Master thesis | Master of fine art in design | Child Culture Design | University of Gothenburg | HDK School of Design and Crafts | 2013-05-22 | Ylva Eckersjö

SPATIALITIES, LIGHT, CHILDREN
– *in interaction*

A vision of how a new preschool can enhance urban spaces and support children's interaction with spatial dimensions and light

This project has been realised with the help of the following people

Thank you

MARIA NIKLASSON AND ABAKO ARCHITECTS
who have been giving external critique during the project

CLAES JOHANSSON
who has been internal tutor at HDK

EVA DAHLIN
who has given support and invaluable advice

Teachers
at Palettens förskola, Ugglans förskola, Kristallens förskola and Spekebergsgatans förskola,
who has showed and discussed their preschools

Children
at the preschools at Smaragdgatan 29b and Opalgatan in Gothenburg, who has shown how they use their outdoor surroundings and what they think of it

JOHNNY FRIBERG
who has been the examiner

MATTIAS LIND, WHITE ARCHITECTS
who has criticized the project and gave many valuable view points.

JONAS
for love and support

Sammanfattning

Det finns så många trista förskolor, oinspirerande för både barn, personal, föräldrar och för oss som passerar föbi. Med detta examensarbete persenterar jag en vision om en ny förskola och bostads- hus i centrala Göteborg. Under senare år har kommunen inte lyckats leva upp till kraven om att kunna erbjuda förskoleplats inom 4 månader. Som ett alternativ till standardiserade förskolebyggnader och tillfälliga förskolebaracker föreslår detta examensarbete en förskola som ska locka barn att utforska med rum och ljus. Resultatet är en förskola som både stärker gaturummen och stödjer pedagogiken och barnens utforskande. Ett kvarter, en förskola med dess barn och pedagoger påverkar alltid varandra mer eller mindre. Det här examensarbetet fokuserar just på denna interaktion. Projektet presenterar flera skalor, från staden – till kvarteret – till förskolan – till rummen – till barnen. Dessa relationer har utforskats genom och presenteras genom ritningar, 3d modeller och fysiska modeller. För att zooma in på barnen har piazzan studerats närmare. Där kan barnen interagera med dagsljusets växlingar, där kan de förändra ljuset genom vridbara väggar och leka i rumsligheter de skapar. Arbetet baseras på studiebesök, läsning och analyser av förskolor med tonvikt på synsätt inom Reggio Emilias pedagogiska filosofi. Researchen ligger till grund för förskolans konceptuella utformning, inom-hus-piazzan och ateljén vetter ut mot gatan som två lyktor. På så sätt förstärks kontakten mellan förskolan och samhället och väntan på spårvagnen blir lite roligare. På slutet reflekterar jag kring projektets relevans i relation till den pågående debatten i Göteborg om hur staden kan bli mer barnvänlig.

NYCKELORD

Förskola, dagsljus, barnperspektiv, Reggio Emilia, rum, interaktiv design, Göteborg

Abstract

There are so many dreary preschools, uninspiring for children, staff, parents and us passing by. In this thesis I present a vision for a new preschool and housing in central Gothenburg. In recent years, the municipality of Gothenburg has failed the requirements of offering a preschool within 4 months after application. As an alternative to temporary preschool barracks, this thesis propose a preschool that will attract children to explore with space and light, a preschool which simultaneously strengthens the urban spaces and supports the pedagogy and the children's play. A neighbourhood, a preschool with its children and teachers always affect eachother more or less, however, in this thesis I focus on the interaction. Thus the work presents several scales; from the city – to the block – to the preschool – to the rooms – to the children. These relationships have been researched through and are presented with drawings, 3D models and physical models. I have zoomed in on the indoor piazza with the intention of studying how children can interact with daylight changes. The work is based on study trips, studies and analysis of preschools, with an emphasis on the Reggio Emilia educational philosophy. The result is a preschool where children can manipulate the daylight by rotating walls and play in the spatial units they create. The research is also the basis of the preschool layout with the indoor piazza and the atelier which look out onto the street like two lanterns. It boosts contacts between the preschool and the community and waiting for the tram becomes a little more fun. To the end I reflect upon the proposal's relevance to the ongoing public debate of how Gothenburg can become a child friendly city.

