

# MOVEMENT AND MATERIALITY

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AN ARCHITECTURAL EXPLORATION OF A DANCE/MOVEMENT THERAPY CENTRE

A MASTER'S THESIS BY ELLA DAVIDSSON  
SPRING OF 2021

**MOVEMENT AND MATERIALITY**

*An architectural exploration of a Dance/Movement Therapy Centre*

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Master's Thesis  
Spring Semester 2021



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## ABSTRACT

- keywords -

Dance/movement therapy is one of the expressive therapies, using the creation of art as a means for therapy. In contrast to the traditional way of working with arts, the focus is on the process rather than the outcome of the artwork. Expressive therapy can be especially useful for people who find it hard to put feelings, experiences or memories into words, as an complementary way of processing.

American Dance Therapy Association (ADTA) defines dance/movement therapy as “*the psychotherapeutic use of movement to promote emotional, social, cognitive, and physical integration of the individual, for the purpose of improving health and well-being.*” Dance/movement therapy examines the correlation between movement and emotions, focusing on the holistic view where body and mind are interconnected.

This thesis aims to bring attention to the benefits of dance/movement therapy as a psychotherapeutic treatment by exploring how the typology of a Dance Therapy Centre can be incorporated in the area of Linnégatan in Gothenburg. It seeks to understand how the design

requirements of the practice can be embodied and how to develop a program to facilitate the needs. This can contribute to a further understanding of the design choices impact on the psychotherapeutic treatment.

The proposed building within the framing of this thesis deals with the complexity of an urban site, focusing on spatial organisation and materiality. By working with glass blocks as facade material, the building reaches the state of being translucent, but not transparent. The building is enclosed and provides a safe space for therapy, yet with generous daylight, embracing the playful patterns generated by the illuminated glass block facade.

The aim of this thesis is to communicate the benefits of, and the need for, a Dance/Movement Therapy Centre in Gothenburg, as well as the architectural beauty it can behold.

Keywords: *dance/movement therapy, mental health, urban expression, glass blocks*

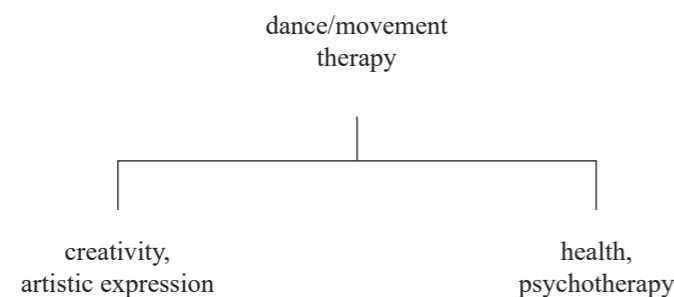


Figure 1. The two key principles of dance/movement therapy, stated by Jenny Davidsson, certified dance/movement therapist and university lecturer at Karlstad University. (J. Davidsson, personal communication, February 19, 2021)

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01.

# INTRODUCTION

## THESIS FRAMEWORK

- questions, methodology and aim -

### Purpose and aim

This thesis aims to investigate the typology of a Dance/Movement Therapy Centre, to understand how the design requirements of the practice can be embodied and how to develop a program to facilitate the needs. It seeks to understand how material and design can enhance the client's experience of dance/movement therapy as a psychotherapeutic treatment and how an urban site can be used as an active tool to make such a practice accessible to all.

### Methodology

This thesis is developed through *research for design* and *research by design*. Literature studies, mainly the books of the Swedish researcher and dance/movement therapist Monica Thelin and the American pioneer Joan Chodorow and her writing based on the work of Jung, built the foundation of this thesis.

The theoretical framework is complimented with interviews of Swedish dance/movement therapists, to understand the specific spatial requirements of their practice, as well as interviews with dance teachers at a local dance company in Gothenburg, to improve the understanding of the local context.

Design studies, including sun studies, volume studies and site analysis, has further shaped the space program and the proposal, to fit the building into the context of Olivedal and to meet the demands of the urban fabric at the selected site.

### Delimitations

The typology of the project proposal does not cover clients' potential need for psychiatric treatment or further physiotherapy. The program and building proposal of this thesis does not take economic or political restraints in consideration; the intention is to act as a conversation piece for the future development and use of the site Olivedal 1:3.

### Reading instructions

This thesis begins with an historical background and an explanation of the methods used in dance/movement therapy, as well as the spatial design requirements for the practise. This is followed by a context and site analysis, and later design studies, to support a final design proposal, represented by drawings and perspective images. The thesis ends with a conclusion, commenting on the process and results of the thesis work.

*"Dance/movement therapy (DMT) is defined as the psychotherapeutic use of movement to promote emotional, social, cognitive, and physical integration of the individual, for the purpose of improving health and well-being."*

*(American Dance Therapy Association, 2021)*

*"Dance/movement therapy can be a helpful treatment for those with mental or psychosomatic problems, for example sleeping difficulties, anxiety, pain, tensions or eating disorders."*

*(1177 Vårdguiden, 2021)*

### - thesis questions -

*How can architecture enhance the use of dance/movement therapy as a psychotherapeutic treatment?*

*How can the typology of a Dance/Movement Therapy Centre be materialized in an urban context?*

02.

## BACKGROUND

## HISTORY

- from Jung's theories to today's practice -

### C.G Jung

The creative arts psychotherapies were first described in the early works of C. G. Jung, a Swiss psychiatrist and psychoanalyst. He wrote a paper in 1916 describing his ideas about accessing the unconscious using expressive body movement. He described the technique he later came to refer to as active imagination, in which a person explores the unconscious mind by dance, drawing, work with clay and other types of artistic expressions. Jung's paper was passed around amongst his students and was not publicly published until 1957 (Chodorow, 1991).

C.G Jung described the practice of active imagination with two stages, the first one letting the unconscious come up, and the second one coming to terms with the unconscious. Non-verbal medium such as movement, clay or painting can be a catalyst for the process of describing experiences, feelings, and thoughts with words (Jung and Chodorow, 1997).

In the middle of the twentieth century, a few pioneers developed the methods of dance/movement therapy further.

### Treatment after World War II

In 1942, Marian Chace was invited to work at St. Elizabeth's Hospital in Washington, D.C, a result of the reputation she had as a special teacher working successfully with her patients, using methods involving dance and movement. At the end of World War II, this federal psychiatric hospital was filled with former soldiers in need of psychological treatments. There was an openness at this time for new kinds of treatments and engagement in group processes, and within the walls of St. Elizabeth's Hospital, "*Dance for Communication*" was born. The method and work soon developed into the mental health profession of dance/movement therapy. In 1947, Marian Chace was the first American full-time dance/movement therapist (Thomas, 1993).

### Authentic movement

During the 1950s, Mary Whitehouse developed Jung's ideas of active imagination by engaging the body and creating the practice of movement as active imagination, that later came to be called *Authentic movement*. This branch of dance/movement therapy is widely used today by therapists, artists and other practitioners. The Jungian Psychoanalyst Tina Stromsted argues that this widespread use comes as "*a response to a growing need to embrace the wisdom of the body and its essential role in the process of integrative healing, development, and transformation*" (Stromsted, 2018, p. 3).

### The American Association

The American Dance Therapy Association was founded in 1966. The first president was Marian Chace, and the association is still working to develop and expand training and research, at both a national and international level (Devereaux, 2016).

Dance/movement therapy is, of course, practised differently depending on culture. The therapy in America is grounded in modern dance traditions and does not, in general, embrace other types of dances such as folk, ballet or social dances. In many parts of the world, dance/movement therapy can be seen as a ritual practice present in many kinds of games, festivals, rites and celebrations (Panagiotopoulou, 2011).

### The European Association

Similar to the American Dance Therapy Association, an umbrella organization for dance/movement therapy was founded in Europe in 1994. The first European Dance Movement Therapy Conference was held in Berlin, and from this event the idea of a collective association was born. The European Association Dance Movement Therapy (EADMT) is working to "*further develop the professional practice and the legal recognition of the profession*" (European Association Dance Movement Therapy, 2021).

### Swedish context

Dance/movement therapy is a quite new form of therapy in the Scandinavian countries. It was used in the beginning of the 1980s in workshops with children and youths. In 1991, the first course in dance/movement therapy was introduced at Stockholm University of the Arts. Today, apart from undergraduate studies, Karlstad University offers a second-cycle course (*påbyggnadskurs på avancerad nivå*) in dance/movement therapy (Svenska Föreningen för Dansterapi, 2021) (Karlstad University, 2021).

### The Swedish Association

The Swedish Dance Therapy Association (Svenska Föreningen för Dansterapi) includes over 20 active dance/movement therapists in Sweden. The association functions within the contact network of other related organizations in Sweden and internationally. The ambition of the association is to promote and develop the dance/movement therapy method (Svenska Föreningen för Dansterapi, 2021).

*"Oftentimes the body has a very different story to tell us than the mind. With our mind, we have to create meaning, we have to function, we have to keep going. But there is a lot that happens to us that never gets processed and never gets put into words. People who work with movement and dance will often experience moving through an experience that doesn't have any words, but that has been with them for a long time."*

- Dr. Aline LaPierre  
(Takieddine, 2020)

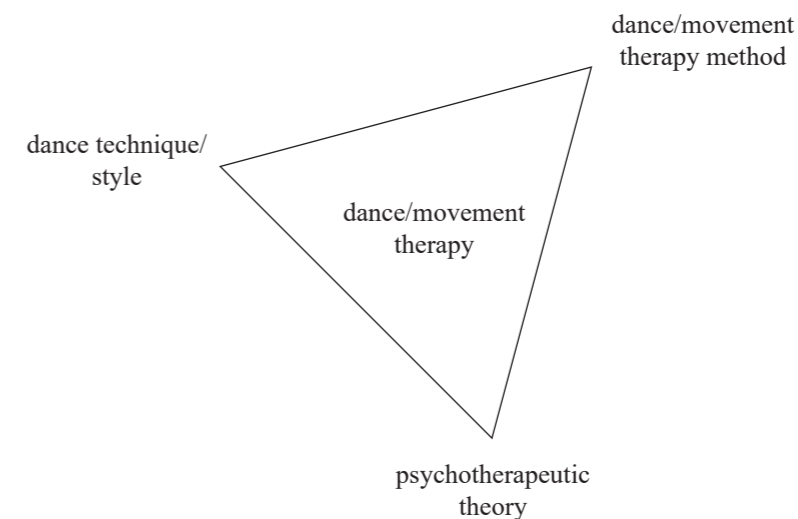


Figure 2. Diagram of the three fundamental pillars of dance/movement therapy, developed by the Swedish dance/movement therapist Monika Thelin. (Thelin, 2008, p. 29)

## THE PRACTICE

- chronology -

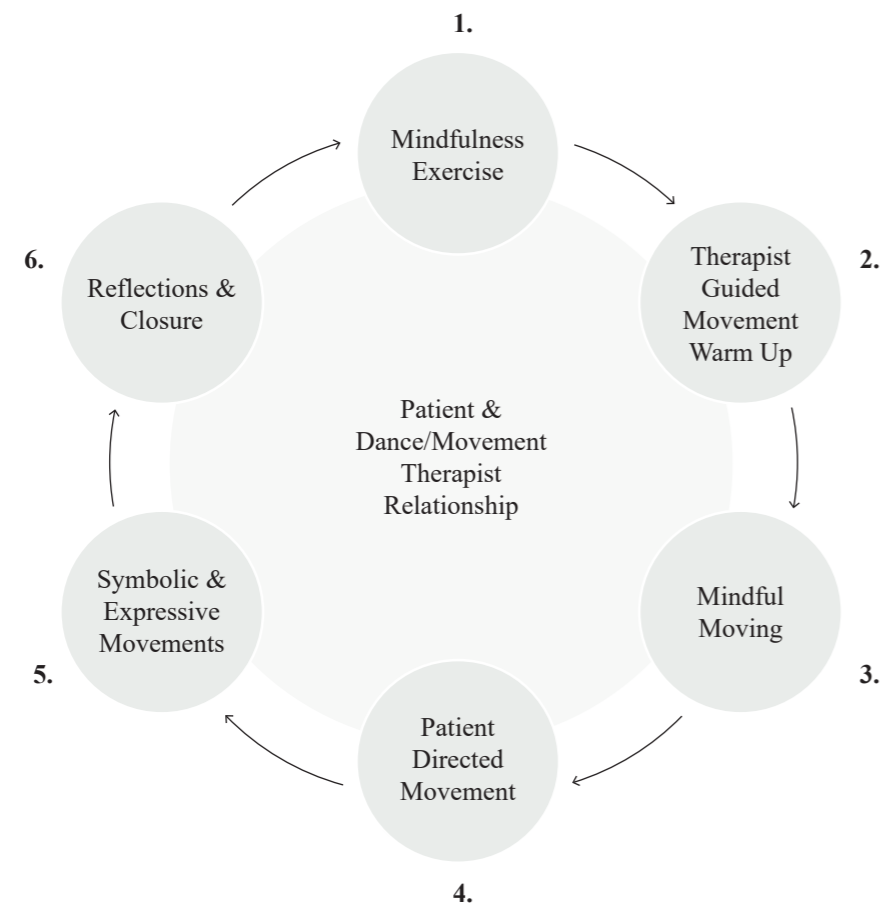


Figure 3. Model of six components guiding a patient through a dance/movement therapy session. This example is based on a study of adult patients in active treatment for cancer or amyotrophic lateral sclerosis (ALS) at an outpatient cancer centre, therefore it is not a generalisation applicable to all sessions (Millrod, 2020).

Component	Purpose
Mindfulness Exercise	Develop foundational skills in mindfulness practice. Cultivate mindfulness attitudes: non-judging, patience, beginner's mind, trust, non-striving, acceptance, and letting go.
Therapist Guided Movement Warm Up	Transition from verbal to non-verbal mode. Integrate mind and body with warm-up covering three planes. Prepare mind and body for movement—release tension. Coordinate breathing with movement—manage arousal. Transition patients from passive recipients to active participants in treatment.
Mindful Moving	Engage patients as initiators of movements. Mobilize thoughts and feelings that are held in the body. Develop a neutral and objective observing ego. Reduce emotional reactivity – gauge tolerance. Alter relationship with the body.
Patient Directed Movement	Promote self-efficacy. Increase spontaneity. Improve patients' experience of reality.
Symbolic & Expressive Movement	Access unconscious material. Express difficult emotions. Maintain safe distance from highly charged content—prevent overwhelm.
Reflections & Closure	Transition back to the verbal mode. Reflect on movement experiences. Make sense and make meaning. Discuss insights—integrate new understandings.

Figure 4. Explanation of the purpose of each component of the model for a dance/movement therapy session (Millrod, 2020).

## METHODS

- techniques -

*The following methods are explained and used by the Swedish dance therapist Monica Thelin. In her book "Dansens helande kraft", she describes her methods as a combination of dance, body therapy, physiotherapy and yoga.*

### Breathing exercises

Breathing is a life sustaining function of our bodies, but it also adapts to the state of our emotions. When we feel safe and calm, the breath is slow and deep, and as we feel worried, mad, or upset, the breath is faster and shallower, it moves higher up in the chest. When we feel afraid, we might even stop breathing for a second. Learning how to work with the breath, it can be a tool to deliberately control the emotions in our body. If a person feels anxiety or stress, it can be hard to deepen the breath and in this case, breathing exercises can be very helpful. It is common to start the dance/movement therapy session with breathing exercises to set the foundation for further therapeutic work, no matter the theme of the session (Thelin, 2008, pp. 67-68).

### Body grounding/body centring

The body centre is located right underneath the navel and is important to locate to find balance. When we let gravity influence the weight of the body, it can change our posture and energy flow. To be grounded is to feel the connection to the floor or the ground, no matter if you are standing, sitting, laying down or moving. Many people with anxiety or stress have tense muscles and have only a vague connection to the ground and to the body centre, and this could be improved by dance/movement therapy exercises (Thelin, 2008, p. 69).

