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SCALES OF CARE

MASTER THESIS
FS23

NOSTALGIA
ECOLOGY N°II



CHANTAL BEKKERING

STARTING POINT

After we have dealt with the “Bürgerhaus” in Zürich in the previous semester, we would like to continue our investigation with the “Bürgerhaus” in the canton of Graubünden with this master thesis. The foundation of our research is the extensive work “Das Bürgerhaus in der Schweiz” published by the “Bürgerhaus-Kommission” of the Swiss Association of Engineers and Architects in the 1920s, which documents representative residential buildings from various eras, most of which still exist today. The collection shows an impressive variety of formally and stylistically self-assured buildings, which are depicted in detail with wonderful care. The reproduced plans include meticulously drawn elevations and interiors, from ceiling to floor, from tiled stove to door handle.

“Das Bürgerhaus in der Schweiz” was created in the interwar period and bears witness to a specific view of the history of architecture that is specific to the place and time. Thus, the concept of the “Bürgerhaus” itself is to be understood in a specific historical context. On the one hand, the publication can be read as a documentation of an architectural heritage; on the other hand, it is an expression of a return to traditional ideas of a building and craft culture that is understood as the antithesis to a modernity that is perceived as threatening. We are interested in the question of how we can take an inspired and critical look at architectural history today. By looking at historical architecture, we want to generate knowledge that helps us to produce architecture in our own time. In doing so, we do not look back because we are nostalgic, but because we want to be radically contemporary and relevant.

Considering their advanced age and durability, the buildings portrayed seem to be particularly sustainable. They testify to a high level of economic, functional and energetic intelligence and contain implicit knowledge on these topics. We want to learn from this and apply our findings to current issues of sustainability, resource and energy consumption and the durability of buildings in their various meanings. We will re-examine the buildings our own way a hundred years after they were documented by the “Bürgerhaus-Kommission”. In doing so, today’s digital tools allow us to make a high-quality, direct and fast recording of the building fabric and an up-to-date view of the “Bürgerhaus”. At the same time, we are looking for answers to the urgent questions of our time through precise observations.

Based on the results of our investigation, we will identify thematic fields that are characteristic for the phenomenon of the “Bürgerhaus” and still seem relevant today. Based on this, we will develop design scenarios for contemporary, urban buildings and ask ourselves the question: could the “Bürgerhaus” today once again function as the starting point for a radically ecological architecture?

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TYPOLOGY

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SPRECHERHAUS AS A TYPOLOGICAL REFERENCE

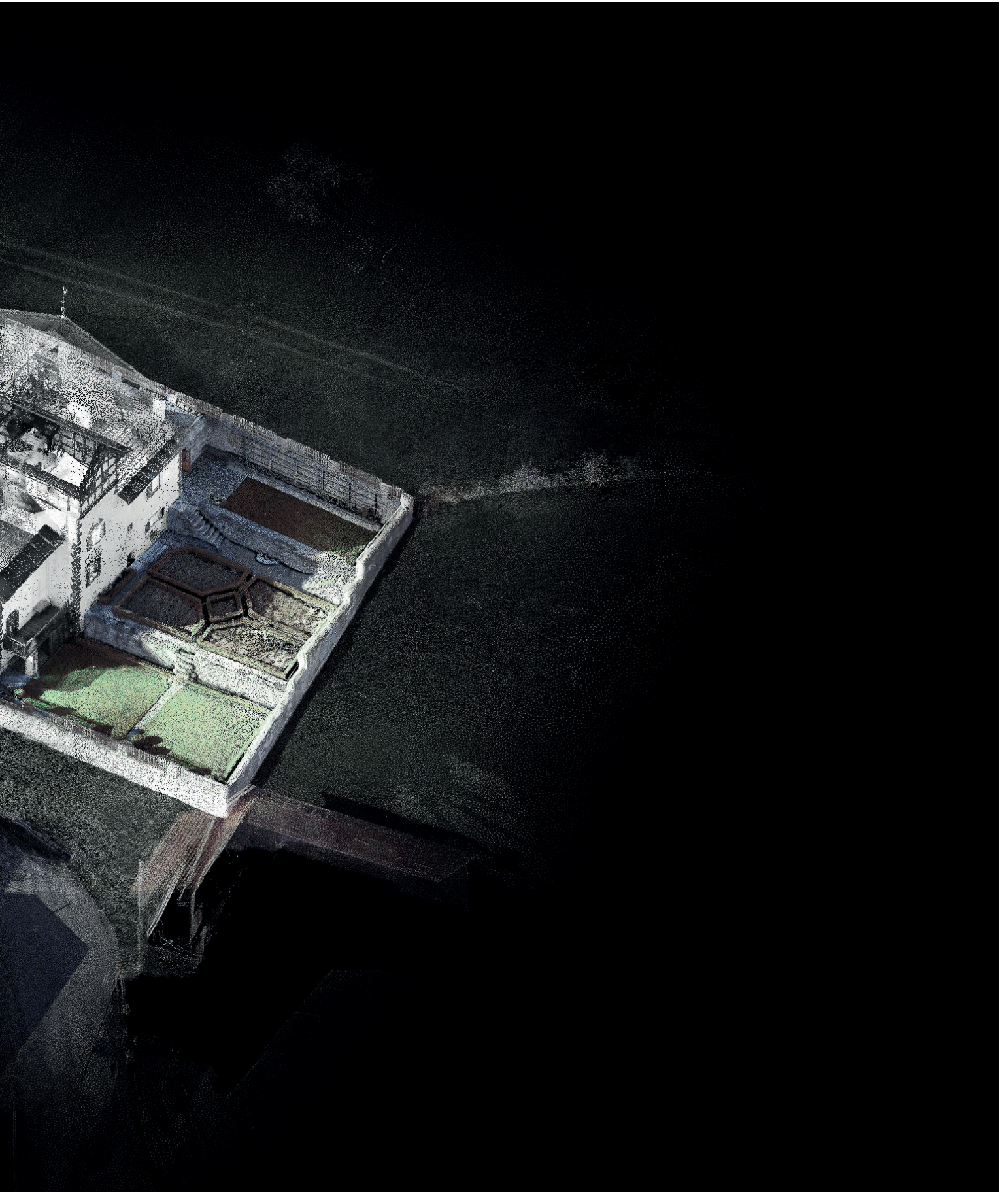
Despite the rather difficult topographic and climatic conditions for gardens in the canton of Graubünden, its upper class had an increased desire for them during the 17th century. The realization of the gardens and an increased square footage of their building complexes was made possible by their growing wealth during that period. Other typologies of outdoor areas like the courtyards also gained importance with the expansion of the buildings, because of their functional needs for the workings of the growing household. Because of the mentioned difficulties in topography and climate, a lot of thought had to be put into the placement of the different parts of the building complex. Important factors like the sun position, shading and wind directions had to be considered. Furthermore, the changing slope of the landscape required a different approach to the site composition. Fortunately, there is a lot of historical experience in the region, of making slopes functional for buildings as well as agricultural purposes by dividing the plot into different sections on different heights.

The chosen «Bürgerhaus» reference called «Sprecherhaus» in Luzein was used to examine more in detail how these factors got implemented. Its walled garden incorporates the existing slope by taking the shape of a terraced garden on three different levels connected by stairs. The garden opens to the south and east, which is great for getting lots of sun light for the growth of the plants. By strategically placing the building on the west side of the garden, it gets protected from the stronger winds coming out of that direction. The courtyard is placed in the center of the three buildings, so that it is easily accessible from anywhere on the site and can fulfill all its functional needs. To still get some sun light, the south side of the courtyard is kept open. Another traditional element of the region used in the «Sprecherhaus» is the continuous wall surrounding the whole building complex, which gets interrupted only by the façade of the buildings and the gate of the main entrance. The historical origin of the walled garden can be placed back to the old farmer's gardens of the canton Graubünden. The wall brings all the different elements of the plot together. The combination of the walls and the specific placement of the buildings and the outdoor spaces creates an exciting experience of transition and connection of spaces when walking through it.

The specific building composition influences also the interior of the buildings, especially the arrangement of the rooms and their circulation. Therefore different building typologies emerged, depending on their outside situations. The location of the circulation is thereby often the decisive factor for the room arrangement and gives each of the buildings its own character as well as different ratios between the effective and the circulation area. The most common used typology for the main house is the «Sulère», where a long wide corridor goes straight through the middle of the whole building. The rooms are then placed in a row on each side of it. Historically the «Sulère» was used in the «Engadiner» house as circulation as well as a utility and storage room. The second building, the former stable, has its circulation placed on one side of the building in the shape of a half open arcade, where in the past the animals could be placed for their grooming. The smaller annex building uses the system of continuous rooms right next to each other without a specific corridor, almost like an enfilade, to create as much usable space as possible to work.



Point Cloud Axonometry, Sprecherhaus, Luzern





Entrance to Courtyard

Point Cloud, Sprecherhaus, Luzern



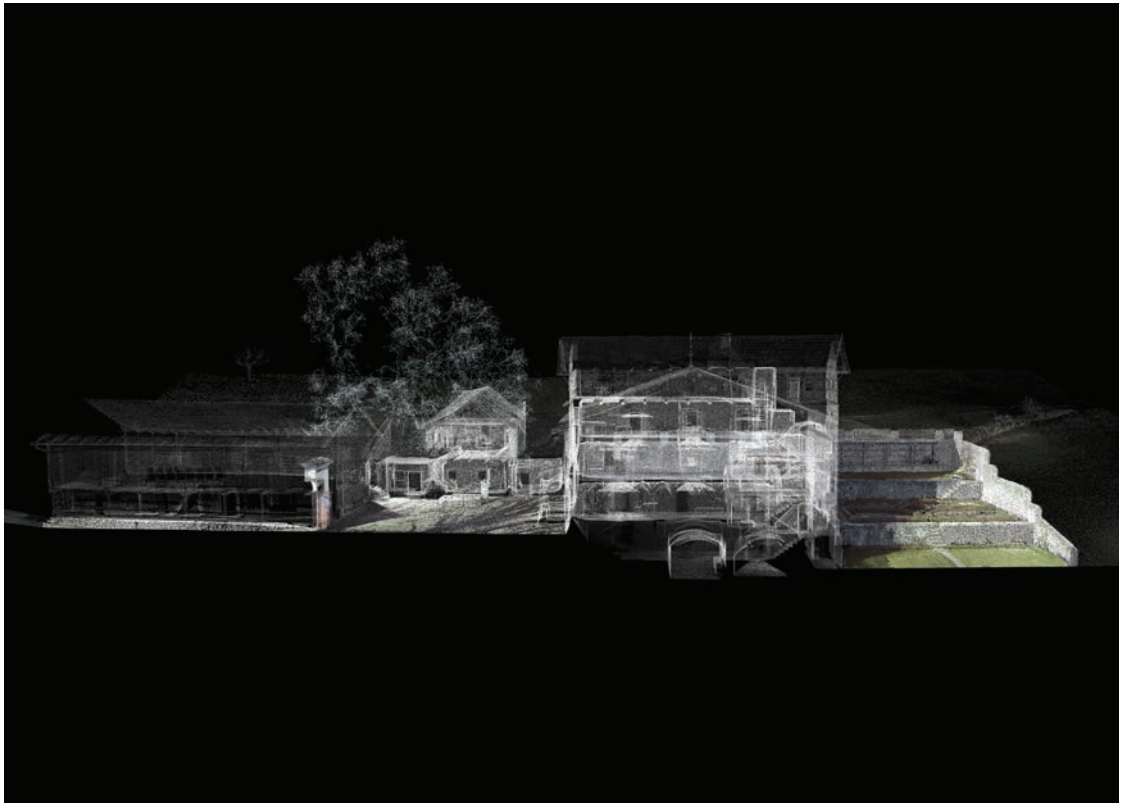
Courtyard

Point Cloud, Sprecherhaus, Luzern



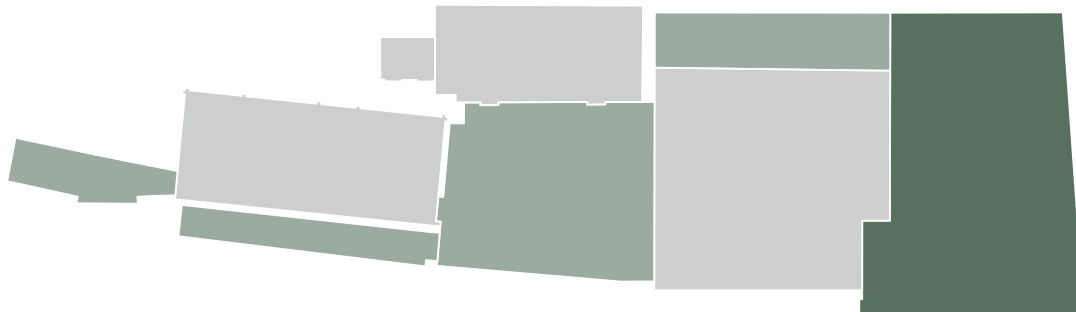
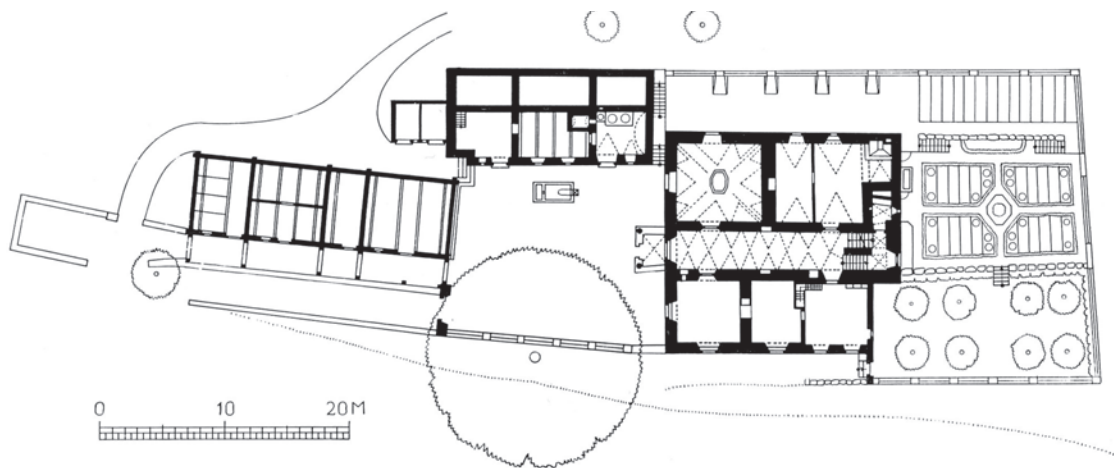
Garden

