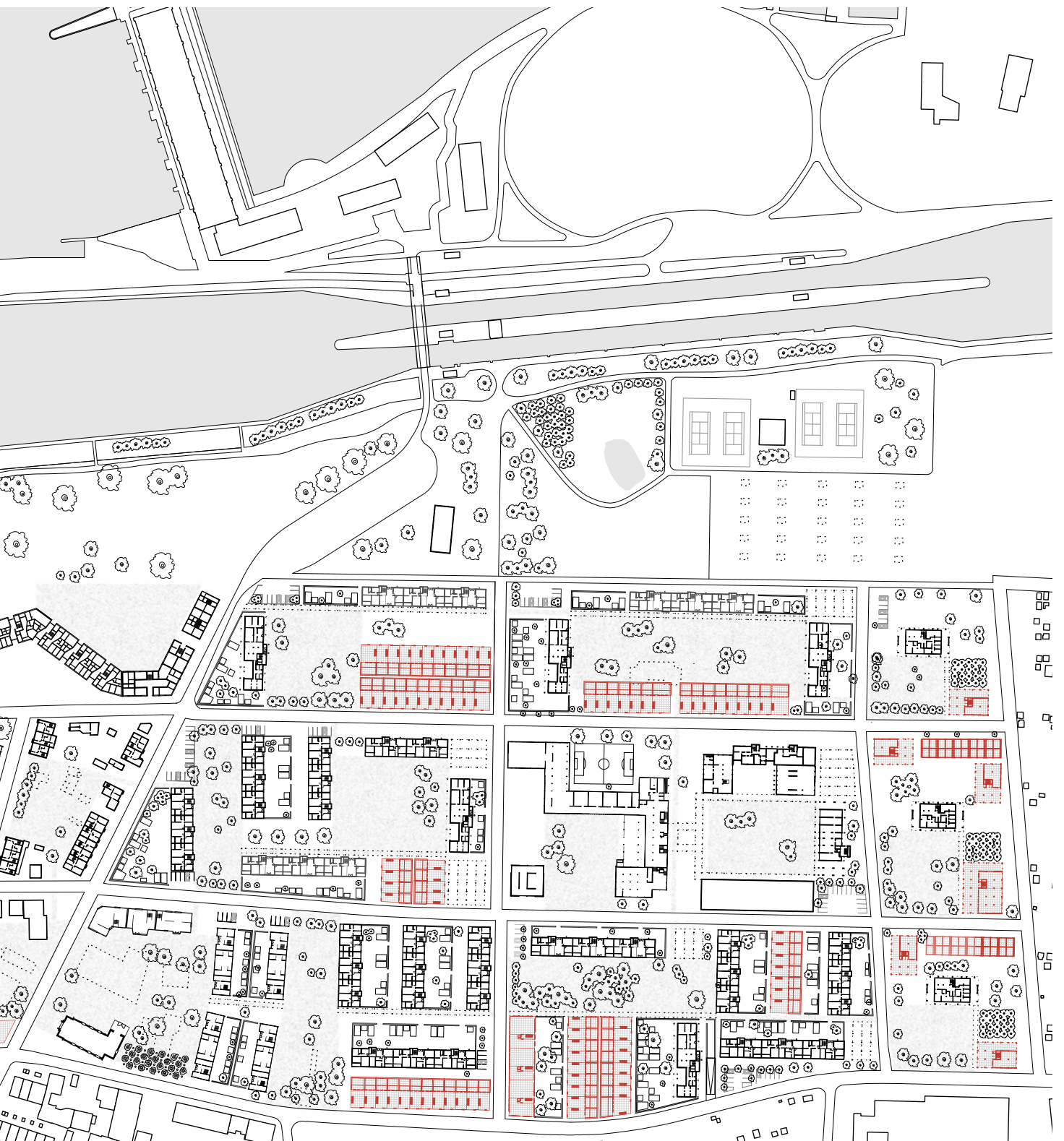
Additionally we created covered roof structures functioning as outdoor parking spaces as we don't have enough parking capacities in the existing underground garages after densifying the area.



placement of the gardens

PROJECT PLAN





MODEL

Interconnected neighborhood gardens

The result of the strategy described before is a system of highly interconnected common gardens, serving as a recreational space for the surrounding buildings and its habitants. The accessibility into each housing unit is arranged in a way so that the connecting paths have to be used by the local population, therefore creating a certain density and an urban feeling.