### Mirroring

A fundamental part of human relations is to see and be seen by other people. Mirroring is to acknowledge another person and verifying his or her existence, not necessarily by mimicking the movements of the body, but rather respond to, or imitate, the emotions of the body's signals. This can create meaning, belonging and connection. For a parent/child relationship, mirroring is a means for communication (Thelin, 2008, p.70).

### Rhythm

There are natural rhythms of the body, the beating of the heart and the phase of the breath. As a child, we are rocked to sleep as it is soothing and comforting by nature. Rhythm can be used to affect our bodies and our movement; it can be a powerful tool for example in sports and when moving in synchronization. In therapy, rhythm has a structuring function, it can create order in chaos, but it is also a tool to express or amplify feelings. Dancing together can break down isolation and exclusion. Rhythm affects the body in a direct way, as it can activate or calm straight to an emotional level, in a way words are unable to. Therefore, the choice of music plays an important role in a dance/movement therapy session (Thelin, 2008, pp. 72-76).

### Kinesphere

The kinesphere is the potential space of movement of the body, the space that is reachable from the centre. Leonardo DaVinci's painting of the Vitruvian Man can be seen as a reflection of the kinesphere. This is a visual method introducing personal space to "find" the body, to define and limit the personal space and to become aware of it. This can be a helpful visualisation for a client to learn how to say yes or no in relation to the body, whom to let into the personal space and whom to reject (Thelin, 2008, pp. 77-78).

### Authentic movement

Authentic movement is a development of active imagination, to seek what cannot be explained in words through movement, to find what you are unaware of. This is practised in dance/movement therapy in two steps. First, the client connects with the unconscious through movement, while the therapist can support either as active in movement or as an observer, a witness. Second, words are later used to describe and explain the non-verbal experience, to help the client come to terms with what was found (Thelin, 2008, pp. 80-81).

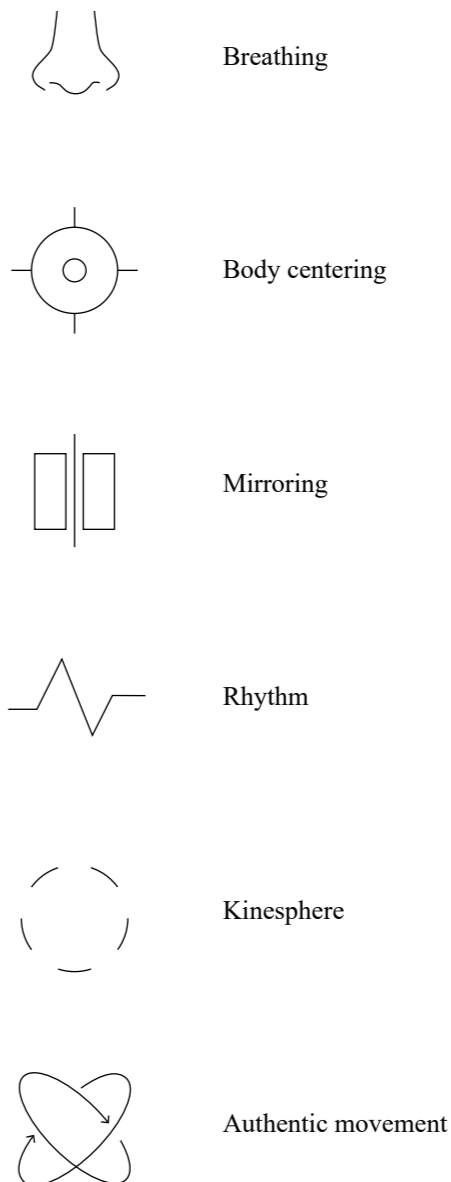


Figure 5. Different methods used during a dance/movement therapy session (Thelin, 2008).

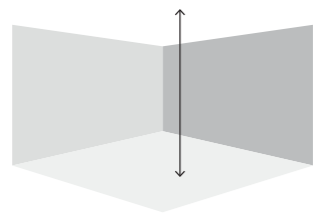
## DESIGN REQUIREMENTS

- room for dance/movement therapy -

Jenny Davidsson is a dance therapist, physiotherapist and psychotherapist working as a lecturer at Karlstad University. Elisabet Rosén is a dance therapist, psychologist and psychotherapist affiliated at the Department of Psychology at Umeå University as well as running her own practice. When separately giving their feedback on the

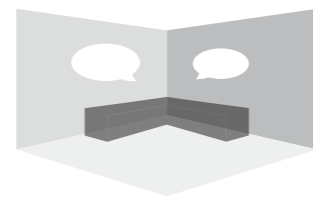
architectural elements desirable in the space for dance/movement therapy, they agreed with each other on most features necessary in the room. In general, the room needs to provide a private environment where the client feels safe to share his or hers experiences and feeling with the therapist.

*“The ‘talking cure’ is not enough, particularly where repressed, preverbal, and/or dissociated material and traumatized affects are concerned. These take up residence in the body, until circumstances are safe enough to allow them to be felt, mirrored, brought to consciousness, and healed.” (Stromsted, 2018, p. 3)*



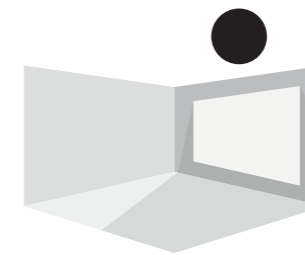
### Ceiling height

The ceiling height needs to be generous in a room for dance/movement therapy. The client needs to be able to move freely, to jump, reach and stretch arms, without accidentally touching fittings in the roof. This could cause a regression in the therapeutic treatment (E. Rosén, personal communication, February 4, 2021).



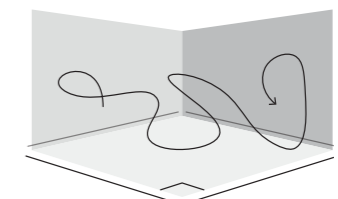
### Corner for conversation

It is important to have the verbal interaction in the same room as the dance/movement therapy session. If changing the environment, other impressions can ruin the moment. Usually, the therapist and the client get seated in a corner of the room or stay on the floor to freeze the moment (E. Rosén, personal communication, February 4, 2021).



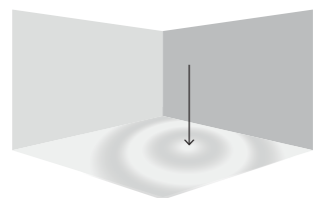
### Daylight

The room for dance/movement therapy should have generous access to daylight, but with the possibility to cover the windows if necessary (E. Rosén, personal communication, February 4, 2021).



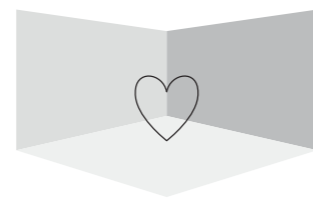
### Square space

To avoid the axial movement generated in a rectangular room, the room should preferably be square shaped. The corners of the room can represent safe and “pausing” space, and can be useful in different exercises (J. Davidsson, personal communication, February 19, 2021).



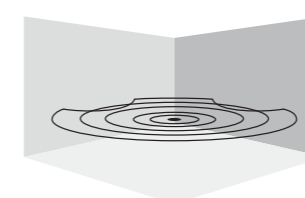
### Soft/warm floor

A lot of physical interaction is made with the material in the room. The floor and sometimes the walls are touched and leaned on and should preferably be made by a natural material such as wood. The surfaces should not be cold against the skin (J. Davidsson, personal communication, February 19, 2021).



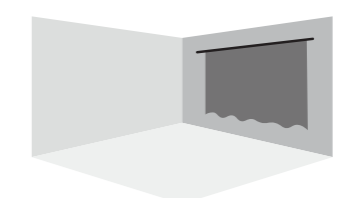
### No self-judgement

Avoiding the presence of mirrors and posters of performing dancers is important. The aim is to reach the state where you are not seeing your body from the outside, but from the inside. There is no evaluation of the movement or the looks of your body, in contrast to traditional dancing (J. Davidsson, personal communication, February 19, 2021).



### Sound privacy

Sound privacy is of high importance, as for all therapy forms where talking is involved. A conversation needs to be confidential, and the walls need to create a good acoustic environment. (E. Rosén, personal communication, February 4, 2021).



### Minimize insight

It is important that the client feels safe in the room for dance/movement therapy and that the room is a private space. There should be as little insight into the room as possible, from the street outside but also from other rooms in the building (E. Rosén, personal communication, February 4, 2021).

03.

C O N T E X T

## LOCATION

- site -



*The site is located in Olivedal in Gothenburg, in connection to the street Linnégatan.*



*The plot was previously part of Olivedal 1:1, location of Viktoriahuset (Hagabion).  
Today, the plot Olivedal 1:3 is occupied with paved parking space.*

*Viktoriahuset site: Olivedal 1:1 (2521 m<sup>2</sup>)  
Project site: Olivedal 1:3 (1764 m<sup>2</sup>)*

## SITE ANALYSIS

- the urban fabric -

### Infrastructure

There are three tram stops along Linnégatan with numerous tramlines and busses operating. The closest one to the site is Prinsgatan, where tram no 1,6 and 8 are operating. At Järmtorget, there is a junction for the west-east bound trams as well.

1. Järmtorget tram stop
2. Prinsgatan tram stop
3. Olivedal tram stop

### Green areas

The site itself is lacking greenareas in the immediate surrounding, but a few blocks away the hill of Skansen Kronan can be found, where one can enjoy the green environment with a view of the city. South west of the site lies Slottsskogen, a larger city park with trails, open grass areas, a zoo and viewpoints.

4. Skansen Kronan
5. Slottsskogen

### Buildings

The most relevant building in close connection to the site is Viktoriahuset, also known as Hagabion. Originally, the two sites were one, before the municipality divided the plot. Another building land mark is Oscar Fredrik Church, located west of the site.

6. Viktoriahuset (Hagabion)
7. Oscar Fredrik Church
8. Hagabadet

### Neighborhoods

The site is located on the boarder between Haga and Olivedal, two urban subdivisions of Gothenburg. "Långgatorna" are four streets in the north area of Olivedal where there is a lot of cultural activities, such as shops, bars and restaurants.

9. Mashuggskajen
10. Långgatorna
11. Haga
12. Olivedal

#### Strengths

- Natural flow of people at Linnégatan
- Central, easy to access by tram/foot

#### Weaknesses

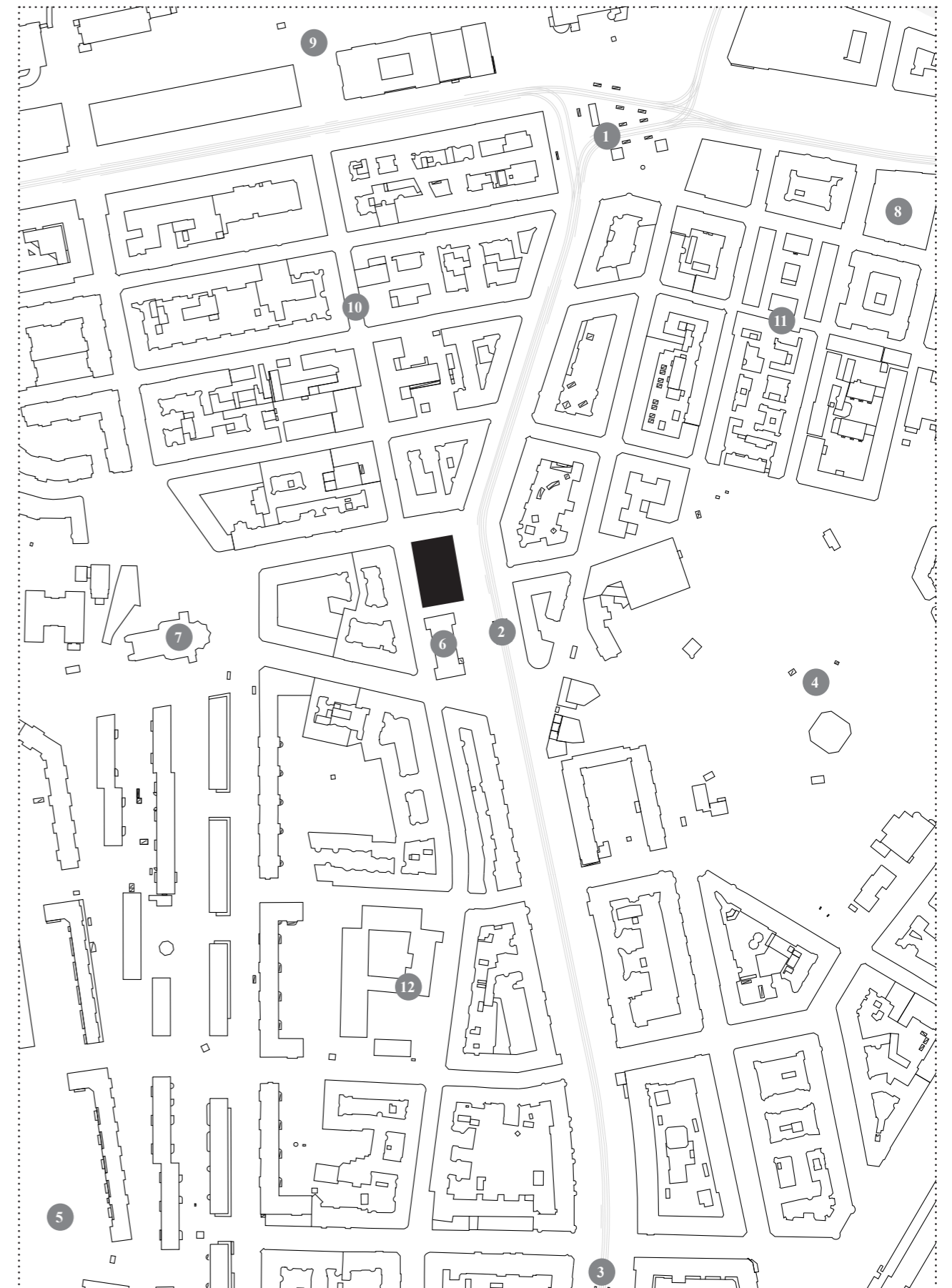
- Lack sunlight in afternoon/evening
- Dense/no green areas

#### Opportunities

- Find places to enjoy evening sunlight
- Create open public spaces in the city

#### Threats

- Relation to Viktoriahuset
- Structured urban fabric, housing blocks
- Noise from street



Site plan  
1:4000



*As one approaches the site from Järntorget, Viktoriahuset is framed within the view.*



*Photos of facade details of Viktoriahuset, built in stone, brick, and ironwork.*



*Upper photo: The north facade of Viktoriahuset, displaying strict organisation of windows and facade elements.*

*Lower photo: Houses at Linnégatan, opposite the site. Brick buildings from to different decades neighbouring each other.*



*Upper photo: Nordhemsgatan and the different height of the buildings.*

*Lower photo: Overlooking the site facing north, towards Järmtorget.*

## VIKTORIAHUSET

- neighbouring context -

The city park Slottsskogen began to be constructed in 1875. Four years later, the water stream Djupedalsbäcken, leading up to the park entrance, was culverted and transformed into the street Linnégatan. During the last decades of the nineteenth century, houses in stone and brick were built along Linnégatan, Viktoriahuset being the first one to be completed, constructed between 1875-1877.

Viktoriahuset was designed by the architect Bror Viktor Adler and was housing Viktoriaskolan for a century. It was one of many schools constructed in Gothenburg in the late nineteenth century, to deal with the needs of the growing population, caused by the large families of the working class and the

rapid urbanization. Viktoriaskolan was planned to house 744 children of different ages, and had a gym, workshops, lecture halls, two apartments for teachers in the attic and an outhouse on the courtyard.

In 1975, the school moved to new facilities, and Viktoriahuset was transformed to house different associations as well as the cinema Hagabion, part of Folkets Bio. Today, there is about 25 different non-profit organizations with their facilities in Viktoriahuset, all working with issues related to culture, environment, peace, and solidarity (Styrelsen för Föreningen Viktoriahuset, 2021).

