TALES OF BALCONIES

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A study on exterior spaces in urban housing

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ABSTRACT

This thesis seeks to explore the balcony, as an architectural element, a function and a space, its limits and possibilities, urban housing design. The thesis gathers a collection of architectural studies focusing on the interface between the interior and the exterior, that separately explore various aspects of the main subject.

As the contemporary balconies usually take shape as large cantilevers independent from each other, the building and the context, this thesis is a reaction to this generic trend. Diversity and distinction are therefore key aspirations.

The thesis distances itself from the technical definition of a balcony as a cantilevering element from the body of a building and rather investigates the theme of balcony as a program and an opportunity space from a cultural perspective.

The thesis is a design project, yet with a historical and referential backdrop and conseptual studies in order to understand the origin and the nature of the subject.

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Thesis

RESEARCH QUESTION

How can we increase the quality of living by facilitating for direct access to private outdoor spaces from the urban housing units and at the same time elegantly contribute to densification of our cities?

How can we utilize and increase the potential of the balconies in future urban homes?

ON THE VALUE OF EXTERIOR SPACES

The space of a house enclosed on all sides has been given a compensatory counterpart in modern residential architecture in the form of various open architectural elements, either covered or exposed. Balconies, loggias, terrasses and porticos are different elements of architecture, but they all strive to satisfy the human desire for direct access to fresh air, light and sun.

A kind of “green room” is a desirable space in the contemporary world. In surveys of what people want in their apartment, private exterior spaces have alwyas ranked very highly (Corrodi, 2008). The lack of such exterior space has the most lasting influence on dissatisfaction with an apartment (Ebner 2010). A loggia or a balcony is thus an exterior room with a view, it not only extends the apartment, but also makes it whole.

Observations	My observations on specific aspect of the subject.
Study	Raising questions regarding the topic through referential projects.
Drawing exersize	Intuitive mapping and articulating of the observed. A drawing exercise reduces the architecture to its perimeter. Its primary function lies in the simple mediation between inside and outside. The drawing exercises are not directly connected to the final projects, yet they are important as a backdrop, as an ongoing discussion and as research.
Feasibility study	In order to study the relationship between the inside and the outside, one needs an outside. Feasibility study is design proposals for a multistory apartment building in a specific context.

METHOD

Following my intentions to develop a certain approach and examine strategies and methods for designing, the goal of the project has been to develop a series of studies investigating outdoor spaces adjacent to the urban housing units, and explore the potential that lies in the interface between a dwelling and its context.

The semester was divided in two parts:

Part I: free research and drawing exercises

Part II: feasibility study on a specific site

I Cyclopedia

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BALCONY - OUR NEW SANCTUARY SPACE

The pandemic and repeating lockdowns has changed our behaviour patterns. During the last year many of us have worked from home or been in quarantine. The everyday life has been especially challenging for those inhabiting small dwellings in dense cities.

Facing the impossibility of escaping, the lucky ones owning a balcony are able to seek refuge in that privileged space. The balcony has thus become the protagonist of these sad times, the quarantine and the forced isolations. The liminal spaces on the edge of the domestic walls allow us to keep in touch with the outside, the other people and the barely existing street life, while staying inside our own home. From here, while standing still, immobile and confined, we participate in the voluntary work of the greatest challenge the world has faced since the Second World War.

As our public life moved from the streets to the walls during the last year, people have added several new uses to their balconies. In March 2020 Elisha Nocomovitz ran a marathon on the seven meter long balcony in his apartment in Toulouse (The Guardian, 2020). People pull out their yoga mats, move the dinner tables or their music instruments out, cheering, listening to concerts and participating in flash mobs from their balconies creating a distanced community, alone but together.

The pandemic has shown us the effect a simple balcony can have for our well-being. *Can a balcony become an essential full-fledged room in the new homes we design?*

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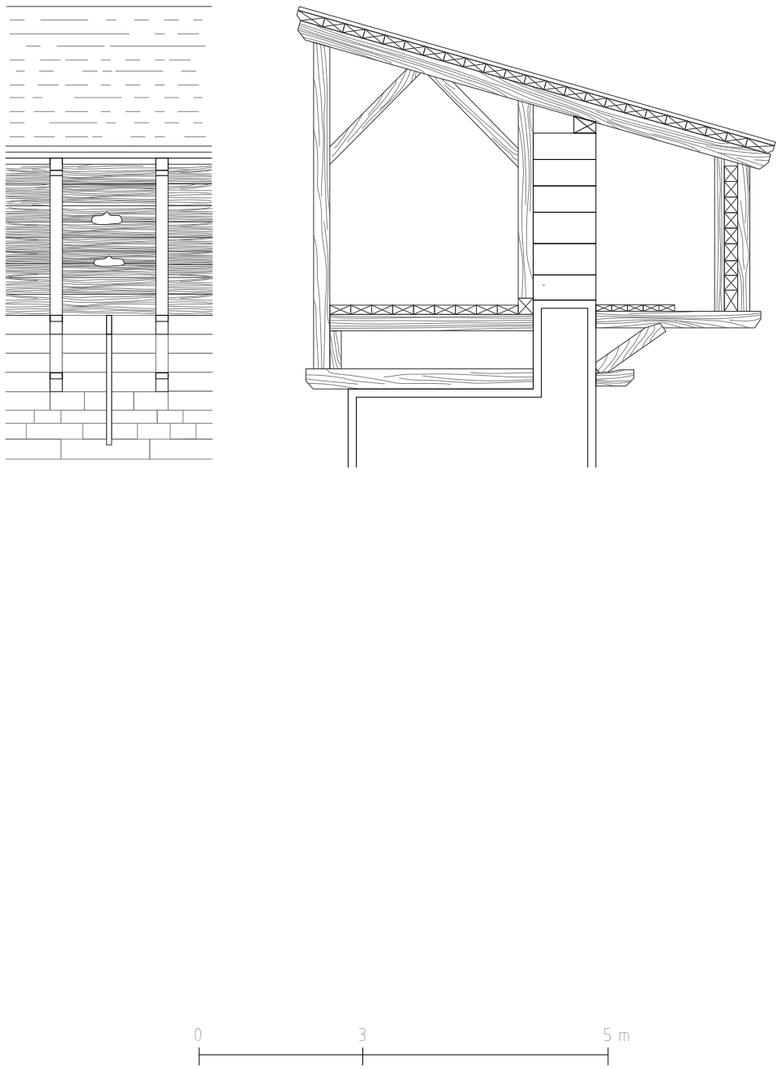
Harald Sohlberg, Fra et hjem 1919

ON BALCONY'S NATURE

Balconies are transitional spaces - at the same time inside and outside, public and private. It is a unique architectural element with an ambiguous status of being connected and at the same time detached. These semi-enclosed spaces create illusions as the dwellers are seen but not heard, among the people but separated and protected from them. They are faces of the buildings, a physical filter for the interior spaces and a social filter for the dwellers. Throughout the history, the balcony has been a scene for technological and social progress and a symbol for hygiene, power and ecology.

The balcony is by definition a horizontal platform that projects from the facade of a building. The word has its etymological origin from the Old High German word *balko*, meaning beam. The origin of the word points directly to the constructional character of this part of a building (Ebner, 2010).

Based on the history of the balcony's evolution, it has not always been associated with residential architecture. Quite on the contrary, all the traced original purposes of the balcony were of a very different nature (Ebner, 2010).

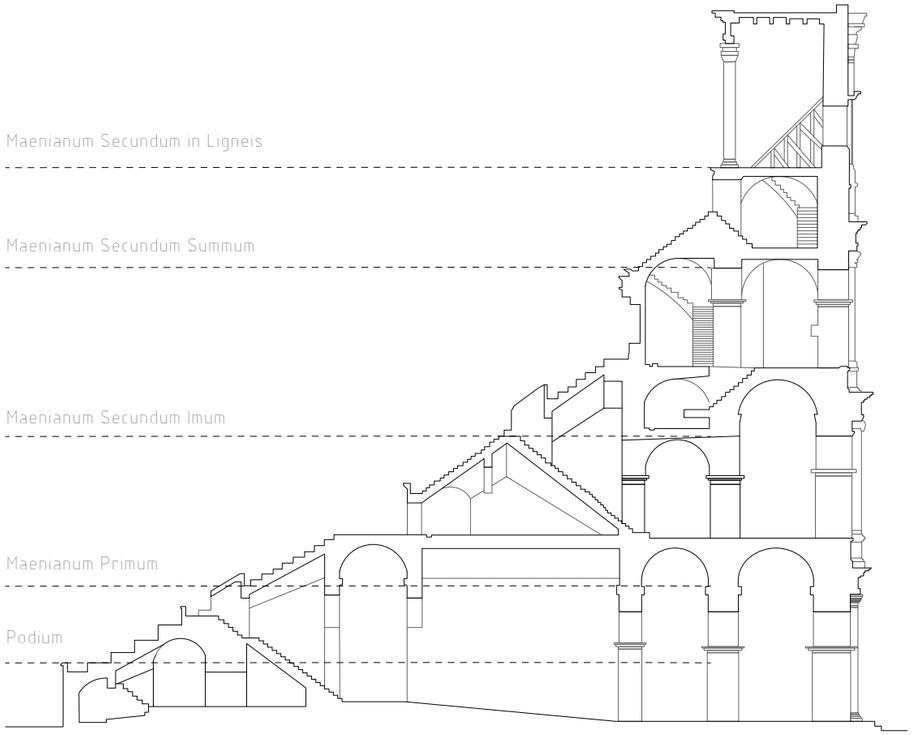


ORIGIN STORIES: THE PRIMAL HOURD

Eugène Emmanuel Viollet-le-Duc in his *Dictionnaire Raisonné de l'architecture Français du VIe au XVIe Siécle* traces the history of the external balcony to an 11th century anti-siege device: the hourd (Koolhaas, 2014).

As the hourd is a mountable wooden structure, it is distinct from the fortress stone wall in material and in time schedule. It was installed on the upper walls or towers of a castle when a battle was imminent, sometimes even during battle (Stamp 2014). Like later balconies, the hourd boosts exposure to the exterior, balancing safety and engagement with the outside world, in the case of the hourd - engagement in the war.

> ""*The hourd: Scaffold closed with planks, applied to military architecture, it is a wooden structure standing at the top of the curtain walls and towers for receiving defenders, overlooking the foot of masonry and giving a wider flanking projection, very favourable to the defence.*"
>
> - Viollet-le Duc in *Dictionnaire Raisonné de l'architecture Français du VIe au XVIe Siécle, 1854-1868*



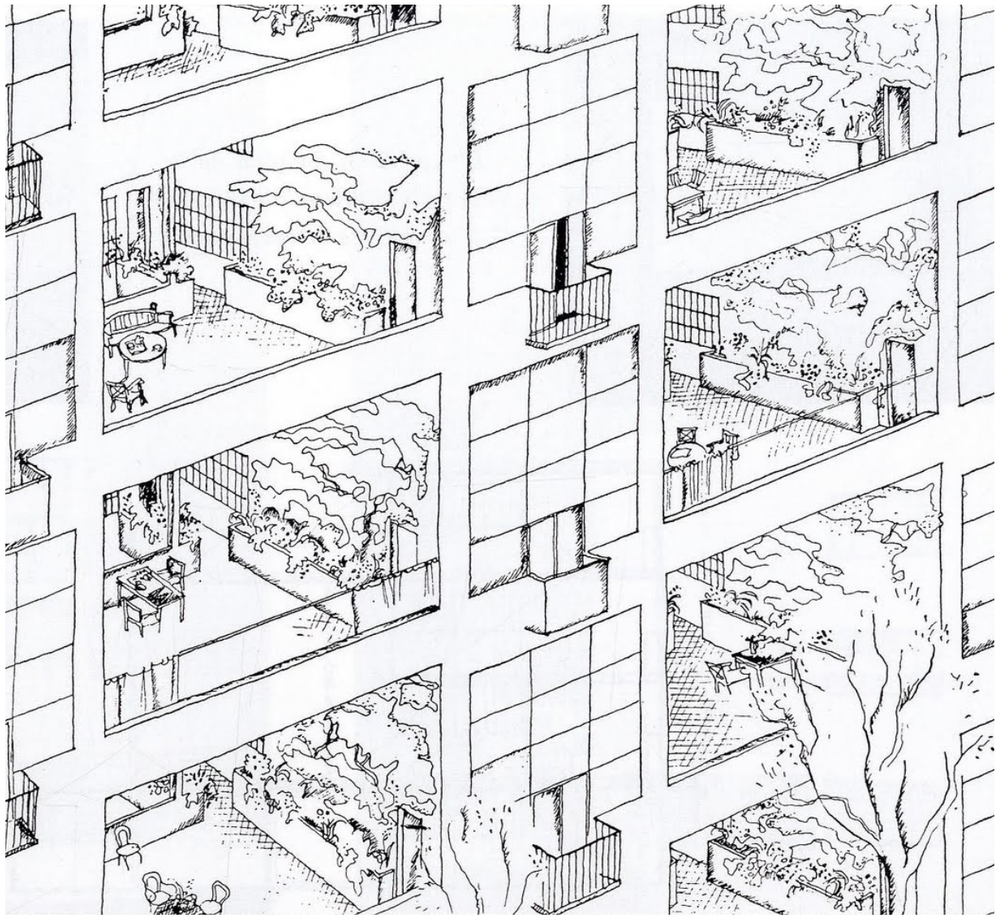
ORIGIN STORIES: MAENIANA

Rome's first balconies were called *maeniana* (Koolhas, 2014). Vitruvius stated that maeniana, or a balcony, should be present in the construction of a forum to create more space for the spectators during gladiatorial shows. This would result in a greater revenue.

Festus, a fourth-cuntury writer who composed a *Summary of Roman Histoy*, explained the origin of the word:

"They are called maeniana for Maenius the censor who was the first to extend wooden beams in the Forum beyond the columns so that the upper spectacula could be enlarged."

(Welch, 2014)



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Le Corbusier, Immeubles-Villas 1922

ON (URBAN) DWELLING

The archaic shelter had one task - to provide security for its inhabitants. The primal hut, a cave or a wooden frame, a tent or an igloo, therefore always had a door, but no windows. As shelters' primary purpose was to providy security, not of living, it needed no daylight. Therefore, natural light was not really discussed in relation to the residential architecture until the twentieth century. (Auer 2008)

From the beginning of the twentieth century and especially after The Second World War, the idea of a light-flooded home, both for the social elite and for the broad masses, started to flourish. Social movements making effort to improve living conditions for the working classes, initiated studies on effects of the dark and unhygienic living conditions. Bad air and an absence of natural light were soon announced as the main evils. Fresh air, sun and light became asscoiated with health. This was used to develop theories and standards for the modern dwelling. Daylight became one of the most important factors in the design of floor plans, building volumes and even layout of large urban developments.

In this light, the protagonists of the Modern Movement dictated the use of generous panes of glass, but also expansion of living space to the immediately adjacent exterior spaces (Corrodi, 2008).

The relationship between the home and work was another factor creating guidelines for housing design throughout the times. During the times of strict separation between home and work the dwellings and its outdoors spaces were devoted to leisure. In the last decades, this relationship has changed. As the housing and working have fused, it is logical that spaces and functions in our homes have to be redefined.

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Home of Ignazio Gardella

RATIONALISTS ON MODERN DWELLING

The post-war reconstruction of Italy differs from the rest of Europe. Modernist tabula rasa principles of rebuilding and optimization of the dwelling spaces, with Le Corbusier as the first spokesman prevailed in most of Europe. Italian reconstruction, on the other hand, consisted of everything that the Modern Movement otherwise in Europe contested: the preservation of constructive traditions, the cultural heritage and the importance of local craftsmanship.

Especially the Milanese architects of the last century stands out for a very complex research on the "modern" dwelling. The concept of the *casa all'italiana* emphasized the importance of interior flexibility and spatial qualities, a dialogue between the building and the context, the relationship between form and structure and the language and materiality of construction details.

Italian rationalists emphasized the importance of the facade as they understood it as a backdrop of the community space. However, it was not only about the look. According to them, a well-shaped and balanced expression of a building is a pure result of a correctly organized internal layout in relation to the context and the language of the contemporary residence. A great variety of architectural elements facilitating for outdoor spaces became a significant part of their formal vocabulary.

(Pierini 2017)

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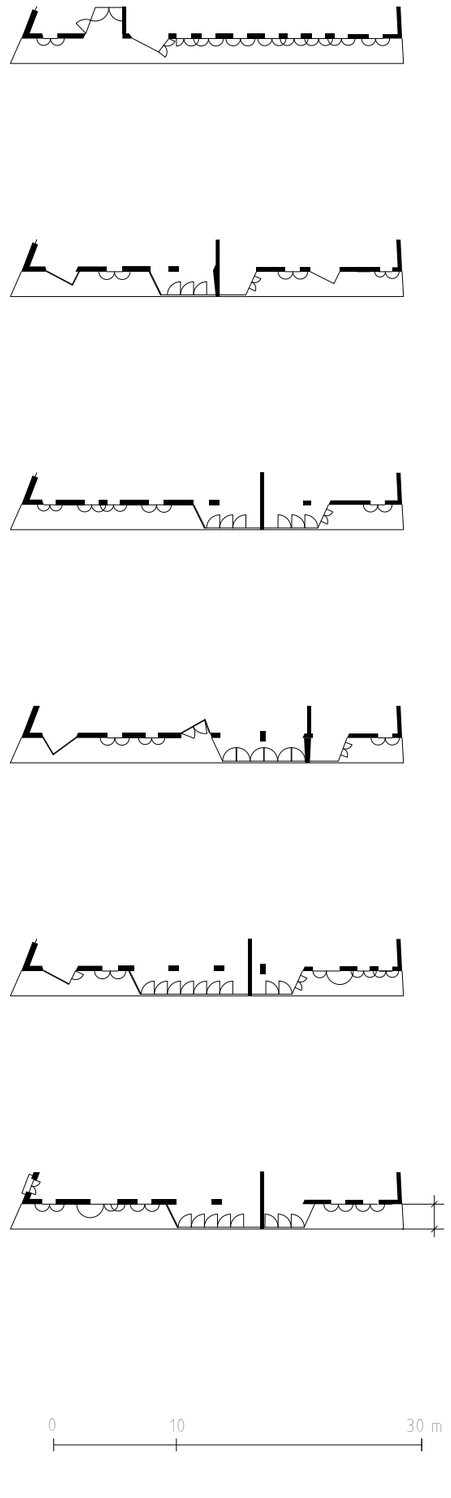
Ignazio Gardella, Condominio ai Giardini d’Ercole, Milan 1949



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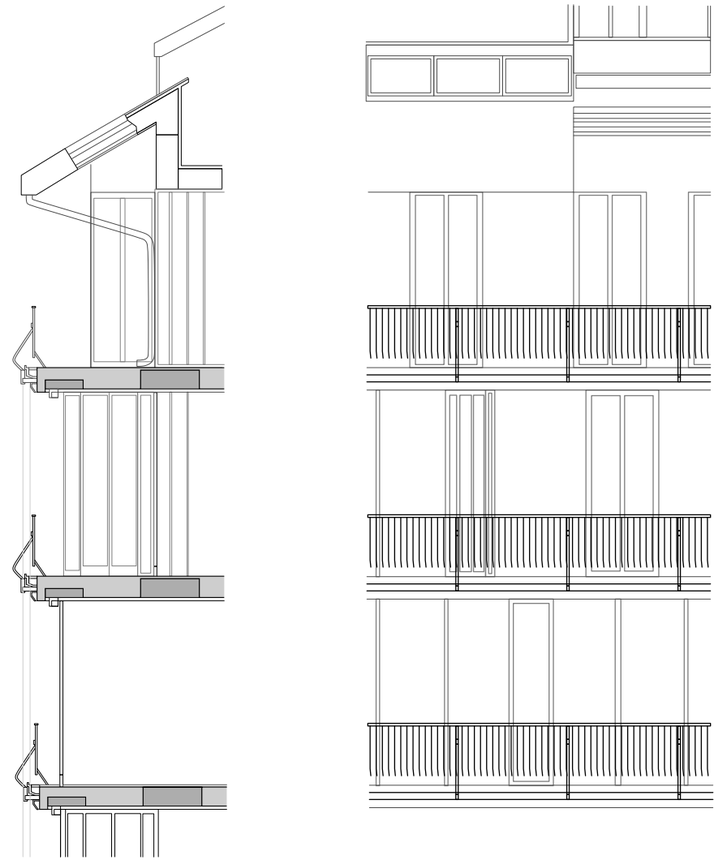
Balcony as a mediator between the built structure and the nature



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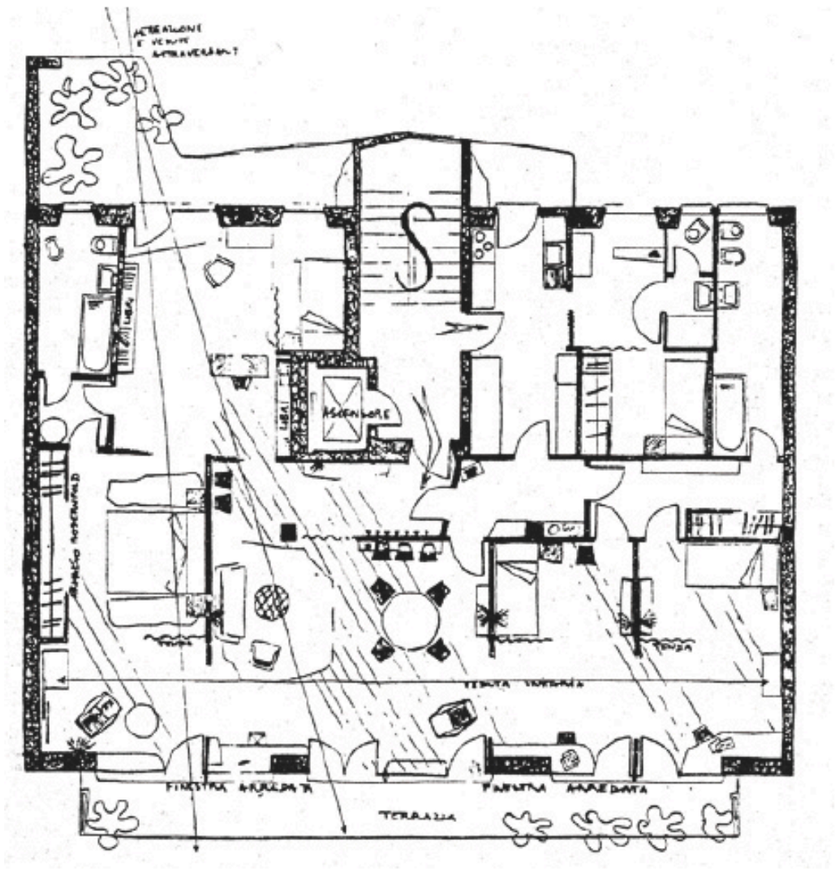
Gio Ponti, Casa in via Dezza, Milan 1957



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Directions, sightlines and room sequences in Gio Ponti's appartment,
drawing by Gio Ponti

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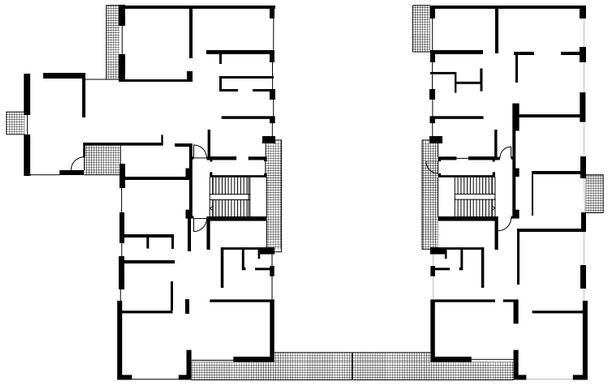
Giuseppe Terragni, Casa Rustici, Milan 1935