Point Cloud, Sprecherhaus, Luzern



Section

Point Cloud, Sprecherhaus, Luzern



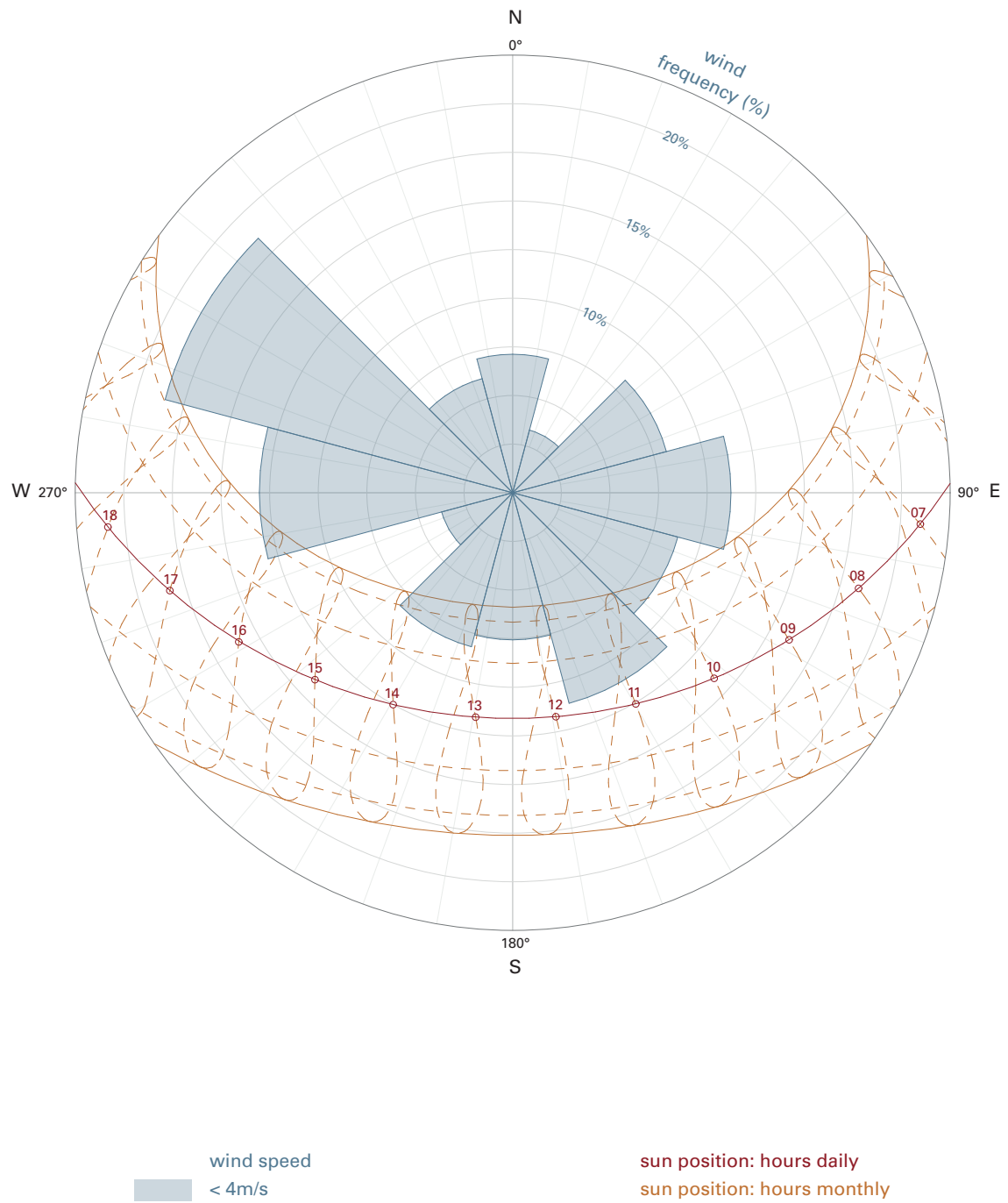
	indoor area	647.70 m ²	-	45.20% of the total site area
	outdoor area	785.60 m ²	-	54.80% of the total site area
	paved area	415.30 m ²		
	garden area	370.30 m ²		



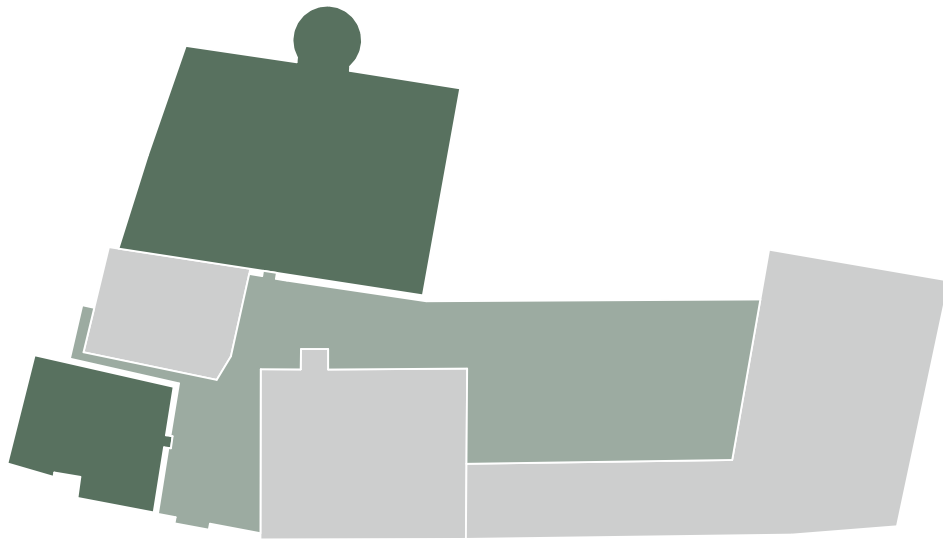
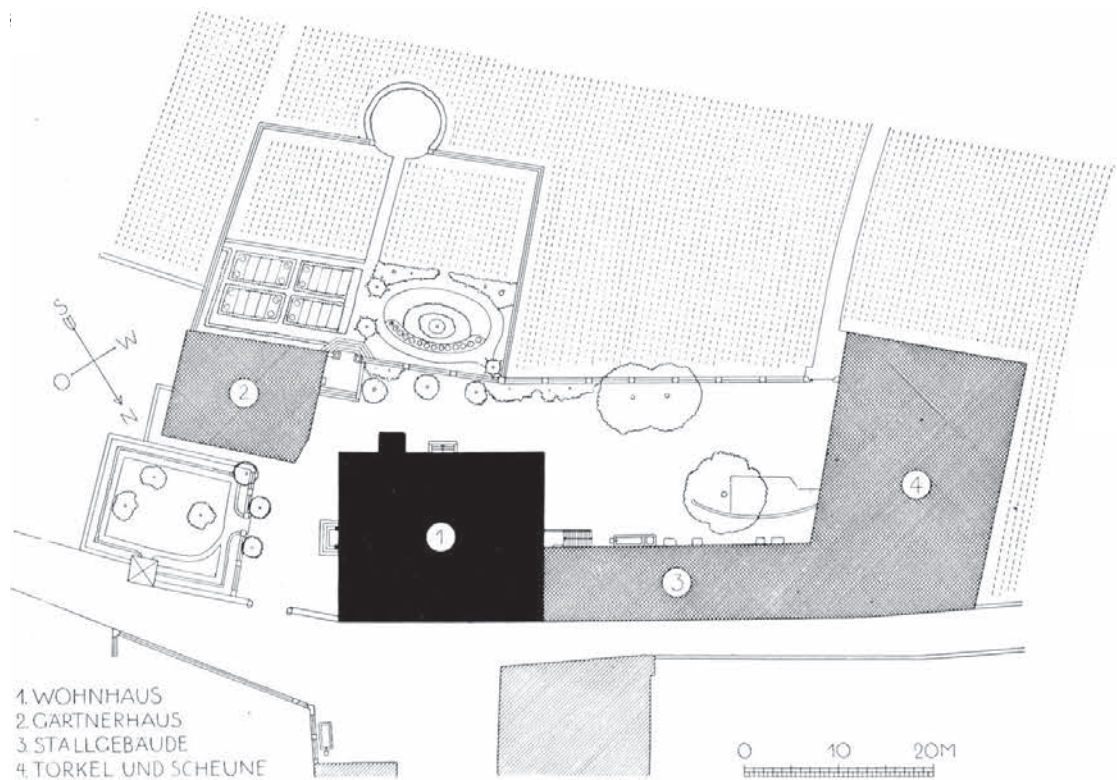
Site Plan and South Facade, Sprecherhaus, Luzern

Das Bürgerhaus in der Schweiz, Band 16, Kanton Graubünden

TYPOLOGY



Wind Direction, Speed and Sun Exposure for Sprecherhaus, Luzern

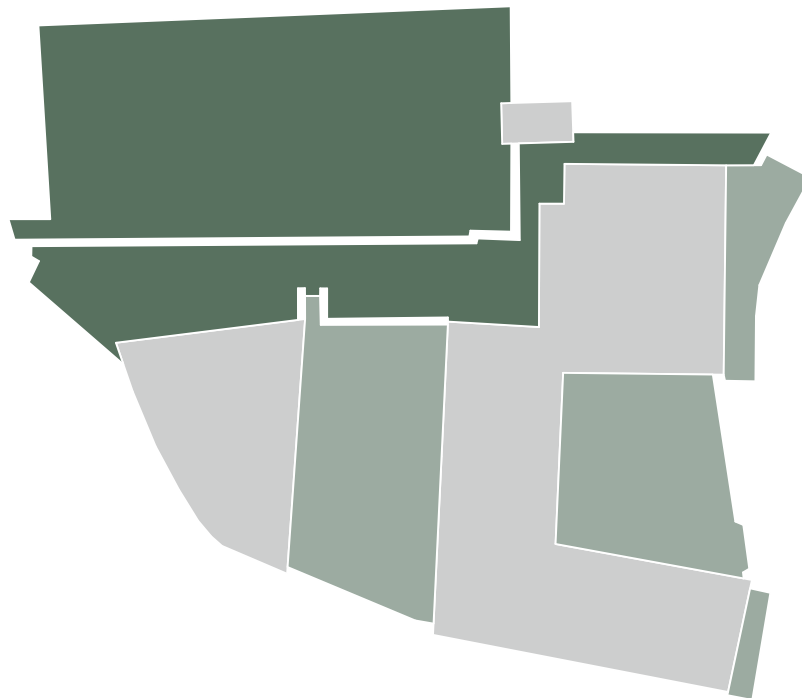
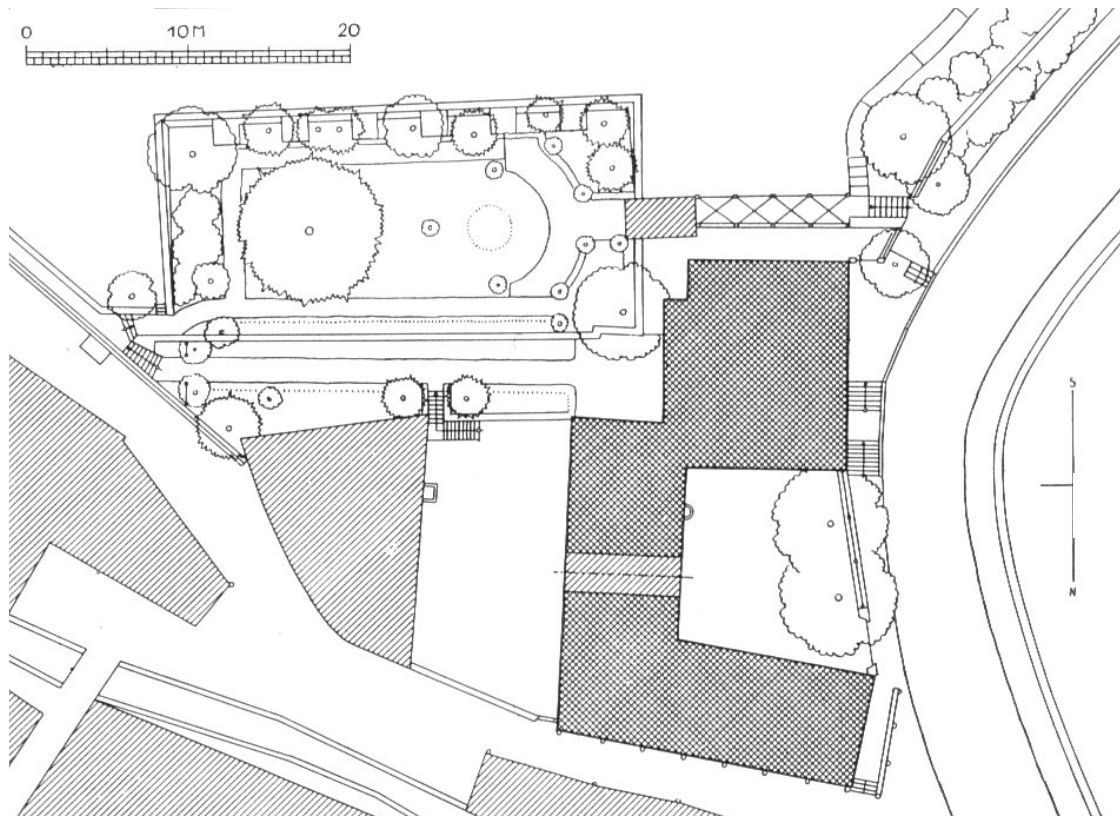


	indoor area	1436.60 m ²	-	46.30% of the total site area
	outdoor area	1669.60 m ²	-	53.70% of the total site area
	paved area	749.70 m ²		
	garden area	919.90 m ²		