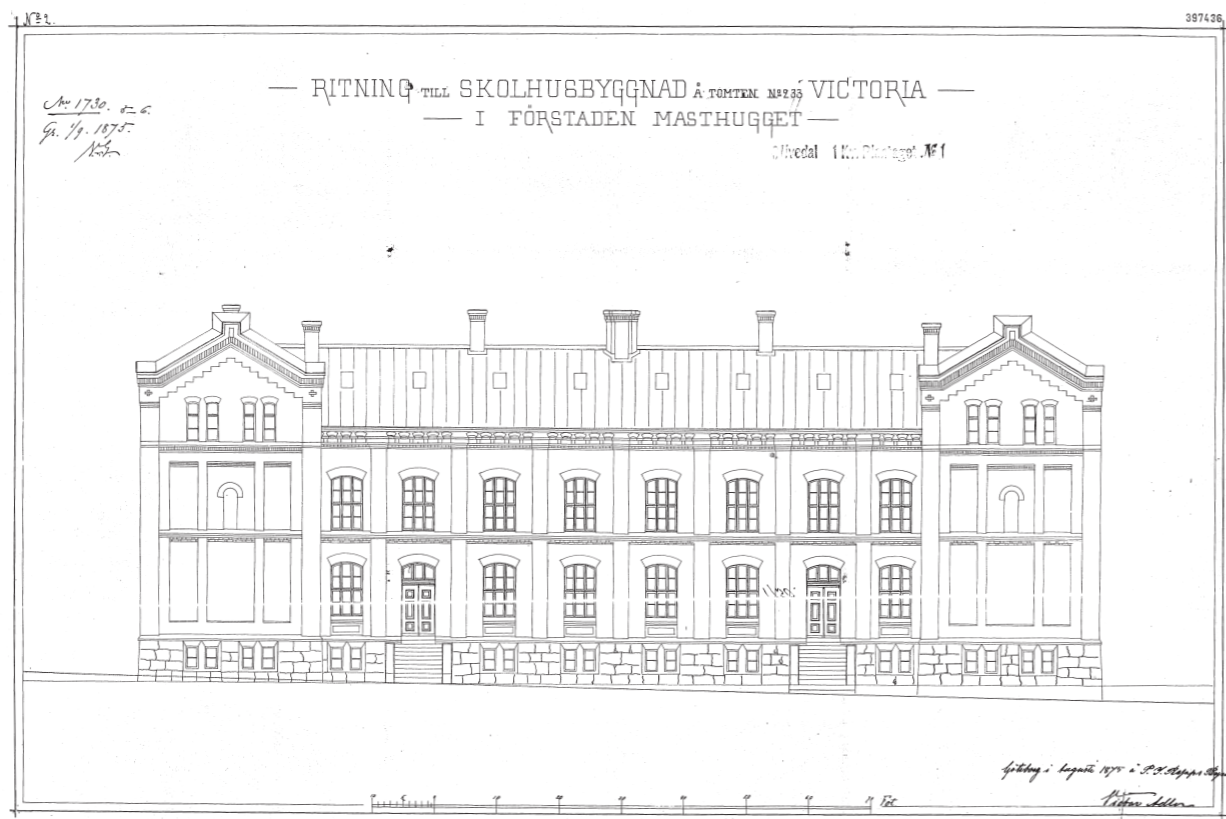
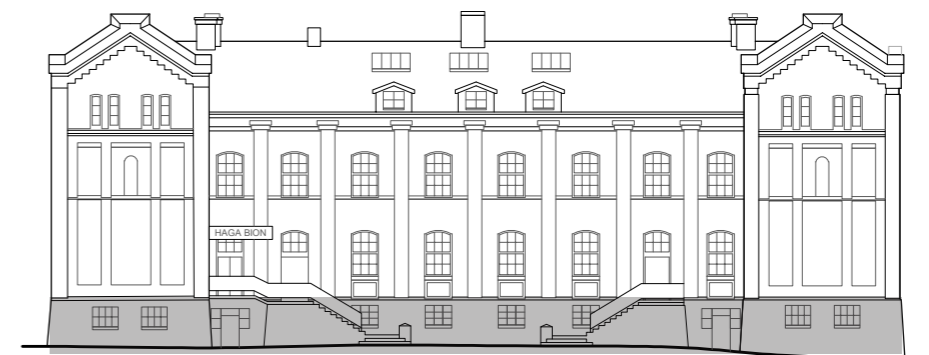
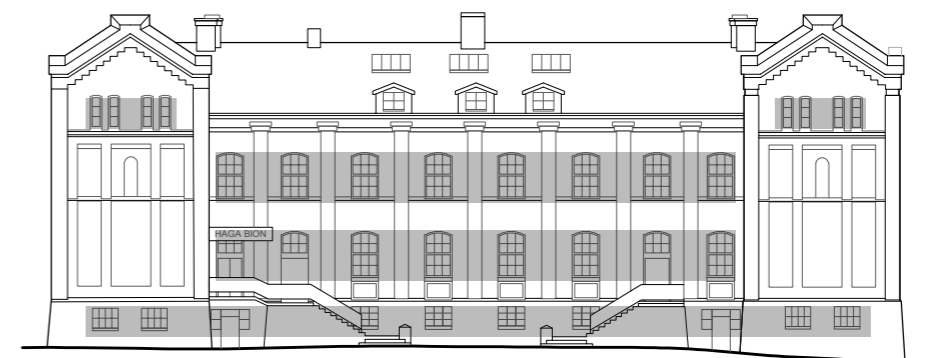


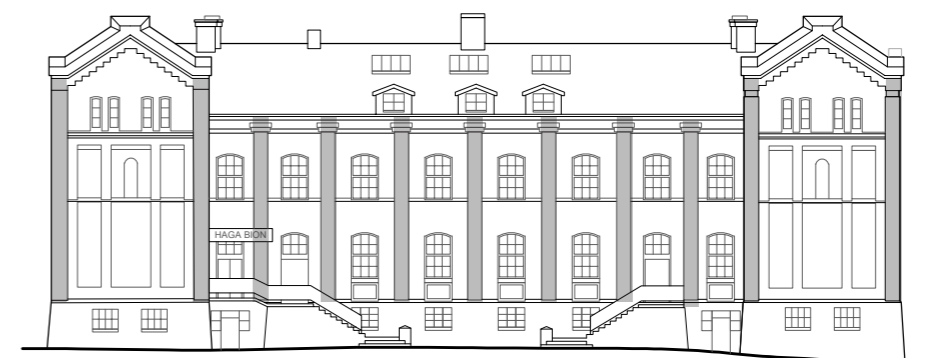
Figure 6. Original drawing of Viktoriahuset, 1875 (Stadsbyggnadskontorets arkiv, 2021).



*emphasized basement/entrance level*



*symmetrical and aligned window placement*



*visible vertical structure in facade*

*Hagabion, Linnégatan elevation  
1:400*



*emphasized basement/entrance level, differentiation in material/colour*



*symmetrical window placement and facade elements*

## VISION

- city development, a discussion -

Currently, there is no existing detailed development plan for the site Olivedal 1:3. The Property Management Committee of Gothenburg has developed a proposal and requested a planning notification for the site. If the municipality give a positive response, a detailed development plan will be enforced.

The proposal for the requested planning notification has been developed in collaboration with Norconsult and consists of three buildings in total, two housing units and one preschool. The largest housing unit, placed along Linnégatan, will be seven stories tall, according to the proposal. The courtyard, partly enclosed by the buildings, has the same elevation as the outdoor area of the restaurant in front of Viktoriahuset, aiming to link the two areas together.

The argument of the proposal is the need for housing and schools in the city area of Gothenburg. The Property Management Committee states in appendix 4 of the proposal, “*Angående grönyta och förskola i Linnéstaden*”:

*“Stadsutvecklingen av parkeringsytan vid Hagabion bör fokusera på stadens behov av skola/förskola och bostäder. Fastighetskontoret har i sin utredning lagt fram alternativ nr. 2 som ger både en förskola med tre avdelningar och ett tillskott av bostäder med verksamhetslokaler i bottenvåningen.*

*Med hänsyn till ovan samt att alternativ 2 även möjliggör för kulturverksamheterna i Hagabion att få vara kvar, anser vi att fastighetskontoret ska utgå ifrån detta alternativ i det fortsatta arbetet.”*

*(Bilaga 4 till begäran om planbesked 2019-10-21. Dnr 4959/18. Stadsbyggnadskontoret, 2021)*

It is true that the city needs more housing and school properties. One could, however, argue that the site in Olivedal is not the proper placement for such buildings and activities. A preschool should preferably not be neighbouring a busy street like Linnégatan, and the lack of open spaces and green areas is profound in the proposal. The semi-private courtyard of the proposal is primarily for the residents of the housing units and does not bring quality to the public space.

There is rather a need for a relief in the urban fabric at this site, with open space for public use. The dense area of housing blocks and the lack of interactive space for pausing along Linnégatan makes this the perfect place for a public square, accompanied with a public building open to all. A Dance/Movement Therapy Centre, and a public outdoor area in connection to it, located at a site like this would give more to the city, improving space for social interaction and putting the importance of mental and physical health on display.

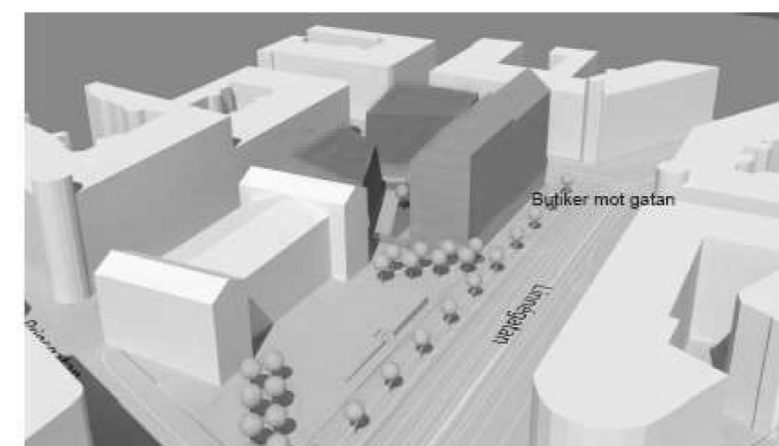
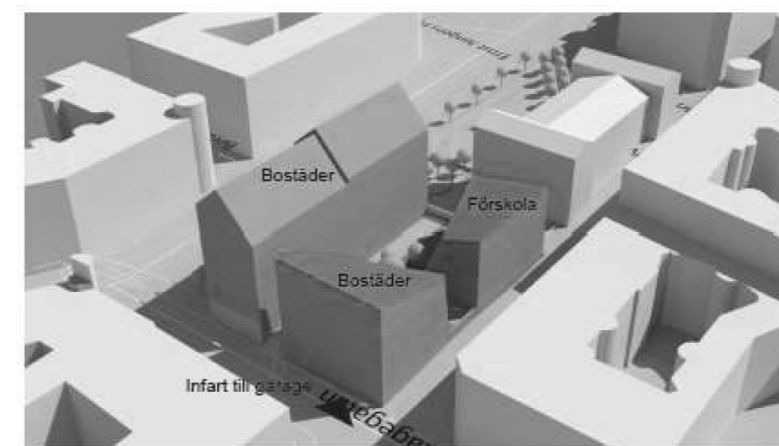


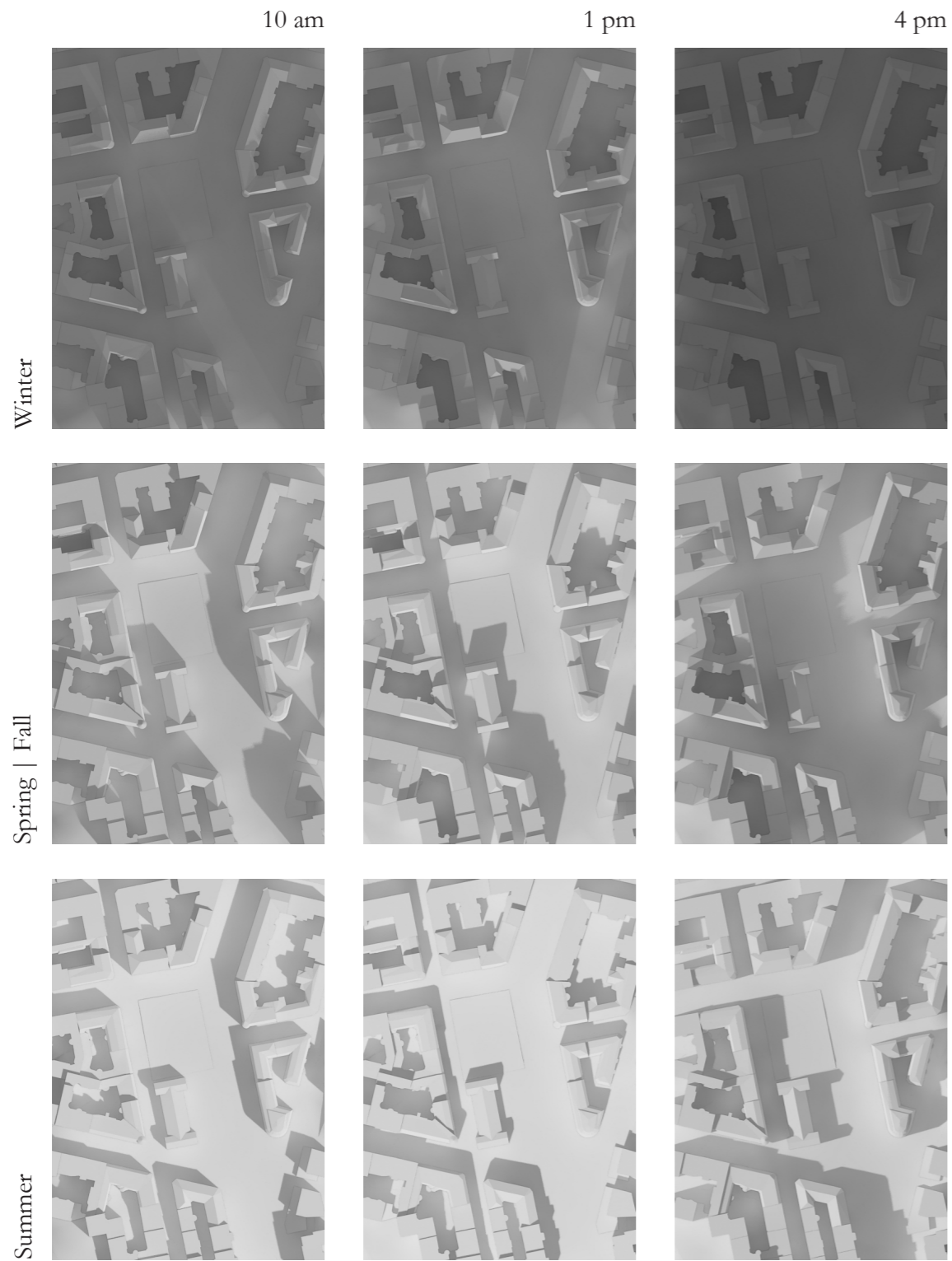
Figure 7. Proposal including two housing units and a preschool at the site Olivedal 1:3 (Bilaga 3 till begäran om planbesked 2019-10-21. Dnr 4959/18. Stadsbyggnadskontoret, 2021).

04.