KEYWORDS

Preschool, daylight, child perspective, Reggio Emilia, space, interactive design, Gothenburg

Foreword

I have now studied Child Culture Design for almost 2 years at HDK School of design and crafts. This design master specialization focusing on children and children´s perspectives is nearly unique in the world. Parallel to the studies I have been commissioned by the Gothenburg municipality, inviting young children in participating in city planning.

During my first year as a newcomer in the city district Majorna / Linné I had met many families who could not be accommodated in any of their wished-for-preschools, concerned about the quality of their assigned preschool. The lack of preschools in the district has been solved by increasing children's groups and erecting temporary preschool pavilions. Good urban design can create great places, for recreation and meetings etc., such as a sheltered spot in the sun to sit down an early day in spring. The "dripping" of prefabricated modules have the opposite effect, reducing the perceived values of a place. When it was time to do my master thesis I was interested in looking at an alternative solution to the situation.

As a child culture designer in the spatial field I have explored the relations from the city – to the block – to the kindergarten – to the room and light – to the children.

Ylva Eckersjö, Gothenburg June 7, 2013

SPRÅK / LANGUAGE

English

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I. INTRODUCTION

1.1 Background

More families than before are choosing to stay in town and more families choose to put their one year old in preschool. Misestimates of population projections, lack of locales and buildable land, are highlighted as causes of the shortage of positions in Majorna / Linné. In recent years the city district has failed to live up to the law to be able to offer preschool place within four months after application. By increasing the size of the groups of children and erecting temporary preschool barracks (so called pavilions) queues have been foreshortened. While the Education Department recommends 15 children per group of children, it is common with groups of 24 children in local preschools. Children Researchers point out the implications for children's safety and ability to pursue education. (Flanke, 2011; Andersson, 2011, et al)

Of five visited preschool pavilions in Gothenburg, three are placed upon previous quarter playgrounds, now partly or wholly disappeared. Playgrounds situated near homes are important for children and young people who have little or no opportunity to get around the city on their own.

Many of the barracks are not close to meet the municipality's own guidelines for m2/ person. It is standardized modules adapted for adult activities and adult scale that do not support the pedagogy. At the same time, research shows that a diverse environment with large area stimulates children's development and reduces the number of conflicts (Lenninger and Olsson, 2006). The municipality's short-term solutions prioritize neither child's perspective, nor the effect on our urban environment.

Looking in Sweden and internationally, you can find fine examples of architect-designed preschools based on the children's scale and play. Many of them have been developed in consultation with the preschool staff and are inspired by the Reggio Emilia approach. The preschool environment is seen as the third teacher in addition to the pedagogues and the children themselves; a place for exploration and learning.

'The school environment must lend itself to manipulation and transformation by adults and children alike ... The school should be able to change during the day and during the year, to be continuously modelled and re-designed as a result of the experimentation of children ... ' (Ceppi, Zini, et al, 1998).

In Reggio Emilia preschool atelier and workshops, children have the opportunity to explore light and different materials according to their own interests. Children use light boxes, and a special atelier called Ray of light, has been developed. The Reggio Emilia educational philosophy also believes in strengthening preschools as part of the community (Ceppi, Zini, et al, 1998). Early in the project, I made visits to preschools inspired by Reggio Emilia.

One of many temporary pavilions in Gothenburg.

1.2 Purpose

The goal is to provide an alternative vision of a preschool that adapts to its environment and inspires children to explore and play. The project aims to help the lack of preschool places in Gothenburg by examining how to create a unique preschool inspired by the Reggio Emilia approach to the physical environment at a central site. How do children, preschool and the neighbourhood interact with each other? This is examined by studying the relationships between different scales; from the city - to the block - to the kindergarten - to the rooms - to the children. The preschool should be able to transform and change. The project zooms in on the kids to explore how the preschool can be designed to become part of their play and exploration.

1.3 Issues

• In what ways can Reggio Emilia approaches to preschool architecture help develop the urban environment in a child-friendly manner and sustainable way?