Site Plan, Marschallhaus, Maienfeld

Das Bürgerhaus in der Schweiz, Band 14, Kanton Graubünden

TPOLOGY



	indoor area	490.60 m ²	-	35.30% of the total site area
	outdoor area	899.30 m ²	-	64.70% of the total site area
	paved area	320.40 m ²		
	garden area	578.90 m ²		

Site Plan, Plantahaus an der Rossstrasse, Chur

Das Bürgerhaus in der Schweiz, Band 14, Kanton Graubünden



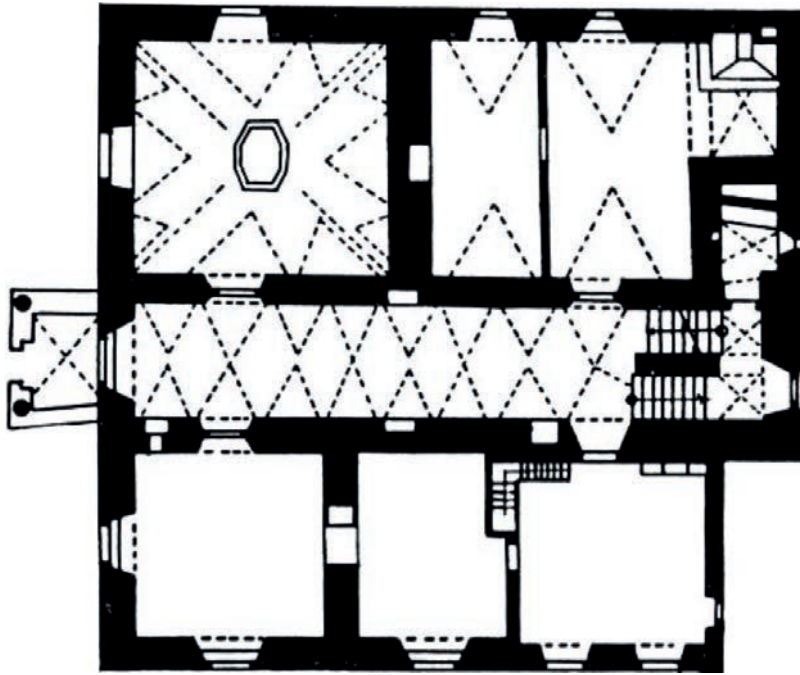
"Strassenansicht des Hauses P. C. Romedi in Madulein mit Blick auf die gemauerte Umfriedung und das Eingangstor zum geometrisch angelegten Garten."

Das Bürgerhaus in der Schweiz, Band 12, Kanton Graubünden

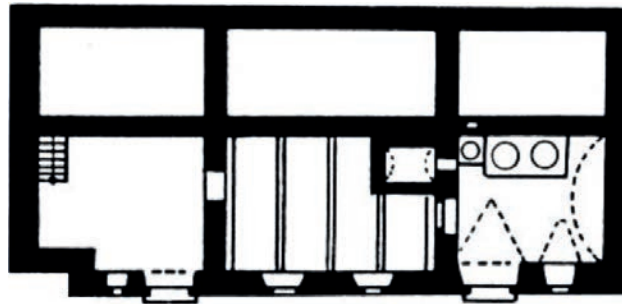


"Blick vom Garteneingang in die grosszügig angelegte Gartenanlage des Schloss Bothmar (Malans), welches im Hintergrund erkennbar ist."

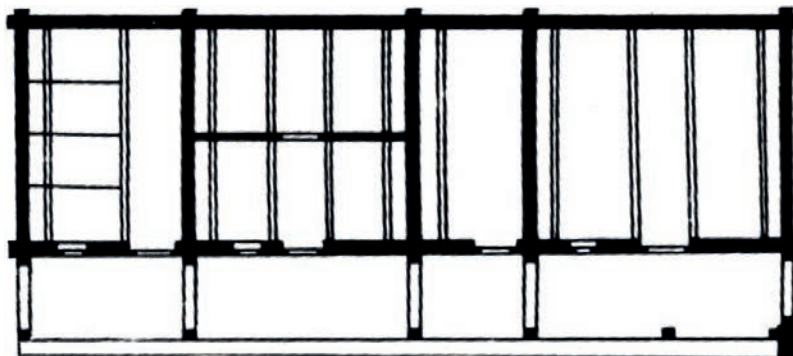
Das Bürgerhaus in der Schweiz, Band 14, Kanton Graubünden



main building – sulère



outbuilding – enfilade





former stables – arcades

Analysis Building Typologies



Sprecherhaus, Luzern

TYPOLOGY





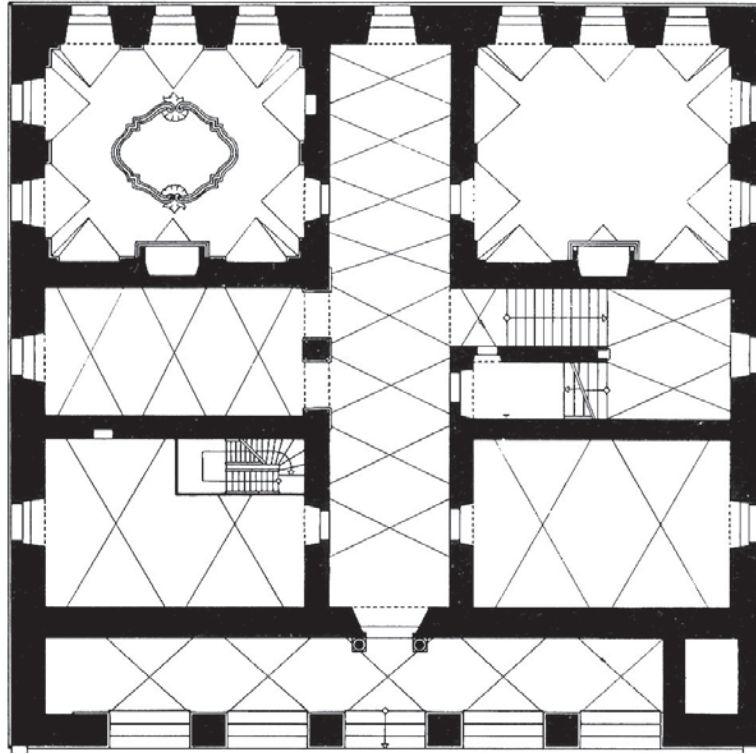
	effective area	157.60 m ²	-	74.6% of the total area
	circulation area	53.60 m ²	-	25.4% of the total area





	effective area	76.00 m ²	-	98.7% of the total area
	circulation area	1.00 m ²	-	1.3% of the total area



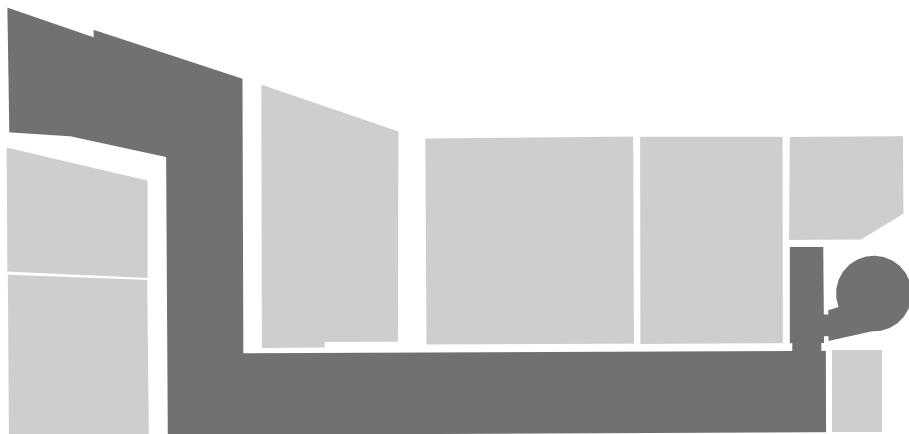
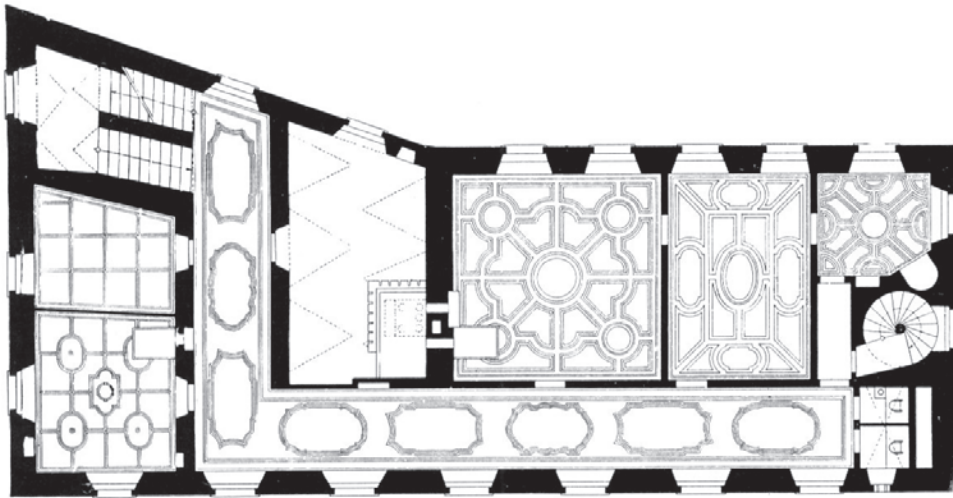
	effective area	105.30 m ²	-	70% of the total area
	circulation area	45.20 m ²	-	30% of the total area



	effective area	163.40 m ²	-	59.6% of the total area
	circulation area	110.60 m ²	-	40.4% of the total area

Mixed Building Typologies

Schloss Salis, Seewis i. Pr.



	effective area	105.40 m ²	-	60.7% of the total area
	circulation area	68.10 m ²	-	39.3% of the total area

Mixed Building Typologies

Haus Schmid, Malans



Entrance Hall, Unteres Plantahaus, Zuoz

Das Bürgerhaus in der Schweiz, Band 12, Kanton Graubünden



Corridor on the first floor, Haus von Schwartz auf dem Sand, Chur

Das Bürgerhaus in der Schweiz, Band 14, Kanton Graubünden



Arcades, Unteres Schloss, Zizers

Das Bürgerhaus in der Schweiz, Band 14, Kanton Graubünden



Entrance Hall, Oberer Spaniöl, Chur

Das Bürgerhaus in der Schweiz, Band 14, Kanton Graubünden



View of the central axis of the house, Palazzo Salis, Bondo

Das Bürgerhaus in der Schweiz, Band 12, Kanton Graubünden



Living room on the ground floor, Haus Peterelli, Savognin
Das Bürgerhaus in der Schweiz, Band 12, Kanton Graubünden

SITE & SCENARIO

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INTERIOR AND EXTERIOR IN BALANCE

Out of the research of the reference project “Sprecherhaus” the scenario for the project got developed by combining it with a program and a corresponding site. The brief asks for a new children and youth psychiatric clinic in the north of the city of Chur. The planned construction of the clinic is a response to the growing demand in this medical field in recent years and closes a gap in the system of the psychiatric services in Graubünden. The site is located at the northern edge of the city of Chur. The plot is surrounded by lots of single family houses as well as many other care institutions like the hospital of the canton Graubünden or Nursing homes. To the east one can find close by the access to the Fürstenwald. However, the most important neighbour, and also the reason behind the chosen plot as the new building site, is the adjacent psychiatric clinic “Waldhaus” for adults. It opened in 1892 during the Wilhelminian era (Gründerzeit).

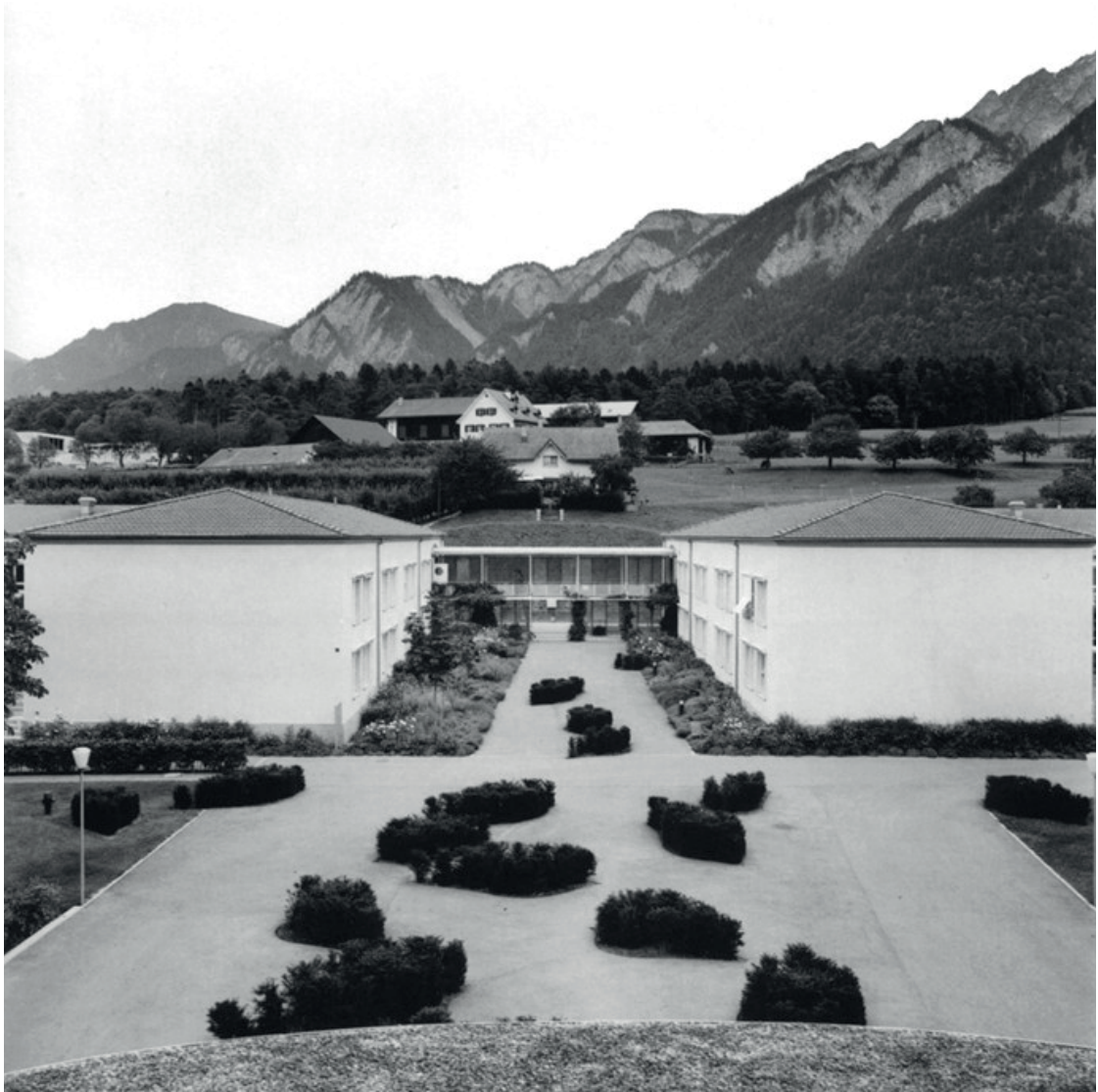
While being a programmatic continuation of the existing adult clinic, the new clinic should have its own address. Due to the program, which asks for a lot of different functions with individual needs, the children and youth clinic’s composition consists of numerous smaller buildings in contrast to the larger buildings of the existing adult one. The small scale of the individual buildings promotes the homely character of the clinic through a human scale. Furthermore, the formulation into individual smaller units makes it possible to respond precisely to changes in use and space at the respective points in the future and ensures the long-term preservation of the facility.