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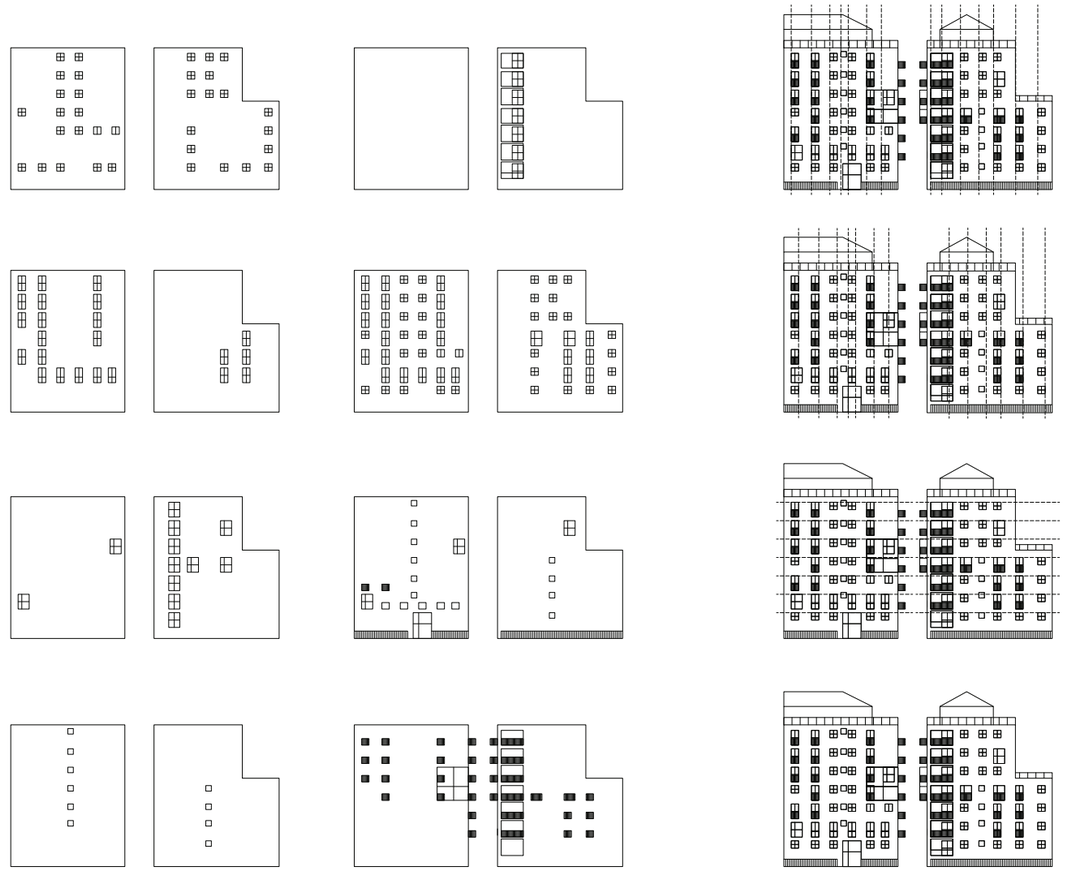
Asnago Vender, Via Farrufini 6, Milan 1954



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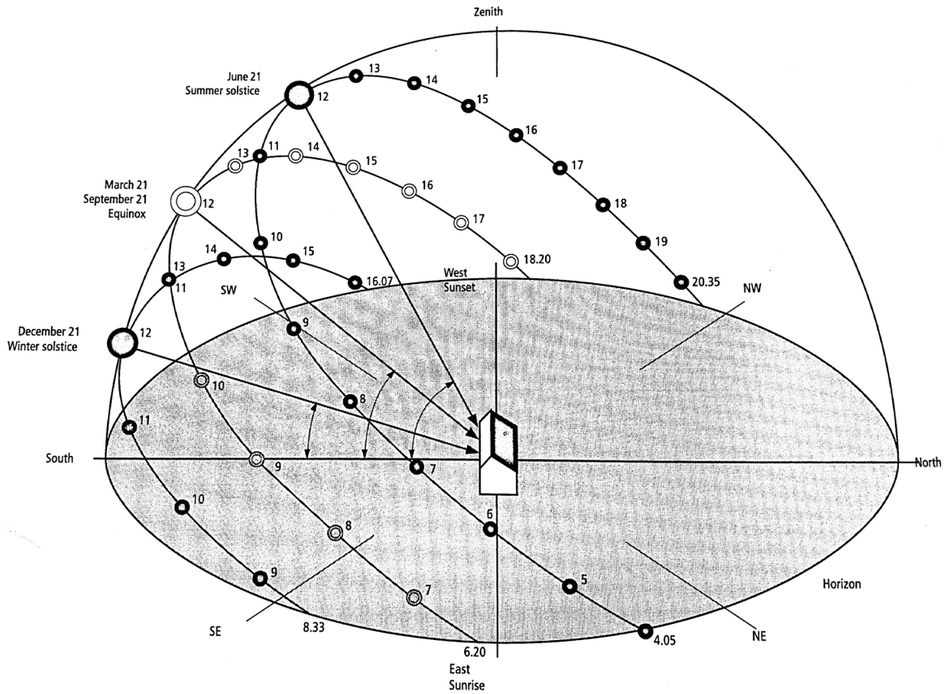

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Course of the sun during the year

ON DAYLIGHT

The significance of daylight and its beneficial effects on the human organism is today common knowledge. By following the sun throughout the day and the year, availability of daylight determines how we perceive time. A number of qualitative aspects, such as climatic conditions, buildings' surroundings and it's orientation in relation to sun, may be approached in order to meet demands of brightness when planning the interior and exterrior spaces of a dwelling.

The availability of daylight depends on the sun's path and the amount of natural light in a dwelling will therefore hinge on the geographical location of it. The Nordic countries are characterized by large seasonal variations with shorter days in winter and longer days in summer. This, together with a generally low position of the sun, are main reasons for a deficit of sunlight and heat, especially during the winter. For that reason, maximizing the influx of daylight in the homes of nordic countries is crucial for our wellbeing. In northern Europe the sun is covered by clouds 55% of daylight hours. This results in a diffuse sunlight radiation and provides soft, glare free light that comes from all sides, which is beneficial for the northern facades of a building. Strategies for sun shading are therefore not as crucial as in Southern Europe. (Corrodi, 2008).

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Sverre Fehn, Villa Schreiner 1963

THE NORDIC LIGHT

In addition to its the qualitative factors, dayligh has another, non - analytical, emotional
dimension.

Through his travels Sverre Fehn found the distinct quality of the Nordic light. He explained:

"If you build for example in Greece, light creates most of your architecture. You just need to scratch in the marble with the nail and the scratch is visible. Up here in the Nordic light, it will not be visible at all. These factors make our architectural world shadowless"

from *Sverre Fehn: samlede arbeider,* Norberg-Schulz, Postiglione *1977*

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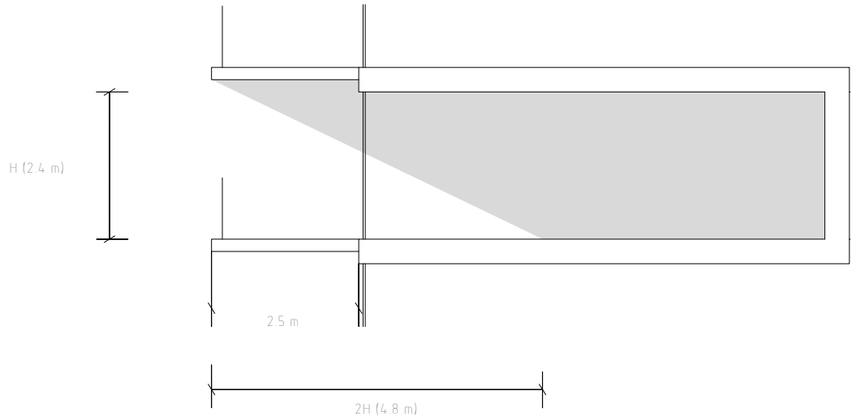
ON DIMENSIONS: THE BALCONY'S PARADOX

As the possibilities for the balcony and its uses multiplied, their functional value increased. The balcony has been appointed to be an element increasing the quality of urban living. Consequently, the balconies grew in size. Paradoxically, when balconies grow in size, it prevents daylight from entering the interior spaces, which again may decrease the quality of the spaces and thus the inhabitant's well-being. Standard ceiling height in contemporary residential architecture in Norway is 2.40 m. This, combined with balconies projecting up to three meters from the façade may result in questionable circumstances of interior spaces. In additions, climatic conditions in Norway prevent the use of balconies as a place for leisure for large parts of the year and these green rooms transform into messy storage spaces.

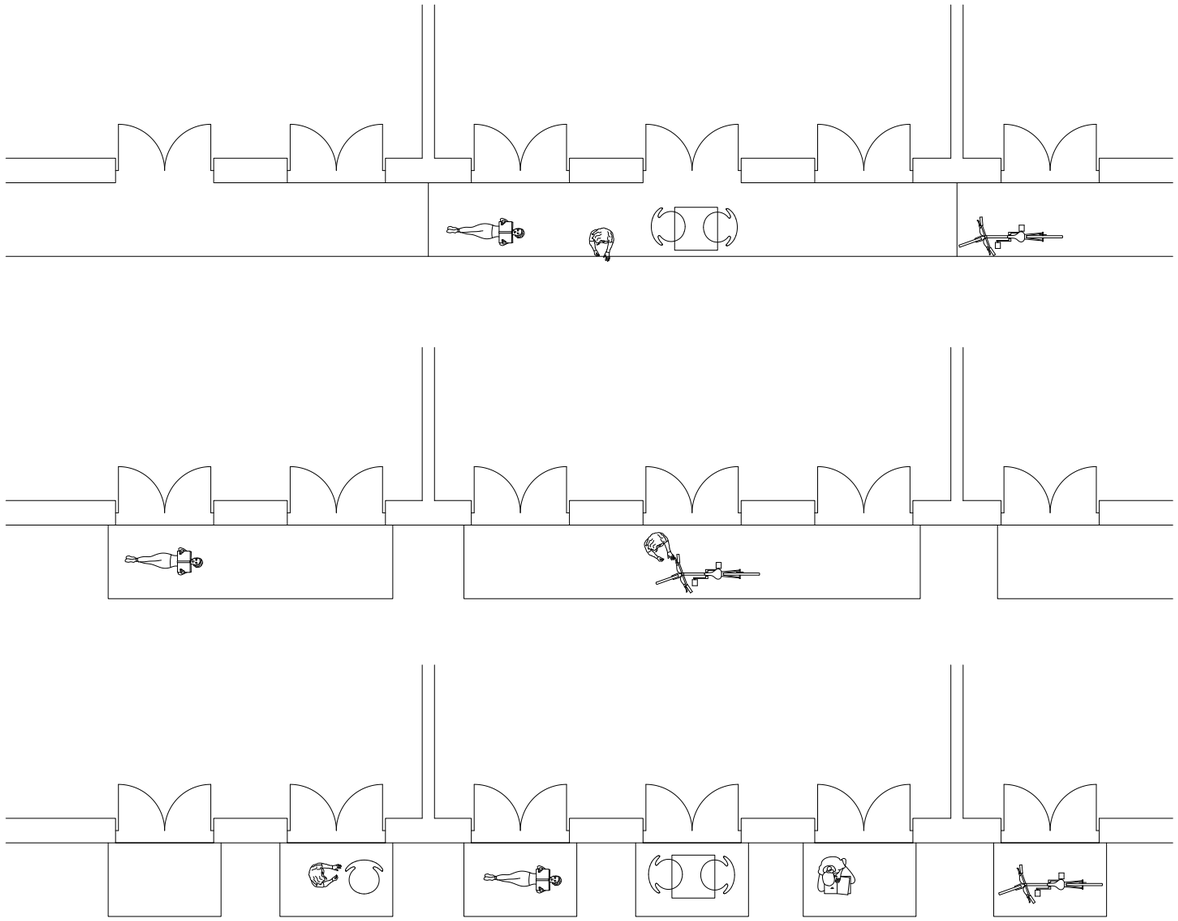
The balcony's dimensions, articulation and usage raises the question about the threefold relationship between the living spaces of the dwelling, the appearance of the building and its dialogue with the surroundings.

How big do we need our balconies to be?

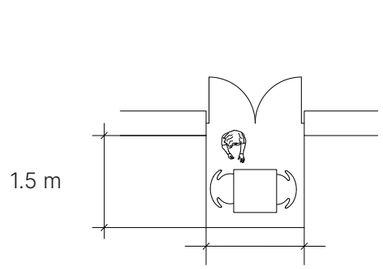
Residential building on Solsiden, Trondheim

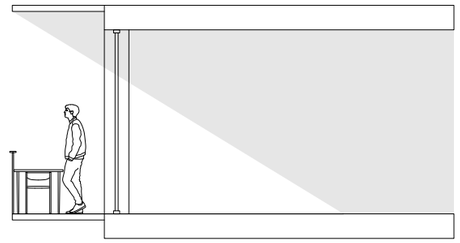


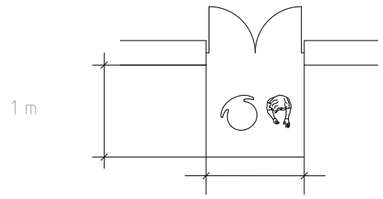
Standard ceiling hight in contemporary residential architecture in Norway is 2.40 m, meanwhile the depth of the balconies vary between 2 and 3 meters.

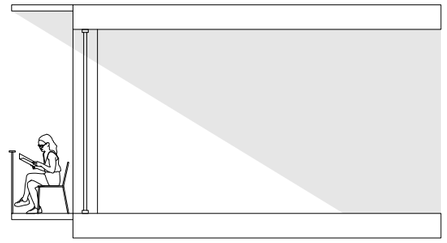


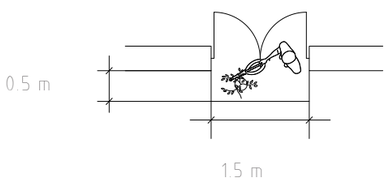
Width of the balcony

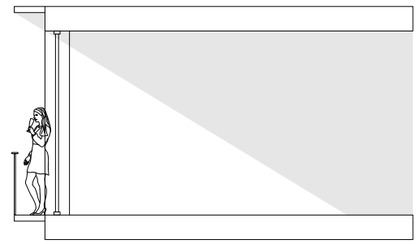


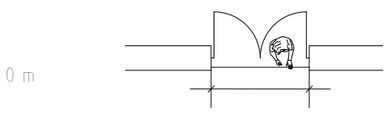


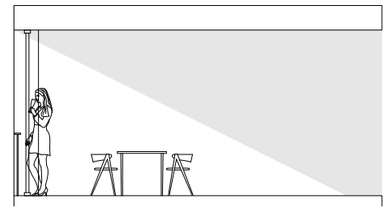




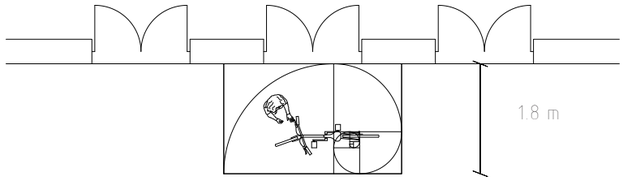


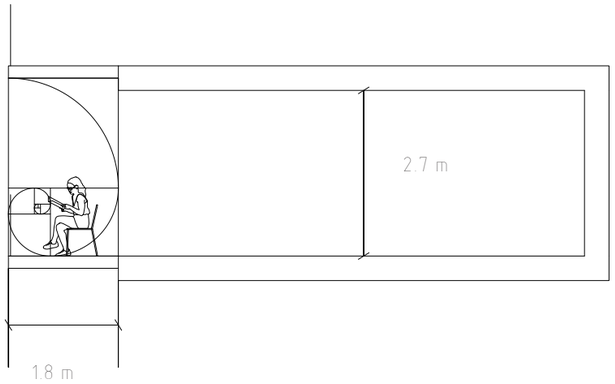






Depth of the balcony





ON DIMENSIONS: THE GOLDEN RATIO

With an aim to create residential architecture that can be a backdrop for our everyday life, something the eye can rest on, I strive after placid and balanced expressions.

The golden ratio (also called the golden rectangle) is a proportioning system that governs the relationship of smaller parts to the whole. Through out the times it has long been believed to produce some of the most aesthetically pleasing shapes in nature. Maybe it can give us some guidance when dimensioning our balconies, maybe 1.8 m is enough depth for a balcony in an apartment with 2.7 m ceiling height?

In an interview with Politiken in 1971 Arne Jacobsen explained:

"The main thing is proportioning. Proportioning is what makes the beauty of old Greek temples classical. Like great blocks from which the air is literally carved out between the columns. And whether we look at a building from the Baroque, from the Renaissance, or from our own time the ones we wish to look at, the ones we admire - they are all well-proportioned: this is what is decisive"

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Gustave Caillebotte, L'homme au balcon, boulevard Haussmann 1880

ON DIMENSIONS: FRENCH BALCONY

The late-nineteen-century residential architecture, with Baron Haussmann in the lead, adopted the balcony as an architectural status symbol. During this time its role in the home was quite modest. On the ring roads or the large boulevards of Paris, balconies were not particularly pleasant places to stay, no one really spent time there. They were, however, functioning as a buffer zone to filter the noise from the outside world. The balcony was essential in the layer principle in construction of the urban homes. In addition, the railings of the balconies allowed for openable floor-to-ceiling windows providing more light in the deep spaces behind them. (Ebner, 2010)

Haussmanian buildings follow a standard layout with running balconies on the piano noble, individual balconies on the third and fourth floors and a running balcony again on the fifth floor for the sake of balance. All the balconies were quite narrow with elegant railings of wrought ironwork (Richman-Abdou, 2019).

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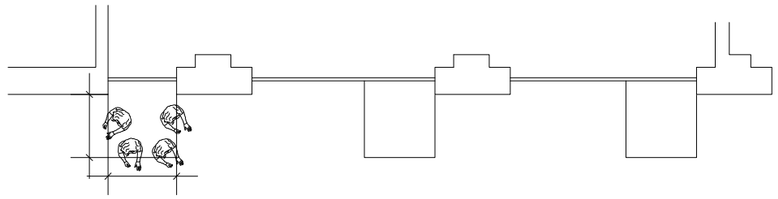
Students of the Bauhaus in Dessau, 1926



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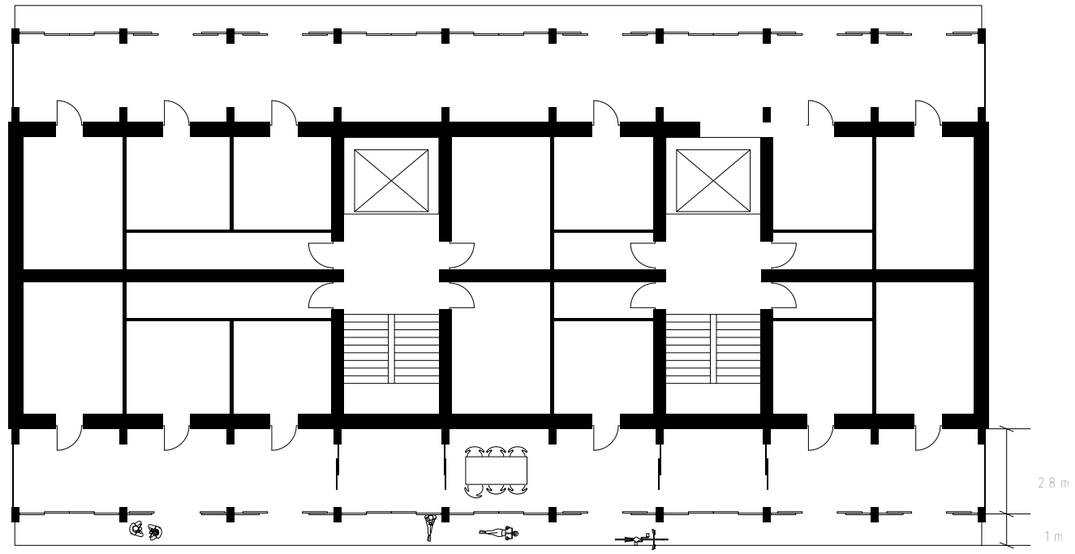
Lacaton Vassal, Transformation de 530 logements, Bordeaux 2017



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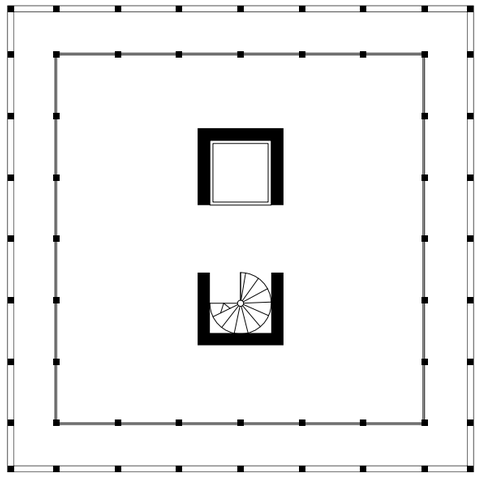
Enrico Alessandro Fanfani, La mattina del 27 aprile 1859, Loggia Lanzi, Florence

ARTICULATING THE TRANSITION THROUGH CONSTRUCTION

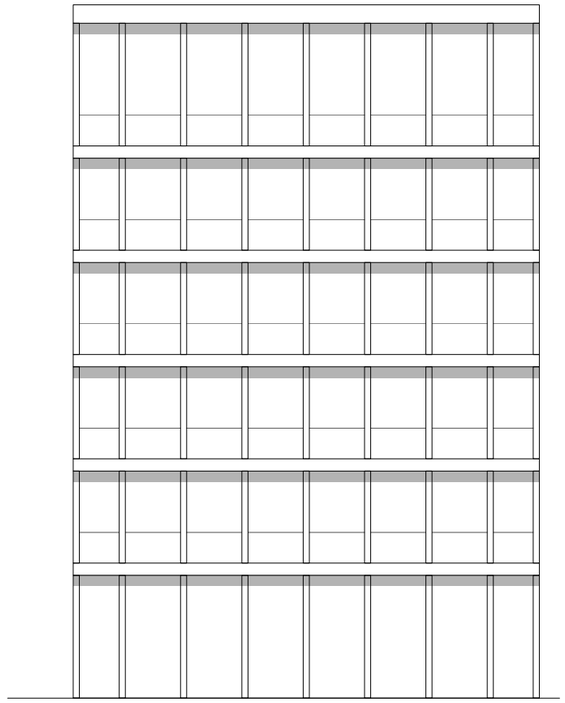
By giving the exterior spaces an important role, it may no longer be an additinal element. The transition between the interior and the exterior spaces an important may fuse with the construction and the boundaries between the inside and the outside become unclear.