• How can the architecture be designed to become a part of the preschool's exploratory activity? Light transforms and can be changed, it can tell the time of day, the time of year, the weather, what's happening outside and inside. How can children be enabled to interact with daylight as a 'material'?

1.4 Limitations

The project focuses on light, interaction and changes in scales. The design of the residential building, the preschool and the interior lie on a conceptual level. The issues of material choices, residential floor plans and window setting is not addressed in this work. I have not researched the economic conditions to realize the project. Neither have I tested any part of the design on children. Only 4 visits to kindergartens were carried out during the thesis, however, I have visited additionally 7 preschools in the past 2 years.

1.5 Definitions

INTERACTION
In this thesis, interaction is used synonymous with synergy and mutual influence. The project aims to investigate how the interaction can be strengthened; between the children and the block / between the kids, the rooms and light / between the preschool and the city.

PRESCHOOL
The term preschool is continuously used throughout the text synonymously with the Swedish term förskola. The Swedish förskola addresses children aged 1-5 years, it includes childcare and preschool and Kindergarten programs are the same early childhood education programs.

PIAZZA
A piazza is an open public space, usually surrounded by buildings, the center of public life. While the Italian piazza may be equivalent to a "public square", it doesn't have to be square in shape.

2. RESEARCH AND METHODS

2.1.1
Intro to research and methods

The exam work was started by reading about the Reggio Emilia approach which is an educational philosophy focused on preschool and primary education which origins from the city Reggio Emilia in Italy. Over the years, through collaboration between educators and architects, a number of spatial categories and concepts which supports the pedagogy have been developed. These are used by architects, and pedagogues, when designing a preshool. I recognized some spatial categories and concepts that would be interesting to work with in the urban district of Majorna-Linné, strengthening both the neighbourhood district and the quality of the environment within the preschool. Ceppi, Zini, et al (1999) has written a book that has been developed in collaboration between architects and pedagogues; it has contributed to the project by highlighting the relations between the pedagogy and the physical environment. Books by Barsotti (1986), Wallin (1993, 2011) and Colliander, Stråhle and Wehner-Godée (2010) and have contributed with a slightly deepened understanding of Reggio Emilia through practical examples of children's project work in different preschools.

Study visits and analysis of 3 architect-designed preschools have inspirited the thesis and functioned as living example of how to design a preschool inspired by Reggio Emilia. Being two of Sweden's' most renowned architect-designed preschools inspired by Reggio Emilia, Ugglans förskola and Palettens förskola was visited.

Spekebergsgatans förskola was visited because it is located on the site and housed in so-called temporary pavilions.

The book Förskolans pedagogiska rum, med plats för alla sinnen (2004) presents interesting examples of preschools continuously changing their indoor environment to strengthen the children's present interests. One similar preschool constructed with standardized elements, was visited early in the project to get complementary educational perspective on the indoor environment from some dedicated educators.

Olsson's (2012) and Sernhede's (2011) master thesis about new preschools have been other sources of reference.

Svennberg and Teimouri (2012), and Grut (2005) pay attention to issues about children and the urban environment.

2.1.2
Views on children

What is a child, a being or a becoming? 1961 The French historian Philippe Aires published a study in which he concluded that children up to the 1600s had been treated as small adults. Later the Victorian era emphasized the role of the family and the child's devotion, children should be educated and learn to become adults; a perception that has followed up to the present day.

New ideas about a more democratic parenting came in the 60s and 70s. At this time new preschools grew in Reggio nell'Emilia in Italy after the fascist era. Accordingly, in a democratic spirit, citizens started preschools that served as a corporate operator and thereby founded democratic values of the children who were seen as active and explorative.

Today children are staying long hours in school and have busy lifestyles with many activities. To participate in many outside-of-home activities could shift the perception of the child as primarily part of a family toward a more individualistic perspective.