The focus of the project is especially on the arrangement of the exterior and interior spaces in a careful considered balance, in which exterior spaces are also treated as architectonical rooms. While the outdoor area of the “Waldhaus” clinic strives for the atmosphere of a big landscape park, the goal with the new addition is to create a variety of smaller enclosed outdoor spaces. The two opposite poles of the existing large park and the newly created archipelago of gardens balance each other out and offer a wide range of exterior spaces.

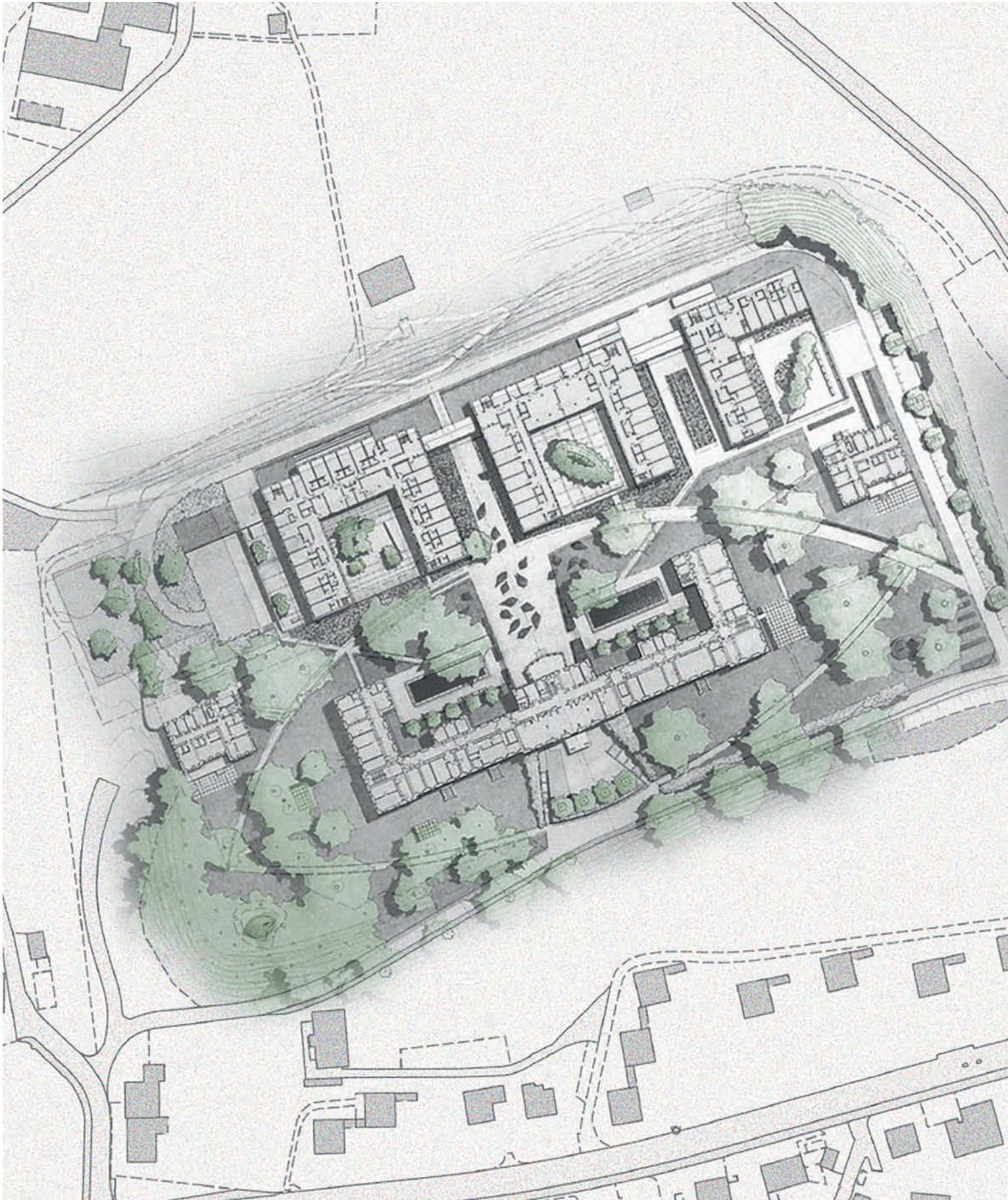
The attitude of the project should implement a sense of care on every scale; from the large scale like the topographical situation and the site context, to the smallest one of the clinic users and their needs and desires. The new clinic should ensure a certain quality of life during very stressful times and situations for the young patients and their support system.