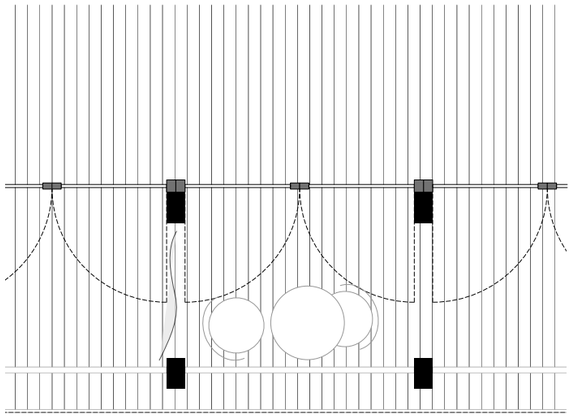
Loggia, a word borrowed from Italian, is a covered architectural element that is open on at least one side. In contrast to the original balcony, a loggia does not project beyond the building façade, but is included into the construction. The loggia represents an area of transition between outdoor public space and the interior of a building. When one steps out on a balcony, he or she is visible as a body. In a loggia one is more protected. Originally loggias were used for public buildings and often had the role as a place for official announcements by the city council. In the nineteenth and twentieth centuries, loggias could be first found on hospitals and hotels, before finally being added to residential buildings (Ebner, 2010).

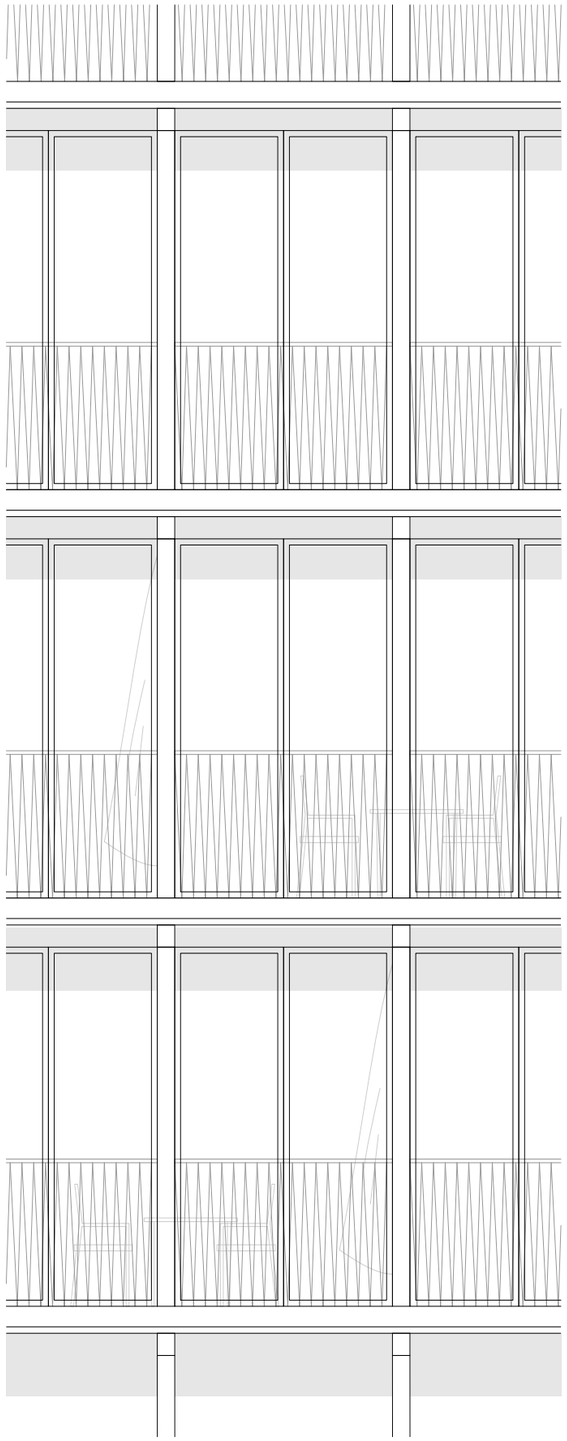
The following series of drawing excercises explore construction methods that can embody an exterior space, highlight the interface or erase it.

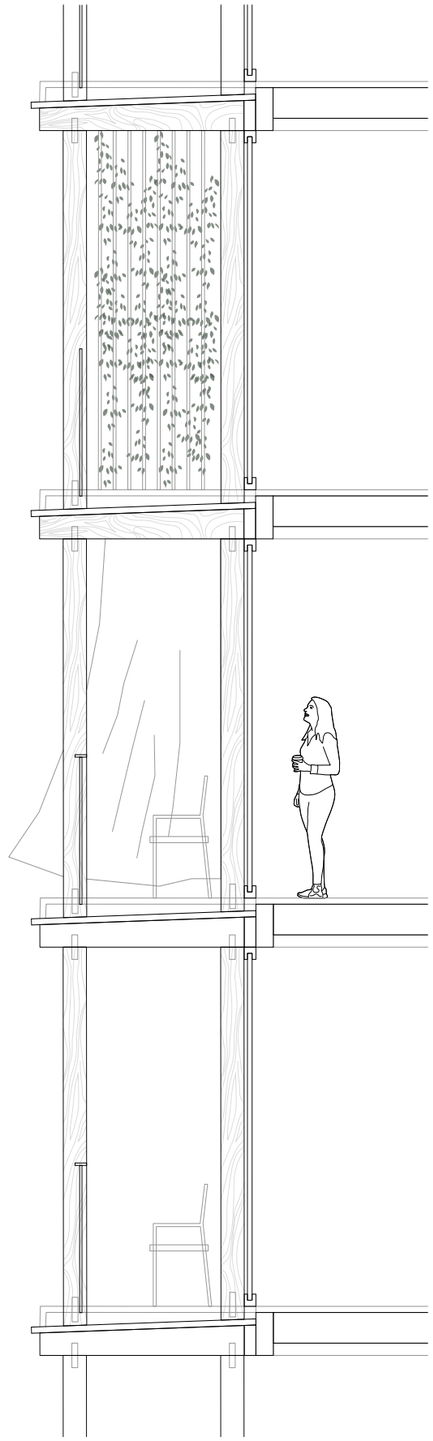


Arcade House:
Creating a continuous exterior space along the whole facade







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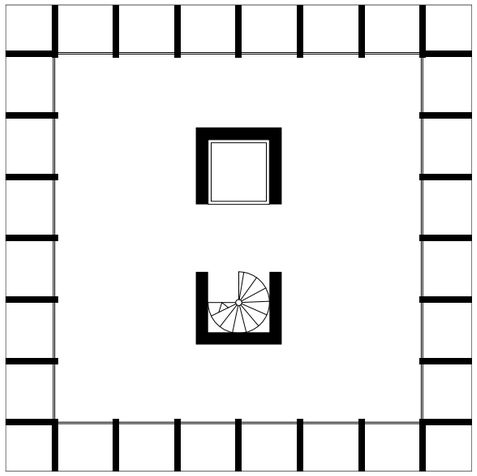
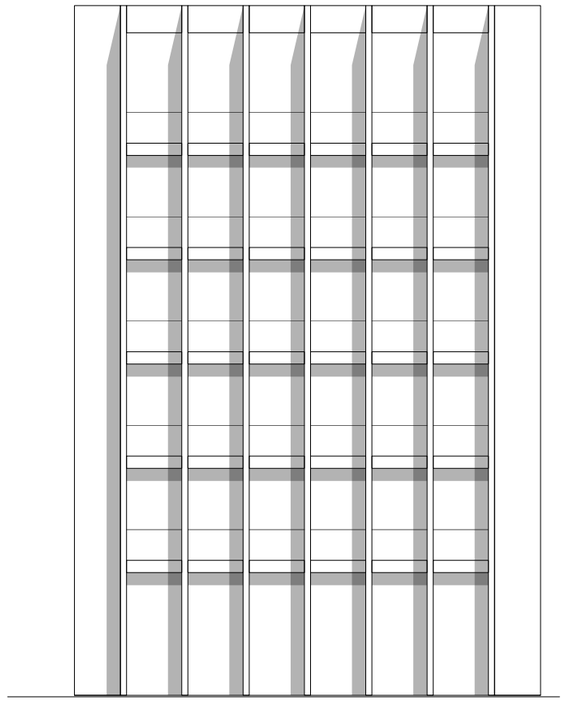
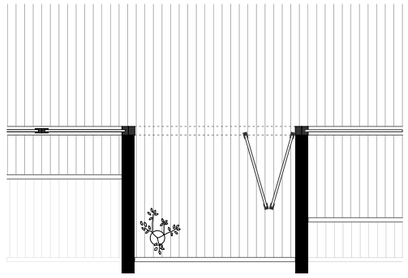
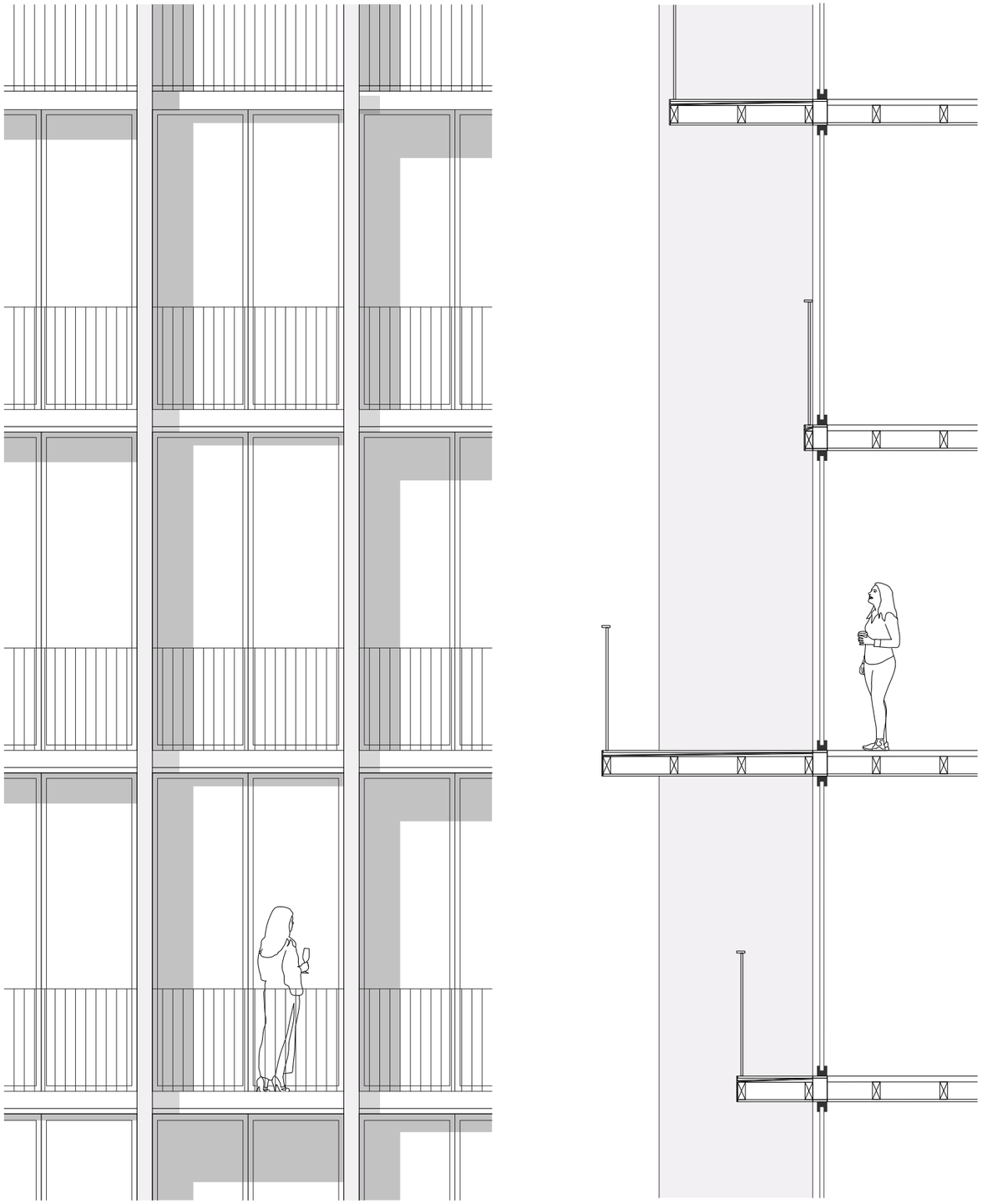


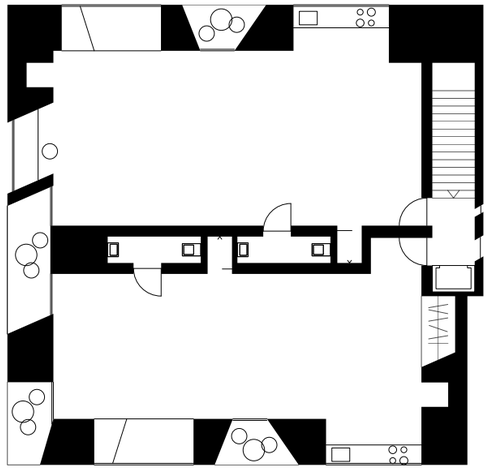
Frame House :
Dividing the continuity



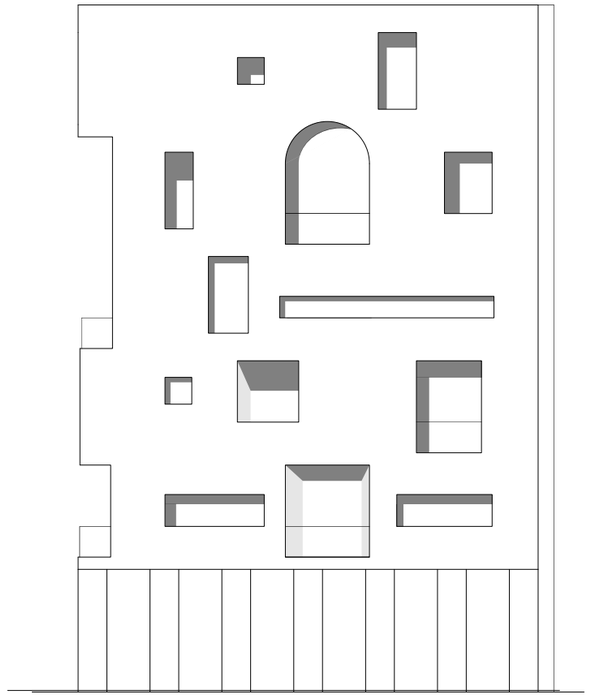


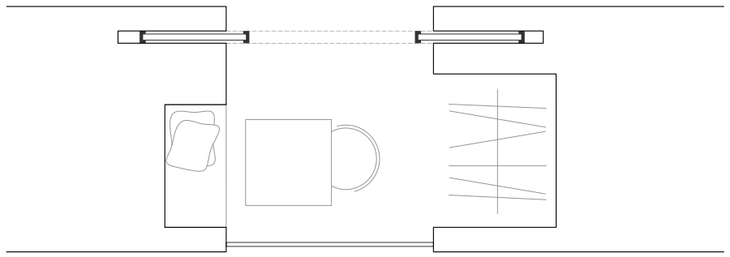
Separated outdoor space between the frame slices,
however with a continuity in the facade



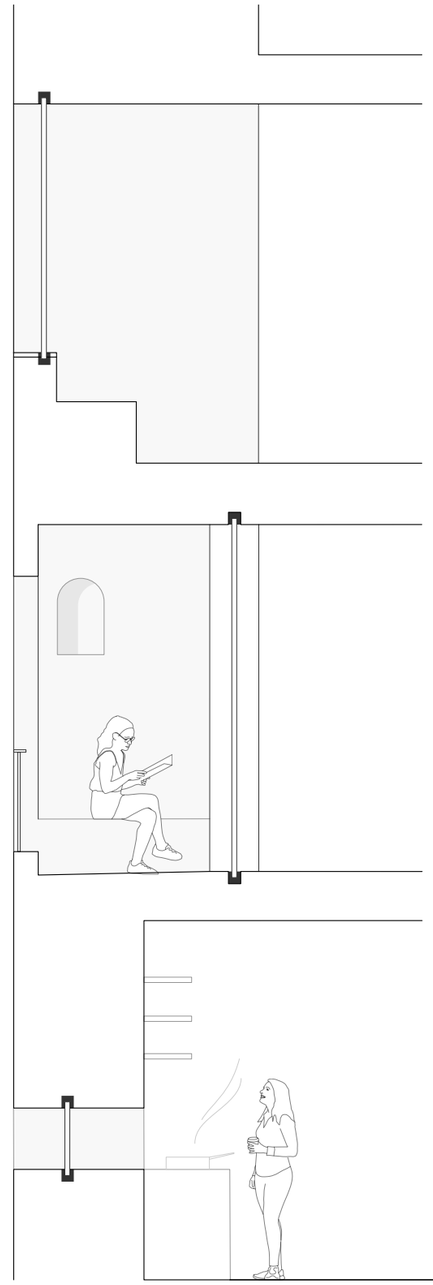


The Living Wall:
Embodying the structure and all the necessary functions within the limits of the wall, carving out loggias.

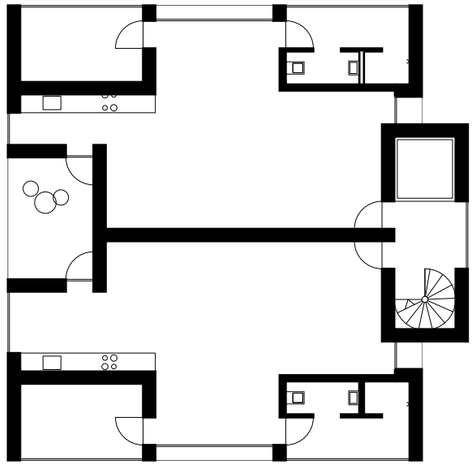




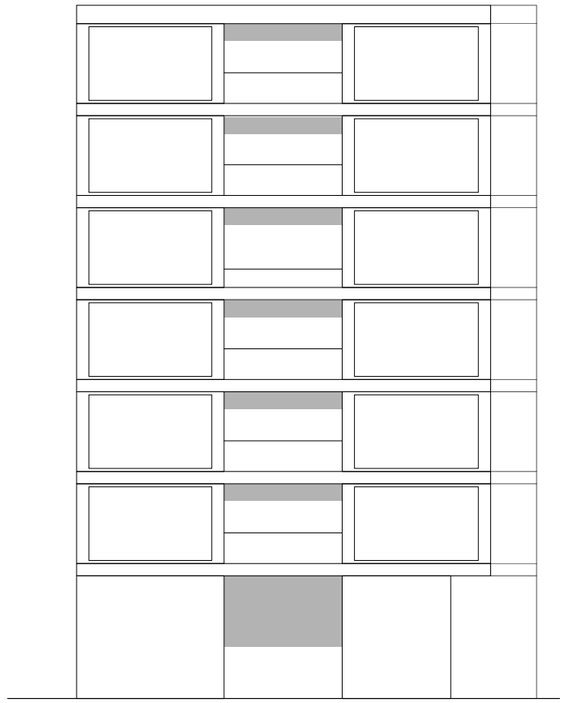
Shielded loggias facilitate for placid and planar wall treatment

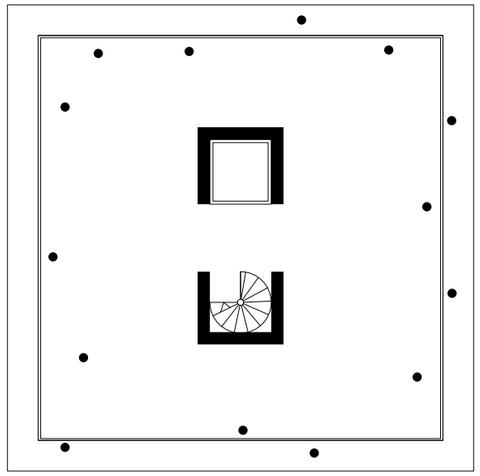


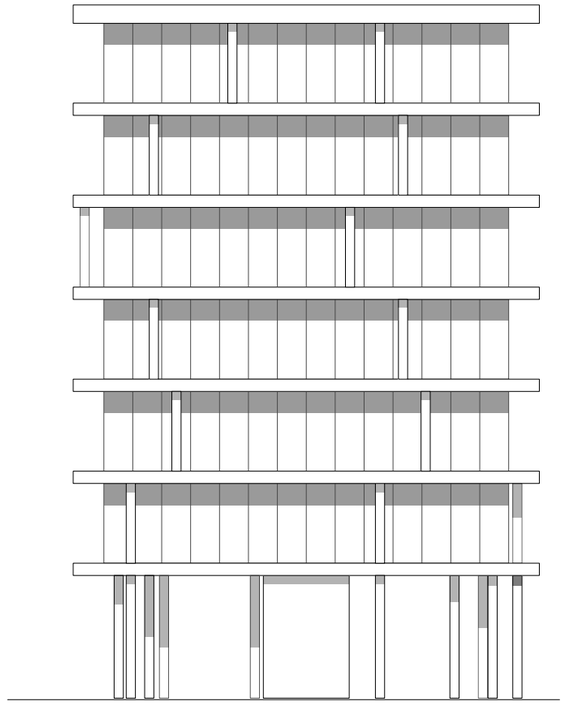
0 1 3 m



Cells and Cores:
Defining all the necessary functions with a loadbearing core.
Balcony is in one of the cores, or in between them.