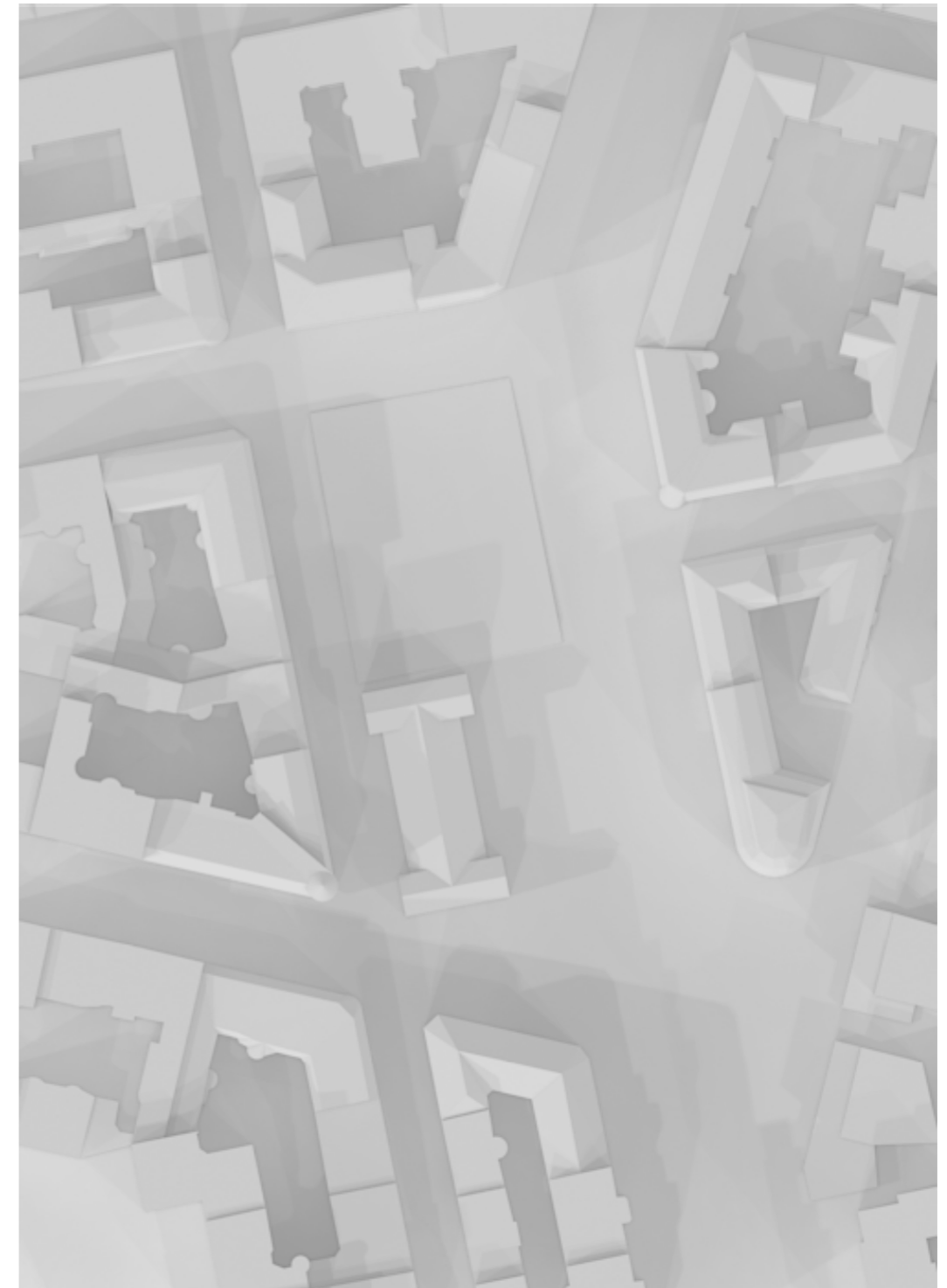
DESIGN STUDIES

## SUN STUDY

- identifying dark areas -



*Sun study of the site at different occasions throughout the year; at summer solstice, winter solstice and equinox. During winter, the sun barely reaches the site at all, due to the inclination of Linnégatan.*



*By overlaying the results of the sun study, the south west corner of the site, at the gable of Viktoriahuset, can be detected as darkest area.*

## VOLUME STUDIES

- spit models -

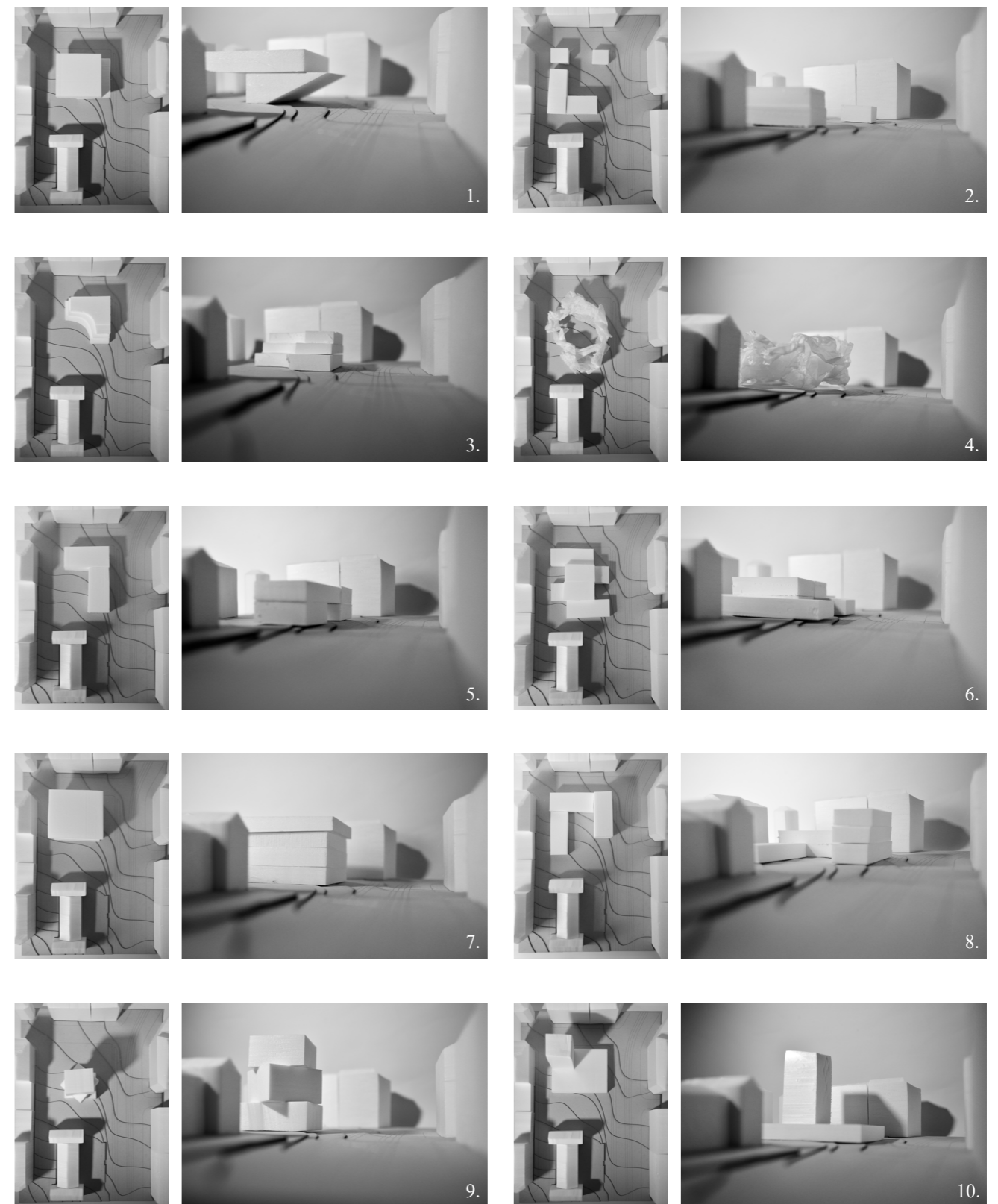
“Spit models” are many models produced in a short amount of time, without focusing on details. Almost like you are “spitting” out models.

Each model took five minutes for cutting material, arranging it on the site and take photos. This explorative method was used to further under-

stand the possibilities of the site and to blindly experience the unexpected results of “doing without thinking”. Some of the models gave spatial qualities to the urban space and to the streetscape of Linnégatan, while some were perhaps more provocative than inspiring.

### Comments:

1. *Overhang. Creating sheltered exterior spaces. Invitation?*
2. *Free standing volumes. Interrupting or creating an experience of negative space?*
3. *Stepped gable. Terraces towards inner square. Possibility for performance/audience? Afternoon sun.*
4. *Free form. Translucent. Playing with sunlight. Texture. Fierce or out of context?*
5. *Connection. Entrance, indoor/outdoor space. L-shape.*
6. *Zigzag. Creating division. Perhaps uncentered.*
7. *Cube. Connecting to urban fabric. Boring or realistic?*
8. *Emphasised square. Framing the afternoon sun. Unfriendly towards street. Walkable roofs?*
9. *Twisted tower. Terrasses.*
10. *How tall is too tall?*

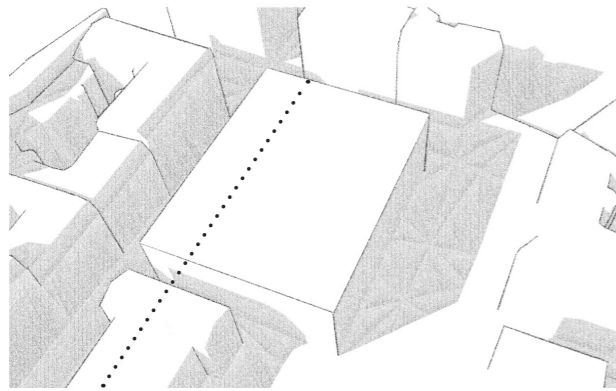


*Volume exploration with spit models, revealing potential qualities of the site and creating an open-minded approach to further design research.*

**VOLUME REDUCTION**

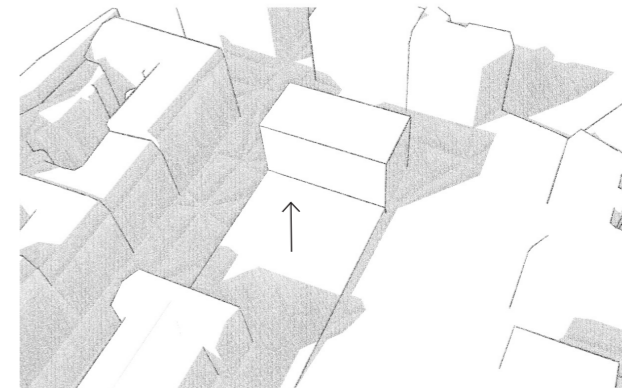
*- form finding -*

**01.**



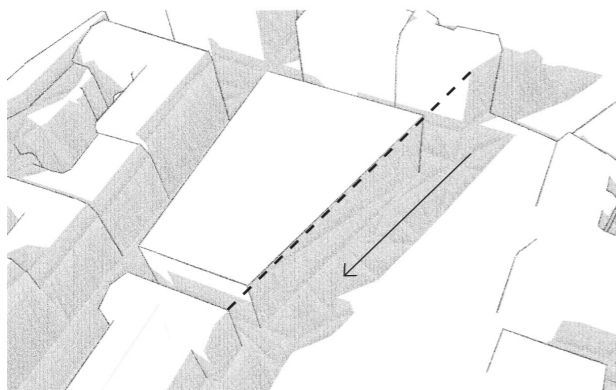
volume block,  
vertical alignment  
with Viktoriahuset

**04.**



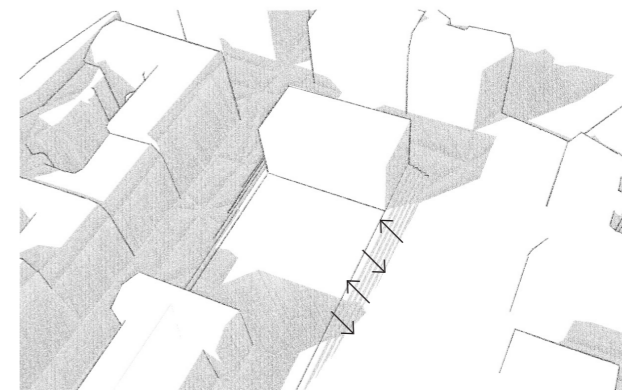
level ground with  
neighbouring outdoor area

**02.**



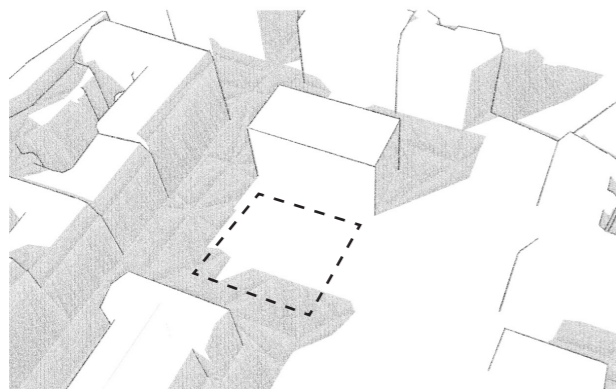
sightline,  
from Järntorget

**05.**



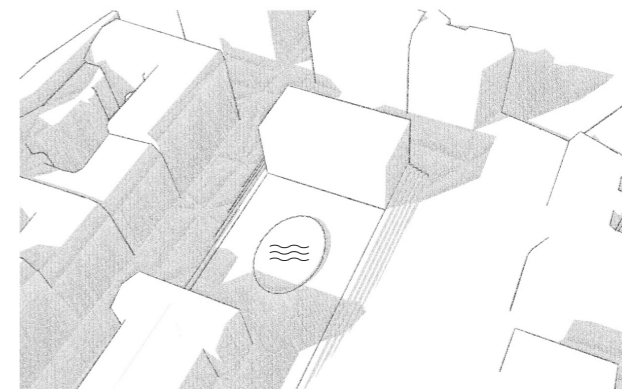
seamless connection  
to Linnégatan

**03.**



square with afternoon  
sun exposure,  
drawback from the gable of  
Viktoriahuset

**06.**



water fountain,  
bring in natural element

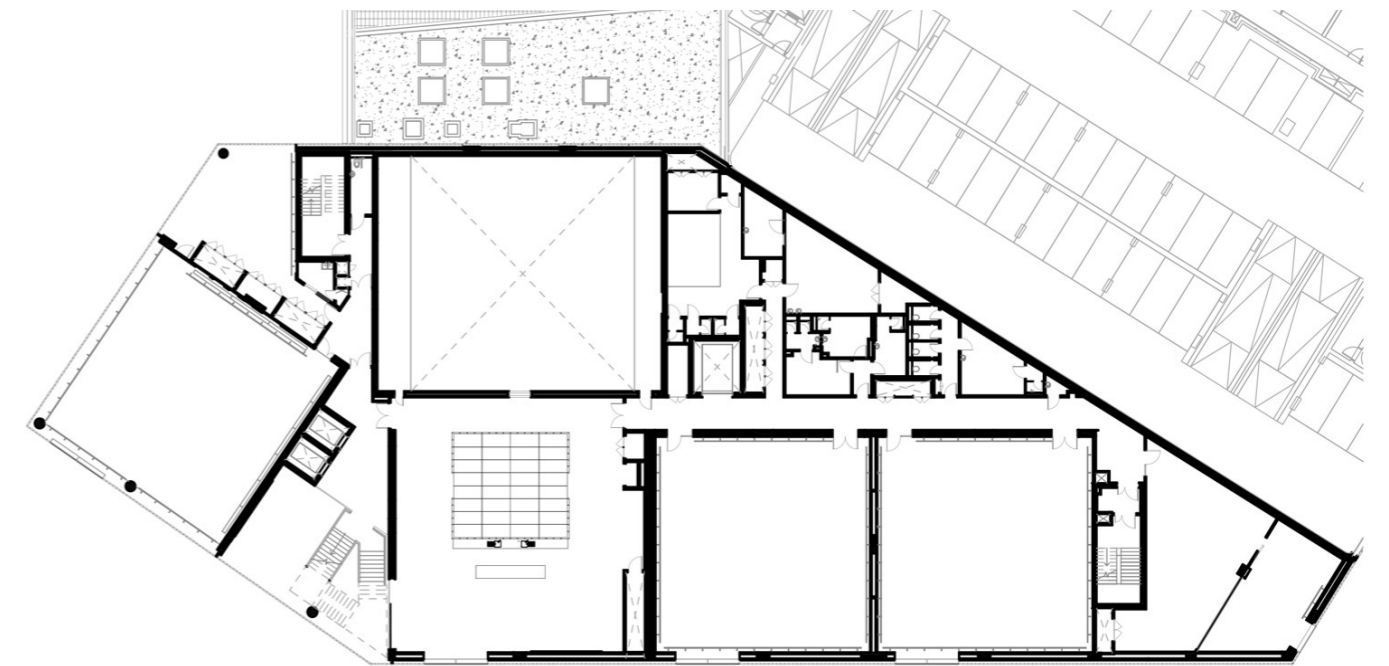
## REFERENCES

- floor plans -



- Dance School in Liria by Hidalgomora Arquitectura -

*The floor plan of the dance school in Liria shows an example of how to limit exterior view of the dance studios, while still accessing daylight, by layering the windows with thin, vertical wooden elements (ArchDaily, 2013).*