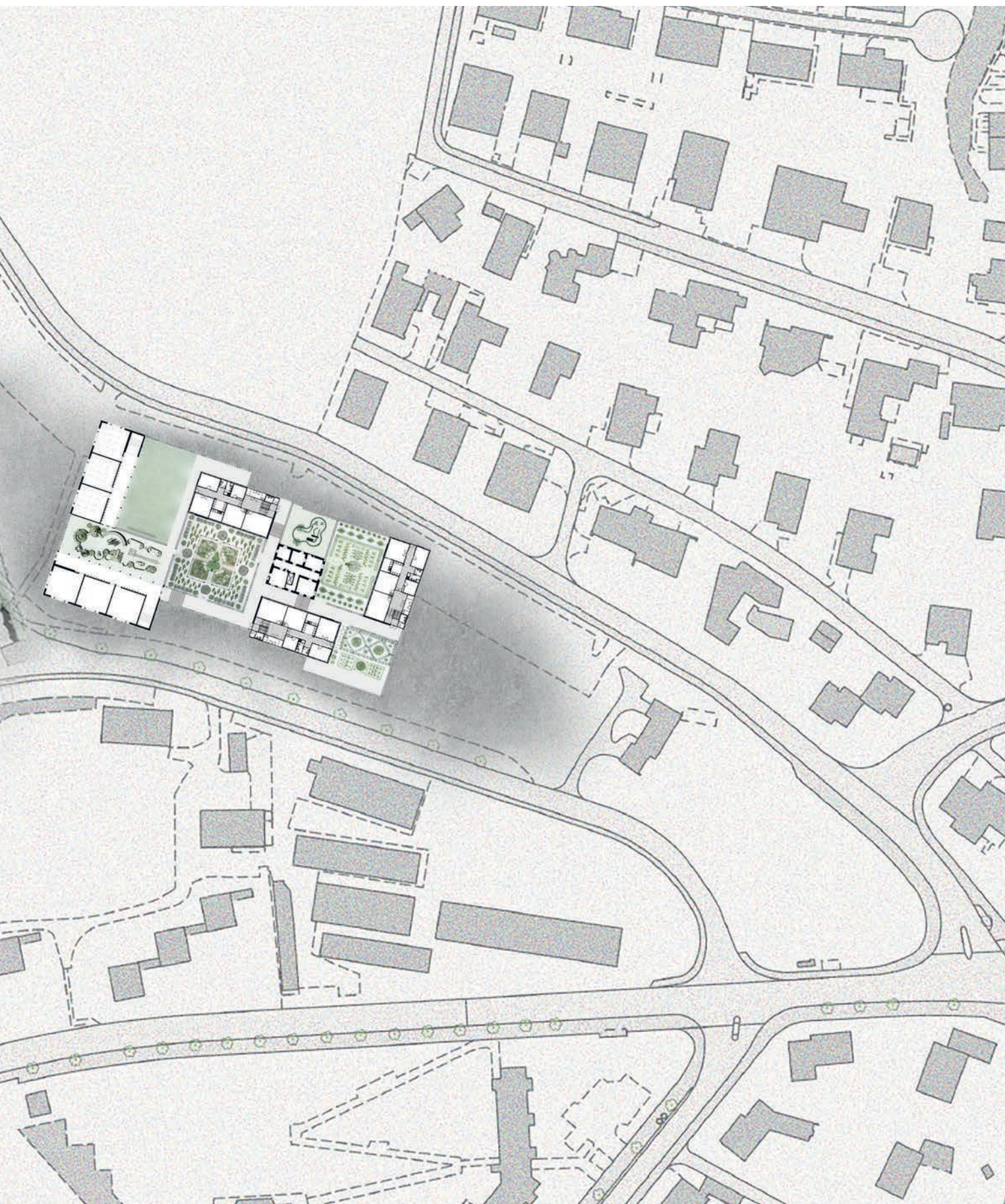
Existing Clinic Waldhaus, Main Building

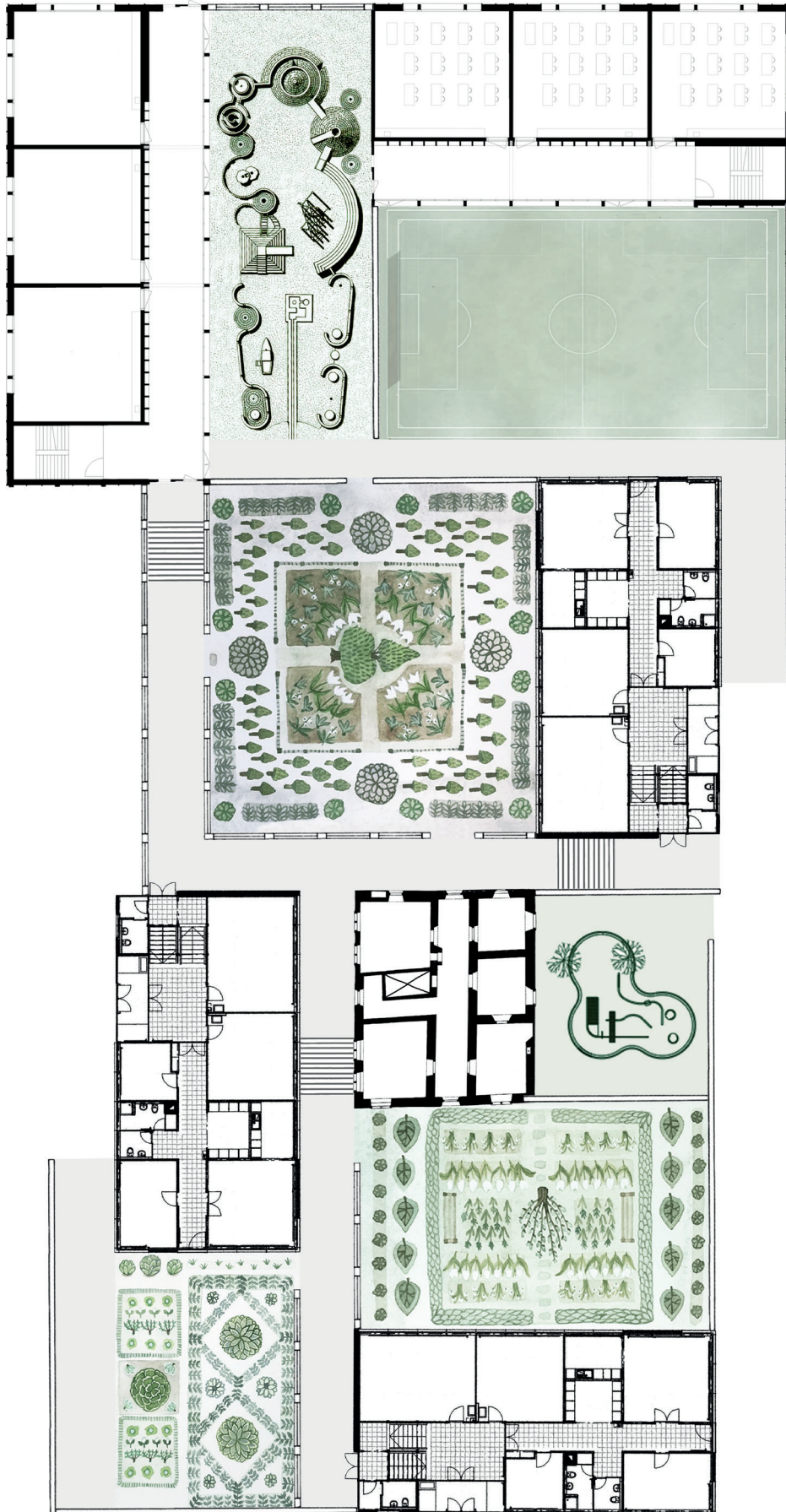


Existing Clinic Waldhaus, Adult Psychiatry



Site Collage





Floor Plan Collage



Exterior Collage

PROJECT

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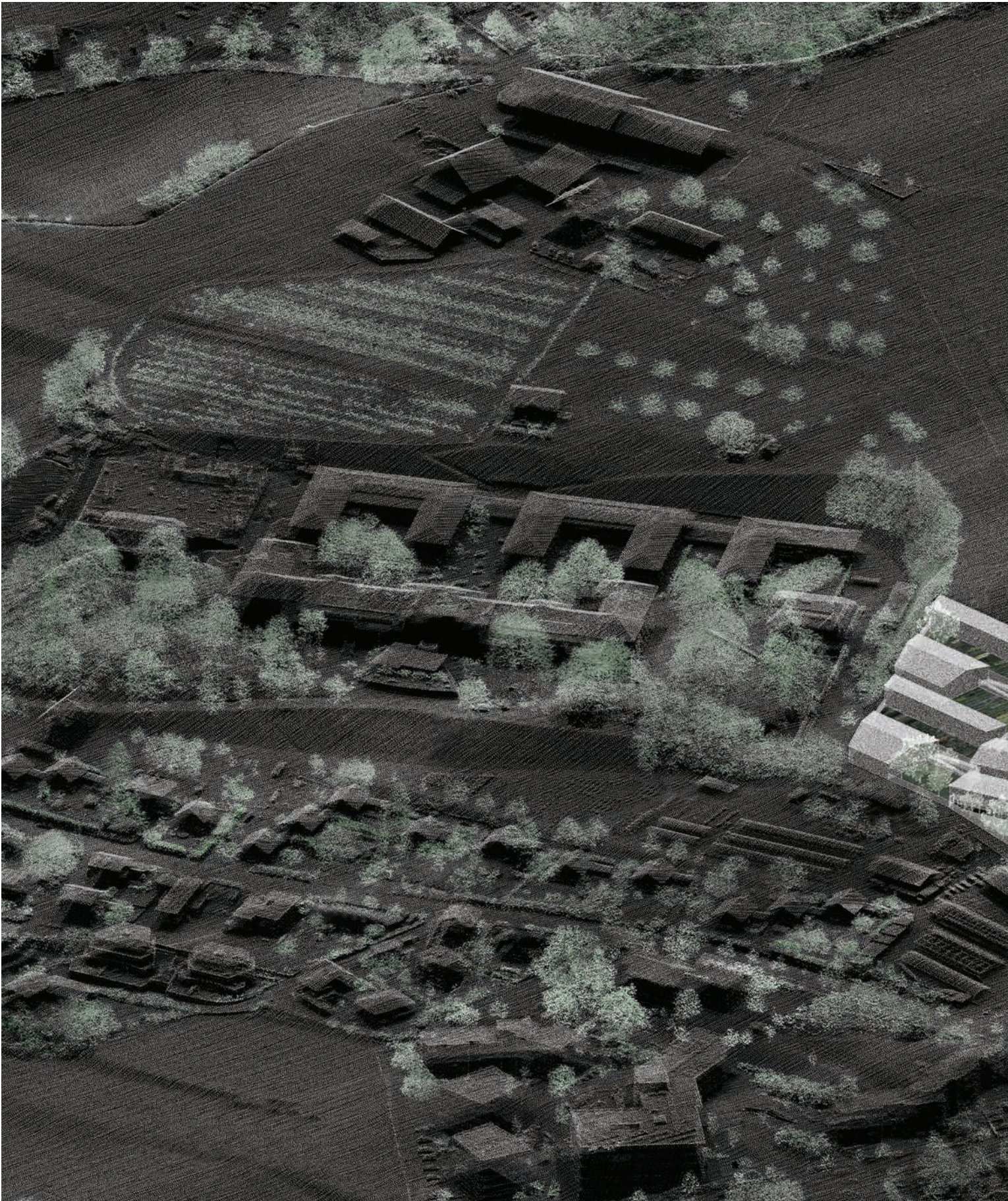
CHILDREN AND YOUTH PSYCHIATRIC CLINIC

With the scenario in mind, a set of principles for the development of the site gets implemented. The sloping topography gets addressed by dividing the whole area into ten different sections following the system of the existing topography lines as well as the specific shape of the site boundaries. Those individual section get further divided into half exterior and half interior to keep the balance between them. Through this concept, each building gains a corresponding outside space of equal status. The position of the building in each individual plot is chosen by applying the climatic conditions of the site like the position of the sun and the wind directions. The different building typologies get applied while considering the depth of each allocated building as well as their individual functional needs to support the inner workings of the clinic. The different floor plans are extended by a corresponding variety of roof types and windows to give each building its own architectural quality and to create a pattern of differences throughout the site. The exterior spaces continue this pattern with the same level of care. Each one has its own individual function, which is planned in relation with the adjacent building. The different functions are emphasized by the variation of shape and size from one space to another. Furthermore, the distinct ground materials, the unique furnishing and planting of each one, create a high variety of gardens and courtyards to experience. The allocation of the functions takes place with the focus on the different levels of privacy needed throughout the clinic, while a few spaces still require a certain level of accessibility to the public.

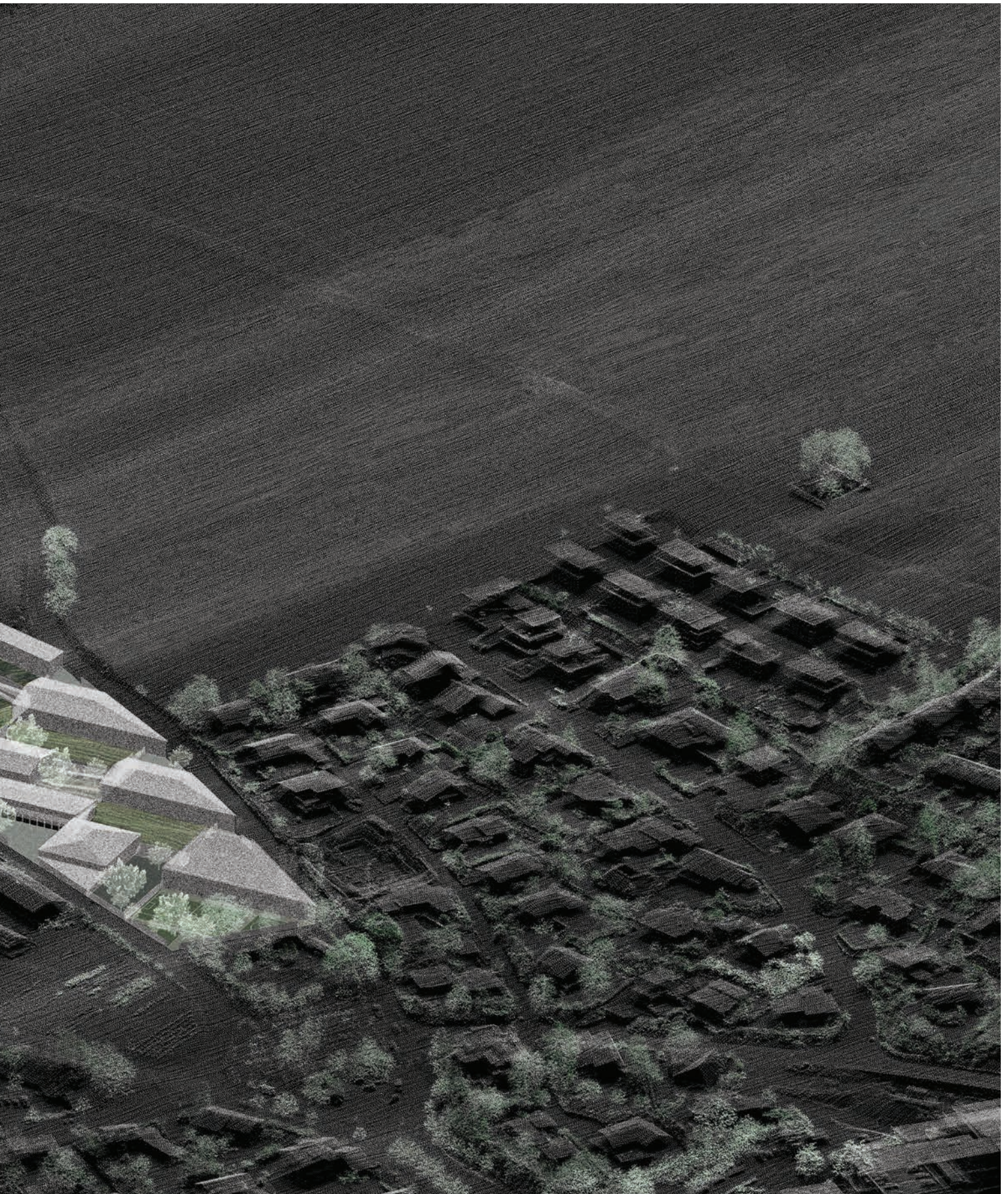
The movement through the building complex is supported through a system of staircases, elevators and ramps. The circulation system flows through the exterior as well as the interior spaces and creates a continuous path throughout. The outdoor spaces are spatially defined by walls as enclosures. The walls divide the continuous exterior into individual rooms and give them a certain level of intimacy. At the same time, the walls connect the buildings and their exterior spaces into one coherent entity. This aspect of the enclosure also promotes the safety of the clinic and aids in the supervision of the children and adolescents. Nevertheless, the variety of outdoor spaces also allow the patients to retreat. The diversity of those spaces offers different atmospheres and the possibility to be integrated into the daily therapy sessions. Especially for children and young people, nature-related forms of therapy, as well as movement have a high priority during their stay and are important measures for prevention and rehabilitation.

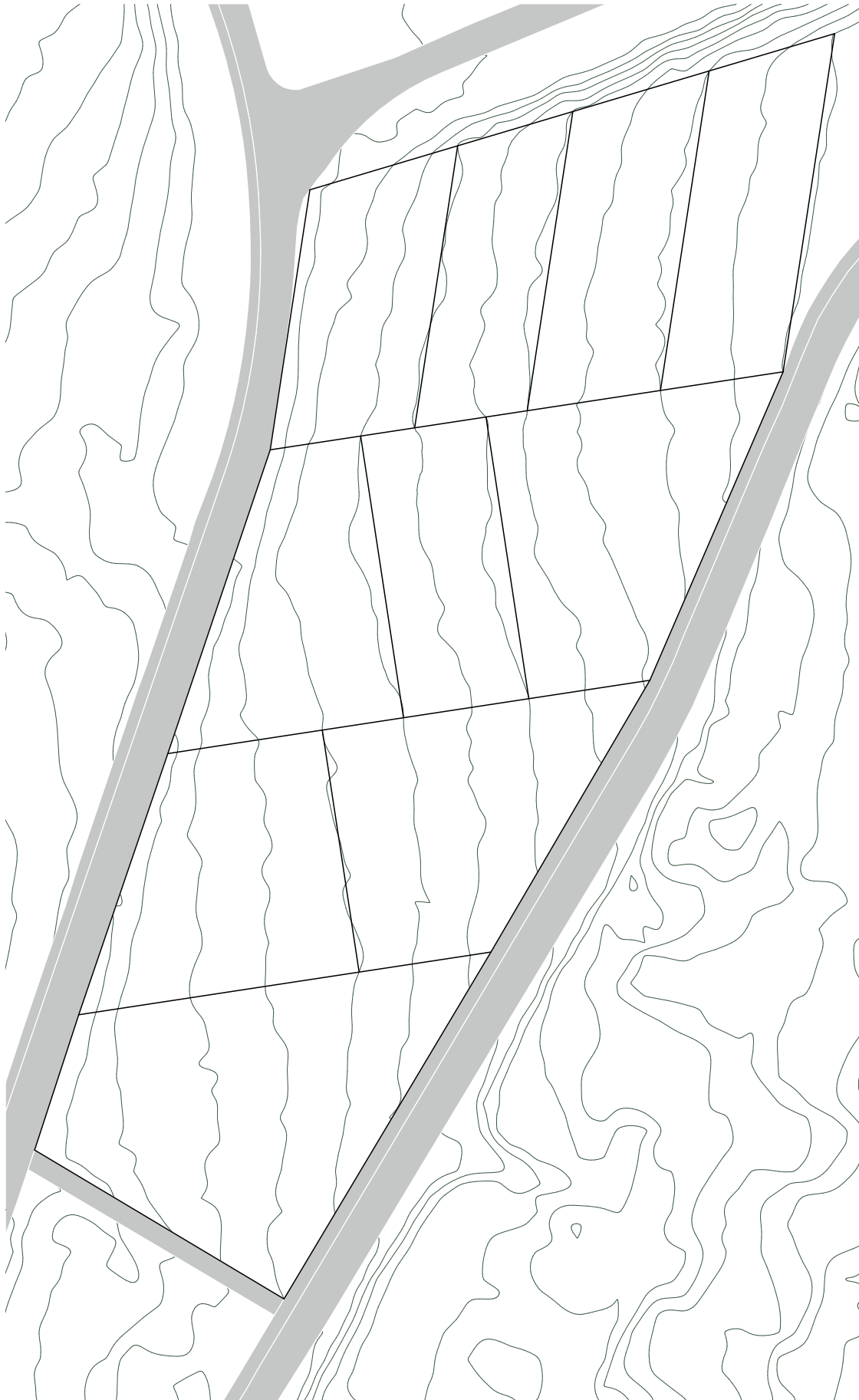
The chosen materiality follows the quality of the massiveness of the "Bürgerhaus" by using rammed earth. Through its texture, the material radiates warmth and comfort and creates a calming effect. In the spaces between interior and exterior, as well as inside, the rammed earth is combined with the smooth texture of clay plaster and the natural feeling of wood for non-load-bearing walls. The rammed earth continues in its raw form on the outside through the wall elements, which emphasizes their connection to the landscape. The whole complex is placed on a concrete base, which is used wherever the application of rammed earth is not possible, because of direct contact with the soil of the ground. This includes the foundations, the floor plate as well as the retaining walls of the terracing.

The level of care in every scale of the project creates an architecture, which offers a nurturing environment for healing young minds and ensures the clinics longevity for the future.