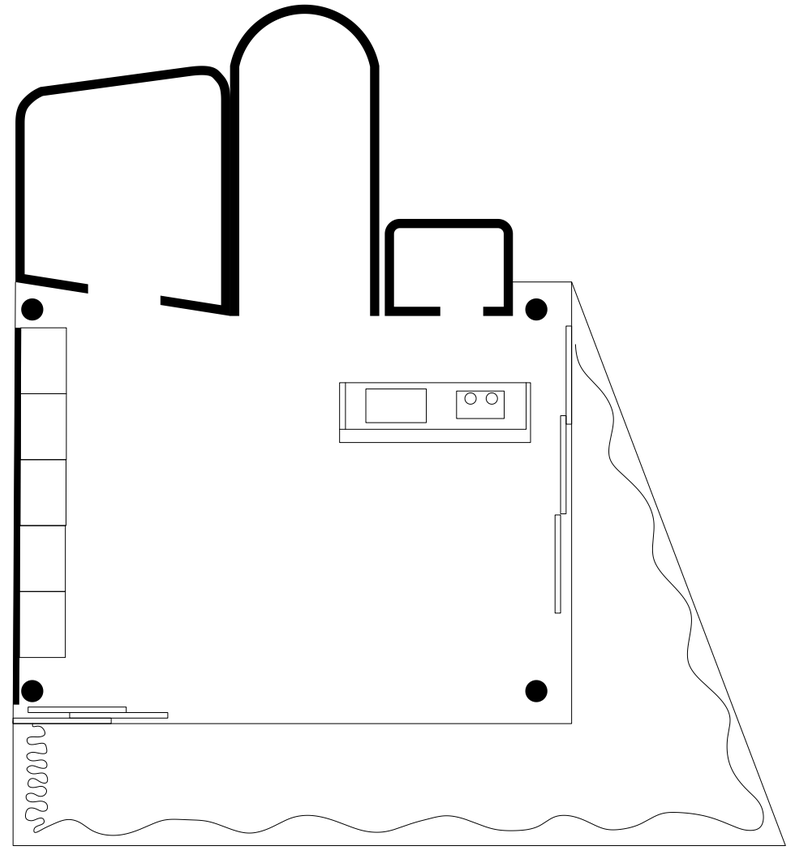





0
2
5 m

18

Shigeru Ban, Curtain Wall House, Tokyo 1995



11 Feasibility study

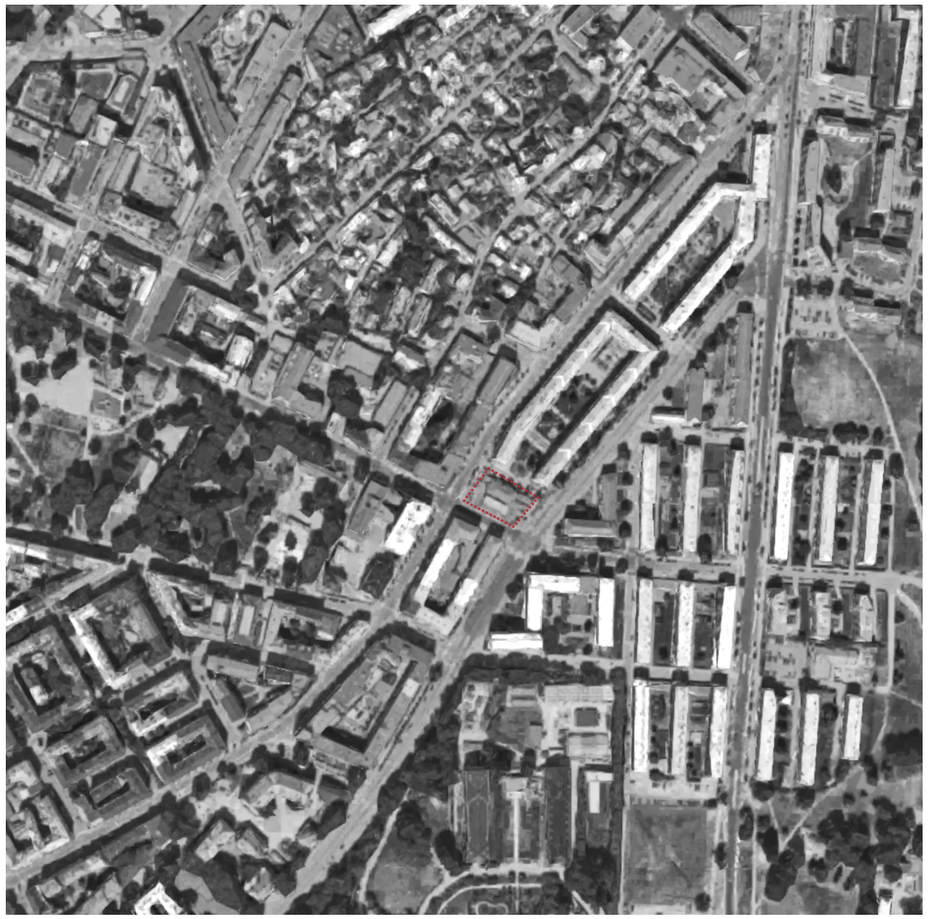
DENSIFICATING OSLO

Urban structures are city portions, they never appear isolated, they are always complementary to the context. Also, in order to study the relationship between the inside and an outside, one needs an outside. Thus, the second part of the thesis is devoted to exploring the problem of balconies in a given context.

As a contribution to the discussion of densification in Oslo the project is located in the central part of the city. A mapping of overlooked plots with a potential for densification was carried out in order to find a place that endure different solutions facilitating a study of different scenarios.

Oslo

Potential plots



Satelitte photo from Google Maps

TRONDHEIMVEIEN 62

Trondheimsveien 61 is situated in the eastern part of central Oslo, at the end of a housing block from 1962 and in an encounter point of the areas Rodeløkka, Grunerløkka andSofienberg. The site is approximately 1200 sqm and it is currently inhabited by a gas station and a parking lot.

The nearby area has a complex urban tissue with a great variety of typologies, such as Grunerløkka's court yards from the 19th century, urban villas of Rodeløkka and modernist housing blocks and lamella blocks in Tøyen. As the site is located in a typology rupture and somehow a messy area, it can endure a number of different solutions. The plot therefore provides a formal freedom and enables for an opportunity to study different scenarios. The north-south direction of the site facilitates for different sun conditions throughout the day.

19, 20

Typologies of the area

21, 22

Typologies of the area

23, 24

25, 26

Details of the neighbourhood

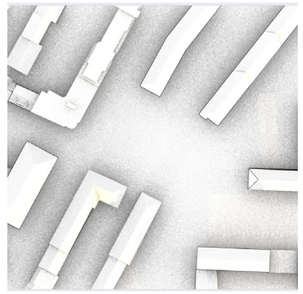
Details of the neighbourhood

27

28

29

30



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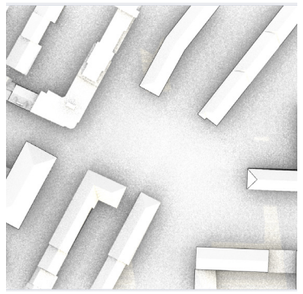

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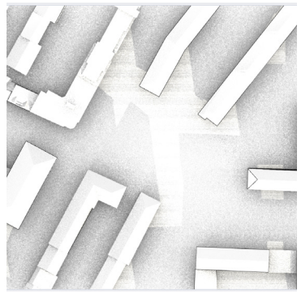

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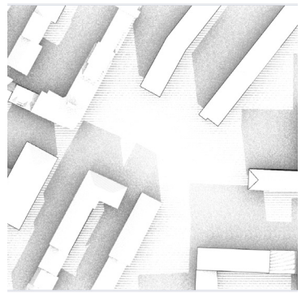

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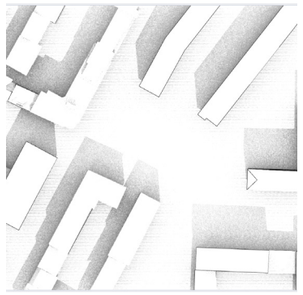

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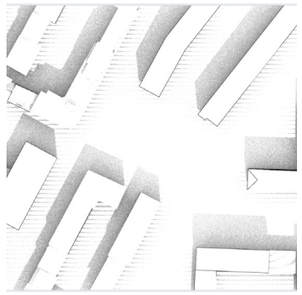

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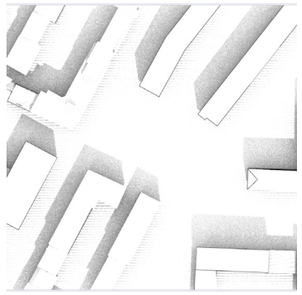

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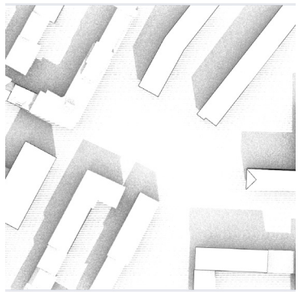

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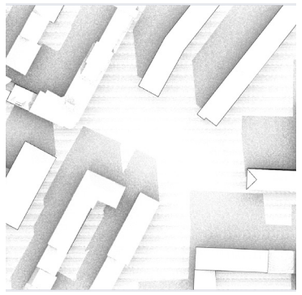

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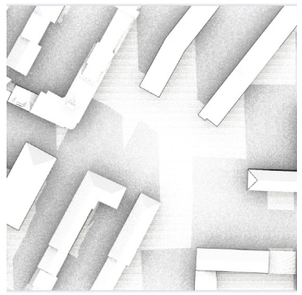

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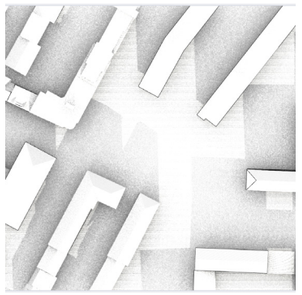

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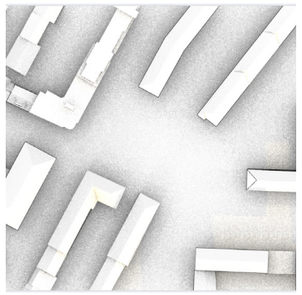
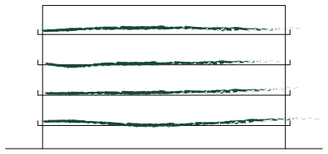
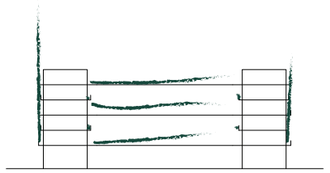


01.12 12:00

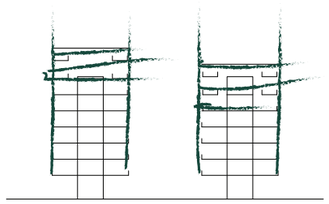
Course of the sun throughout the year



Along



In Between



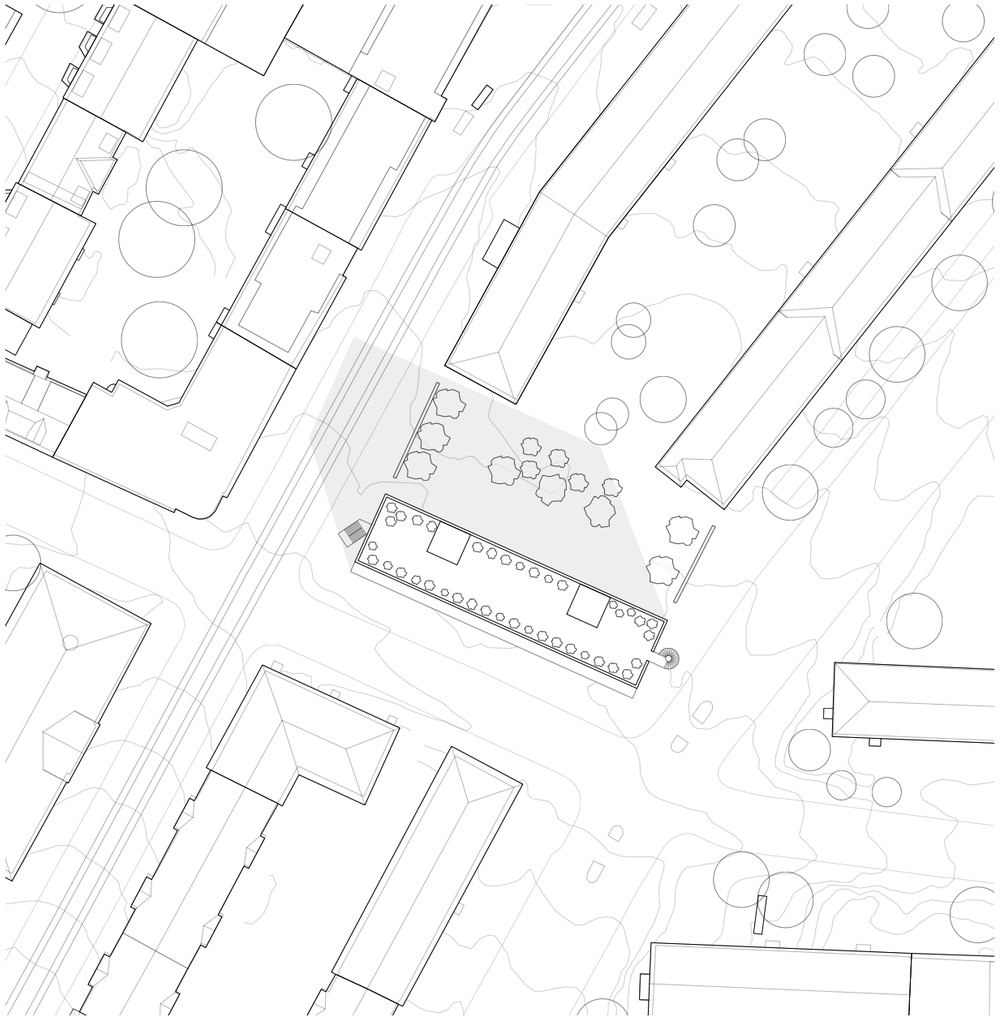
On Top

w

THE PROJECTS

With the balcony as the main protagonist the following three proposals, *Along*, *In Between* and *On Top*, address different housing typologies and living arrangements within the same frameworks. The structures has their main focus on exploring different ways of how a balcony can deal with transition between the inside and the outside, and how it can affect the interior spaces. The proposals together form a typological study on how the element of the balcony can vary in its form and how one structure can obtain different meanings through layout and use.

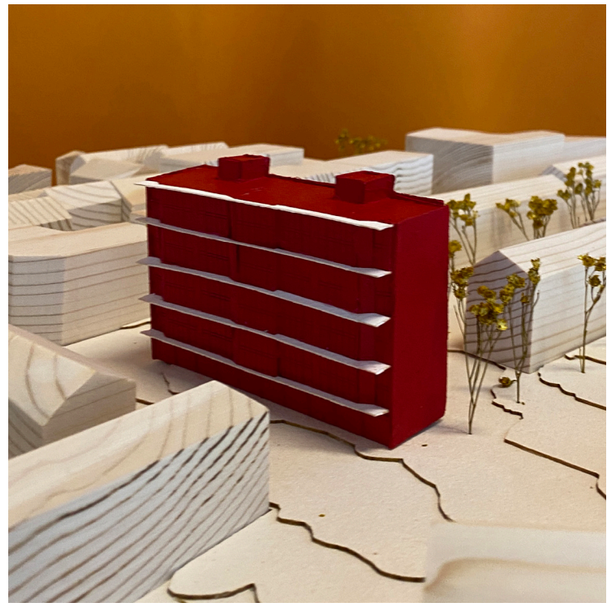
The plans are defined by the load bearing structure, access to the housing units and cores for vertical communications. The spaces otherwise do not necessarily have a prescribed determinate function. The lack of precise programming invites the residents to a free spatial interpretation. Unrestricted organization of space will allow a programmatic evolution of the building in the future. A careful treatment of the relationship between the construction and the interface between inside and outside will ensure the proper daylight condition and control of noise pollution in a formal solution of charged balcony space. The form, the morphology and the materiality, on the other hand, strive to establish a dialogue with the exciting context. Consequently, all the designs aim to embody lasting values of rigorous construction, openness and adaptation to the surroundings.



ALONG

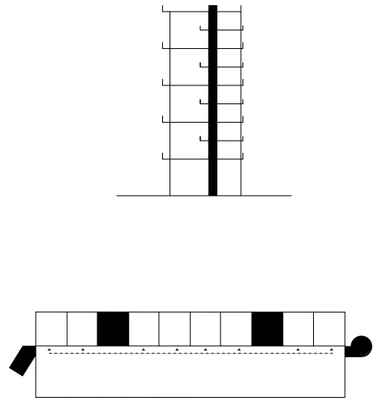
Along is a lamella block that found itself following the line of Helgesens gate. The narrow volume and the distance from the housing block in the north allows a height of 9 floors.

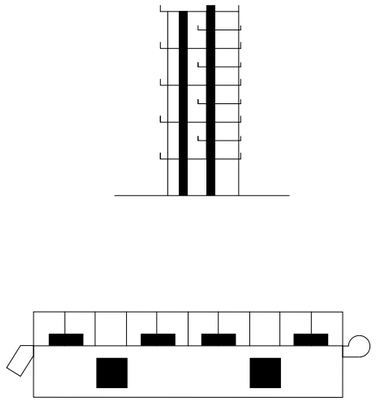
Footprint:	530 sqm
Dwellings:	64 basic studio units of 25 sqm
	4 units share a living space of 65 sqm
Total area:	4 240 sqm

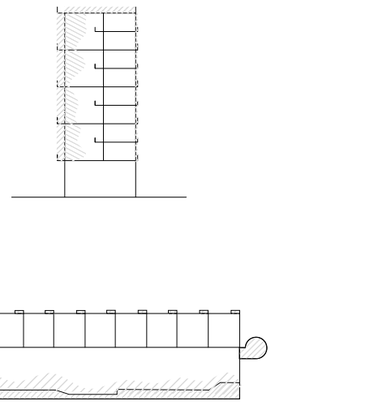


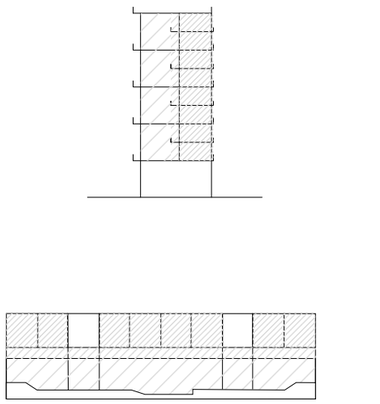
Model 1:500

Model 1:500









Access

Two verticals with an interior corridor between the private and the shared spaces.

Cores

Service cores are placed in the counterpoint between the private and the shared parts of the building and as a division element between the different shared spaces.

Outdoor spaces

Semi-outdoor spaces

Projecting balconies facing south adjastent to the common living spaces and french balconies in the private studio units towards the north.

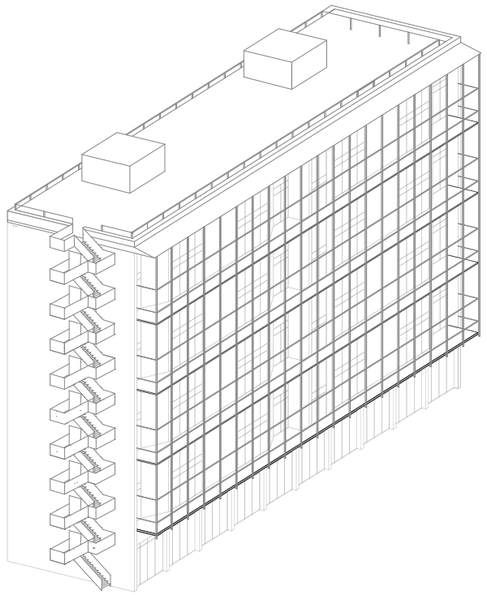
private

semi-private

semi-shared

shared

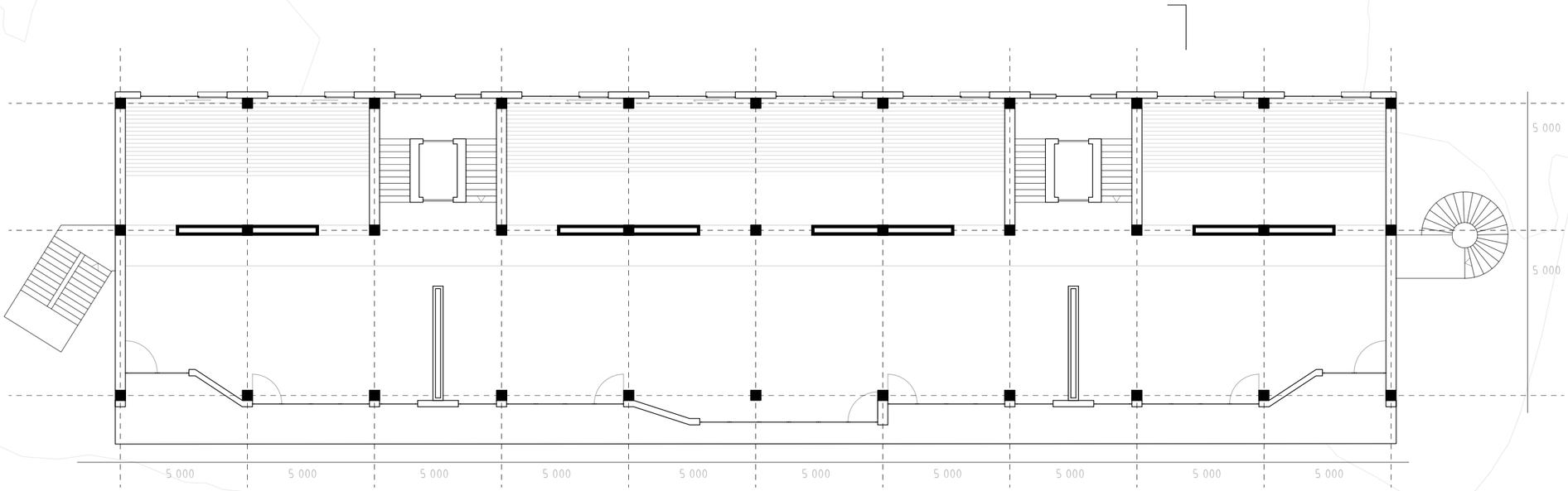
Collective housing with a high degree of sharing. The private studio units are arranged along the north facade, meanwhile the living areas and the common balcony faces the south.



The morphology of the house is dictated by a clear distinction between the parts facing north and south, the private and the public.

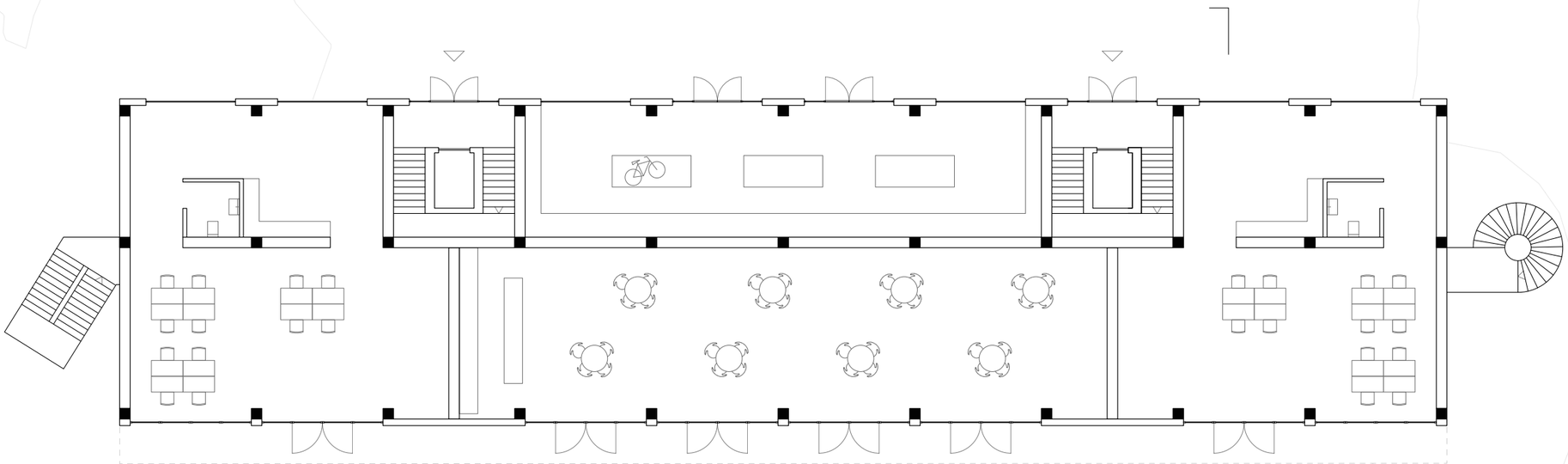
The internal layout can be arranged after the modules of 5x5 m in the north part and 5x6,5 m in the south. Building services and pipe runs are disconnected from the load bearing structure and provide possibility for several layouts and programmes.

The northern part, towards the backyard is assigned for the private studio units. Every unit is facilitated with a private bathroom, a possibility for a small kitchen and a french balcony. The southern part faces the street. It is devoted to shared living areas with double ceiling heights. Four and four private units over the two floors share one space. All the living areas again share a balcony that projects from the south facade and meanders along its whole length. This allows inhabitants to follow the sun throughout the day.