The riverfront is left open in order to be used by the population of Basel as a public green space. In the area of the Rhine Towers, which will be complemented through the addition of two new towers, accessibility to the river is improved through lowering the terrain by 2.8 meters. The former basements of the towers now serve as spaces for shops, cafes and restaurants, while accessibility to the housing estate is secured by a generous ramp, marking the transition between the public park and the settlement in the back. Current allotment gardens remain mostly untouched as they serve as a buffering zone between the housing area and its industrial surrounding.

Transformation

The proposed transformation of the existing structure can be best comprehended by comparing the two axonometric drawings on the next two pages, one showing the current existence, the other the designated alteration. The formerly open, undefined green space is structured through the insertion of the gardens, following constraints described previously. In a next step, new typologies like the single-family row house or the slab are introduced following the geometric order which accrued through the introduction of the green spaces, framing and containing these. While each of the town houses has its own private garden, kitchen gardens are introduced to complement the lacking outdoor space of the slabs. Remaining spaces are used as covered parking lots for cars and bicycles, for sports fields and other activities.

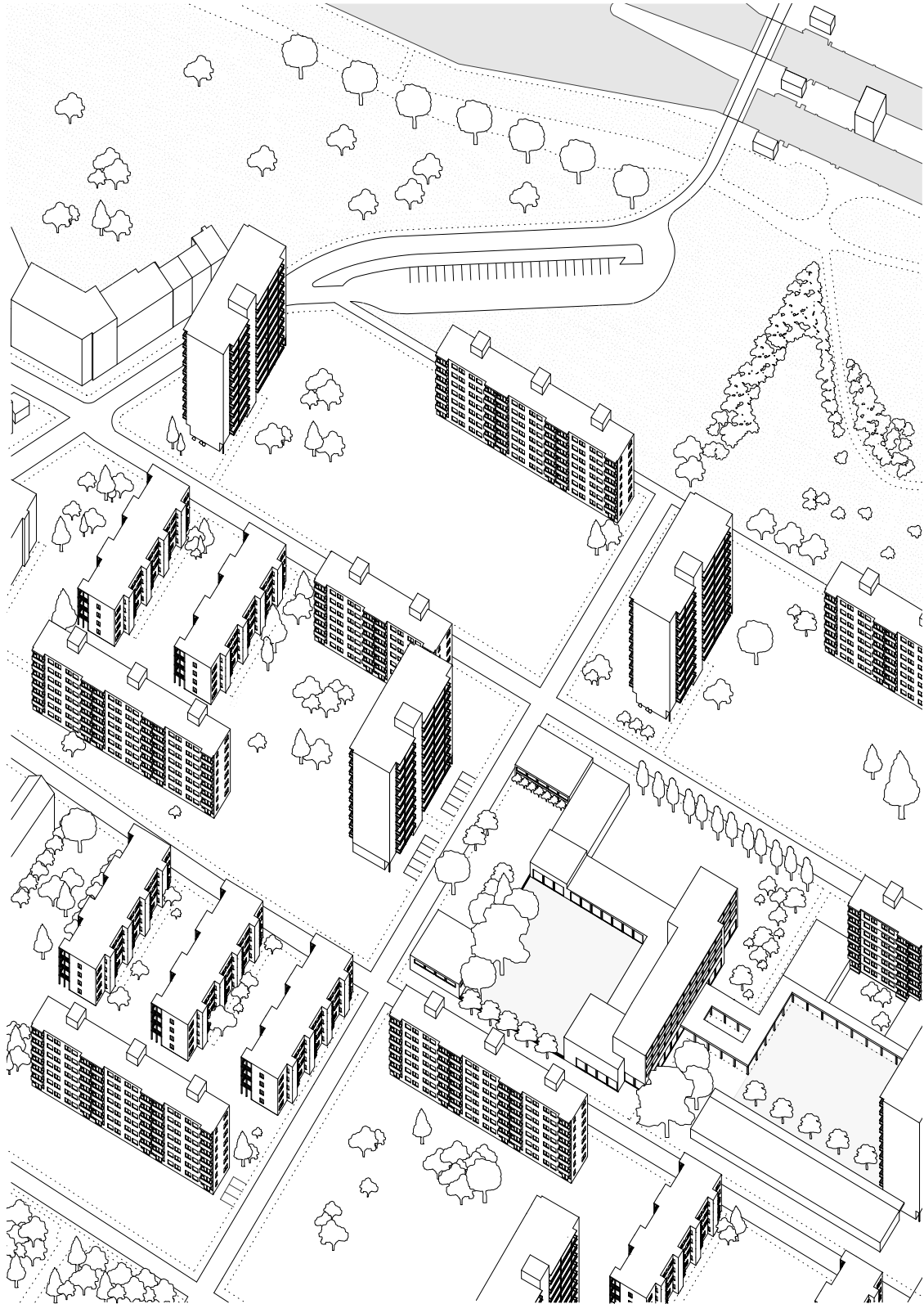
The result is a densified housing estate with a strong interaction between its inhabitants through common pathways and gardens, enabling residents to identify with their build structure and its surrounding green.