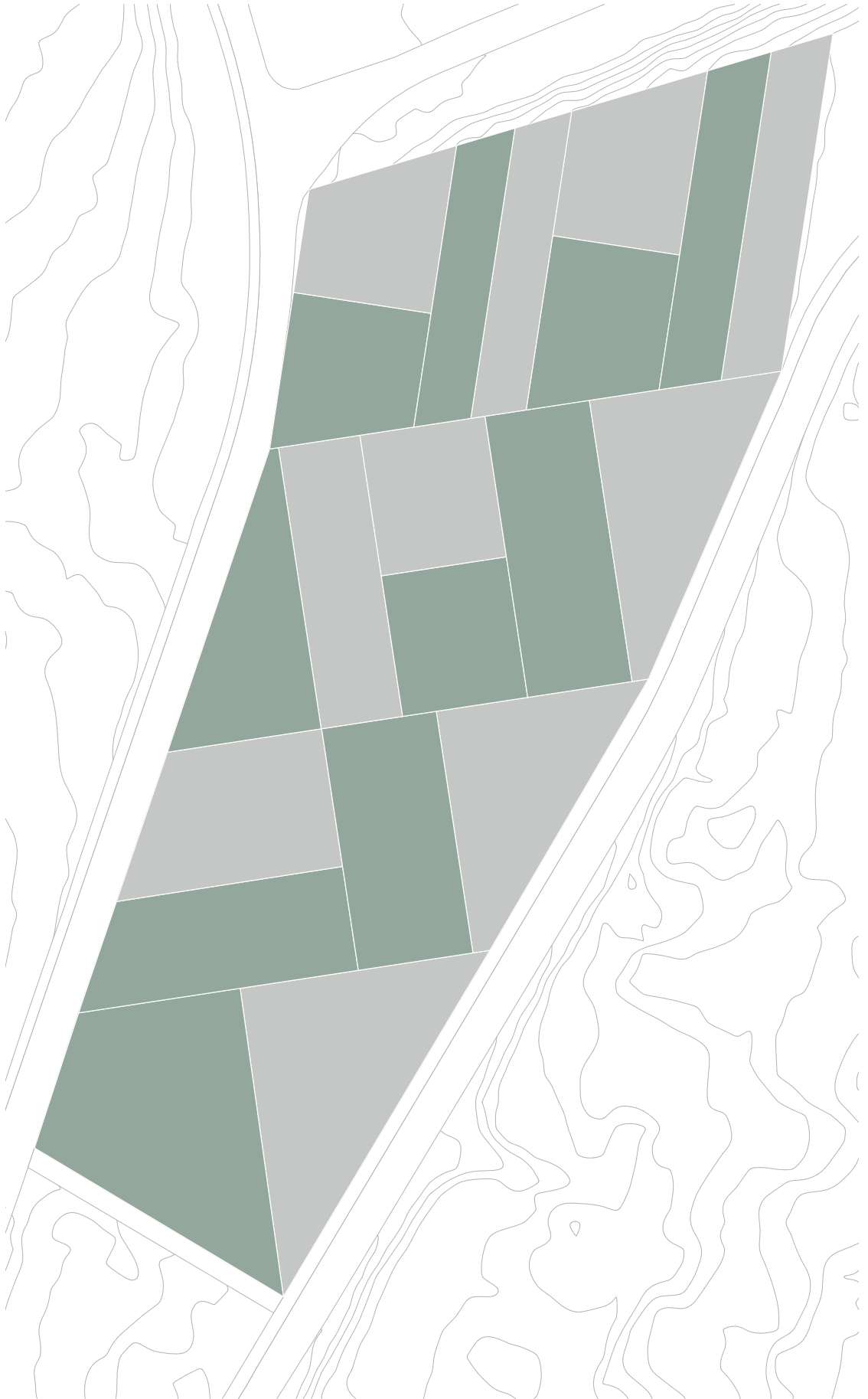


Site Axonometry



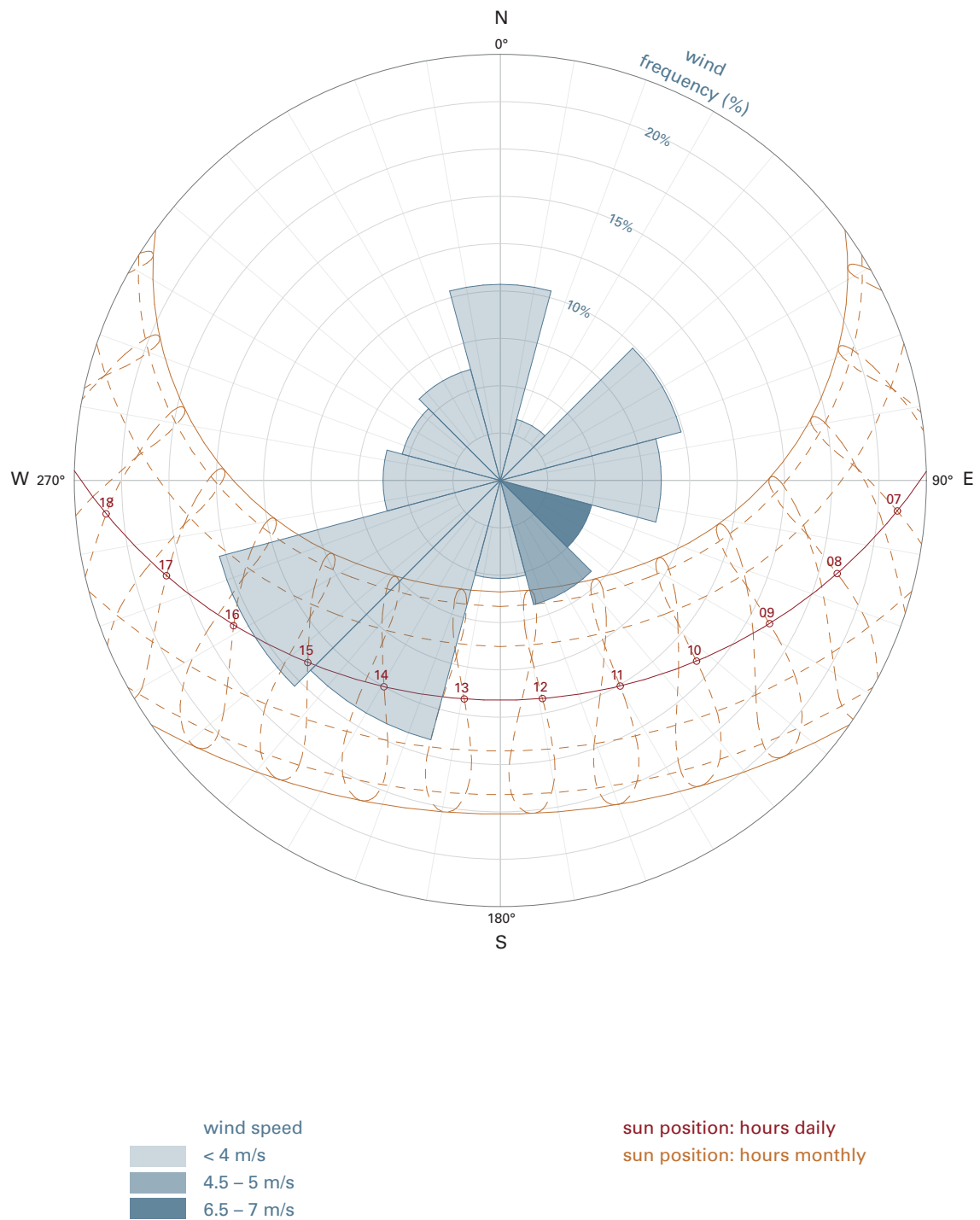


Topographic Division

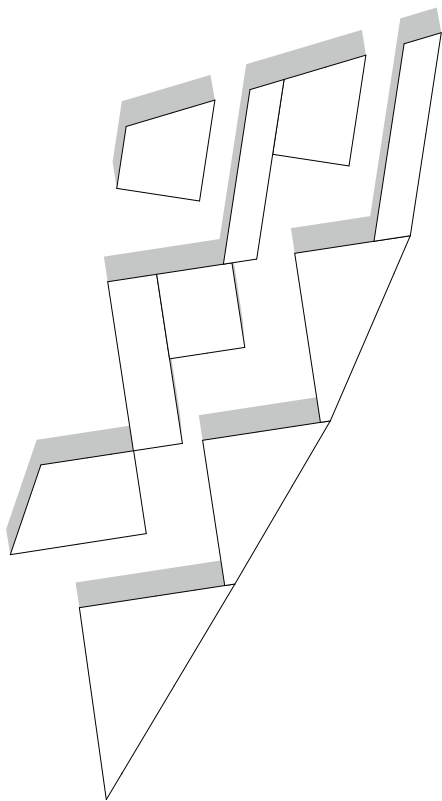


Interior and Exterior Space

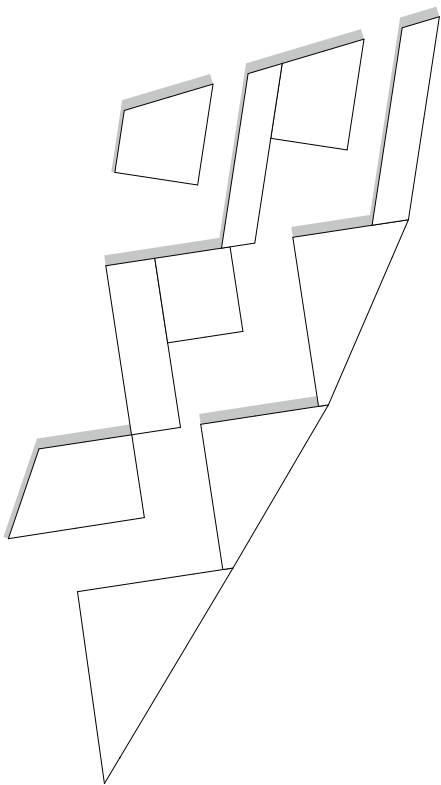
SCALES OF CARE



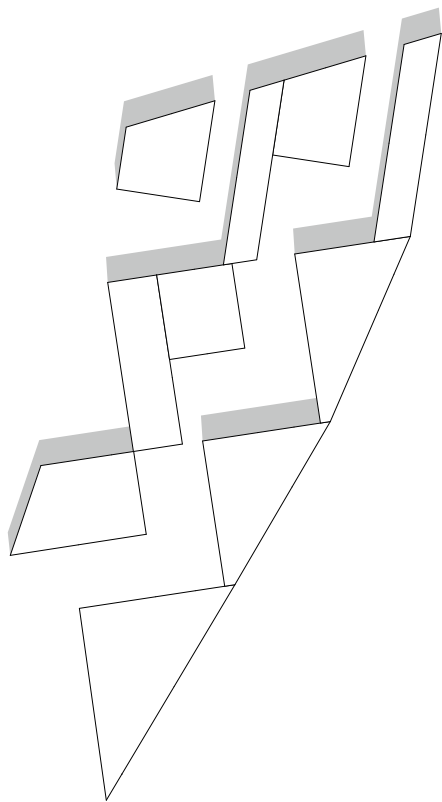
Wind Direction, Speed and Sun Exposure for Clinic Waldhaus, Chur