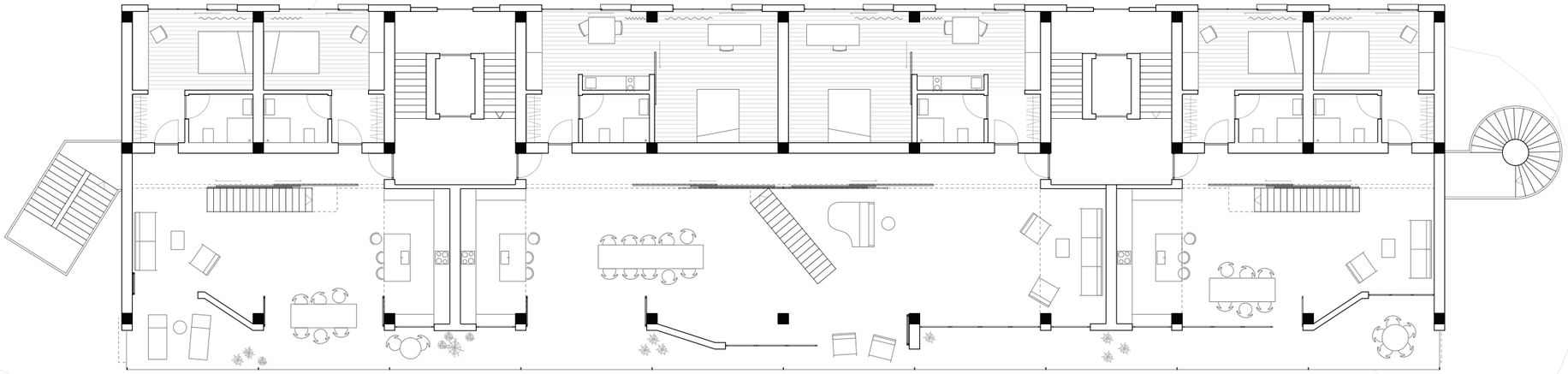


Plan: structure

0 2 5 m

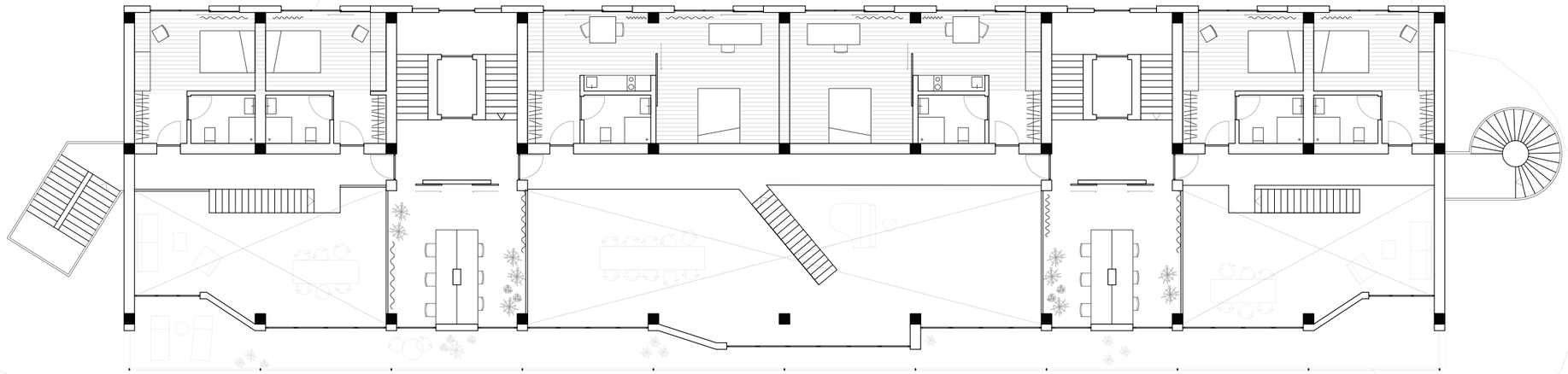


Plan: ground floor, office and cafe



0 2 5 m

Plan: typical main floor



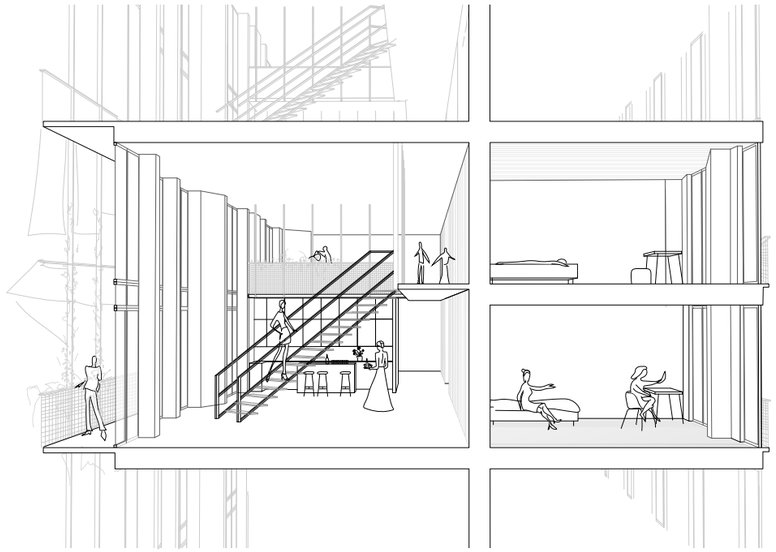
0 2 5 m

Plan: typical mezzanine floor

Living area

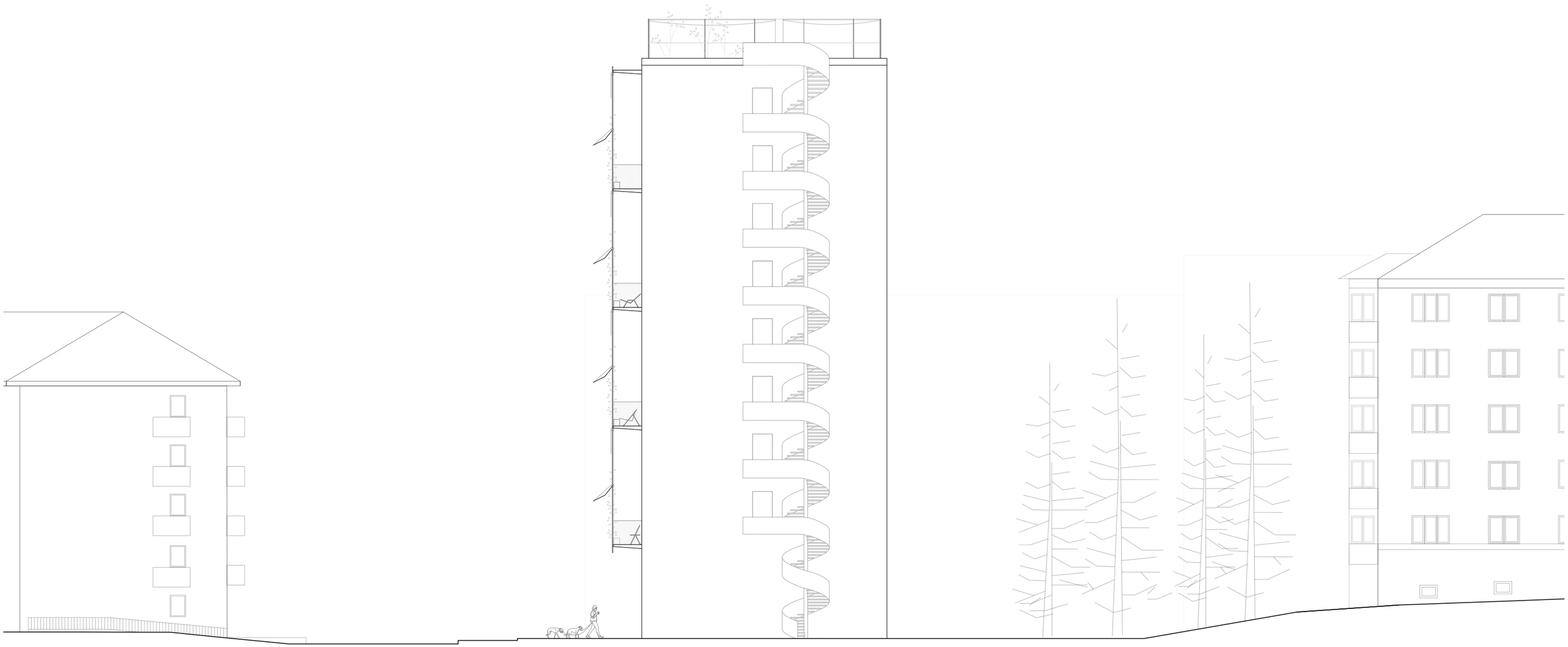
Following the path of the sun throughout the day

Section



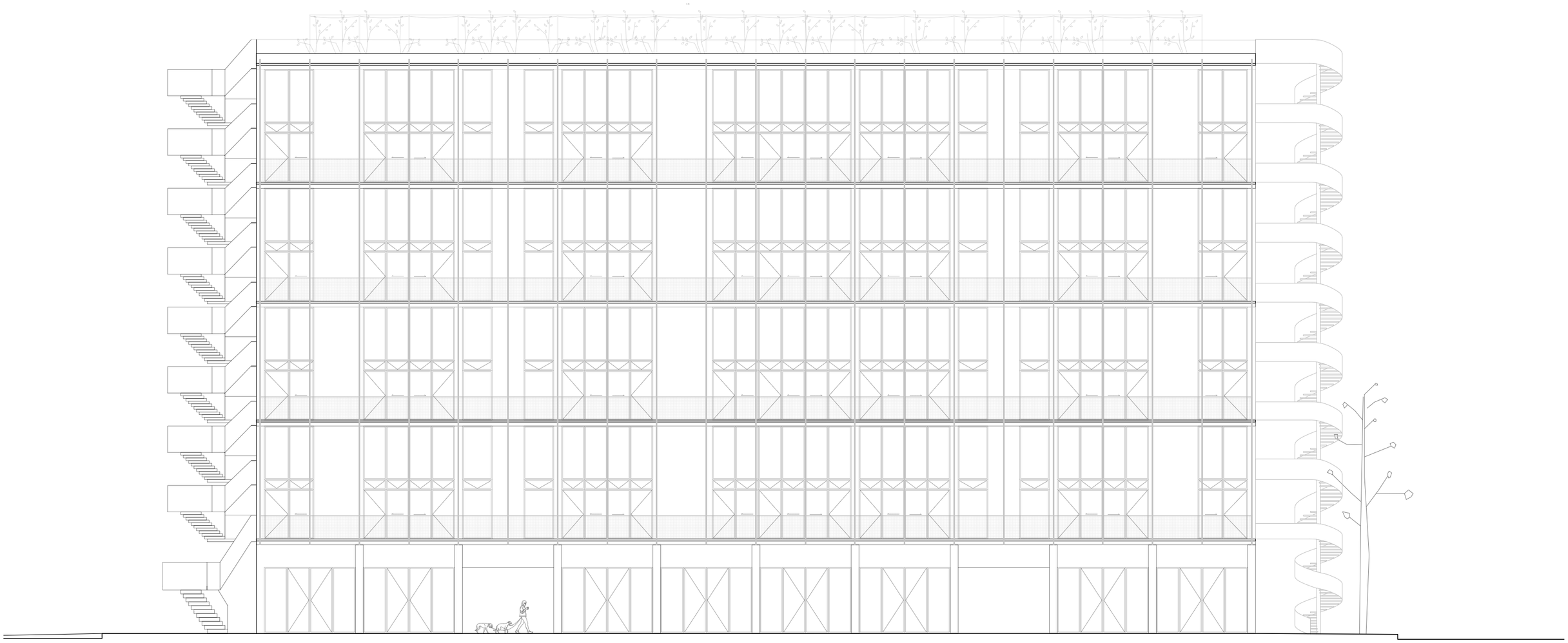
Shared and Private

The Balcony



0 2 m 5 m

Elevation from Sars' gate

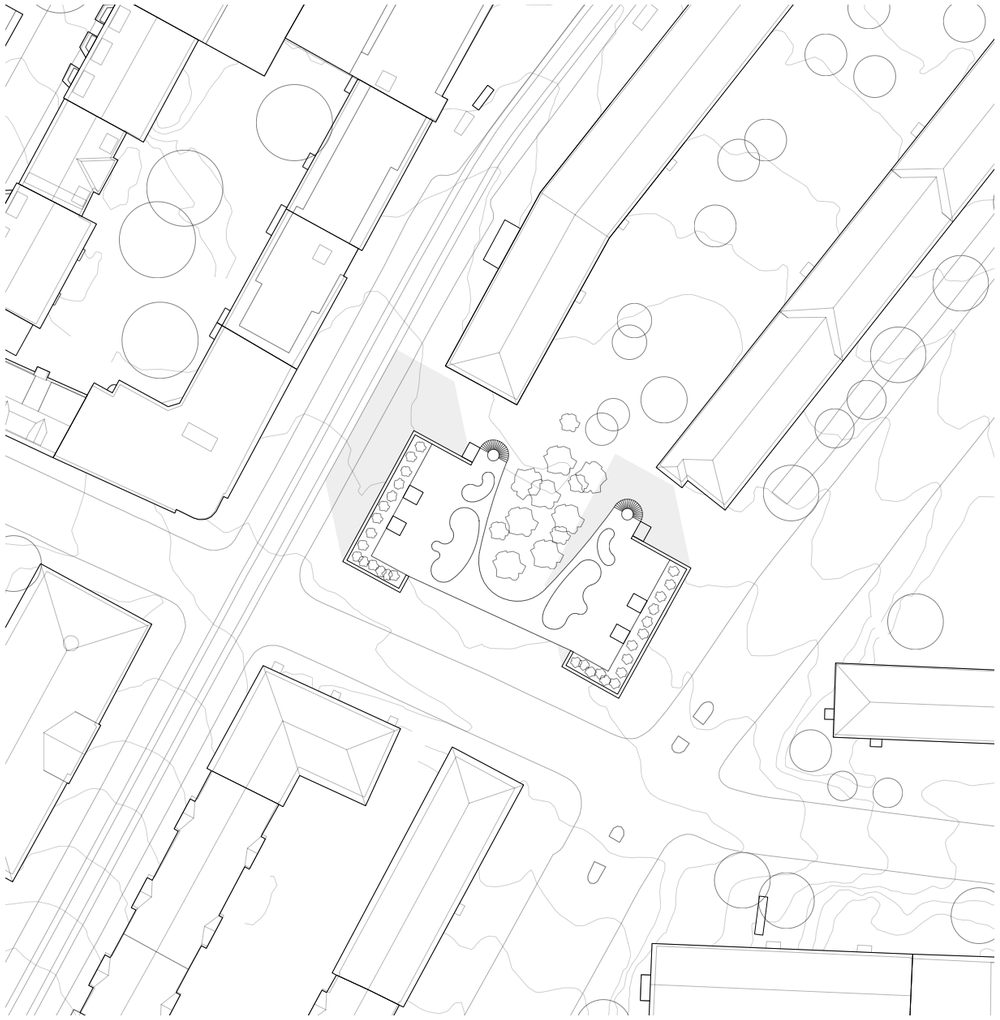


0 2 5 m

Elevation from Sars' gate

Elevation from Helgesens gate

Red metal sheets and white window and balcony elements refer the material palette of the area



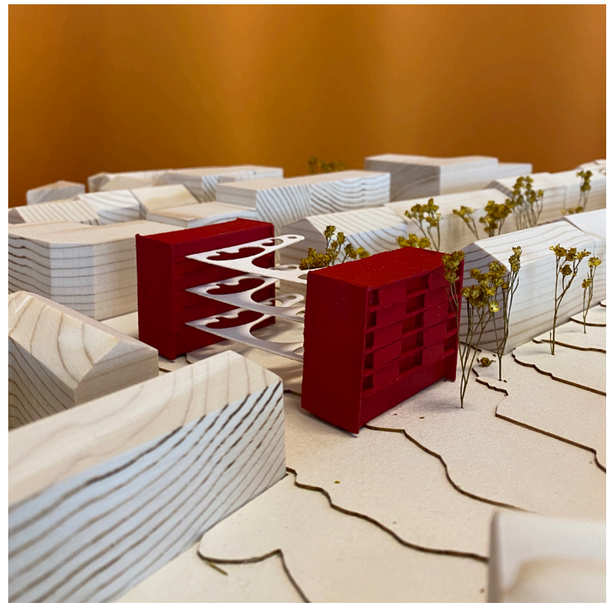
IN BETWEEN

In Between is a project consisting of two volumes connected to each other with balconies. The project explores the problem of a gallery access to the housing units.

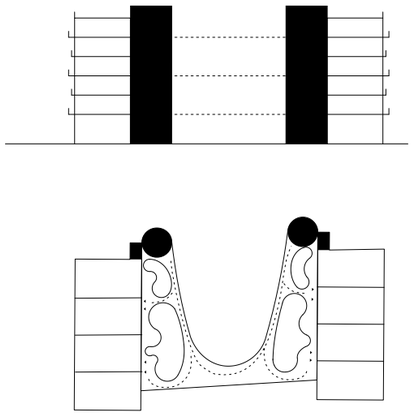
The two building volumes follow Tronheimsveien and Sars' gate and continue the existing housing block north of the site, yet not enclosing it in the south in order to let the sun into the backyard. However, the balcony bridges connecting the two volumes creates a visual termination of the block towards Helgesens gate.

Footprint:	480 sqm
Dwellings:	8 maisonette apartments of 120 sqm
	4 one floor apartments of 120
Additional:	Public ground floor, rooftop terrace
Total area:	4 800 sqm

Model 1:500

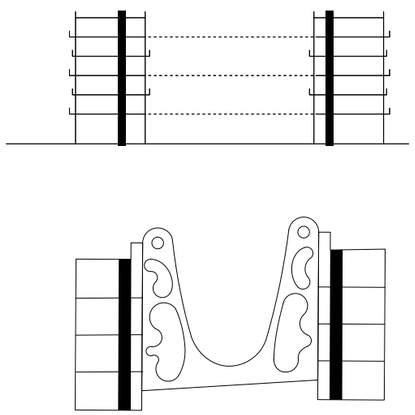


Model 1:500



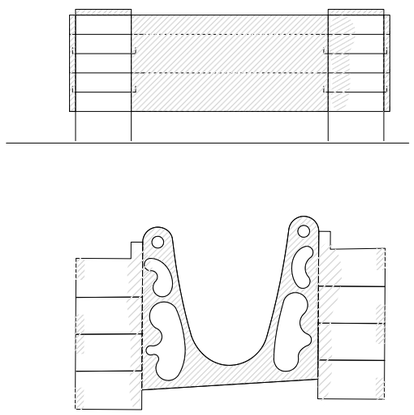
Access

Exterior gallery access



Cores

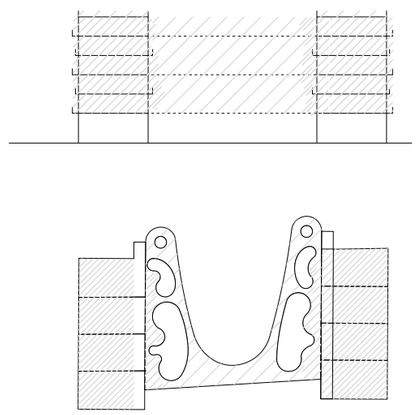
Service cores are places in the counterpoint between the private and the shared areas



Outdoor spaces

Semi-outdoor

Gallery access with additional shared functions in between the two volumes and private loggias in every housing unit



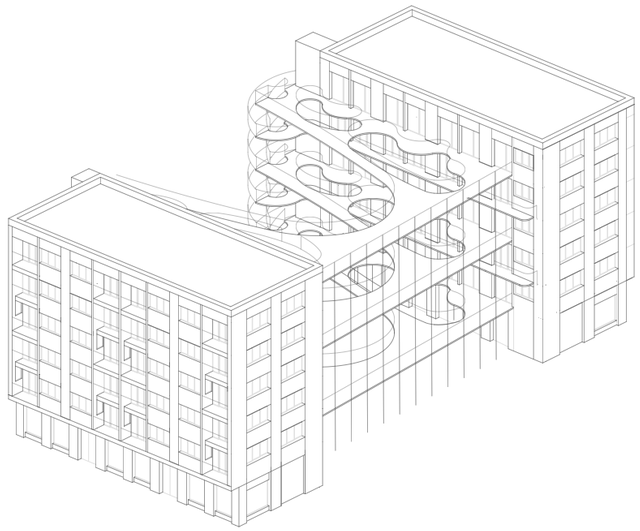
private

semi-private

semi-shared

shared

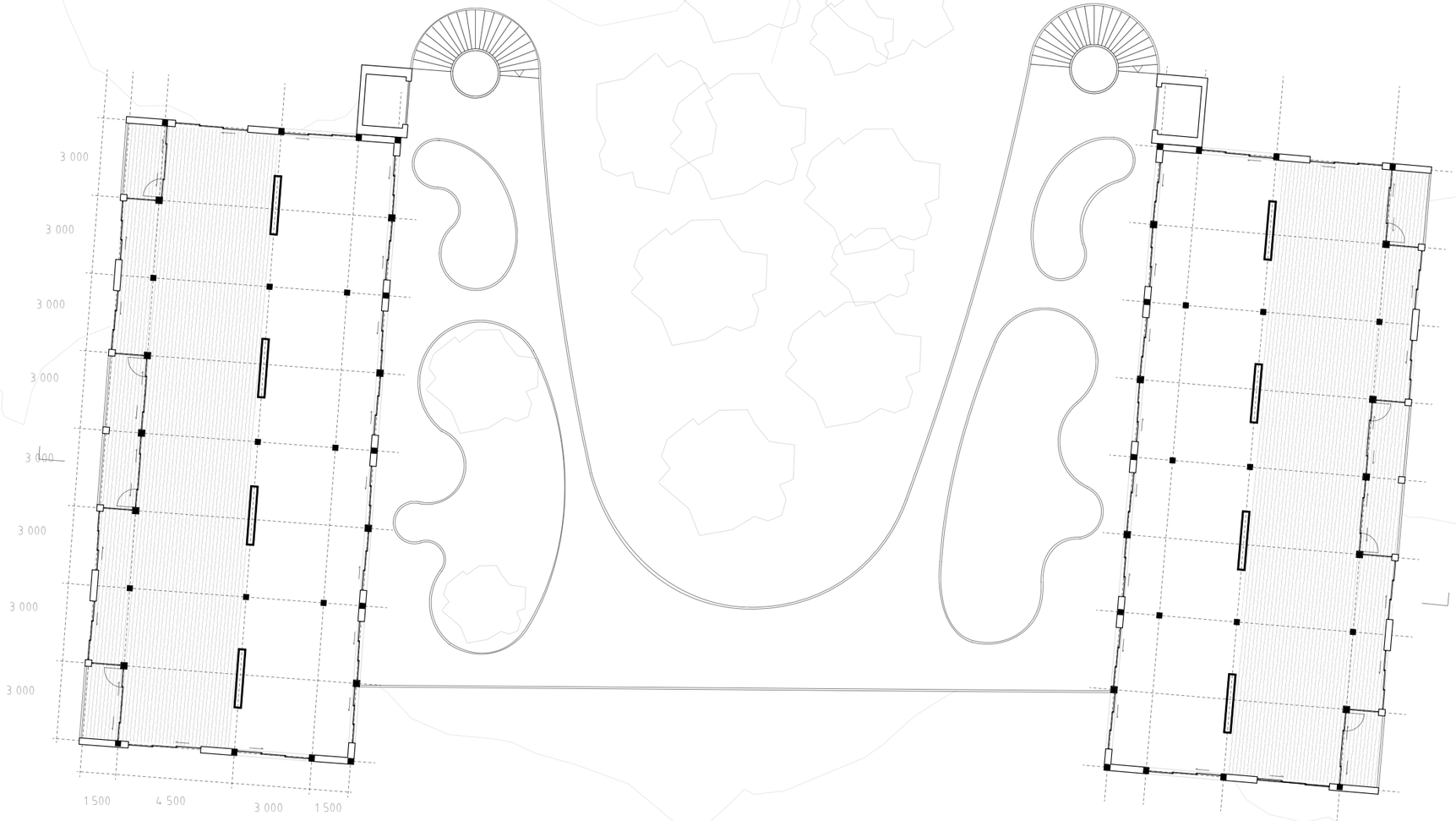
Gradual transition from the private housing units to the shared outdoor spaces