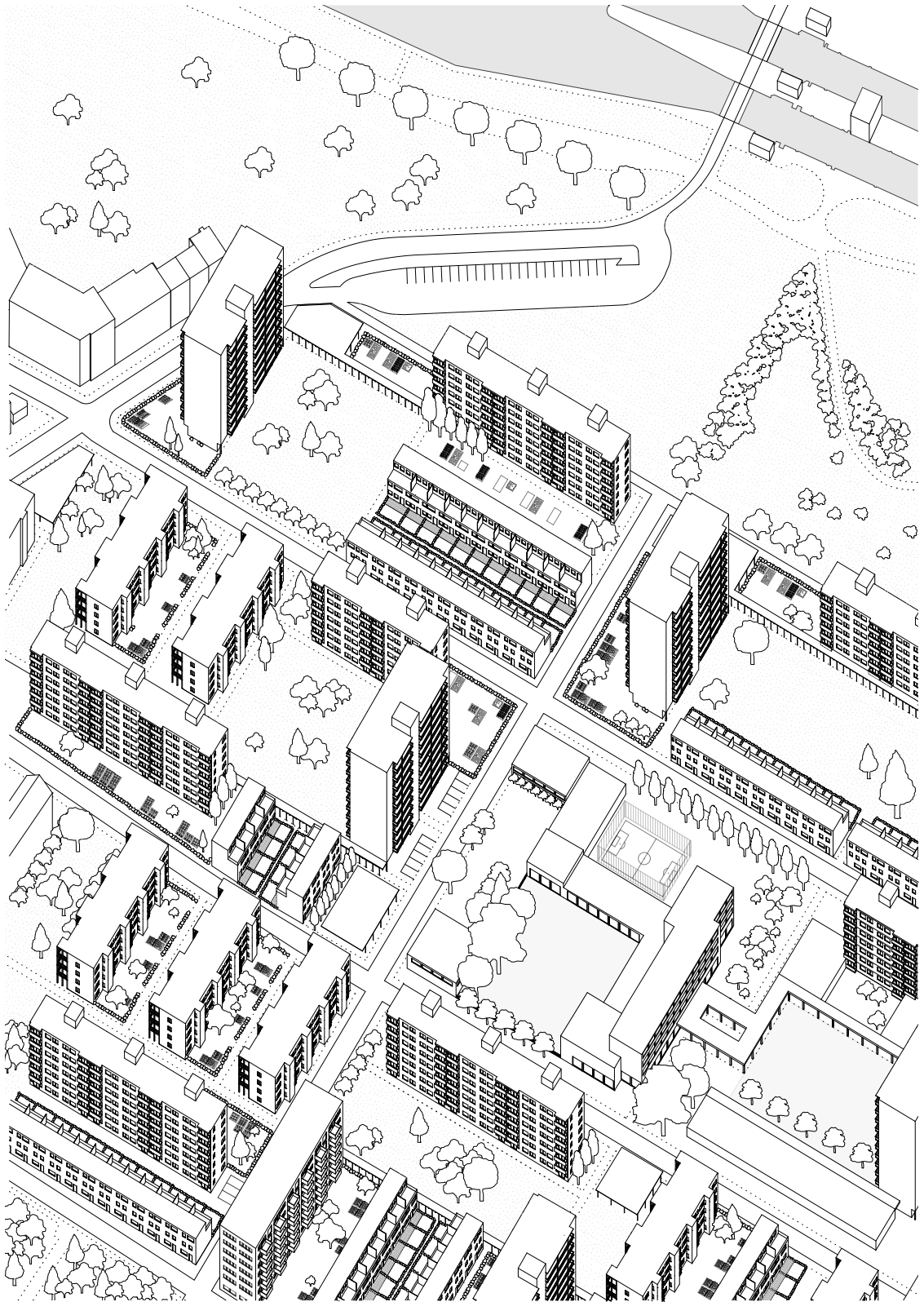
interconnected neighbourhood gardens



riverfront



axonometric drawing existing situation 1:2.000





zoom in masterplan 1:1.500



Riverfront



zoom in masterplan 1:1.500



neighbourhood garden

RESUMÉ

Eversion of the modernistic paradigms

Our approach aims at finding a successful strategy that is able to deal with the residential settlements from the 60s in a sustainable way. The advance is putting great emphasis on integrating the existing modernistic buildings and on working with the vast green space, which does not only proved to be the biggest problem in the course of the project, but also emerged as a primary potential of the settlements of the modern era.

In our project, the success of the city does not primarily depend on the architectural quality of each building, as the design project provides a superior framework, a permeable open and interconnected structure. It doesn't propose architecture, but it defines the relationship between the built structure, its inhabitants and the surrounding landscape. Therefore, this approach can be seen as an eversion of the paradigms of architecture in the modern era, where the focus of attention is set on the build form.

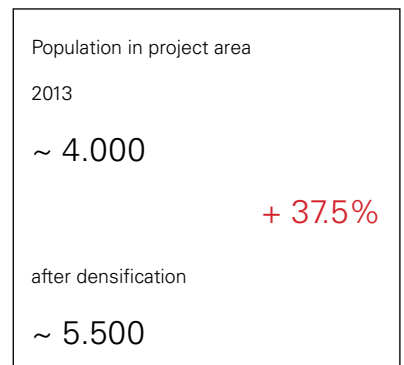
New branding of Birsfelden

Through densification we are going to increase the population in the project area by around 37.5 percent. Birsfelden becomes attractive for families and better-off inhabitants due to the newly introduced housing typologies. This will help the commune to increase tax revenues and will give a decisive impulse on changing the image of Birsfelden in peoples mind. The area has truly a huge potential due to its proximity to downtown Basel, important infrastructures like the train station and the highway and its recreational areas along the river Rhein and Birs.

Potential

The potential of our strategy is that it can be considered as a universal approach how modernist housing estates could be transformed in order to become sustainable in future times. Considering the amount of modernistic settlements all over Europe that can be seen as a considerable legacy from the past century, we have to find a way to deal with them as we cannot afford to replace all of them.

The leading idea of creating interconnected neighbourhood gardens makes use of the vast green space of the modernistic settlements, enables a modest densification and diversification, while creating a hierarchy of the greenery and increasing the value of the existing buildings.



increase of residents

Birsfelden becomes attractive for families and better-off inhabitants due to the newly introduced housing typologies.



lacking qualities of the open space



neighbourhood garden