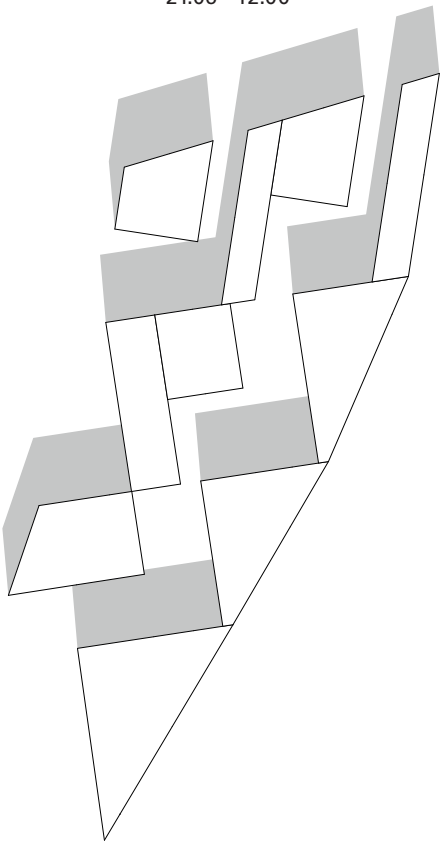
21.03 - 12:00



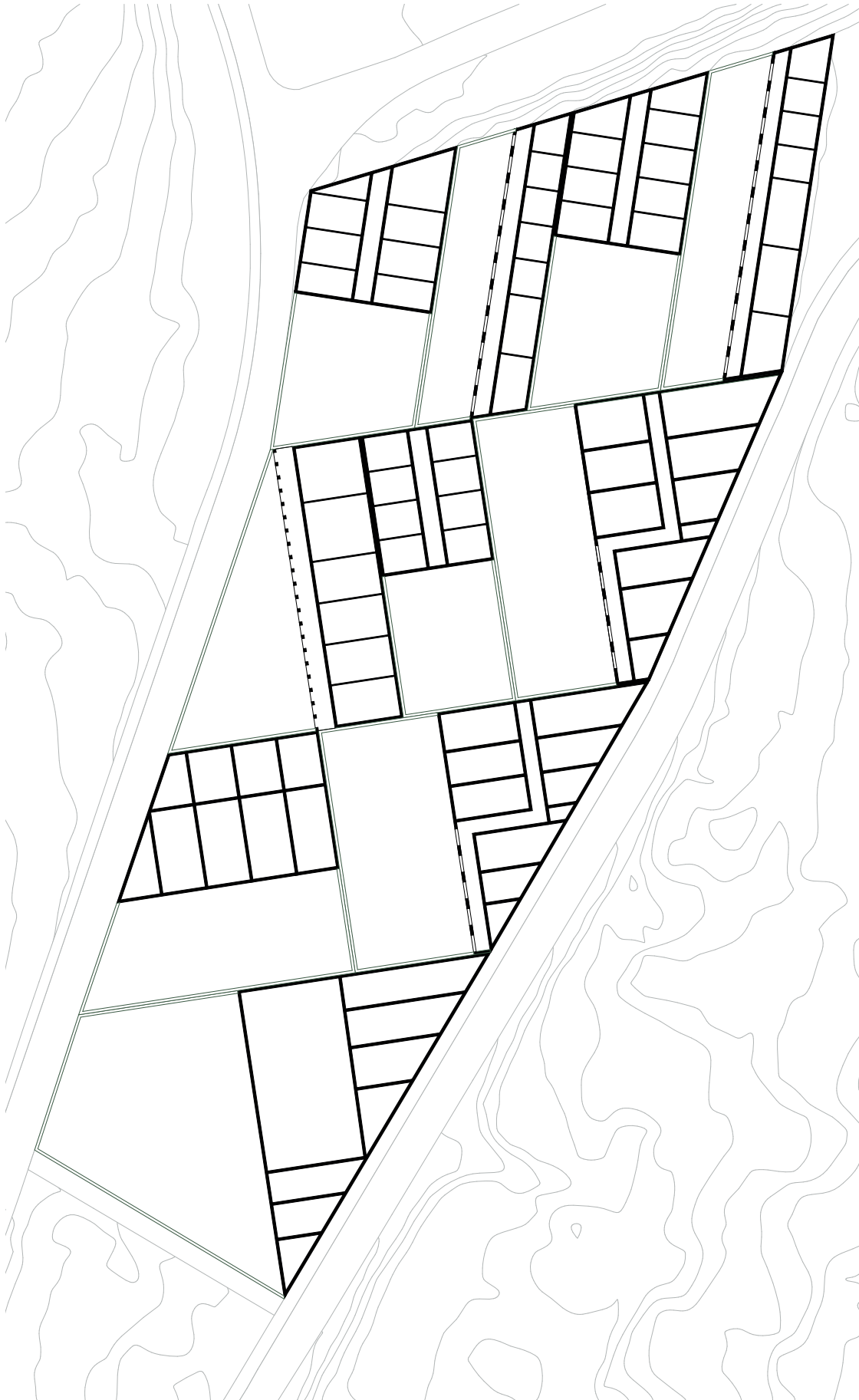
21.06 - 12:00

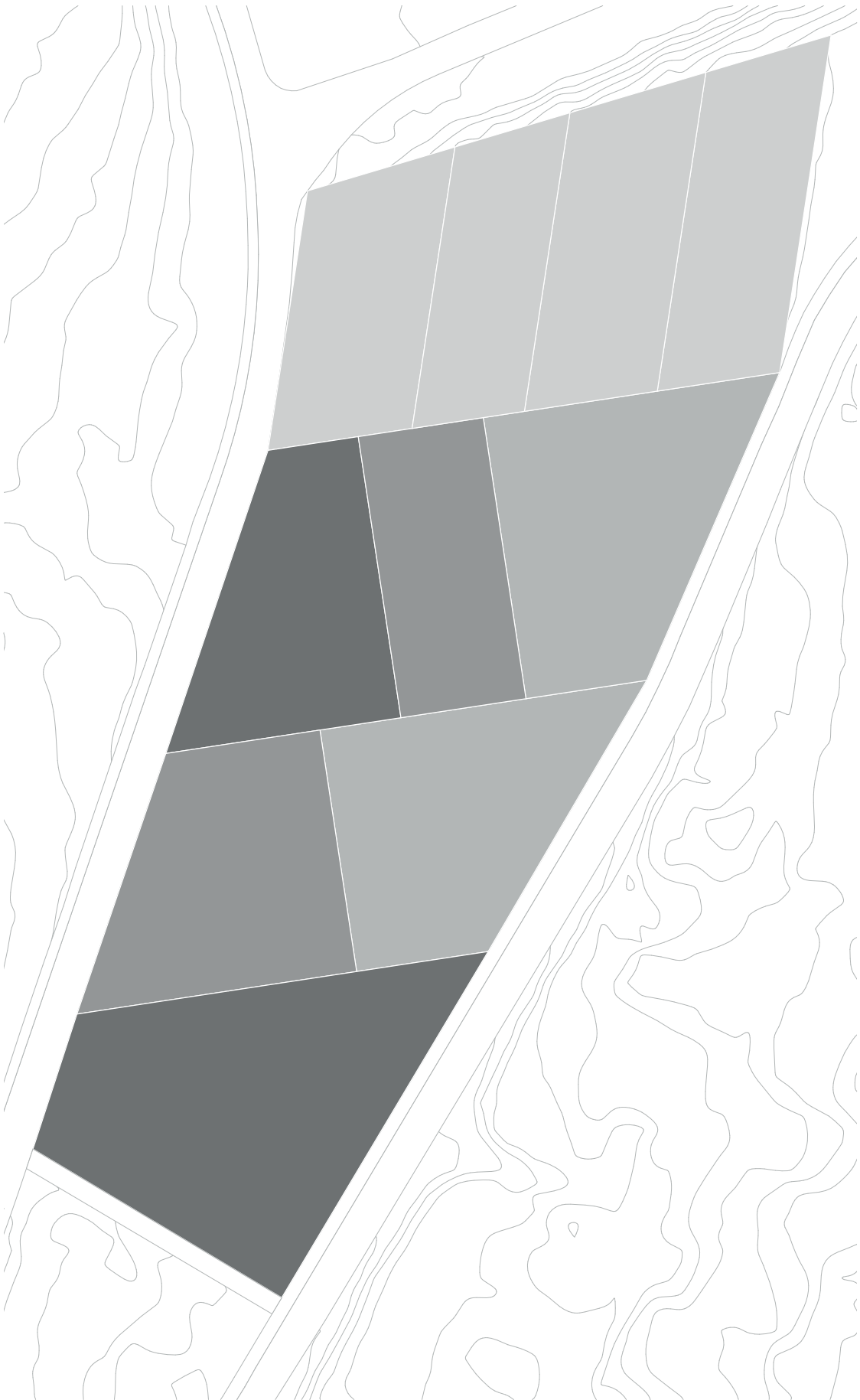


21.09 - 12:00



21.12 - 12:00



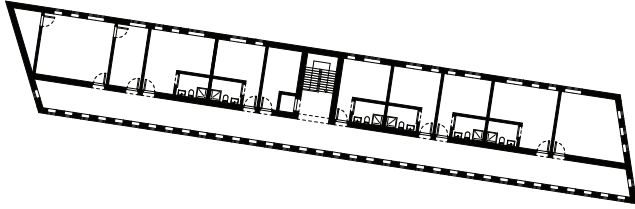


Levels of Privacy

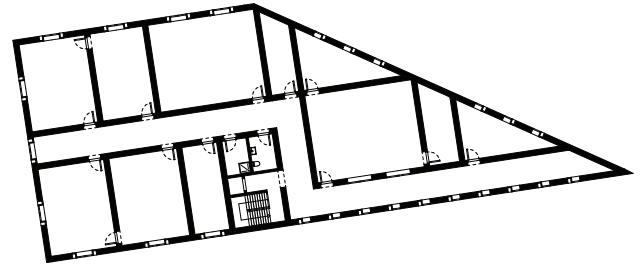


Site Plan - Ground Level

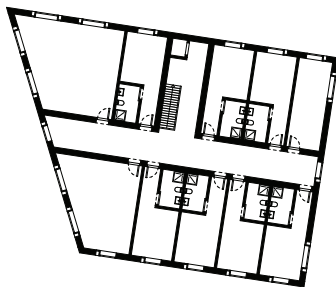




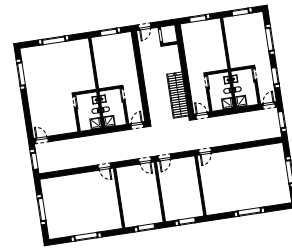
YOUTH STATION I



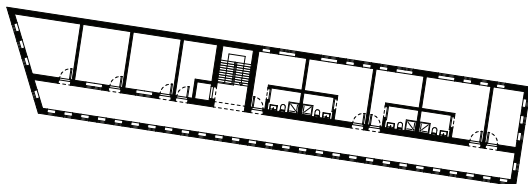
YOUTH DAY CLINIC



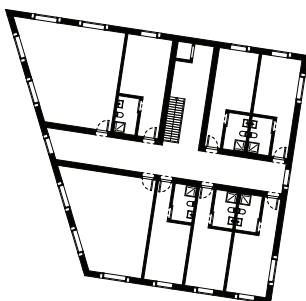
CHILDREN STATION I



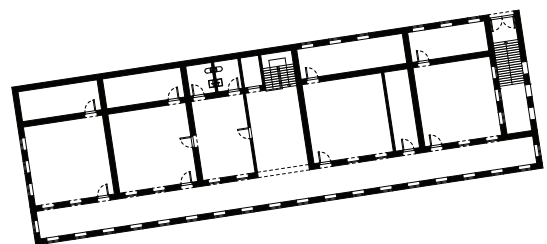
THERAPY BUILDING



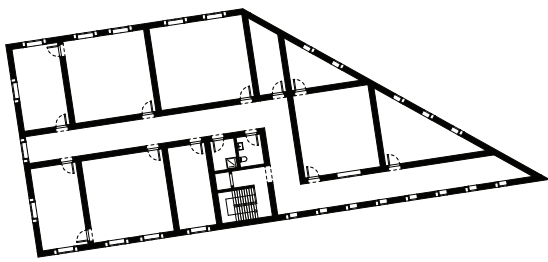
YOUTH STATION II



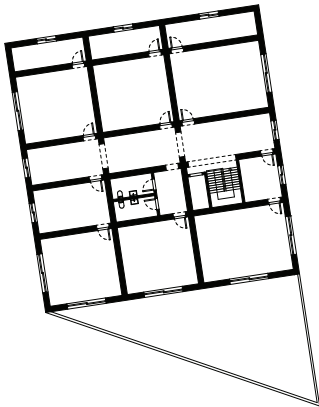
CHILDREN STATION II



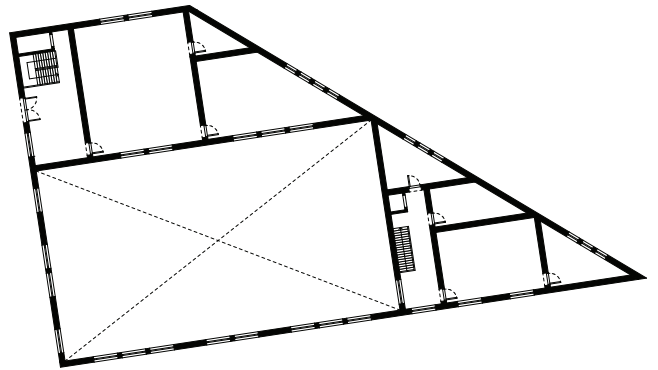
ADMINISTRATION BUILDING



CHILDREN DAY CLINIC



CLINIC SCHOOL



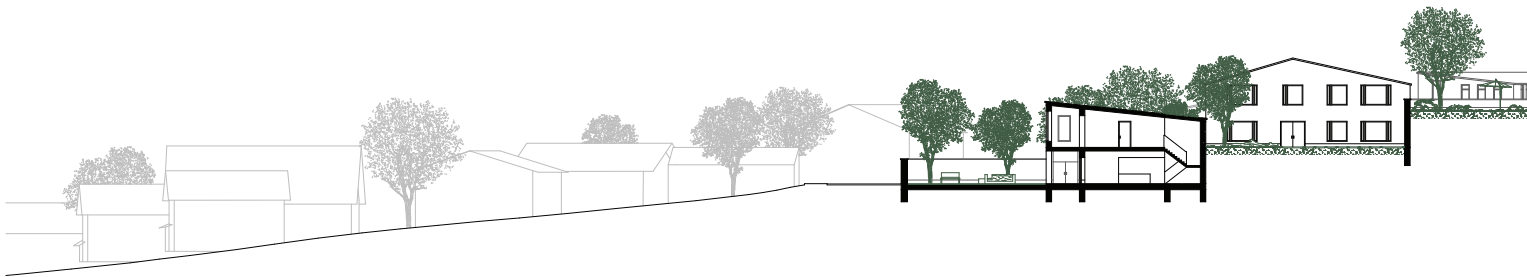
SPORTS HALL

SCALES OF CARE



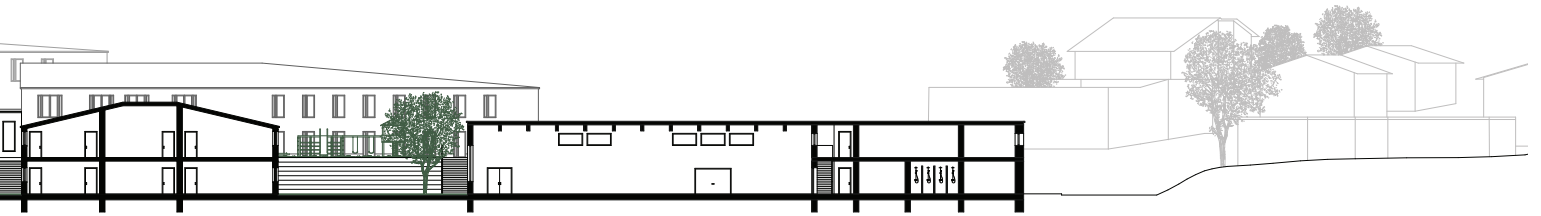
A horizontal number line with arrows at both ends. It is labeled '0' at the left end and '12.5' at the right end. There are four vertical tick marks between 0 and 12.5, dividing the segment into five equal intervals. No numerical labels are present on these intermediate tick marks.

Longitudinal Section



A horizontal number line with arrows at both ends. It is labeled with '0' at the left end and '12.5' at the right end. There are four vertical tick marks between 0 and 12.5, dividing the segment into five equal intervals. The tick marks are located at 3.125, 6.25, 9.375, and 12.5.