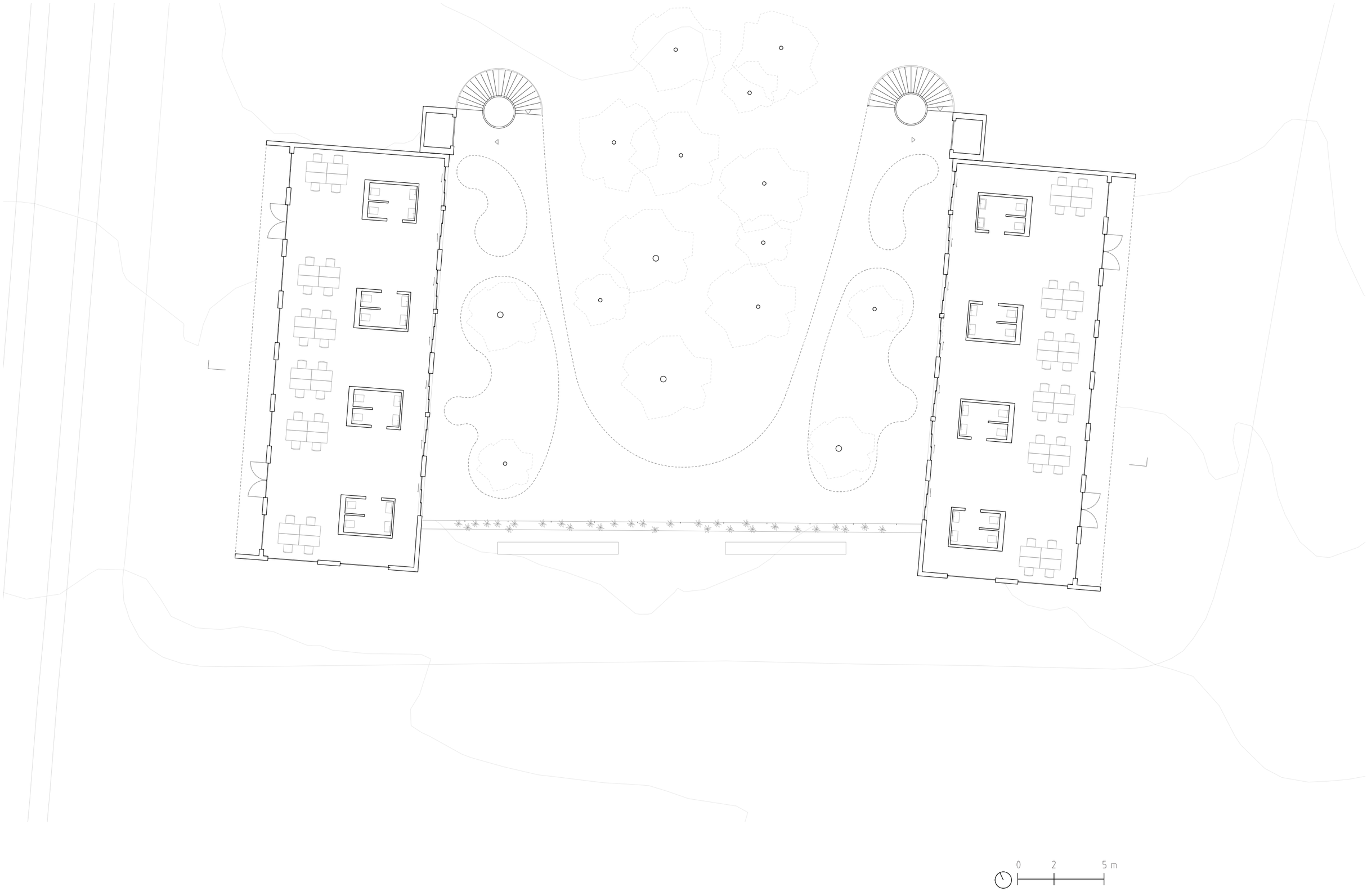
Buildings morphology emerged from a desire to submit to the surroundings by continuing the urban block, but at the same time let as much sunlight as possible into the backyard.

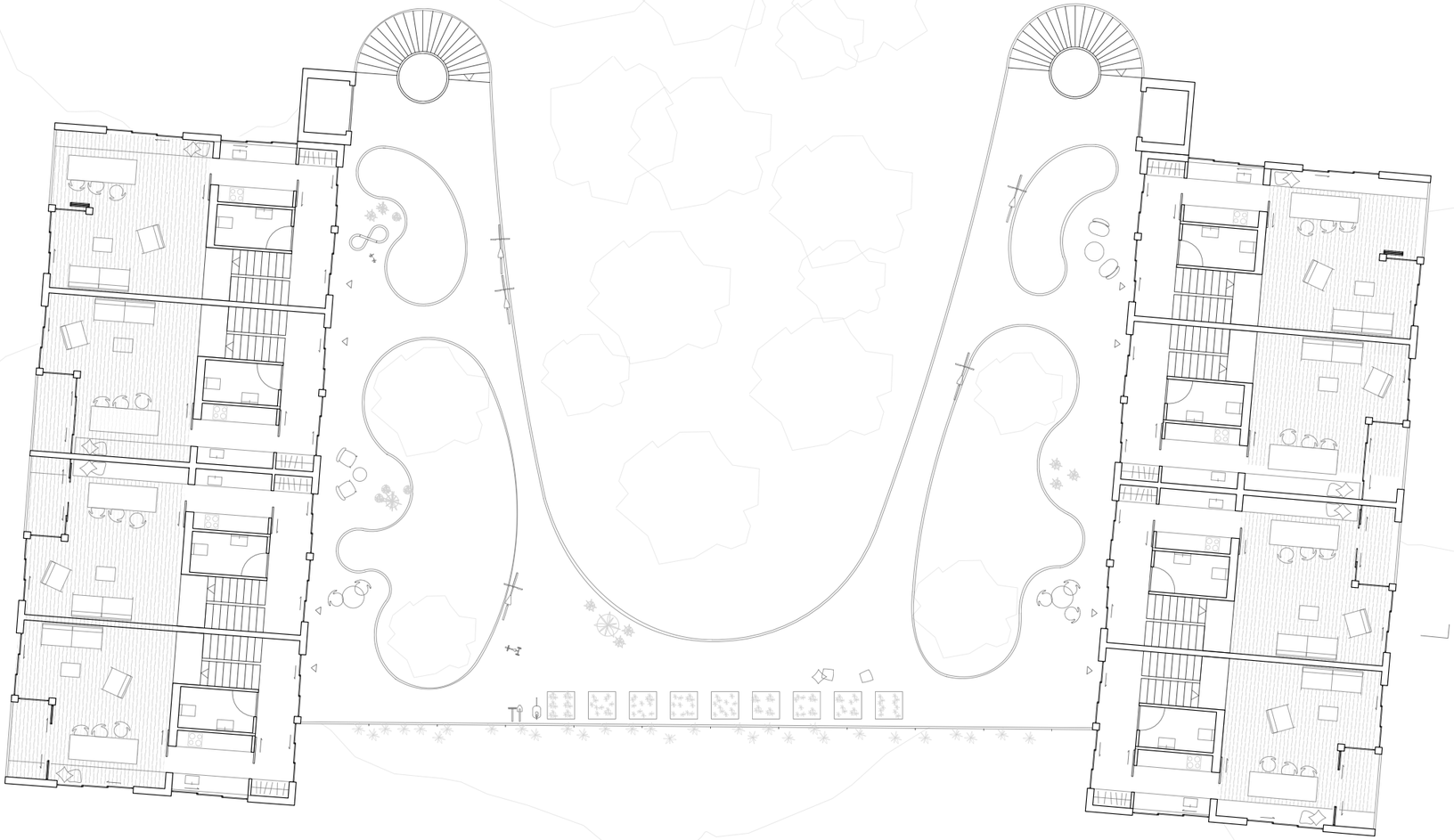
The structure consist of 3x10m modules. In the proposal four and four modules are put together, either on top of each other to form a maisonette apartment, or beside each other for one storey apartmets.

The connecting gallery access is a concrete slab ranging between the two volumes every second floor, working as the main access to the maisonette housing units. The curvature guides one to the central, common area with additional functions as allotment gardens in the two first levels and a sun room on the top level. The holes in the slab create a barrier between the passageways and the entrances to the units. Consequently every housing unit gets a more or less private outdoor space on both west and east side.

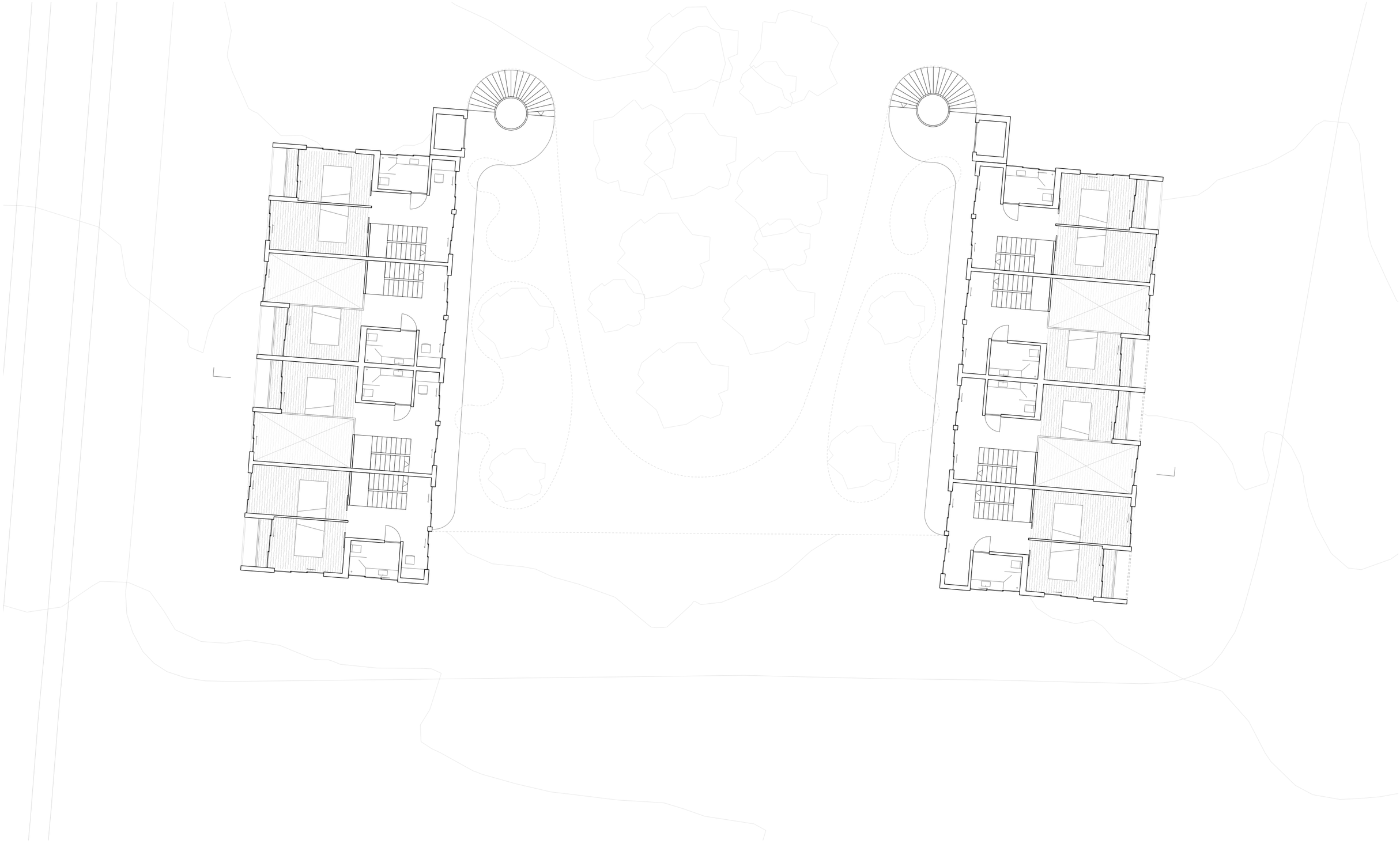


Plan: structure

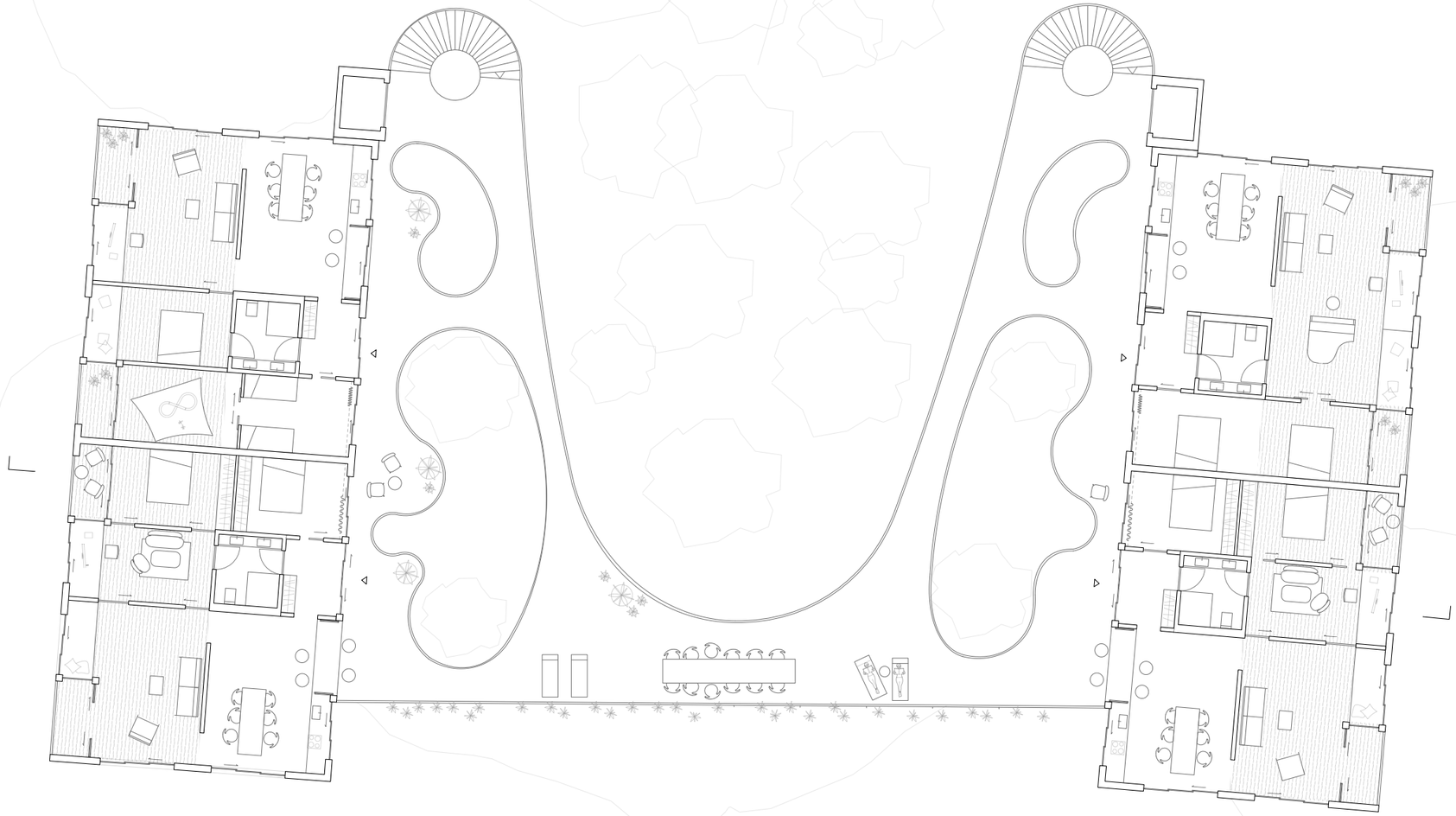

0
2
5 m



Plan: maisonette apartments, first floor



Plan: maisonette apartments, second floor

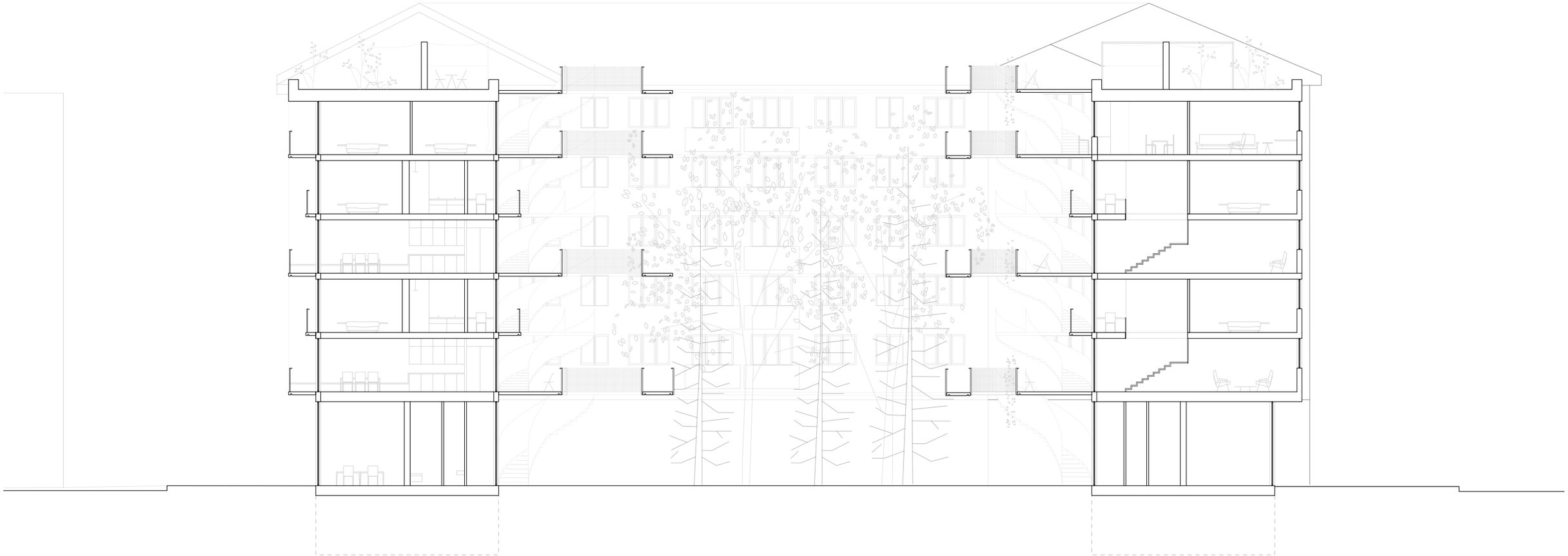


0 2 5 m

Plan: top floor apartments

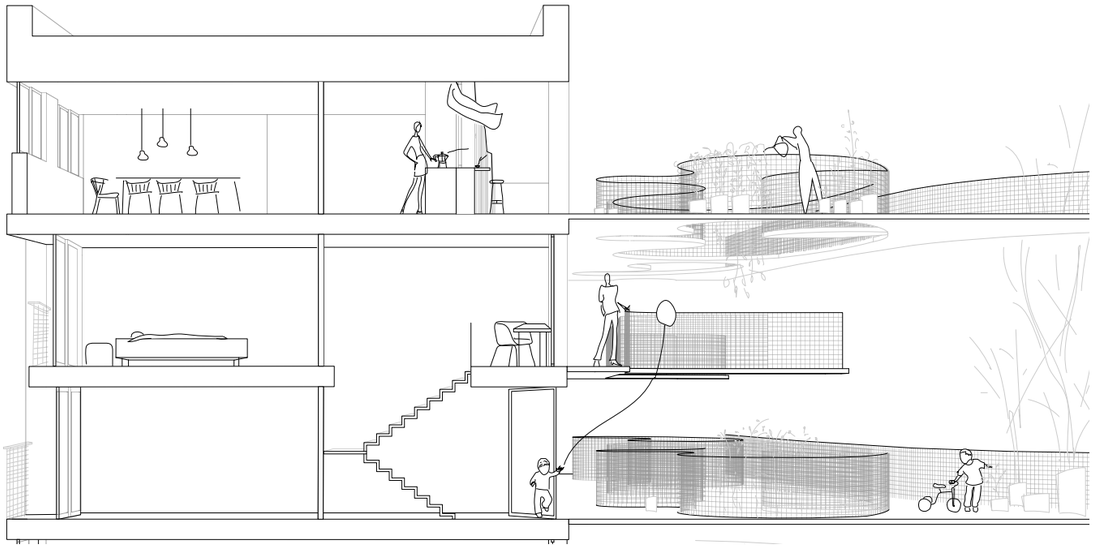
Apartment on the top floor

Letting the morning light onto the kitchen counter



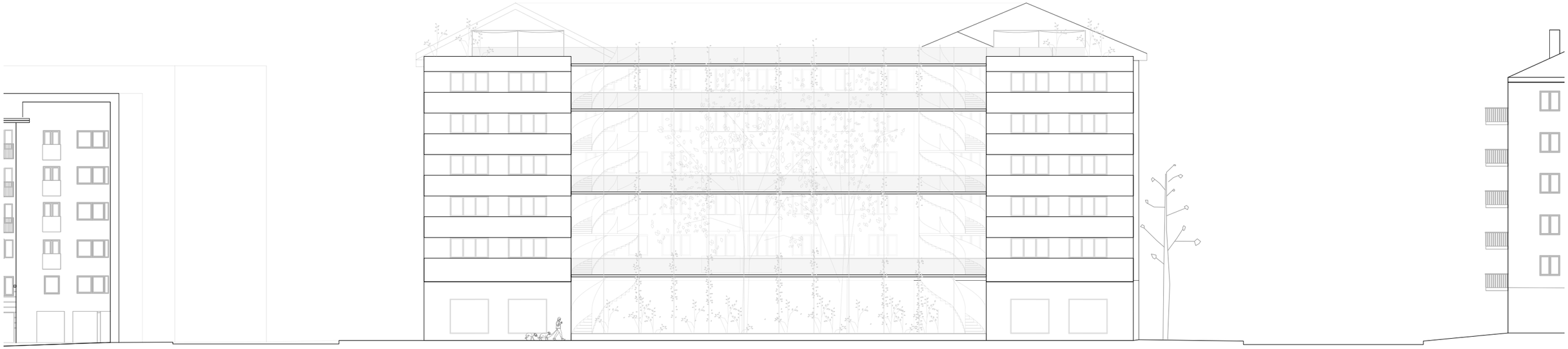
0 2 5 m

Section



Relationship between the gallery and the housing units

The Gallery



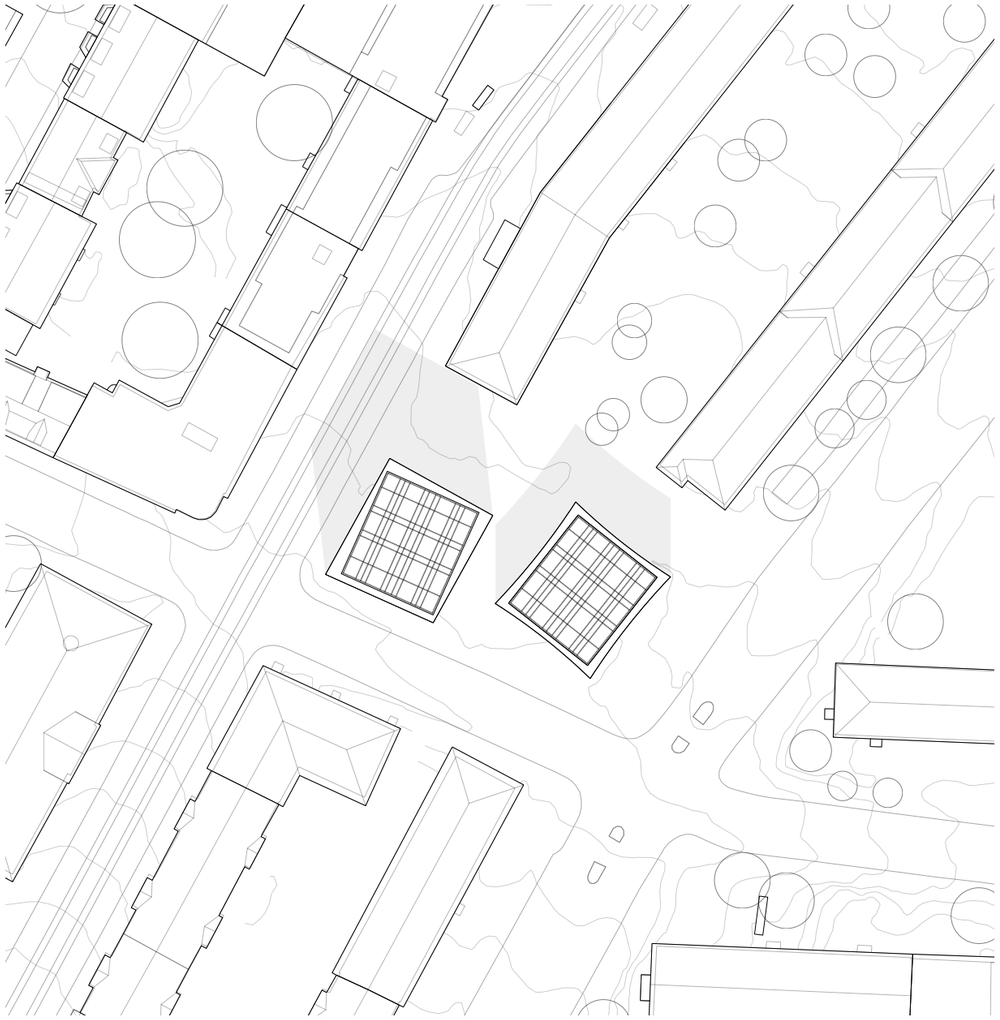
Elevation from Helgesens gate

0 2 5 m

Elevation from Sars' gate

Facade from Trondheimveien

Materiality, window proportions and loggias refer to the neighbouring block



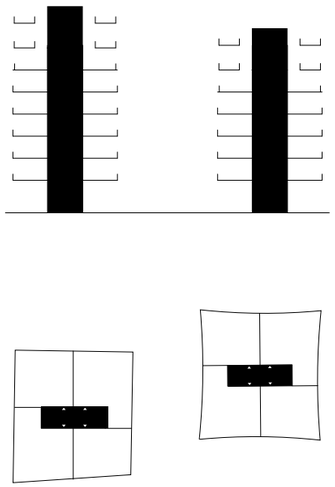
ON TOP

On Top is a project consisting of two towers. The project explores on one side - the balcony's role in layering of an extrovert facade, and on another side - how balconies can become its own structure and organism, compensating for the narrow or no outdoor spaces with a direct access from the housing unit.