- English National Ballet in London by Glenn Howells Architects -

*The dance studios inside the newly constructed English National Ballet in London are square shaped to allow movement in all directions of the room, similar to the design requirement of a studio for dance/movement therapy (Astbury, 2020).*

## REFERENCES

- materiality -



- Optical Glass House in Hiroshima by Hiroshi Nakamura & NAP -

*Working with pure glass blocks, architect Hiroshi Nakamura managed to shield of the noise and the view from the busy street outside, obtaining privacy in the garden without limiting the access to sunlight (Fuji, 2020).*



- Maison Hermès in Ginza, Tokyo, by Renzo Piano -

*The Maison Hermès in Tokyo shows an example of the possibilities with a facade completely built in glass blocks, without supporting structural elements visible from the outside (Miller, 2019).*

## MATERIAL

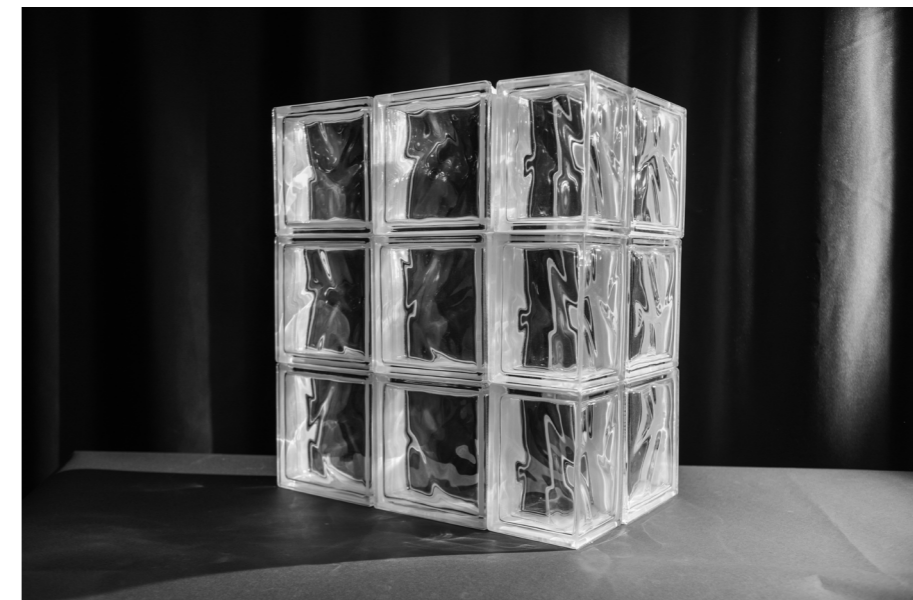
- glass blocks -

Vetro Group is a supplier of glass blocks in Sweden, providing clients of large projects with glass material. The glass blocks are manufactured in the Czech Republic and weights 2,25 kilograms per piece. They have a sound reduction of 42 decibel and the thermal transmittance value (U-value) is 1,1 W/(m<sup>2</sup>·K) at its best. It is possible to further

reduce the U-value with 0,1 W/(m<sup>2</sup>·K) by adding argon gas between the glass layers, but the effect of the argon gets reduced over time, due to sun exposure. The glass blocks can also be made with bulletproof glass if necessary. (J. Öberg, Vetro Group, personal communication, April 20, 2021).



*Glass blocks diffuse the view but does not limit the light, it merely distorts it.  
The glass is translucent, not transparent.*



*There is a variety of corner blocks, they can be made round, chamfered or orthogonal. The orthogonal corner piece is glazed to the very edge of the corner.*

*"I work a little bit like a sculptor. When I start, my first idea for a building is with the material. I believe architecture is about that. It's not about paper, it's not about forms. It's about space and material."*

*- Peter Zumthor  
(Pogrebin, 2009)*



## SPACE PROGRAM

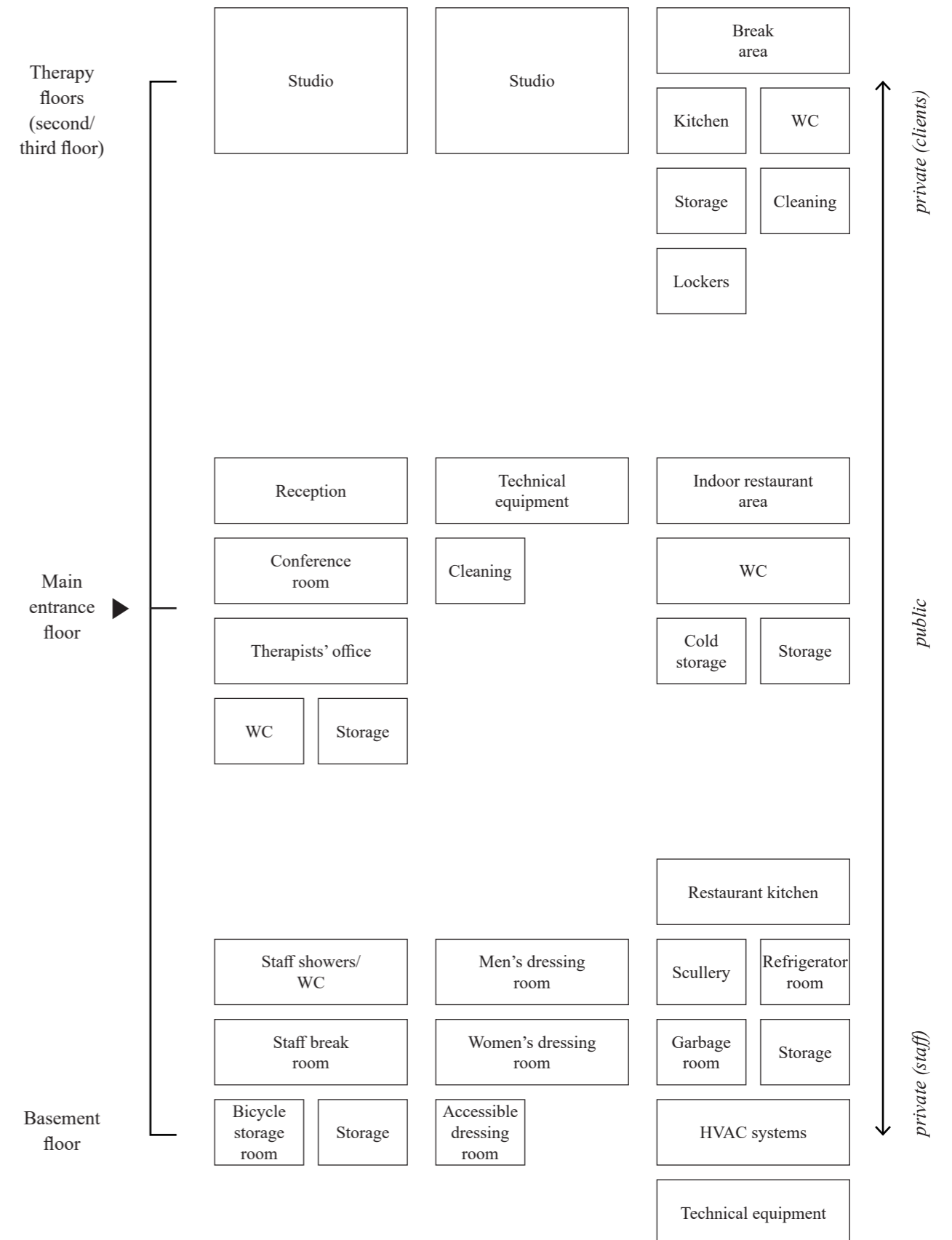
- public, private -

The program is divided in two categories: the *private space* and the *public space*. Dance/movement therapy is a private experience for the client, and the studios are therefore elevated from the entrance level. This is both beneficial in the aspect of disconnecting the client from the everyday noise and sights of the street, but also to create a journey as you do the transition from ground

level to the studios. The entrance level is public, housing the restaurant and the reception for visitors of the therapy centre. The basement level is private and mainly intended for staff facilities and restaurant kitchen. This floor is also housing the clients' dressing rooms, accessible with an alternative staircase.

<i>Spatial program</i>	<i>Quantity</i>	<i>m<sup>2</sup></i>	<i>Total</i>
<b>Therapy space</b>			
Dance/movement therapy studio	4	100	400
Clients' kitchen/break area	2	70	140
WC	5	2-5	19
Woman's dressing room	1	20	20
Men's dressing room	1	19	19
Accessible dressing room	1	7	7
Reception	1	40	40
Lockers	1	18	18
<b>Restaurant/bar</b>			
Indoor restaurant area	1	127	127
WC	3	3-6	12
Restaurant kitchen	1	48	48
Storage room	3	3-6	13
Refrigerator room	1	4	4
Scullery	1	6	6
Cold storage	1	4	4
<b>Staff facilities</b>			
Therapist's office	1	22	22
Conference room	1	25	25
Staff break room	1	46	46
Bicycle storage room	1	12	12
Staff showers/WC	4	6,5	26
<b>Supporting functions</b>			
Storage room	6	2,5	15
Garbage room	1	5	5
Technical equipment	2	12	24
HVAC systems	1	23	23
Cleaning storage	3	2	6
Circulation/stairs/elevators	-	-	470
<b>Total</b>			<b>1551 m<sup>2</sup></b>

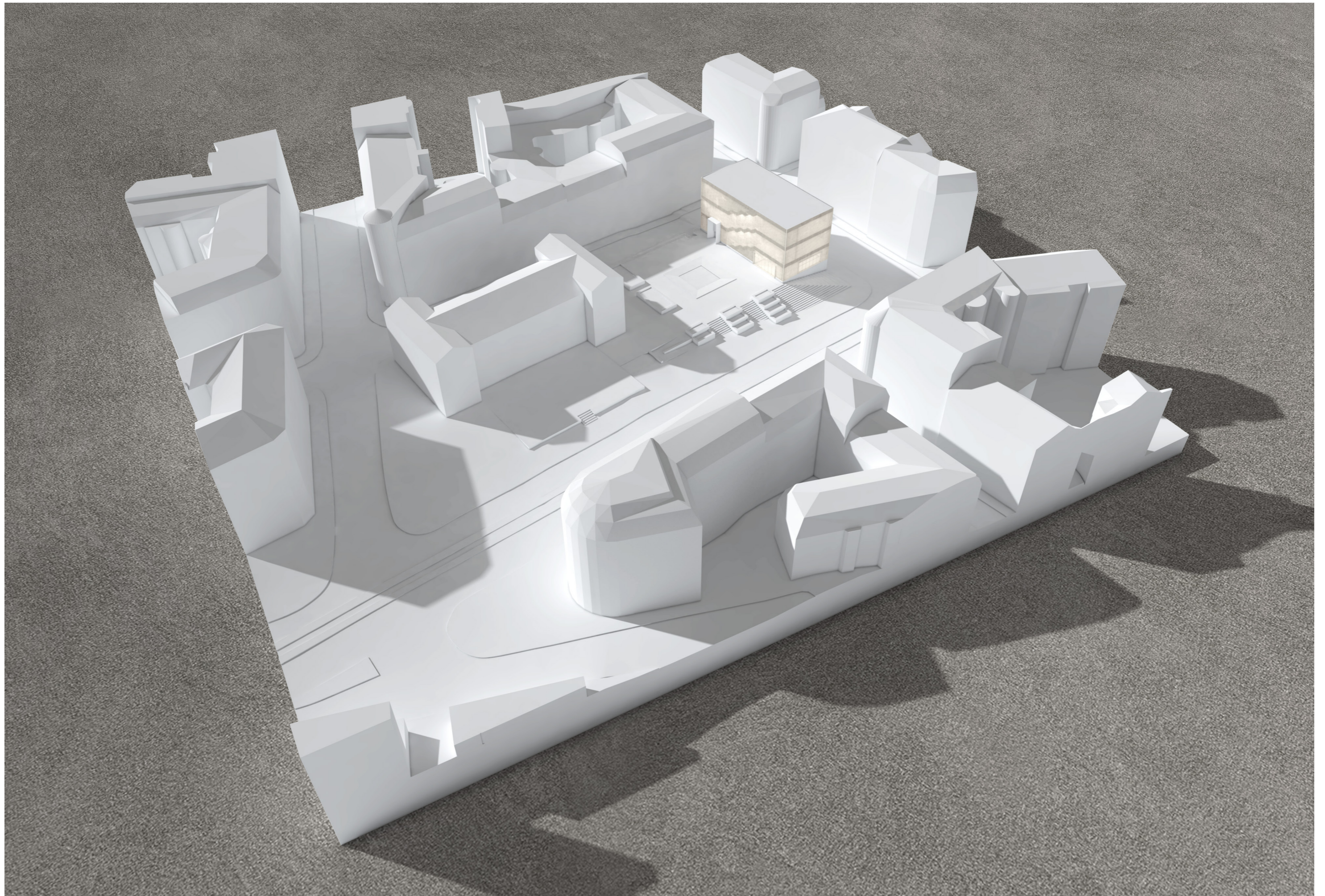
Space program for the proposed Dance/Movement Therapy Centre.



Space program distribution at different floors in the building, according to level of privacy.

05.