Diego Velazquez, Las Meninas, 1656

2.1.3
Preschools in Sweden

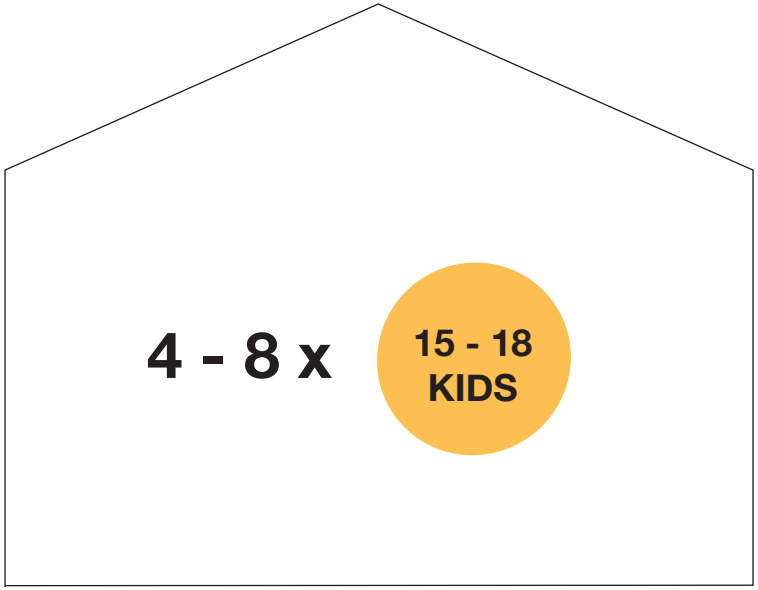
Sweden has a long tradition of childcare in an international perspective. Alongside the Swedish preschool model, there are preschools with specializations such as Montessori, outdoor education and Reggio Emilia. In the last few decades Reggio Emilia has strongly affected both the Swedish early childhood education, and more recently, preschool architecture.

2.1.4
and in Gothenburg

Gothenburg municipality offers preschool service addressed to young children between 1-5 years. When building a new preschool the town committee (stadsdelsnämnden) in Majorna / Linné have guidelines that it should at least have 3 sections, preschools from 4 sections and up are can have their own kitchen. The Swedish National Educational Department recommends a maximum of 15 children per section/habitat. But it is common for groups to be much larger than that. The Swedish architect-designed preschools studied have about 20 children per section, but they are close to the national environmental guidelines (miljöbalken) that a nursery should have 7.5 square meters floor space per child based on the areas that children have access to. Several of the preschool study objects organize the children in habitats with their own rooms but collaborate in larger work teams/departments with 2-3 sections each.

On this basis, the goal for the preschool scope was set:

- **At least 4 sections**
- **15-18 children / section**
- **At least 7,5 m² / child**



2.1.5 Reggio Emilia approach

‘The municipal infant-toddler centers and preschools of Reggio Emilia are internationally recognized as an experience of particular interest and constitute a model of ”relational space” dedicated to young children’.

The idea of the relational focus of the thesis; on the interaction between the block, the preschool and the children and pedagogues, was created during reading about the Reggio Emilia approach.

As earlier mentioned, it grew in the post-World War II era as a desire to bring change and create a new more just world free from oppression. It hosts a unique view of the child as explorative and researching and of the preschool as a democratic actor in the city. Obviously this was going hand in hand with the project´s focus on interaction.

Further, the Reggio Emilia approach acknowledges the importance of the preschool architecture, it regards the environment as the third teacher, a place for exploring. Consequently the municipal infant-toddler centers and preschools of Reggio nell’Emilia have developed a ‘number of points of reference related to both the distribution of space and the planning and organizational decisions, providing indications for constructing environments according to the criteria with a strong identity from the pedagogical point of view as well that of the physical organization of space’. (Ceppi et al 1998)

The following notions described by Ceppi et al (1998) have influenced the thesis:

A CENTRAL PIAZZA

The indoor piazza is a large central area onto which the main spaces of the school face; it is a place for meetings. It plays the same role inside the school as the piazza does in a town.

HABITATS

The habitat is the child’s fixed point at preschool and stands in relation to the common atelier and piazza. Every samller group of children have their own habitat with one or more rooms.

ATELIER

The atelier is used for experimentation, research and manipulation of a variety of materials.