Footprint:	646 sqm
Dwellings:	32 apartments between 60-70 sqm
Additional:	Public ground floor, rooftop terrace
Total area:	4 522 sqm

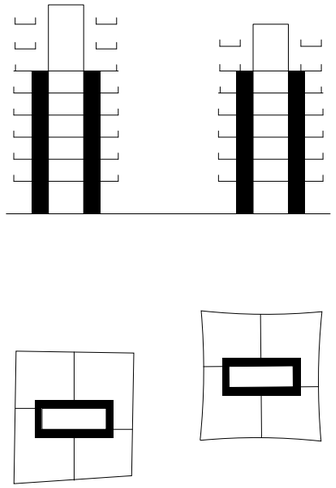
Model 1:500

Model 1:500



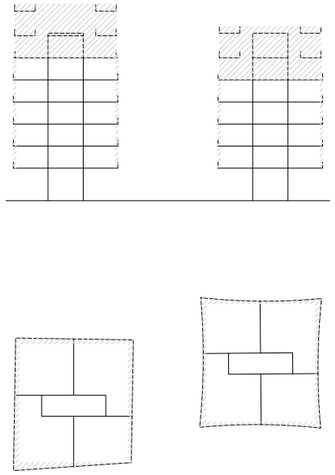
Access

Vertical point access in the main load-bearing core in the center



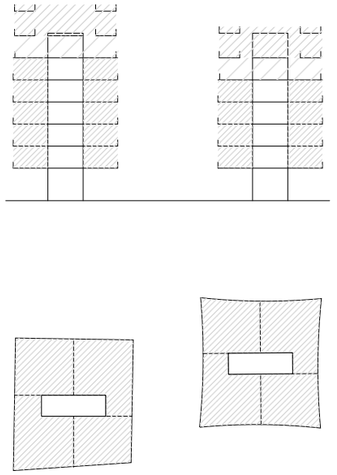
Cores

Service cores are arranged along the central core in order to open up the rest of the area



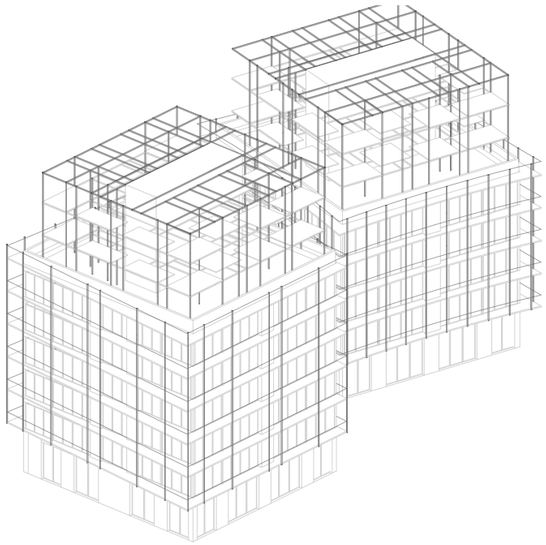
Outdoor spaces

Narrow balconies along the whole structure as a layering system of the facade.
Balconies as its own structure on top of the bulding, creating a multilevelled rooftop garden, where each inhabitant has its own outdoor space.



private
semi-private
semi-shared
shared

Private housing units with a social balcony structure on the rooftop.

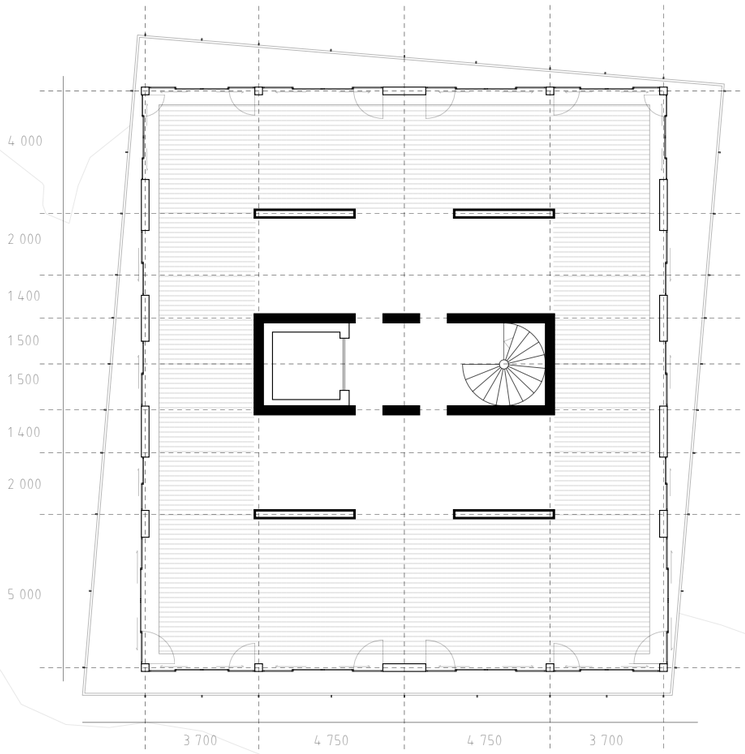


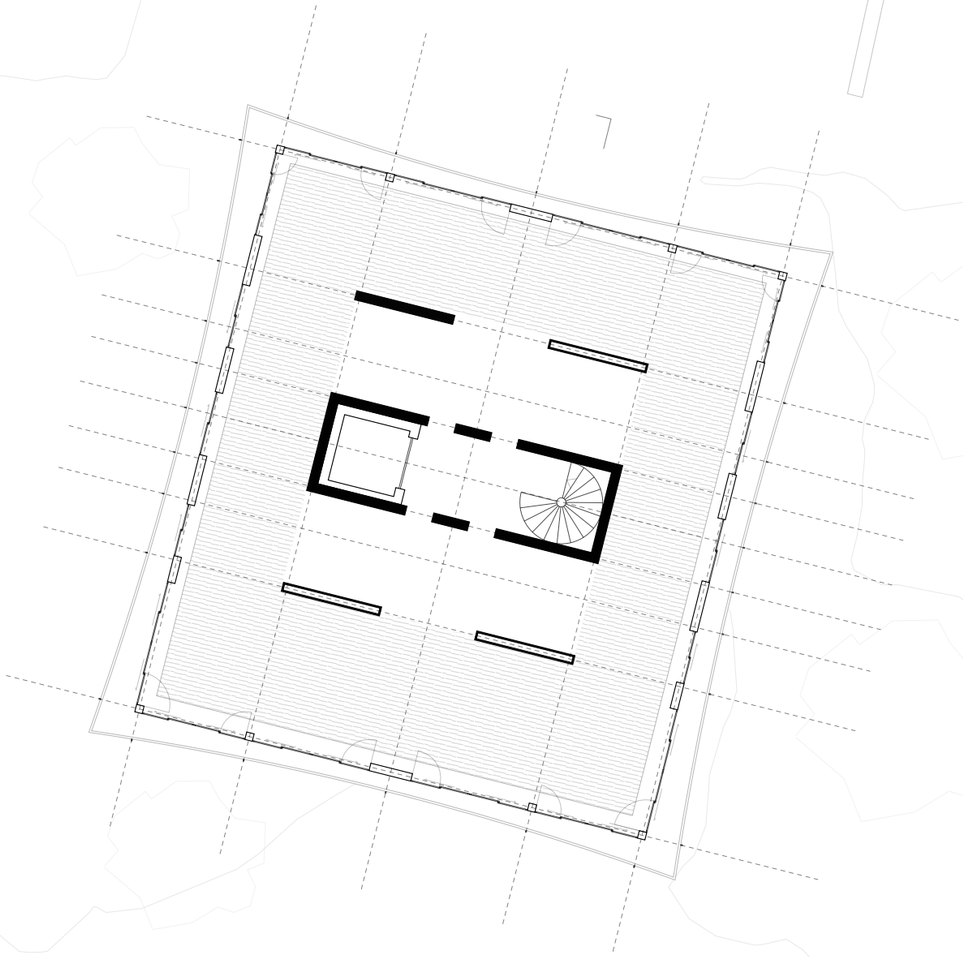
The main load bearing structure with the vertical communications is concentrated in the centre of the volume in order to liberate the rest of the area. The climatised residence area is rationalised to a square volume, meanwhile the balconies, meandering along the perimeter of the buildings follow the street lines. The irregular form of the balconies creates deeper spaces by the living areas and narrower ones in between the apartments, articulating the division of space.

In the proposal, every housing unit inhabits a corner of the building. Smaller parts of exterior walls are placed strategically to give the freedom in the division of space. Other than this, the exterior walls consists of slide and twist doors giving an opportunity to open up and let the surroundings in.

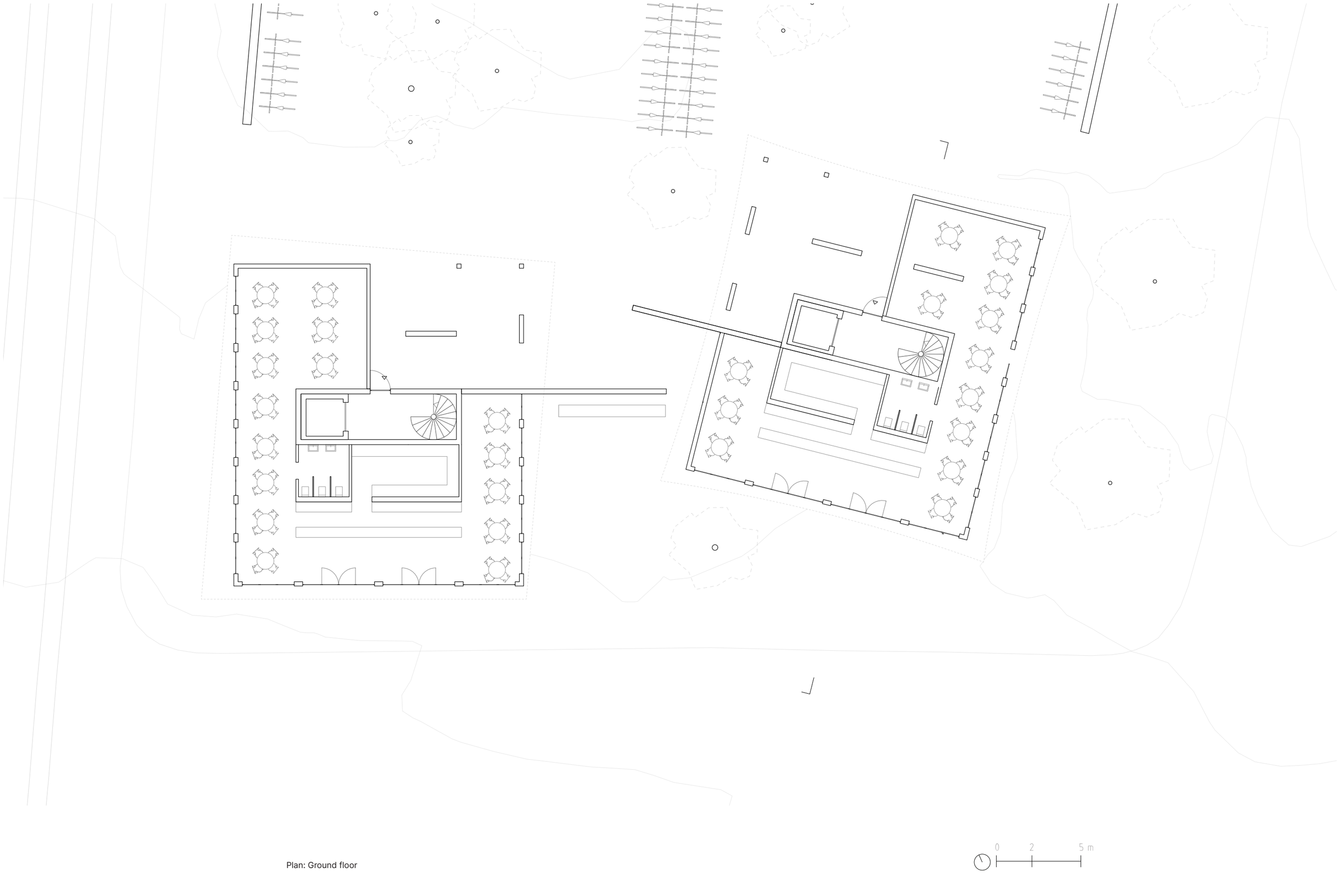
A sense of privacy and protection is given by raising the balconies 45 cm above the floor level. The height difference functions as a bench and a space for heating systems or storage underneath. Consequently, the light is not interrupted on its path to the apartment below. The balcony on the first floor is 30 cm deeper and the ceiling height is 30 cm higher than in a typical floor in order to create a stronger barrier for insight and noise and provide the living spaces with sufficient light.

The narrowness of the balconies adjastent to the apartments is compensated by the multilevelled rooftop terrace with a private space for every apartment As a result, balconies, in stead of isolated private cells, here become its own structure, an organism working together and creating a cohesion between the residents.

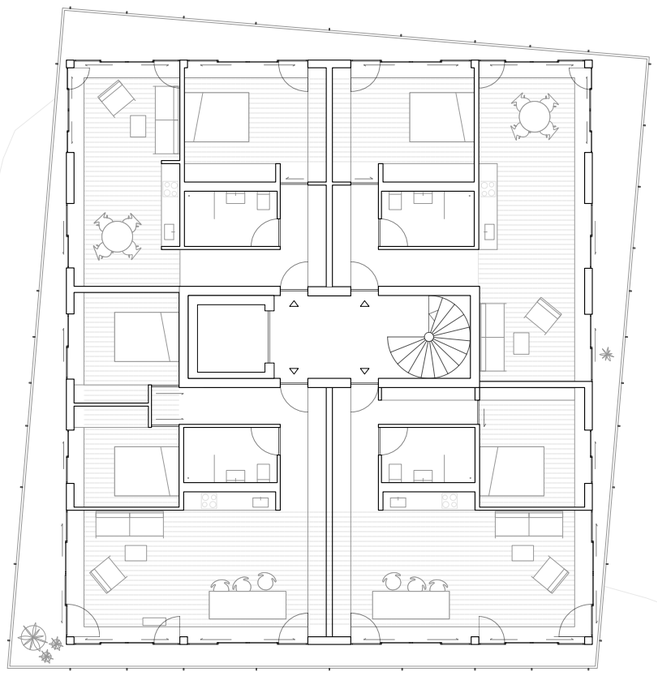


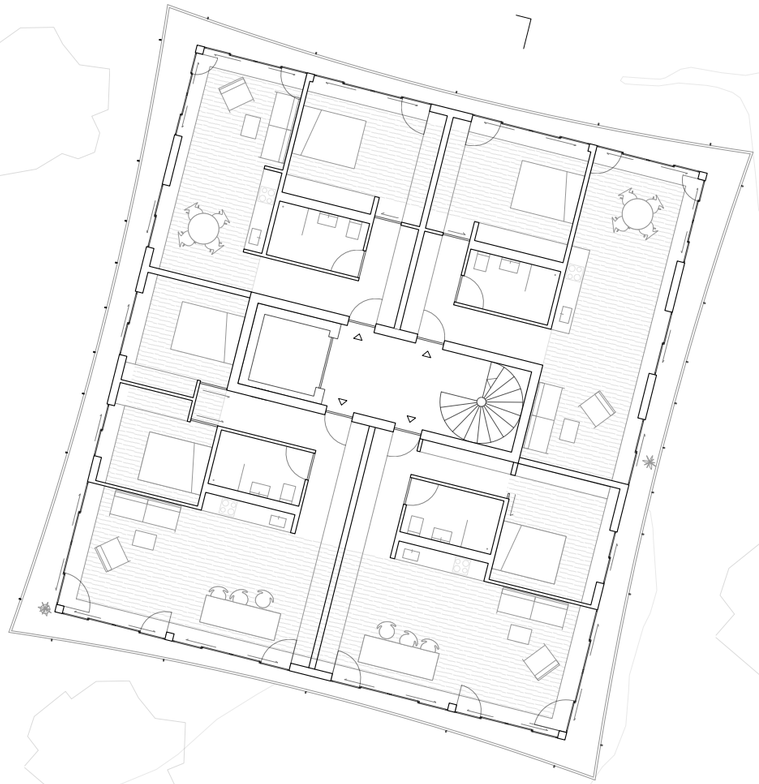


Plan: Structure



Plan: Ground floor



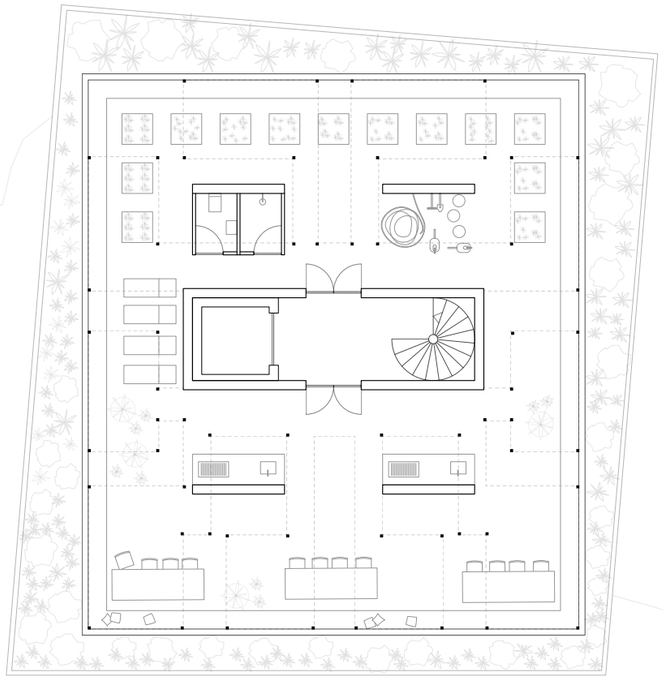


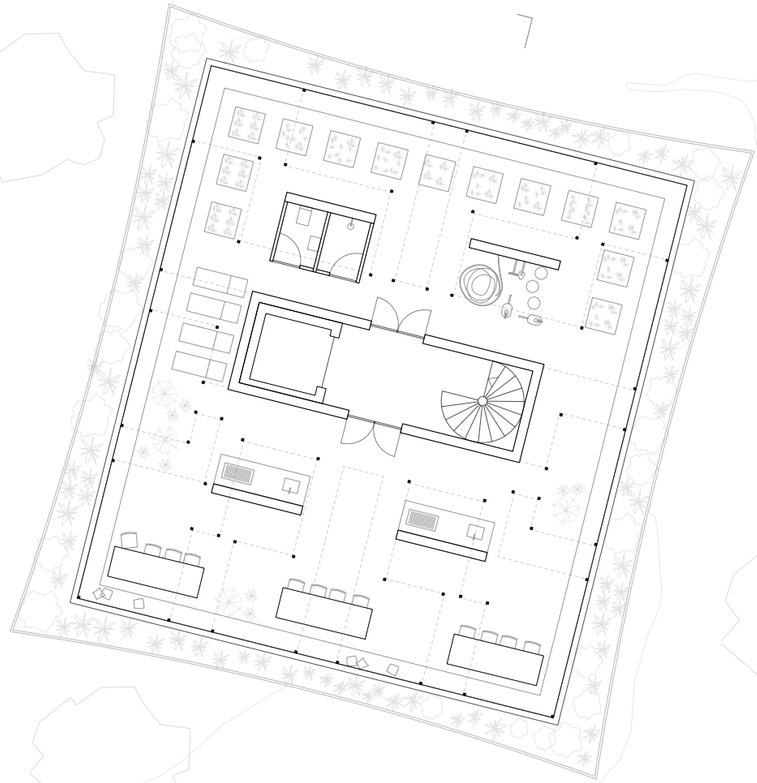
Plan: Typical apartment floor

0 2 5 m

Kitchen in an apartment

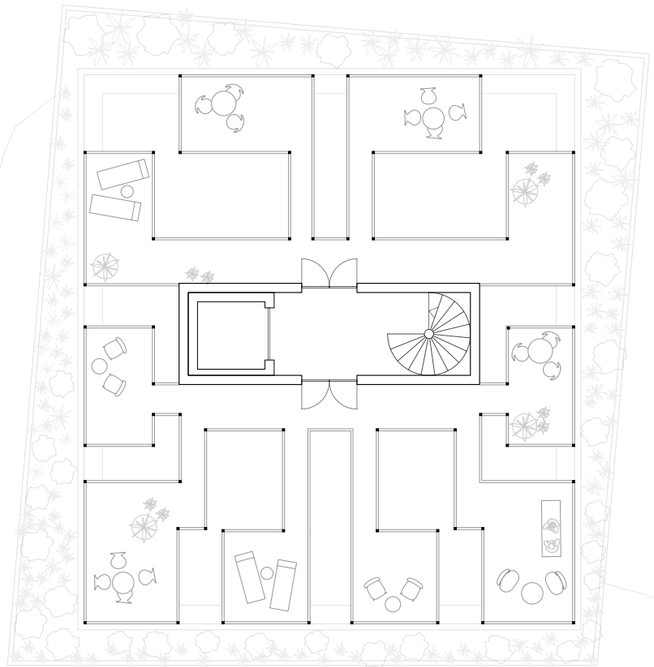
Raised balconies creating a bench along the exterior walls