DESIGN PROPOSAL



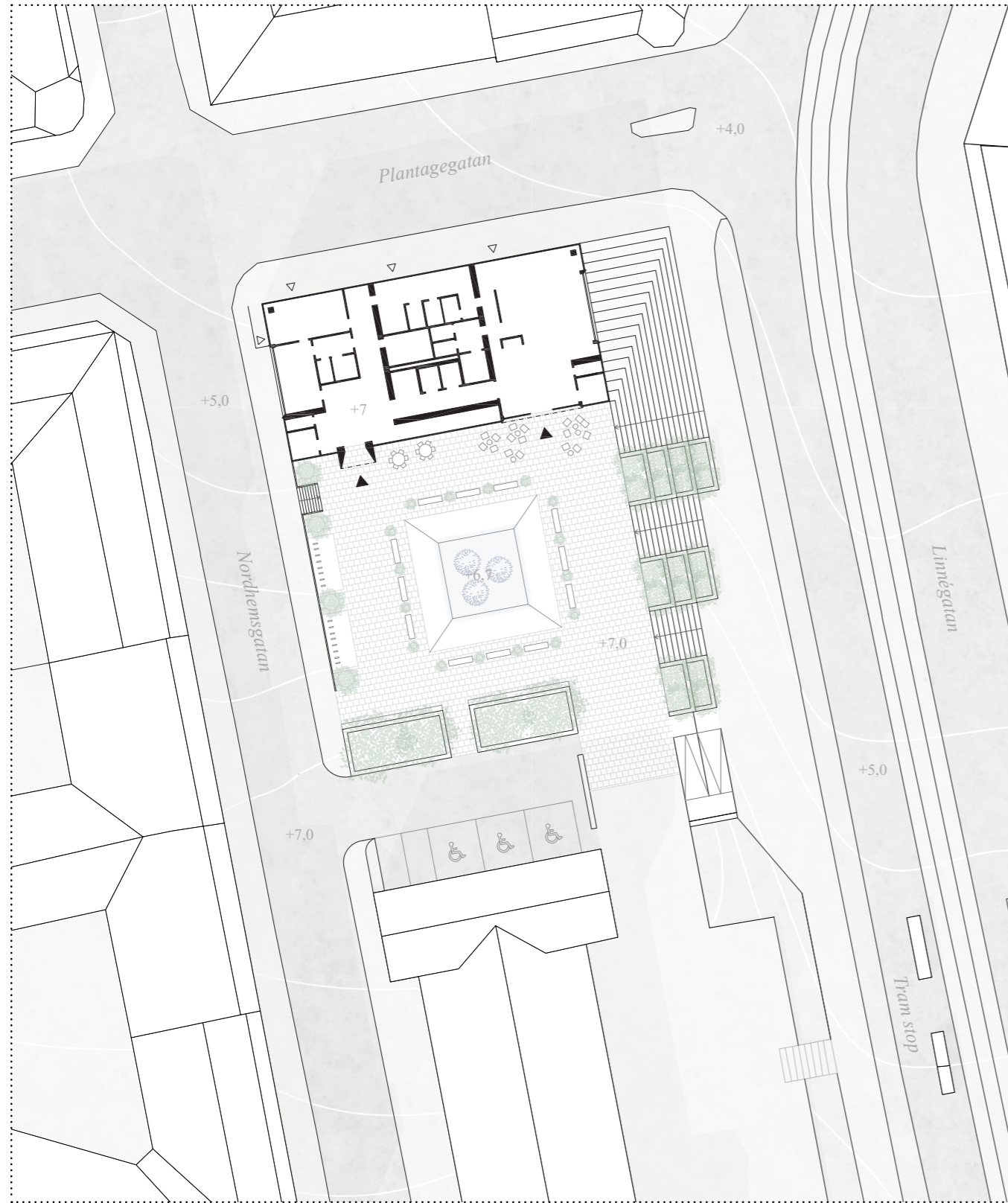


0 2 10 20 m

*Linnégatan elevation*  
1:400

**DRAWINGS**

- site plan -

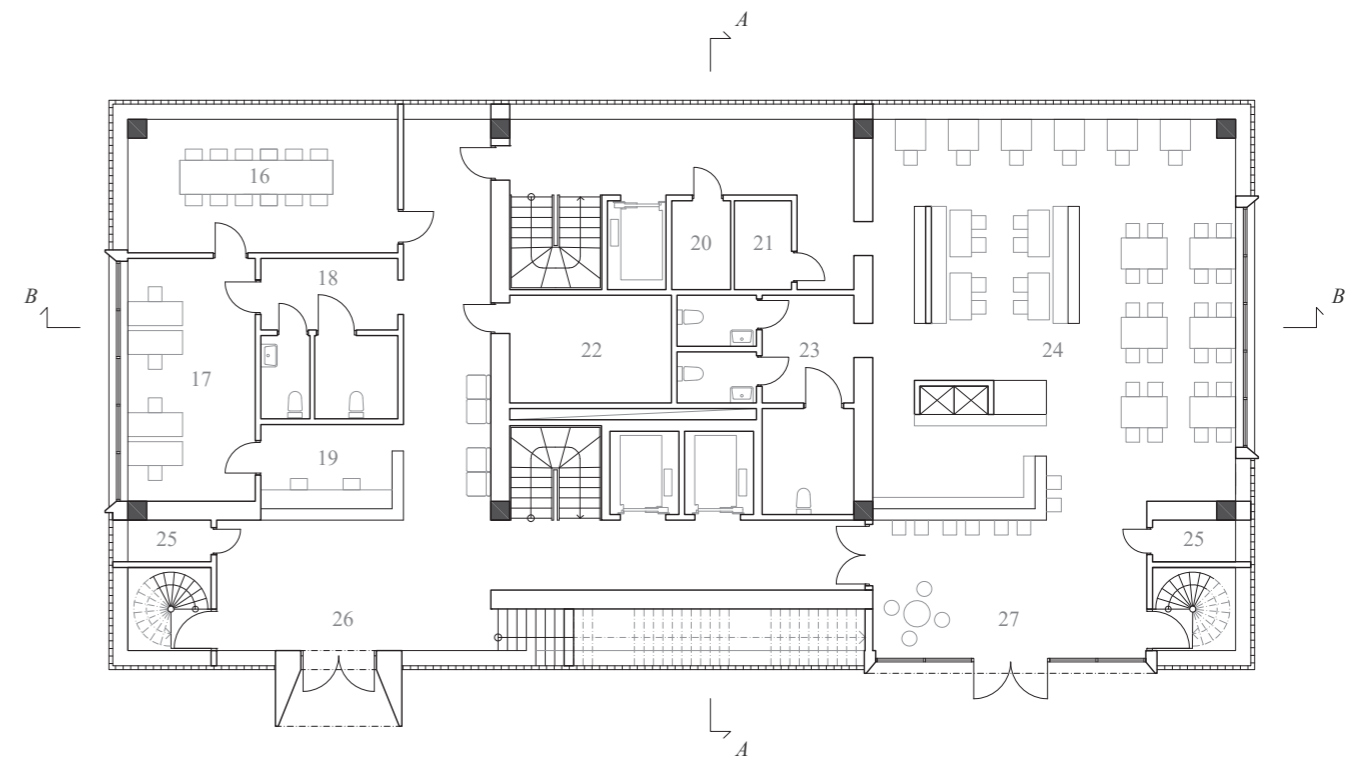


0 2 10 25 m

Site plan  
1:500

**DRAWINGS**

- plans -



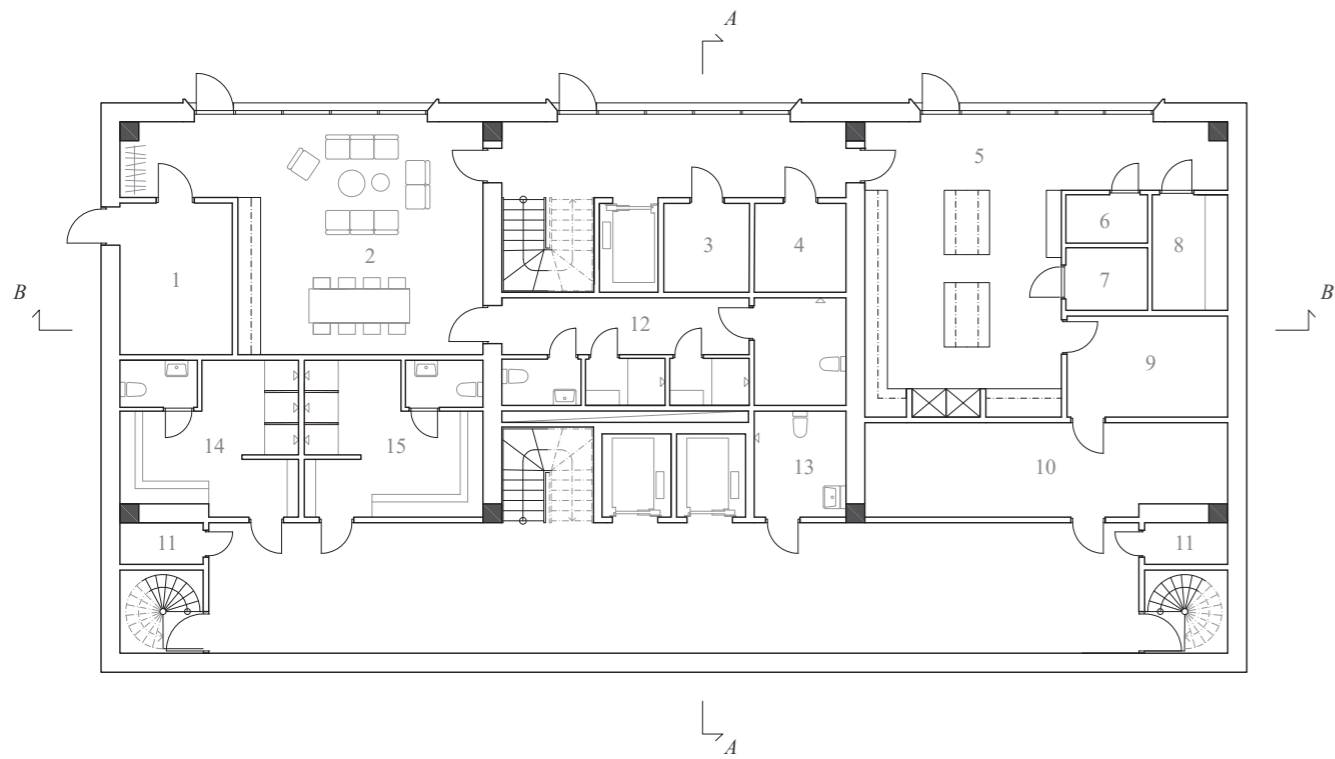
- |                        |                         |                             |
|------------------------|-------------------------|-----------------------------|
| 16. conference room    | 21. storage room        | 26. therapy centre entrance |
| 17. therapist's office | 22. technical equipment | 27. restaurant entrance     |
| 18. WC                 | 23. WC                  |                             |
| 19. reception          | 24. restaurant/bar      |                             |
| 20. cold storage       | 25. storage room        |                             |



0 1 5 10 m



Ground floor plan  
1:200



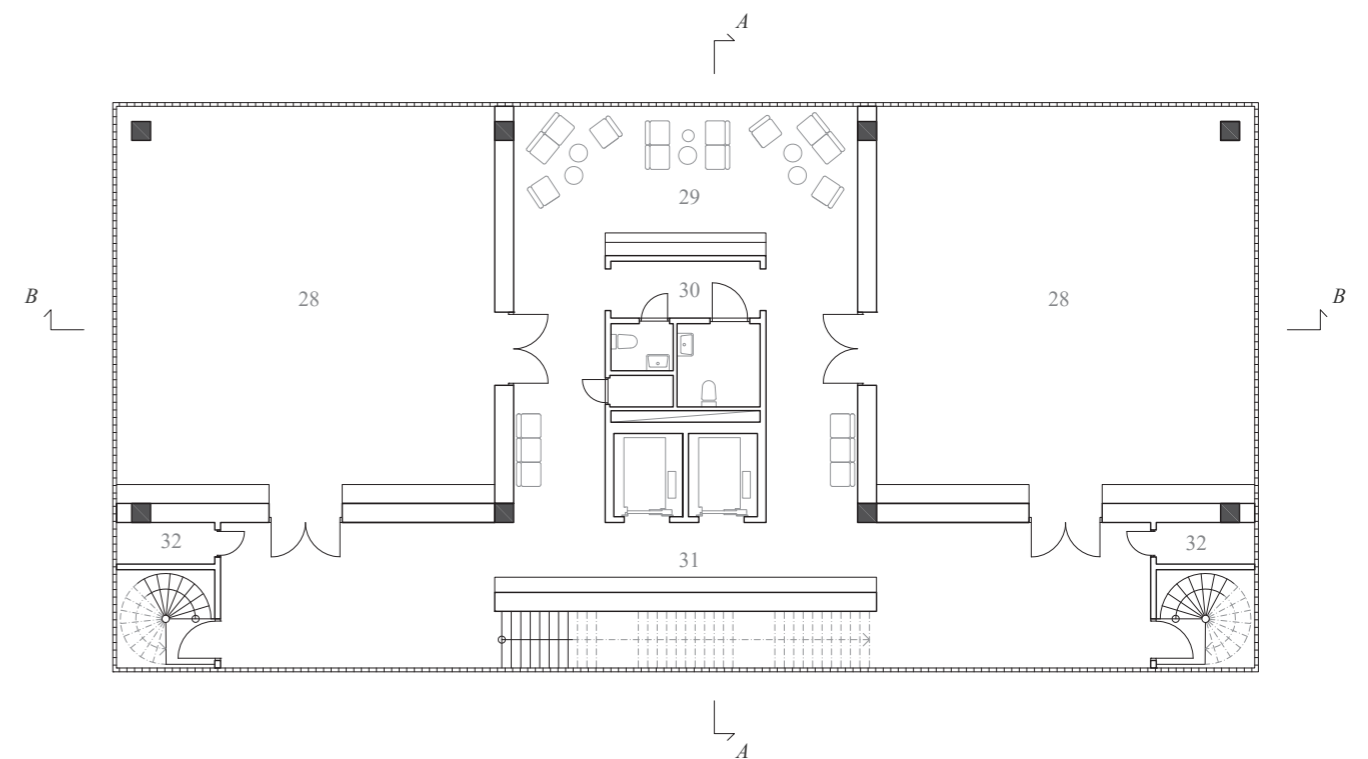
- |                         |                        |                              |
|-------------------------|------------------------|------------------------------|
| 1. bicycle storage room | 6. storage room        | 11. cleaning storage         |
| 2. staff break room     | 7. refrigerator room   | 12. staff showers/WC         |
| 3. garbage room         | 8. scullery            | 13. accessible dressing room |
| 4. storage room         | 9. technical equipment | 14. women's dressing room    |
| 5. restaurant kitchen   | 10. HVAC systems       | 15. men's dressing room      |



0 1 5 10 m



Basement floor plan  
1:200



- |                                      |
|--------------------------------------|
| 28. dance/movement<br>therapy studio |
| 29. break area/kitchen               |
| 30. WC                               |
| 31. lockers                          |
| 32. cleaning storage                 |



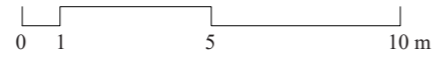
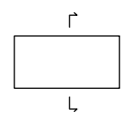
0 1 5 10 m



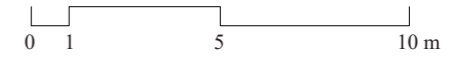
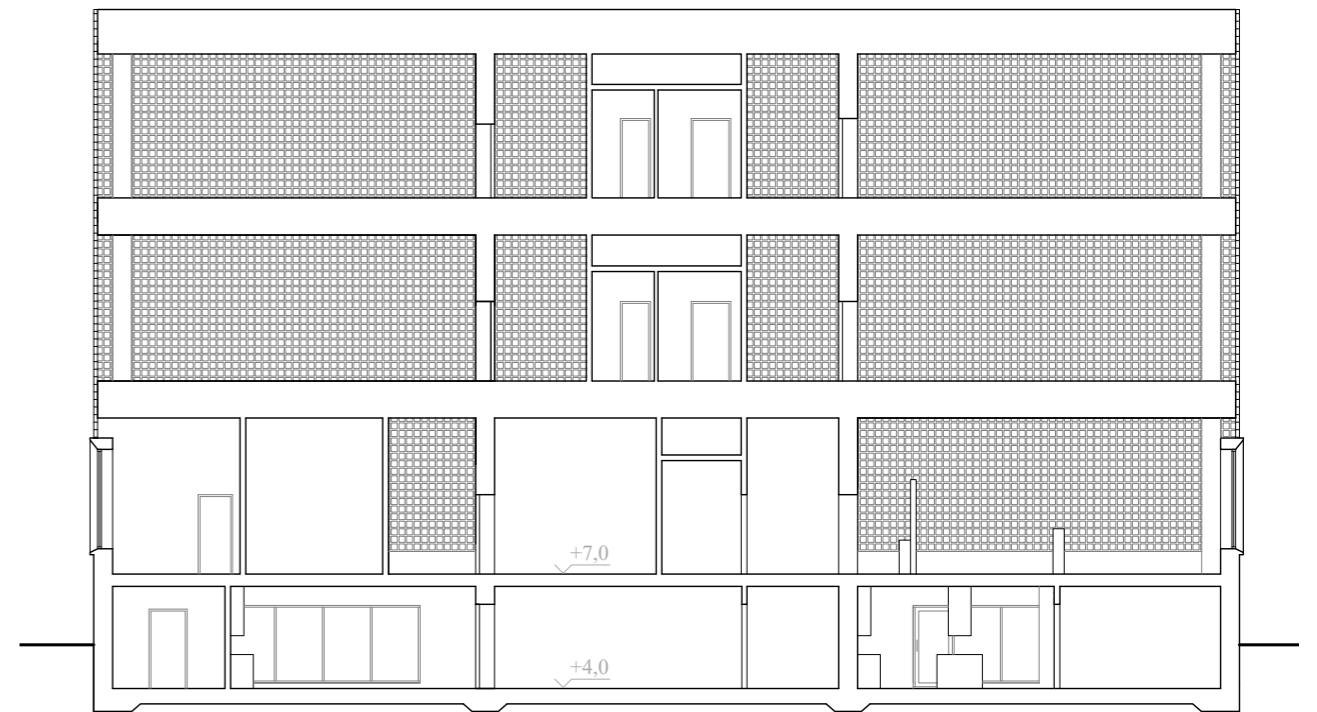
Second/third floor plan  
1:200