TRANSFORMATION AND FLEXIBILITY

‘The school environment must be flexible over time and maniputable. It must also change and be open to modification by the children´s processes of self-learning and, in turn, interact with these processes and modify them.‘

SCHOOL AND COMMUNITY

The outside and the entrance of the school should communicate what is happening inside. The school should be equipped for various activities which may not be strictly scholastic and for use outside school hours. ‘A school should not be a sort of counter-world, but the essence and distillation of society. Contemporary reality can and should permeate the school, filtered by a cultural project of interpretation that serves as a membrane and interface.’

INSIDE-OUTSIDE RELATIONSHIP

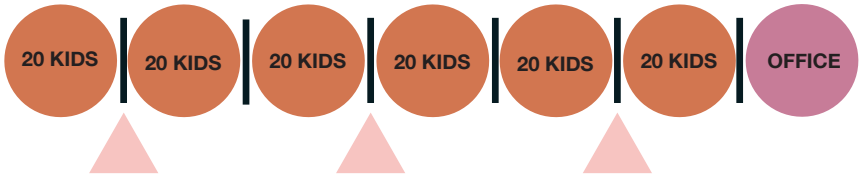
‘The school should sense what is happening outside – from the weather to seasonal changes, from the time of day to the rhythms of the city – precisely because it exists in a specific place and time. ’

2.1.6 Floor plans

A couple of years ago the magazine Arkitekten interviewed the Danish architect Dorte Mandrup, who has designed several new preschools that stand out architecturally. She argues that children can become passive in a block diagram, that such rooms are authoritarian in many ways and become facilities that children do not spontaneously want to explore, to conquer. 'Children usually have basic relations to rooms. They quickly establish an instinctive relationship to them. They do what the rooms ask them. If you make a long narrow room, it is a call to running back and forth. If you make a high ceiling it evokes the feeling of wanting to climb.' Says the architect in the interview. (Lauri, 2011)

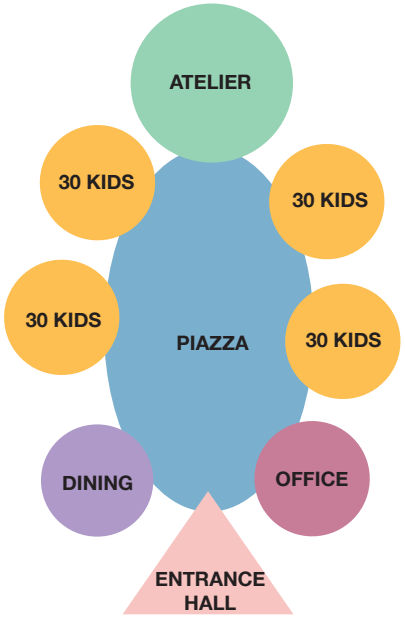
A comparison between typical plans were made:

'TRADITIONAL PRESCHOOL'



- Identical separeted sections, often the sections have similar set of themes and rooms, thus the prechool might have four doll-rooms but no room for construction play.
- Little or no difference in room heights and widths.
- Less opportunity for diverse activities.
- Obstructs meeting between people.

'REGGIO EMILIA PRESCHOOL'



- Reggio Emilia room layout contrasts to the traditional Swedish preschool through high diversity of room heights and widths, rooms with clear characters.

2.1.7 Study visits

Here follows a summary of the studyvisits. The summary focus on how the visits have influenced the project theme of light, interactivity and spatialities (the theme is described in 2.1.4).

KRISTALLENS FÖRSKOLA

Nacka, standardized modules

The children and pedagogs change the environment continously according to the games and interests of the children.

The children are inspired by the shifting light in the stairs and they invent new ways to move.

In order to be able to engage in some kinds of play it is important not to be disturbed.

A lowered ceiling creates an intimate athmospere.

Pedagogs and children has created a place with animal / nature theme.