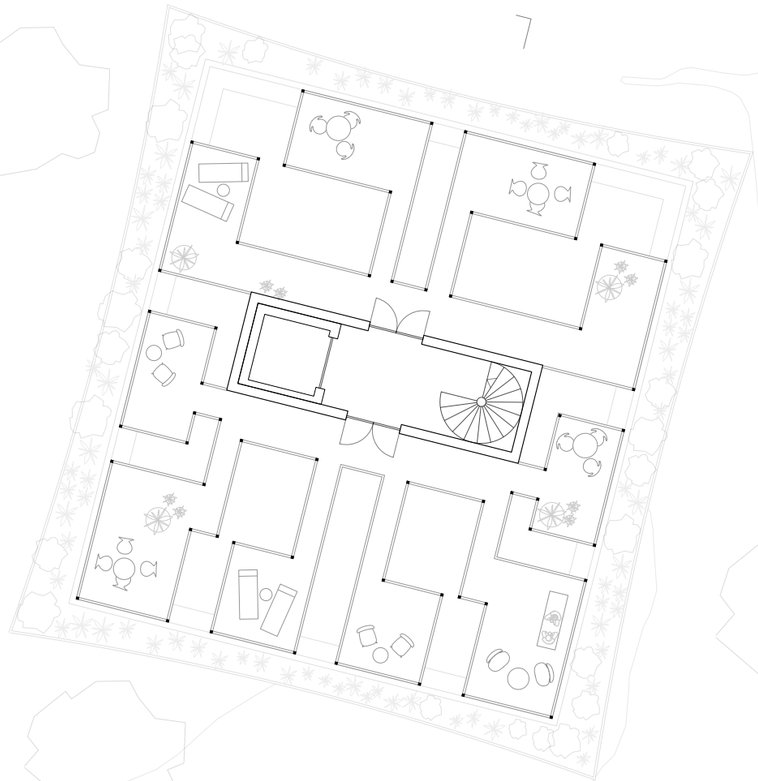




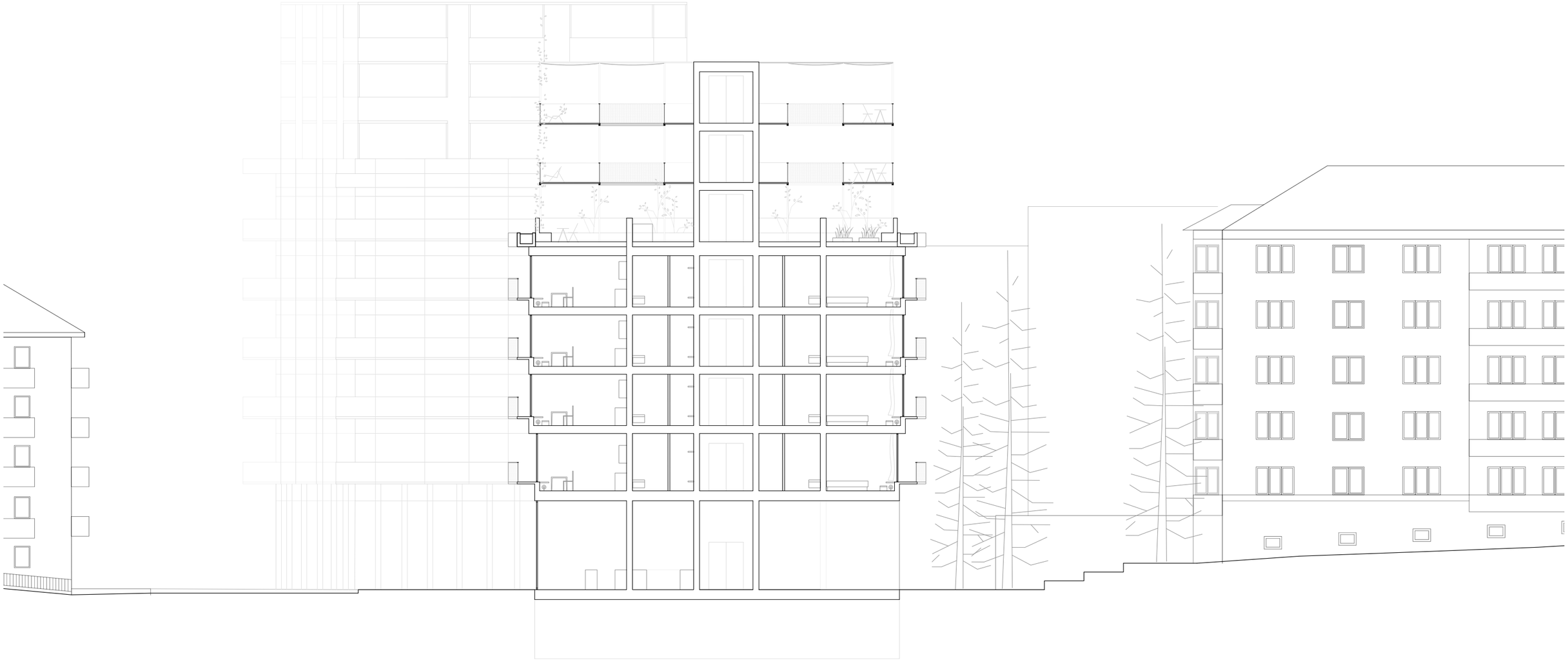
Plan: rooftop

0 2 5 m



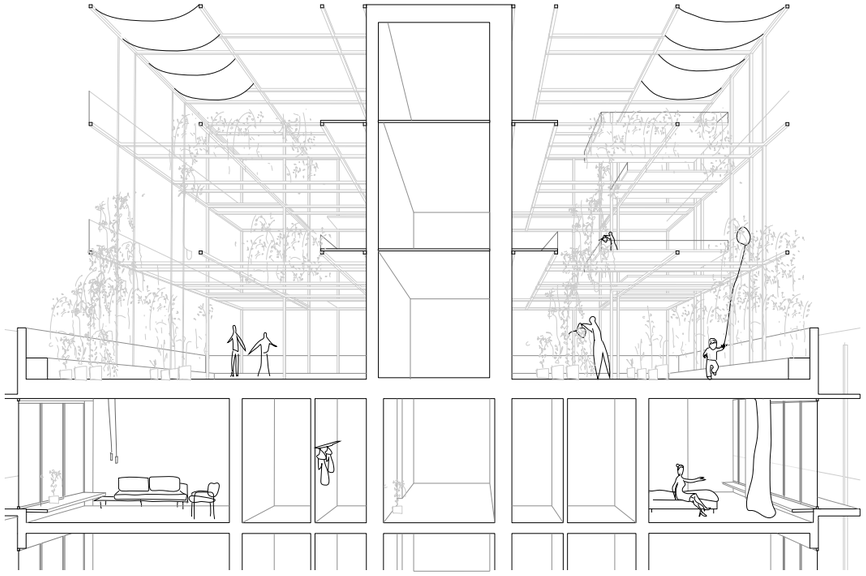


Plan: Balconies



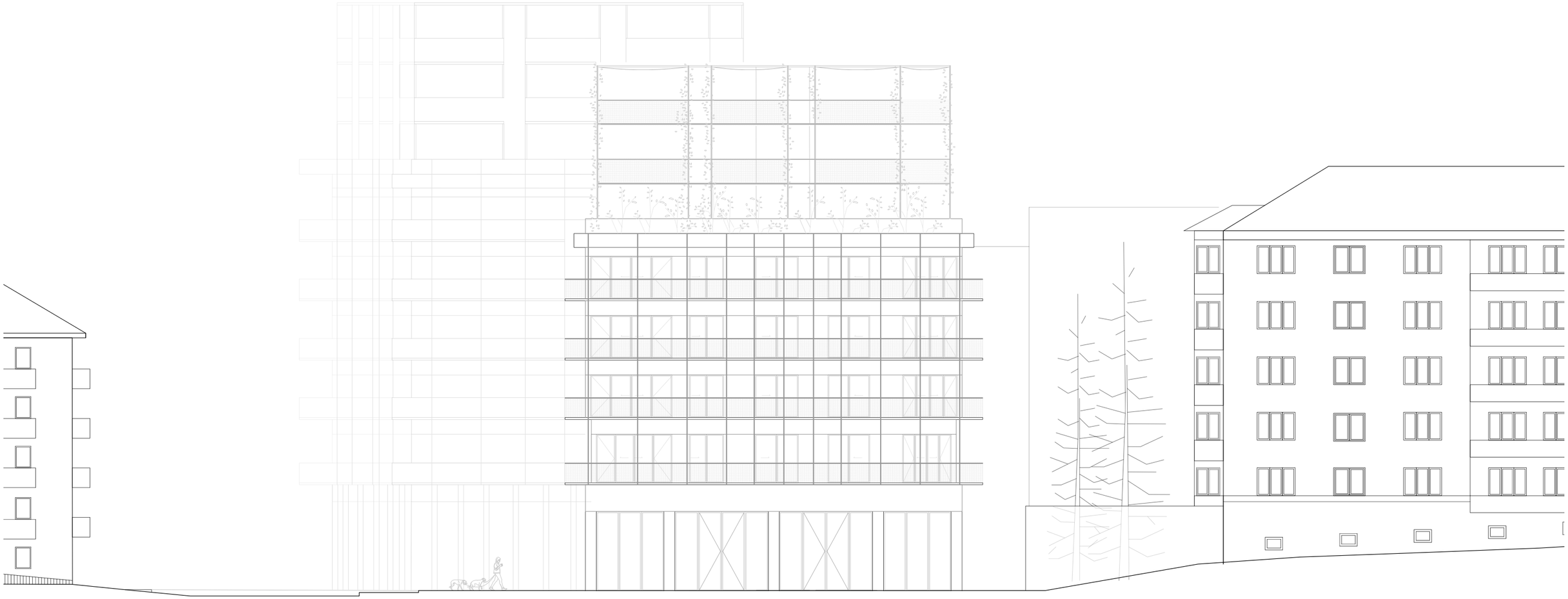
0 2 5 m

Section



Shared and Private

The Gallery



0 2 5 m

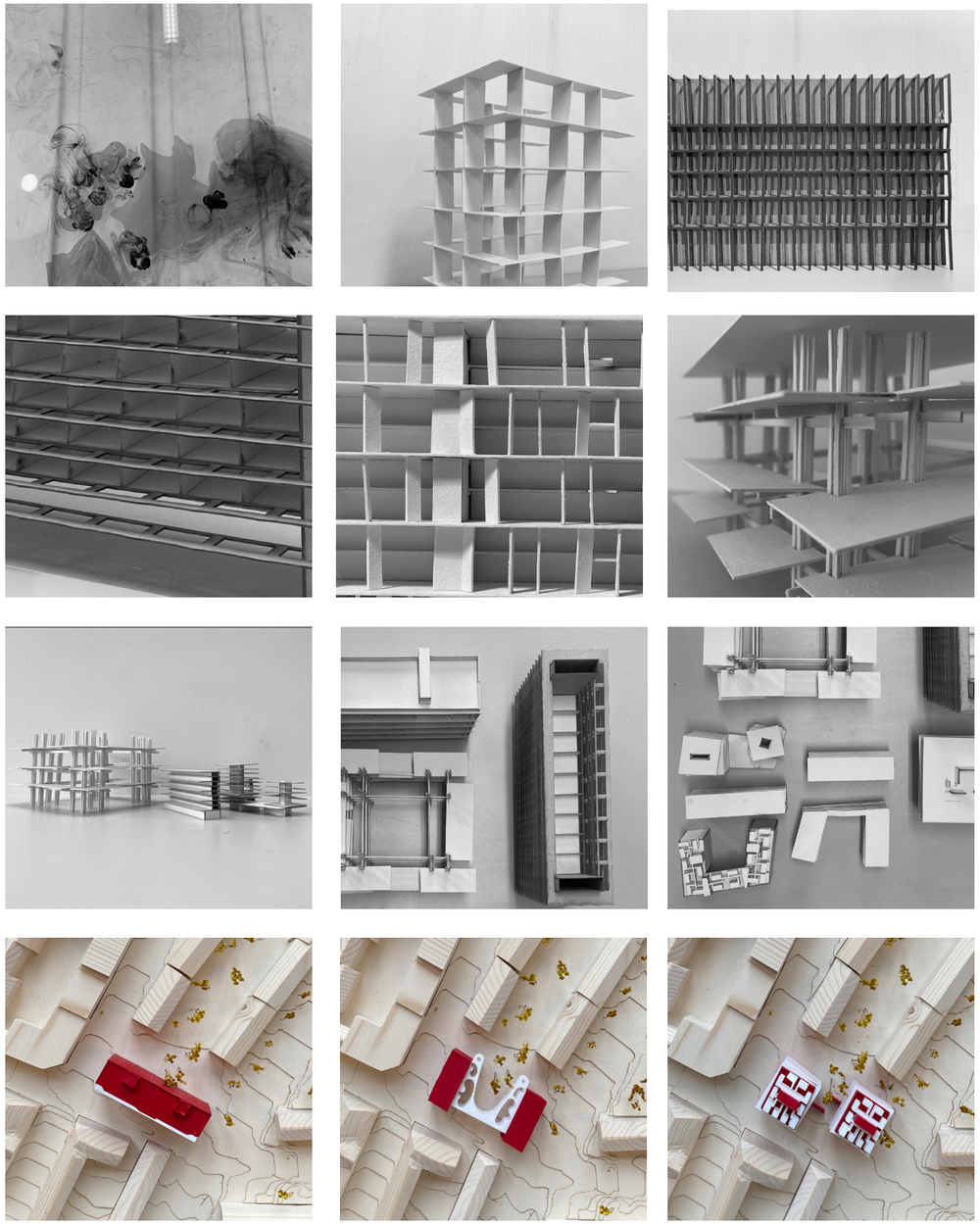
Elevation from Sars gate

0 2 5 m

Elevation from Helgesens gate

Facade from Helgesens gate

The balcony structure



Photos from process: ink workshop and sketch models

EPILOGUE

I entered the semester with only a curiosity and a desire to study the subject of balcony, without a clear idea on how the final product should be. The studies and my gradual realization of the importance on the exterior spaces and the potential that lies in the interface betweent the inside and the outside developed the second part of the thesis into a typological study of urban housing with an extended use of exterior spaces.

I hope the future homes we will build will have beautiful balconies that allow us to inhabit the nature, even in cities, even in our apartments.

ACKNOWLEDGMENTS

I am greatful for the freedom of the thesis which gave me a possibility to spend a whole semester on something I am genuinely interested in.

For this journey, I owe a great deal of gratitude to

My supervisors Nina Haarsaker and Hanna Landfal Hanssen, for your continuous supervising, immense availability and support,

Fredrik Lund, Geir Brendeland for your valuable comments,

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My mother, for being there.

BIBLIOGRAPHY

Ebner, P. H., Eva; Hollbacher, Roman; Kuntscher, Markus, Wietzorrek, Ulrike (2010). Typology +. Innovative Residential Architecture. Germany, Birkhauser.

Koolhaas, R. (2014). Balcony. Italy, Marsilio.

Pierini, O. S. and A. Isastia (2017). Case Milanesi 1923-1973: Cinquant'anni di Architettura Residentale a Milano, Fifty Years of Residential Architecture in Milan.

Welch, K. E. (2007). The Roman amphiteatre: from its origins to the Colosseum. 32 Avenue of the Americas New York Cambridge University Press

Corrodi, M. S., Klaus (2008). Illuminating. Berlin, Birkhauser Verlag AG

Caruso, A. T., Helen (2014). Asnago Vender and the Construction of Modern Milan. Zurich, gta Verkag.

BIBLIOGRAPHY

Arkitektnytt.no. 2021. Tanker om lyset | arkitektnytt.no. [online] Available at: <https://www.arkitektnytt.no/nyheter/tanker-om-lyset> [Accessed 20 May 2021].

Heward, J., 2021. all in the detail ... geometry and proportion in buildings by Arne Jacobsen — danish architecture and design review. [online] danish architecture and design review. Available at: <http://danishdesignreview.com/blog/2016/5/16/all-in-the-detail-thoughts-on-the-use-of-geometry-and-proportion-in-buildings-by-arne-jacobsen> [Accessed 20 May 2021].

Neveu, M., 2021. Om fortellinger: Arkitektur og identitet - Arkitektur N. [online] Arkitektur N. Available at: <https://arkitektur-n.no/artikler/om-fortellinger> [Accessed 20 May 2021].

the Guardian. 2021. Man runs marathon on 7-metre balcony during French lockdown. [online] Available at: <https://www.theguardian.com/world/2020/mar/21/man-runs-marathon-on-7-metre-balcony-during-french-lockdown> [Accessed 20 May 2021].

RICHMAN-ABDOU, K. 2019. How Haussmann Architecture Transformed All of Paris with Modern Buildings. Available: https://mymodernmet.com/haussmann-paris-architecture/ [Accessed 07.05.2021].

SCHNOOR, C. K., CLAUDIA. 2013. Immeuble- villas between Le Corbusier and Albert Gessner. Proceedings of the Society of Architectural Historians, Australia and New Zealand
30, Open [Online]. Available: https://core.ac.uk/download/pdf/70768061.pdf. [Accessed 18.04.2021].

SJØBERG, J. 2012. Heller balkong enn felles uteområde. Aftenposten [Online]. Available: https://www.aftenposten.no/norge/i/onbW6/heller-balkong-enn-felles-uteomraade [Accessed 18.04.2021].

STAMP, J. 2014. The Medieval Origin Story of the Balcony. Available: https://www.smithsonianmag.com/history/the-origin-story-balcony-180951755/ [Accessed April 14, 2021].

KOMMUNE, O. 2020. 8.2 Byrådets ambisjoner for byutvikling [Online]. Available: https://www.oslo.kommune.no/politikk/budsjett-regnskap-og-rapportering/budsjett-2020/budsjettforslag-2020-og-okonomiplan-2020-2023/?del=8-2#gref [Accessed 18.04.2021].

ILLUSTRATION CREDITS

1 Balcony spirit: hope in face of coronavirus. Photograph: Sebastien Salom-Gomis/AFP via Getty Images. Published 2020. Accessed May 19, 2021. https://www.theguardian.com/world/gallery/2020/mar/19/balconies-sites-hope-coronavirus-in-pictures

2 Harald Sohlberg, Fra et hjem 1919. Accessed May 19, 2021. https://trondheimkunstmuseum.no/harald-sohlberg-uendelige-landskap

3 Le Corbusier, Immeubles-Villas 1922. Accessed May 19. 2021.
http://www.tekno24.it/capitolo_4_1_10.htm

4 Home of Ignazio Gardella. Accessed May 19, 2021. http://www.atlasofinteriors.polimi.it/2015/11/19/ignazio-gardella-gardellas-home-milan/

5 Ignazio Gardella, Condominio ai Giardini d'Ercole, Milan 1949. Accessed may 19, 2021.
https://www.artribune.com/progettazione/architettura/2018/12/mostra-case-milanesi-villa-necchi-campiglio/attachment/skm_c25818073013290/

6 Ignazio Gardella, Condominio ai Giardini d'Ercole, Milan 1949. Accessed May 19, 2021.
http://www.lombardiabeniculturali.it/architetture900/schede/p4010-00424/

7 Casa Ponti, Milan 1957. Accessed May 19, 2021. http://www.lombardiabeniculturali.it/architetture900/schede/p4010-00221/

8 Gio Ponti, Pianta di studio dell'ottavo piano destinata all'appartamento della famiglia Ponti. Accessed May 19 2021.
https://www.ordinearchitetti.mi.it/en/mappe/itinerari/edificio/341-ponti-house-in-via-dezza/46-gio-ponti

9. Giuseppe Terragni, Pietro Lingeri, Casa Rustici, Milano (1933-1936) Photography by Maurizio Petronio. Accessed May 19, 2021.
https://www.artribune.com/attualita/2015/03/le-belle-arti-a-expo-intervista-esclusiva-con-lorenzo-degli-esposti/attachment/giuseppe-terragni-pietro-lingeri-casa-rustici-milano-1933-1936-maurizio-petronio/

10 Asnago Vender, Via Farrufini 6, Milan 1954. Accessed May 19, 2021. https://www.ordinearchitetti.mi.it/it/mappe/itinerari/edificio/510/44-asnago-e-vender/galleria

11 Schematic rendering of the course of the sun during the year in Illuminating, Corrodi, Michele; Spechtenhauser, Klaus 2008, Berlin.

12 Sverre Fehn, Villa Schreiner, 1965. Accessed May 19. 2021
http://oslobilder.no/KFS/DEX_T_4671_035?query=%22bolighus%22&page=2&count=2723&search_context=1&pos=147

13 Balcony in Russia. Accessed May 19, 2021.
https://www.google.com/imgres?imgurl=https://pic.mys-ku-st.ru/uploads/pictures/04/30/04/2018/07/30/1bf951.jpg&imgrefurl=https://pluspda.ru/blog/misc/65073.html&h=443&w=800&tbnid=yG4NQVSup9E3UM&tbnh=167&tbnw=302&usg=AI4_-kRfeEM8WszYLC9ww1GGLRJEjWPc-JQ&vet=1&docid=JsIlF8_j0GFwXM&itg=1&hl=no

14 Gustave Caillebotte, L'homme au balcon, boulevard Haussmann 1880. Accessed May 19, 2021. https://journals.openedition.org/bcrfj/7059

15 Students of the Bauhaus in Dessau, Photo: Stiftung Bauhaus Dessau. Published 2019. Accessed May 19, 2021.
https://www.architonic.com/es/story/dominic-lutyens-back-to-the-future-100-years-of-the-bauhaus/20028702

16 Lacaton Vassal, Transformation de 530 logements, Bordeaux 2017. Accessed May 19, 2021. Accessed May 19, 2021.
https://www.lacatonvassal.com/index.php?idp=80

17 Enrico Alessandro Fanfani, La mattina del 27 aprile 1859, Loggia Lanzi, Florence. Accessed May 19, 2021.
https://www.uffizi.it/opere/la-mattina-del-27-aprile-1859

18 Shigeru Ban, Curtain Wall House, Tokyo 1995. Accessed May 19, 2021. http://www.shigerubanarchitects.com/works/1995_curtain-wall-house/index.html

19 Photography by Sofie Ramstad, Oslo 2021

20 Photography by Sofie Ramstad, Oslo 2021

21 Photography by Birgitte Bossart, Oslo 2021

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28 Photography by Birgitte Bossart, Oslo 2021

29 Photography by Sofie Ramstad, Oslo 2021

30 Photography by Birgitte Bossart, Oslo 2021