**DRAWINGS**

- sections -



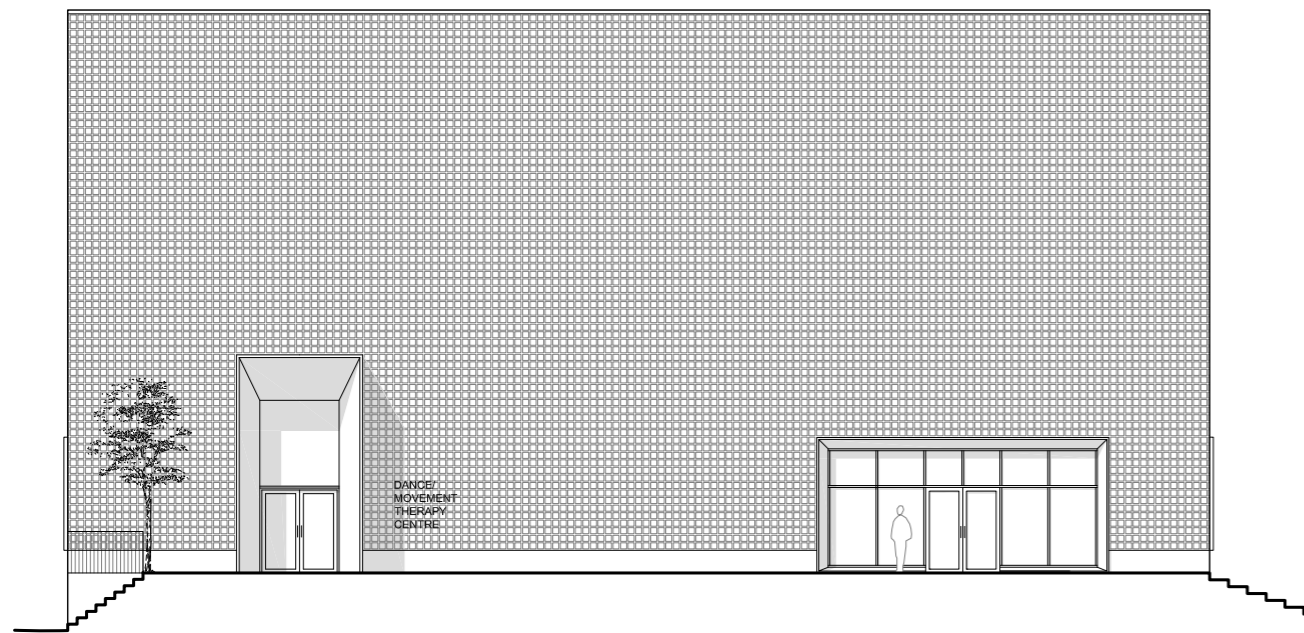
*Section A-A*  
*1:200*



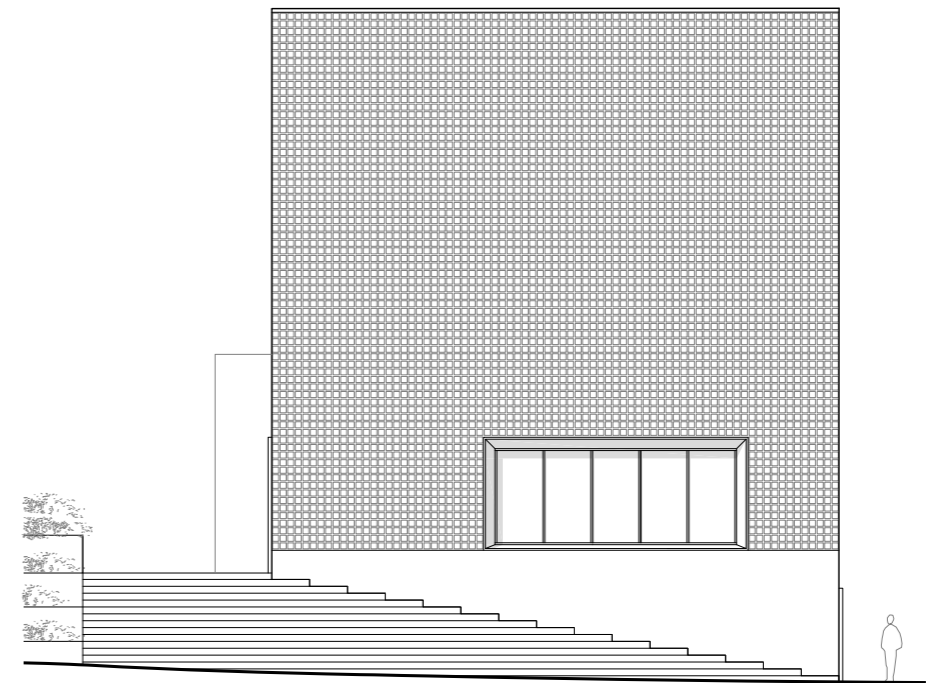
*Section B-B*  
*1:200*

**DRAWINGS**

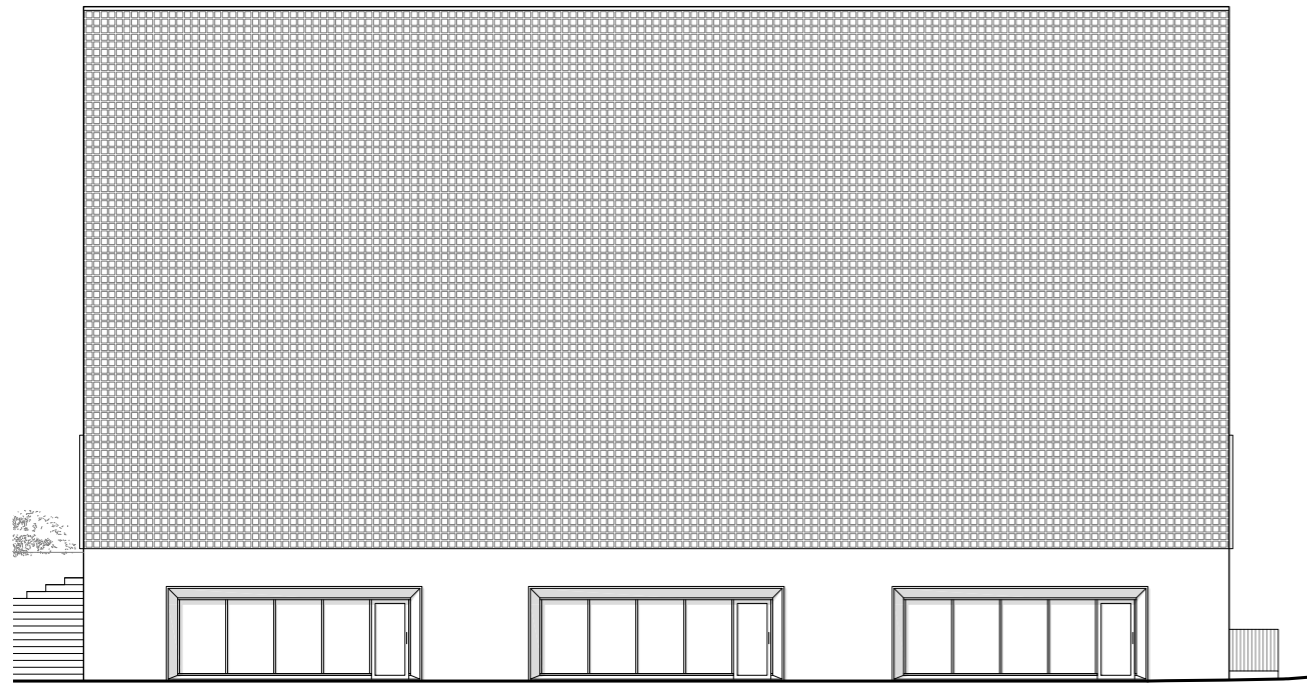
*- facades -*



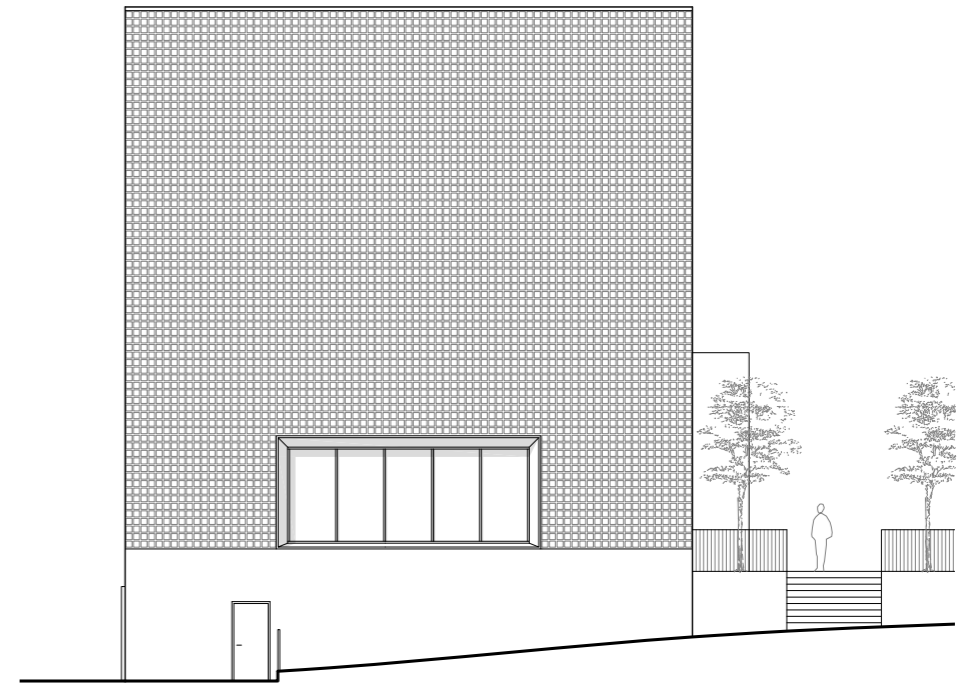
*South elevation  
1:200*



*East elevation  
1:200*



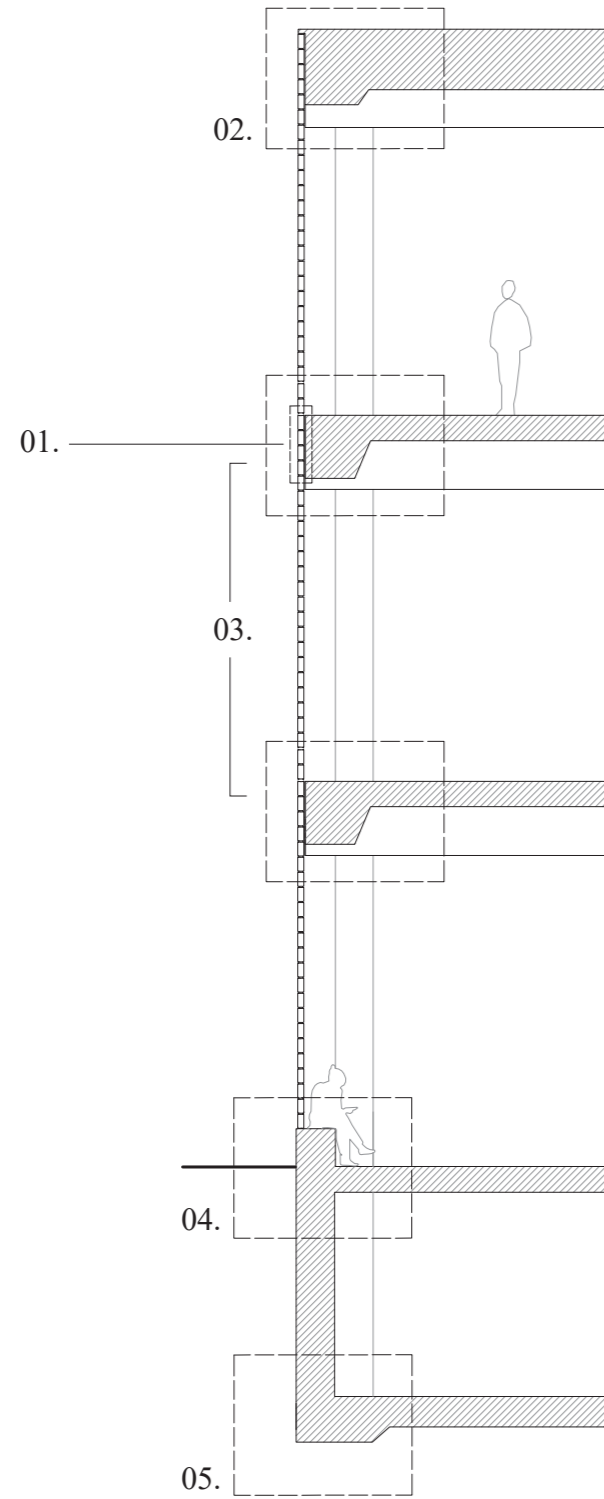
*North elevation*  
*1:200*



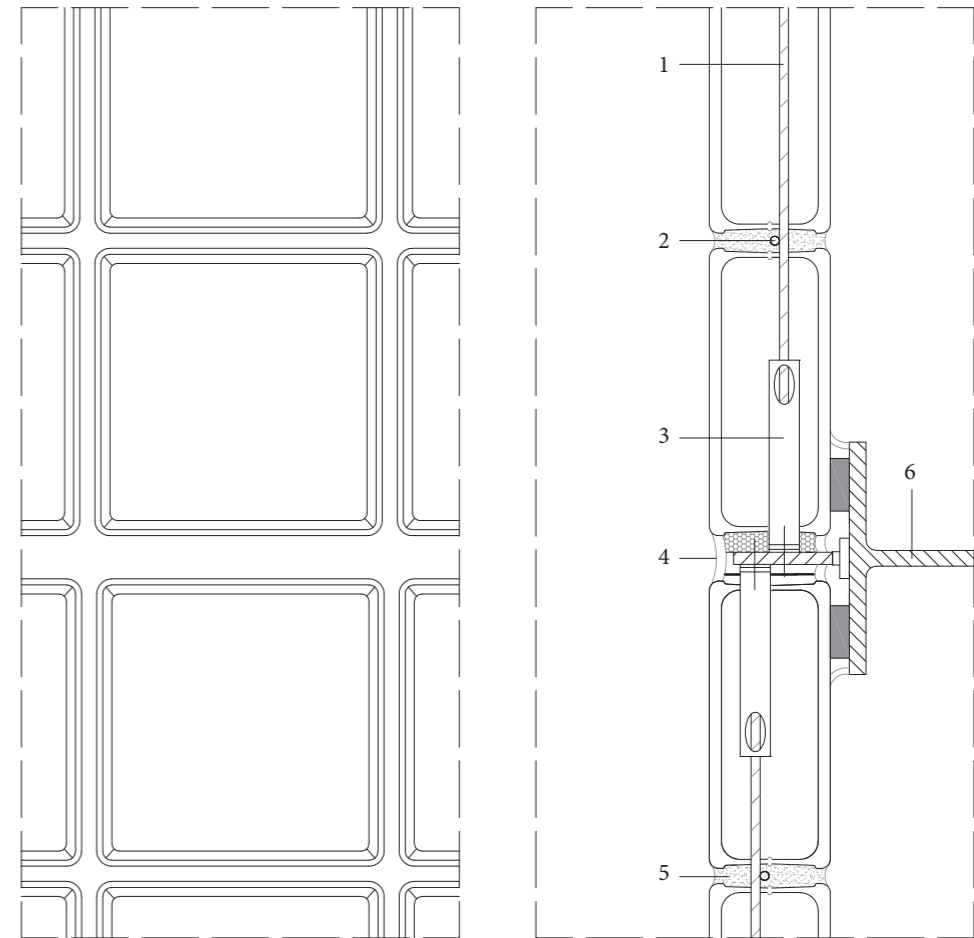
*West elevation*  
*1:200*

**DRAWINGS**

- details -



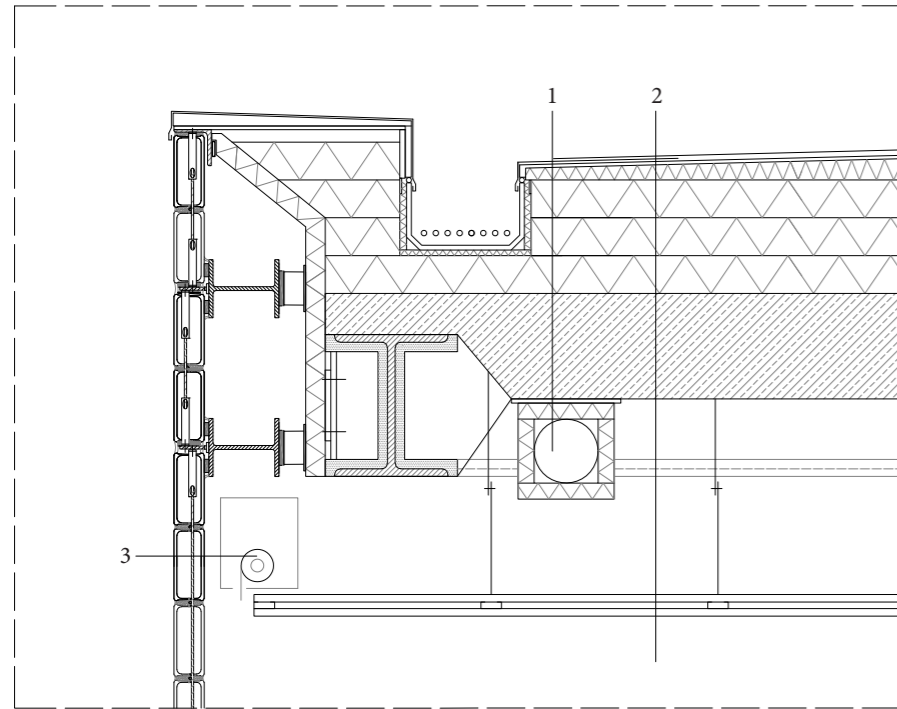
*Schematic wall section  
1:100*



01.