Cross Section



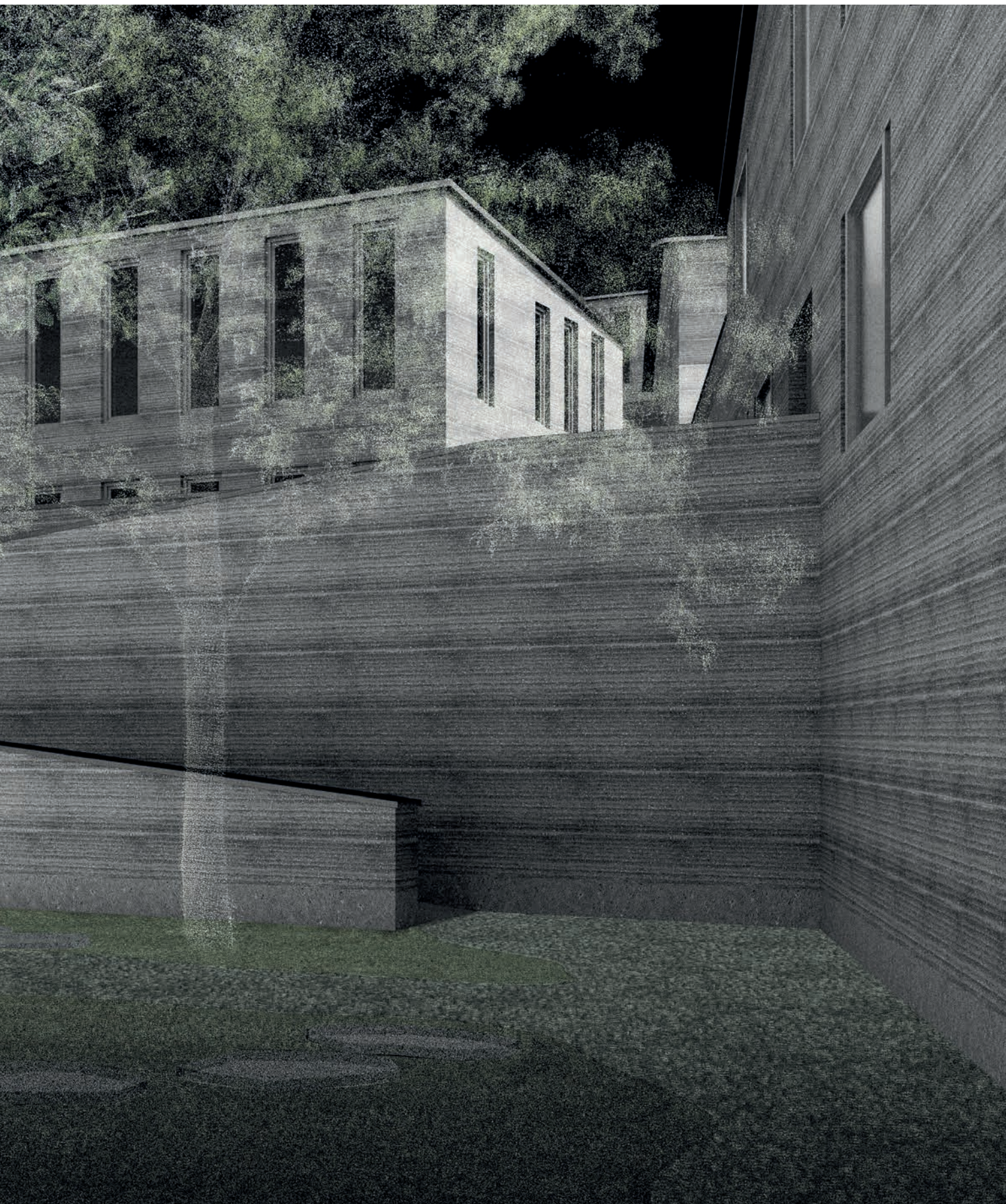


Courtyard with View of the Clinic Entrance





Tree Garden with View of the Stations





Tree Garden with View of the Stations



ARRIVAL

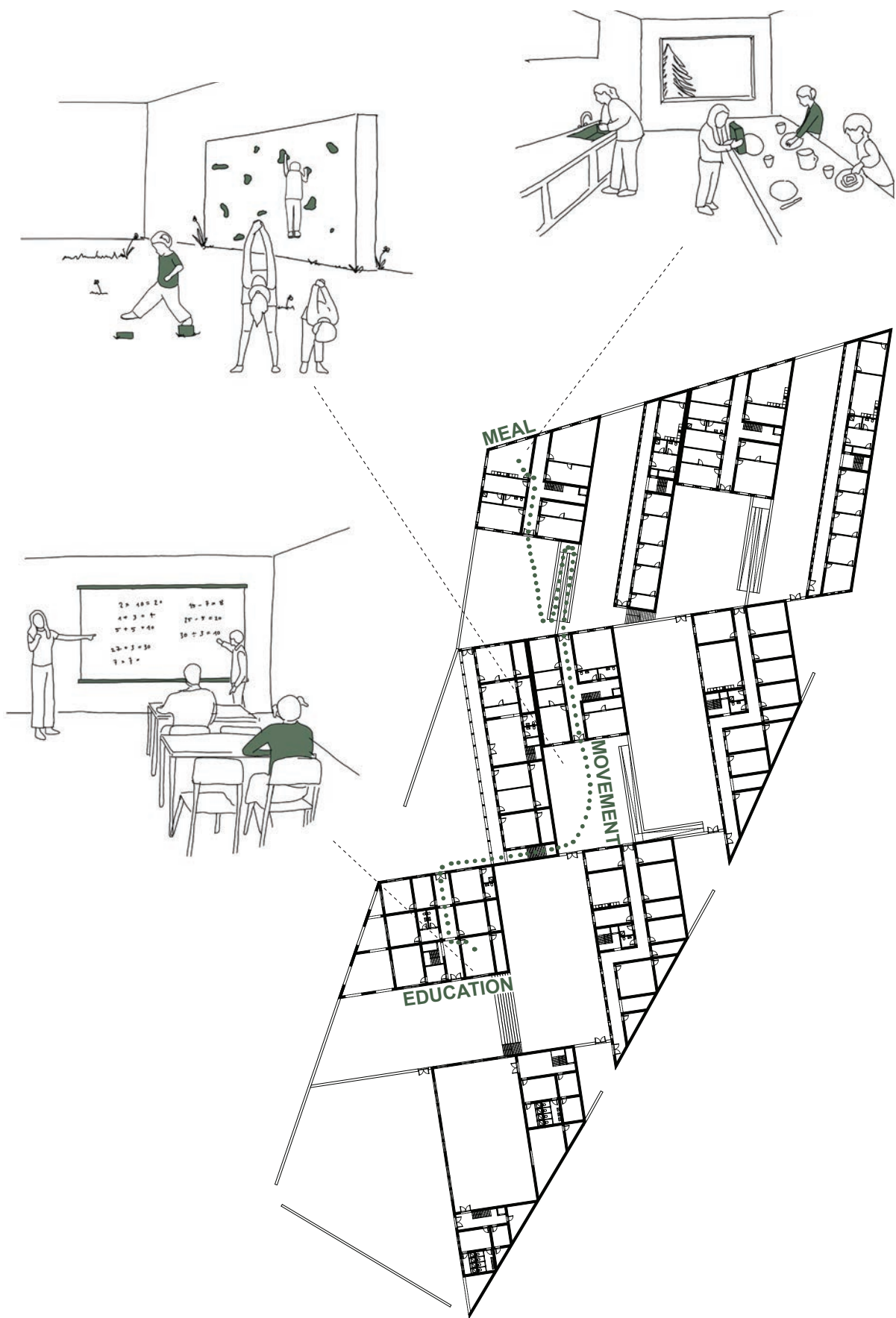
M. just arrived at the entrance of the children and youth psychiatric clinic Waldhaus with her father. She is nervous, because today is the day, where she will start staying here for a while. She has been here one time before, for a first talk with the people of the clinic, where it was decided, that a stay here would help her with her mental health issues. She can hear the water of the fountain in the courtyard, which calms her down a little. She and her father enter the administration building, where the man behind the counter greets them warmly and asks them to wait a few minutes in the waiting room. After a few minutes they can enter the diagnostic room, where M.'s therapist welcomes them and sits down with M. to discuss her first steps at the clinic. He introduces her to her new station's leader V. Afterwards, inside the admission room, they go over her personal details with V. and her father fills out a few last documents. The moment has arrived, where M. sadly has to say goodbye to her father. She then follows V. to her new temporary home for the foreseeable future. There she gets shown around the building of the children station II and the tour ends in her new bedroom. After a few moments V. leaves to let her get settled in and unpack her things. Finally alone M. lets out a breath and starts to process her first big day at the clinic. She looks outside her window, where she can see a vegetable garden and a few other patients her age playing a card game in the grass. Maybe her stay here won't be so bad after all.



Arrival Day at the Clinic

DAILY LIFE

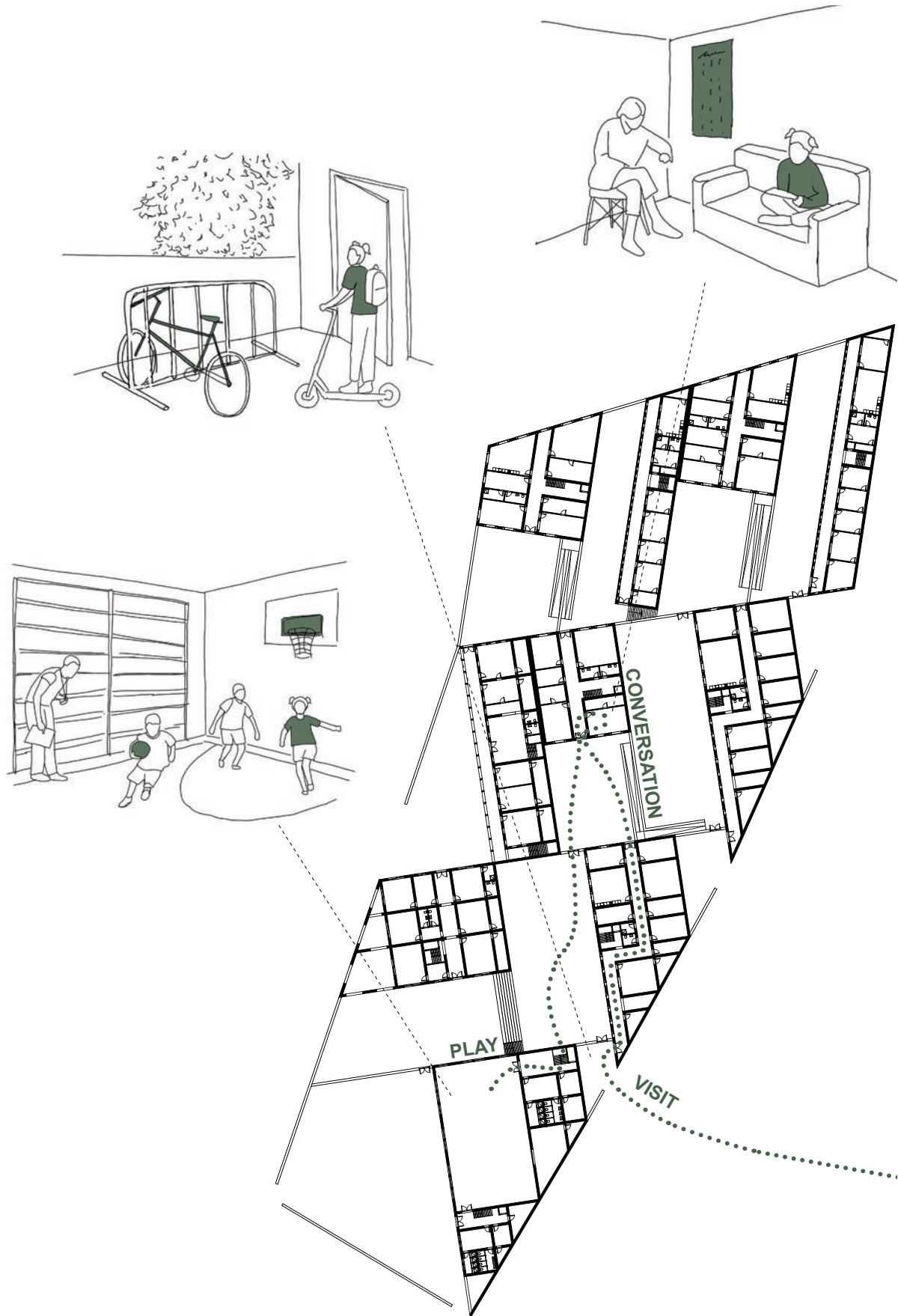
M. has settled in into her daily life at the clinic. The other children in her group are very nice and it feels good to have other children her age, that are also struggling with similar things as she is. Every morning they have breakfast all together in the group's kitchen, even V. her stations leader joins them. Afterwards her busy day at the clinic starts. Today she has an ergotherapy session in the morning, which she is very happy about. Because those take place outside in the therapy garden, if the weather is good. She loves to be outdoors, it always helps her to calm down. Arriving at the therapy garden, she starts doing her exercises together with her ergo therapist, which helps her to concentrate and focus through precise movements. At the end of the session, she even gets to use the climbing wall, which is probably her favorite. After a quick lunch back at the station, she has a few school lessons in the afternoon in the intern school clinic. She likes the lessons there, because there are fewer children and therefor the teacher can assist her more. It makes it easier for her to learn new things and to stay on one task for a longer time. Between her lessons, she gets to go outside with the other children into the school courtyard, where they often run around or play a few matches of table tennis.



Daily Life at the Clinic

TRANSITION

Three months have gone by, and M. had a big evaluation session with all her therapists, her parents and her station's leader V., where they assessed the progress she made so far. Together they decided that she is ready to step down her treatment and to return home to her family. But to help her manage her mental health also in her old surroundings they recommend, that she should continue to visit the day clinic and clinic school for a few weeks to make the transition easier for her and to prevent a renewed increase of her symptoms. Every morning M. drives with her scooter to the clinic, where she can put it right next to the smaller separate day clinic entrance. It feels nice and familiar to her. Today she has a therapy session with her therapist C., where they talk about how it is going back at home and how she feels about being back in her old surroundings. Her therapist C. gives her tips on how she can manage to keep her mental health in a good place with the changing circumstances. After the session, M. walks to the sports hall of the clinic, where she is excited to see some of friends of her old group, that still stay at the clinic. Together, they have a sport lesson today. The sport teacher tells them, that today they will focus on playing basketball and learn the rules of the sport.



Transition to the Day Clinic