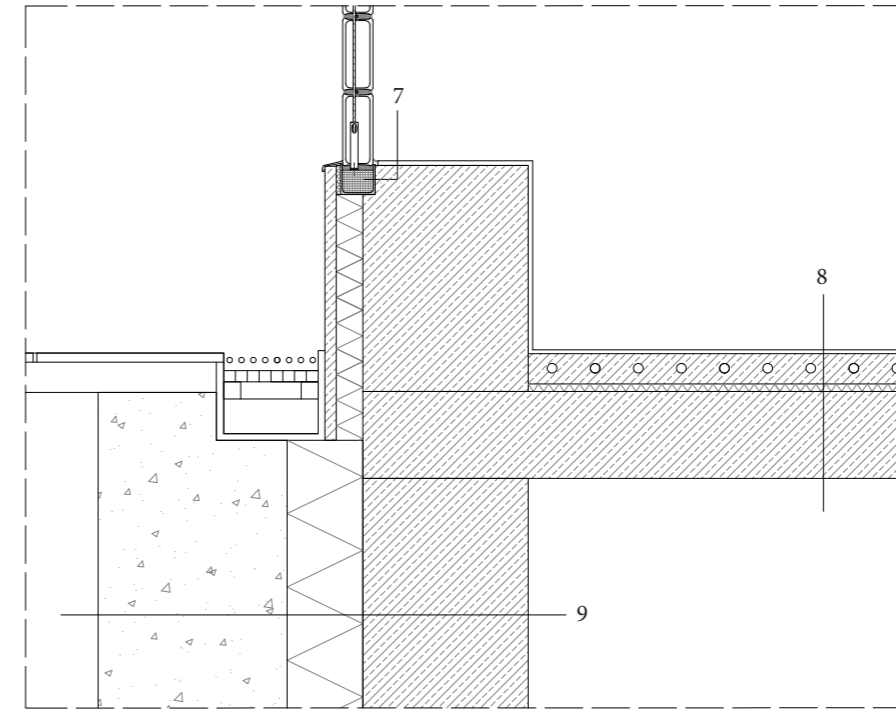
1. Vertical Ø6 stainless steel rebar
2. Horizontal Ø6 stainless steel rebar
3. Panel anchor and isolation pad
4. Mastic seal
5. Bitumen expansion joint
6. UB support steel

*Glass block facade detail - elevation and section  
1:5*



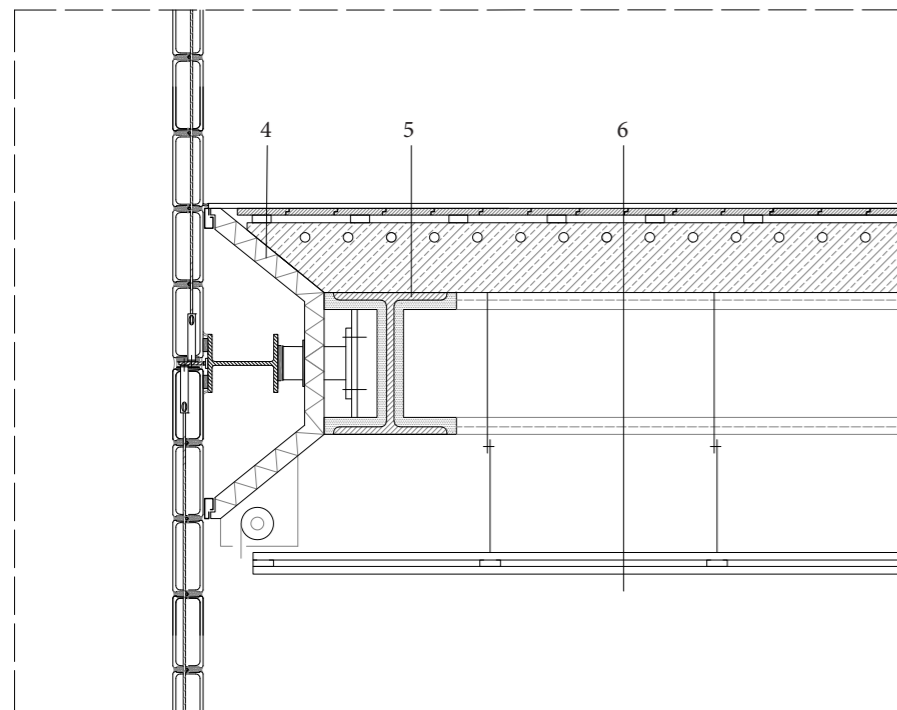
1. Rainwater pipe Ø170
2. Roof construction
  - 5 plastic roof sealing layer
  - 2 anodized aluminium sheeting
  - 9 roofing board
  - vapour barrier
  - 350-500 thermal insulation
  - 280 reinforced concrete
  - 500 space for installations/ sound absorbers
  - 60 concrete composite acoustic panels/ diffused LED light panels
3. Mechanically adjustable sunshade blinds

02.



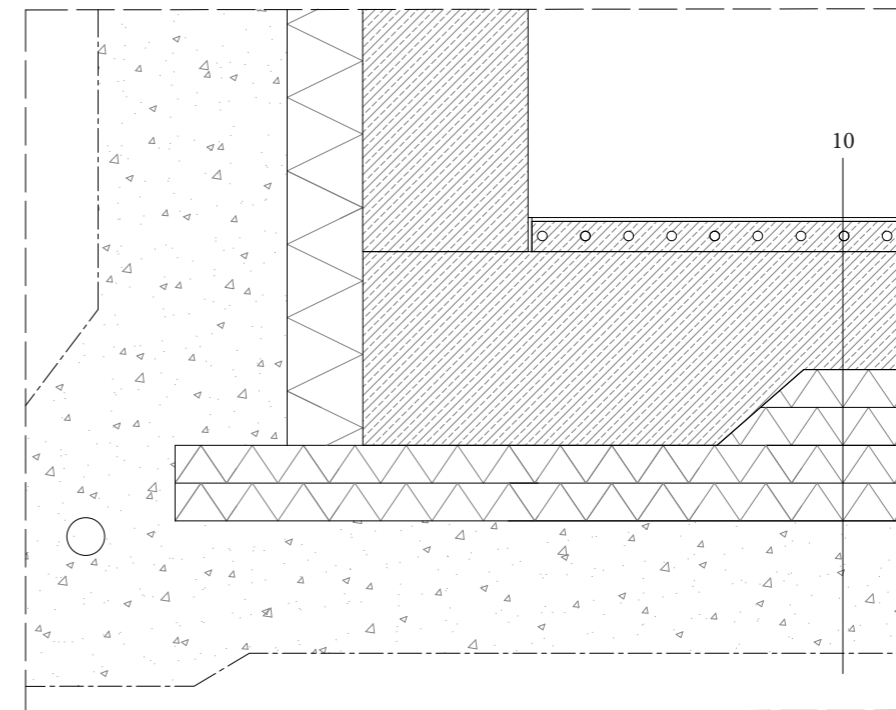
7. Foam glass insulation
8. Entrance floor construction
  - 10 concrete finish
  - 80 screed with underfloor heating
  - 20 sound impact insulation
  - 230 reinforced concrete
9. Basement wall construction
  - geotextile
  - 500 macadam
  - 200 rigid insulation
  - 4 bitumen seal
  - 440 concrete

04.



4. Sheet metal panel, insulated, 50 mm
5. Steel beam, IPE 375x300 mm, with 25 mm fire-resistant coating
6. Studio floor construction
  - 8 solid pine flooring
  - 2 x 9 plywood sheeting
  - 20 elastic bearers
  - 190 reinforced concrete floor slab with screed around underfloor heating
  - 680 space for installations/ sound absorbers
  - 60 concrete composite acoustic panels/ diffused LED light panels

03.



10. Basement floor construction
  - 10 concrete finish
  - 80 screed with underfloor heating
  - 300 reinforced concrete
  - 4 bitumen sealant
  - 400 thermal insulation
  - 350 macadam
  - geotextile

05.

Section details  
1:20

Section details  
1:20

## PERSPECTIVES

- visualizations -

*Light has not just intensity, but also a vibration, which is capable of roughening a smooth material, of giving a three-dimensional quality to a flat surface.*

- Renzo Piano  
(Piano, 1997)



*Staircase accessing the dance/movement therapy studios. With generous sunlight, it invites for a prolonged transition from street level, entering a more private sphere for the therapeutic session.*



*The dance/movement therapy studio is embedded with two exterior walls completely covered in glass blocks, filtering the sunlight, making the walls translucent but not transparent.*



*During dark winter months, the building becomes a gently luminous landmark. The entrance of the therapy centre is clearly emphasized, and the restaurant has generous windows overlooking the street.*

06.

## CONCLUSION

## DISCUSSION

- author's comments -

### Typology

There is no building devoted for dance/movement therapy in Sweden today, nor does it seem to exist in any other country in the world. The buildings always have one or more parallel functions, making the architecture of the dance/movement therapy space a compromise for the therapists and their clients. To define and develop the typology of such a building has been the greatest challenge of this master's thesis.

### Function

In the beginning of the thesis work, the aspiration was to design a multifunctional centre, an urban hub for yoga, dance, meditation and, of course, dance/movement therapy. As I learned more about the dance/movement therapy practice, I came to understand how it distinguished itself in terms of design requirement and that there was a need for a space solely devoted for the field. It has been an intriguing journey to understand the complexity of this specific field of therapy, to understand the vulnerability of a person seeking help and exposing themselves, both physically and mentally, during therapy.

### Materiality

Working with the materiality of glass blocks, with its possibilities and constraints, already at an early stage of the process defined the architectural outcome of the proposal. Exploring the qualities of the material added another dimension of the atmosphere of the building, letting the material be a solution to requested characteristics of allowing daylight but not insight into the studio. The building is enclosed and providing protection from the exterior, but still bright as if you were outside, with the playful patterns generated by the illuminated glass block facade.

### Transition

The transition inside of the building, moving up the stairs to the floors designated for dance/movement therapy, is an important part of the proposal. The movement from ground level, representing everyday life and tension, reaching the safe space for therapy, is emphasized with a staircase aligning the exterior facade, where the brightness of the glass block facade is putting emphasis on the journey of transition.

### Future studies

There are ways of which the proposal within this master's thesis could be improved. The construction could be developed with more sustainable materials such as cross laminated timber, instead of metal beams and concrete columns, to make the project more environmentally sustainable. The choice of not investigating this further has been a conscious delimitation, since the combination of a glass block facade and wooden structure is uncommon and would need proper background research to support the design.

To improve the insulation of the exterior walls, additional glass could be added on the interior side of the glass block facade. The choice of not including this in the proposal is to retain the texture qualities of the glass blocks, to experience the architecture not only by sight, but also as haptic design. There could also be a need for improved sun protection of the facade during the summer months, maybe including additional shading devices, as the interior sunscreen blinds might not be sufficient.

To optimize the acoustics of the dance/movement therapy studios, an acoustic consultant should be involved in the design. To address the possible acoustical adjustments, additional space in the ceiling construction is made available for suitable installations, displayed in the detail drawings.

### Context

The relationship to Viktoriahuset has been one of the challenges of the site. To have such a historical building close by, yet not proposing an extension, is putting the building proposal at test. The solution was to comment the old but with a modern touch, relating the proposed building to the surrounding facades with a distinct basement floor and brick-like elements of the exterior, only in glass rather than stone. A proposal in some ways similar, perhaps in its timelessness, but still fiercely distinguishing itself within the context.

### Site

The site in Olivedal was a strategic decision of placement for the project. Of course, a Dance/Movement Therapy Centre could perhaps have benefitted from a context closer to nature with pleasant landscape views. This would, however, made the building and the therapy less accessible, as well as less visible to the public. The placement of the building, at Linnégatan in central Gothenburg, contributes to reduce the stigma around mental health issues, as well as promote the specific therapy method of dance/movement therapy.

*"I hope this project can communicate the benefits of, and the need for, a Dance/Movement Therapy Centre in Gothenburg, as well as the architectural beauty it can behold.*

*- Author*

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Styrelsen för Föreningen Viktoriahuset (May 4, 2021) *Om Viktoriahuset*. <http://www.viktoriahuset.se/>

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Dance School in Llíria / hidalgomora arquitectura + Eva Alvarez Salvador + Andreas Feder (12 Jul 2013). ArchDaily. Retrieved 9 May 2021 from <https://www.archdaily.com/398725/dance-school-in-lliria-hidalgomora-arquitectura>

Koji Fuji / Nacasa & Partners Inc. (September 13, 2020) *Optical Glass House / Hiroshi Nakamura & NAP* [photo]. ArchDaily. Retrieved 9 May 2021 from <https://www.archdaily.com/885674/optical-glass-house-hiroshi-nakamura-and-nap>

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## STUDENT BACKGROUND

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### *Educational background*

Master's Programme in Architecture and Urban Design, Chalmers, 2019-2021

Erasmus exchange program, Técnico Lisboa, Portugal, Autumn 2020

Bachelor's degree in Architecture and Engineering, Chalmers, 2015-2018

### *Master's Studios*

Architectural Design Studio IV, Autumn 2020

Architectural Competitions, Spring 2020

Reality Studio, Spring 2020

Urban Space Design, Autumn 2019

### *Work experience*

NCC Infrastructure, summer employment, 2020

Forum Arkitekter, architectural internship, 2018-2019

### *Thank you,*

*Jenny Davidsson, Elisabet Rosén and Elodie Labonne,  
for sharing your knowledge in the field of dance/movement therapy.*

*Joakim Öberg from Vetro Group, for material samples and inspiration.*

*Lin Tan, for your support and enthusiasm.*

*My friends, for enjoying this final piece of education together.*

*And to Anton, of course.*



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