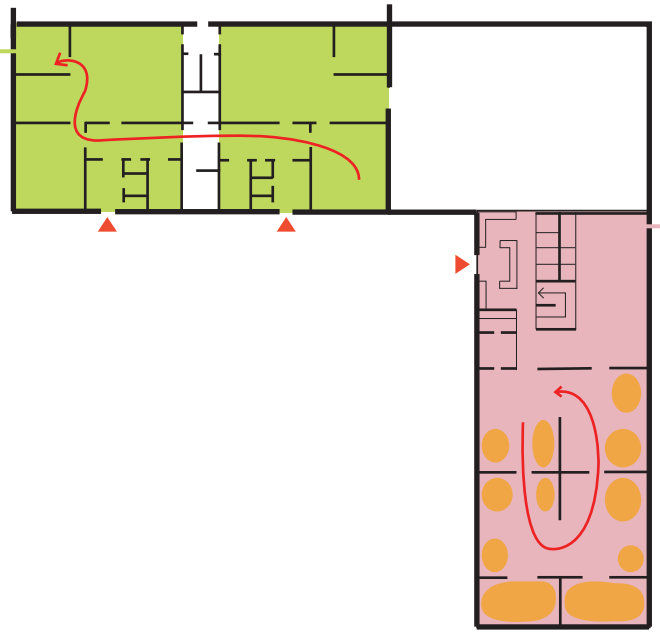
Openings between the floors makes it possible to wave to somebody upstairs.

Lightning create scenes that waites for something to happen.

The children have many opportunities for hiding or finding their own spot.

QUALITIES AND THINGS TO AVOID

ENTRANCE PLAN, SCALE 1:400



OLD BUILDING

2 sections work as one team,
20 + 20 children

+

+ Possibilities to play in peace and quiet in corner rooms

+ The children can use the artificial lights in play

–

– Window heights not suited for children, prevents interaction with daylight

– Many disturbances with the liniar organization

– The deep bulding with windows in simular directions gives uniform light

NEW BUILT PART

40 children

+

+ Overview for the pedagogs, overview for children in choosing place to play

+ The plan result in shorter distances between different spots and less disturbances

+ Many small spots, to play vividly or peacefully

+ The open plan eases the cooperation between pedagogs

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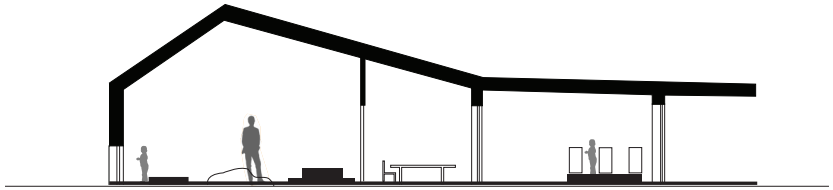
– Window height not adjusted to children, but the thinner building with windows in three directions bring more daylight.variations .

FÖRSKOLAN UGGLAN

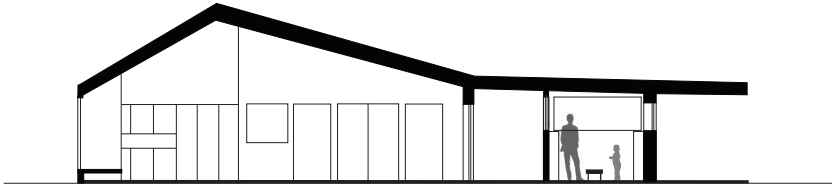
Alby,3do Arkitekter, 2010

3do Architects have created a preschool with a variation in the scale of the rooms, from large ateliers and dining rooms to many different small spots to play at. The light is varied through the placements of windows; low windows by the floor, windows in chest height, windows with sitting benches, rooflight and so on.

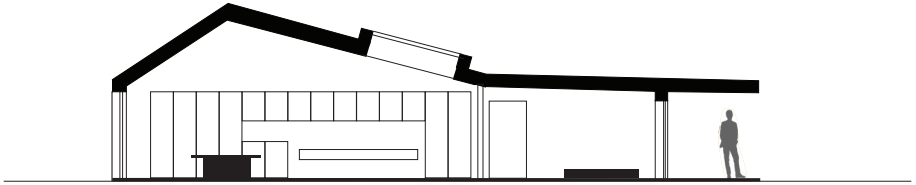
Scale of rooms and placing of windows



SECTION AA, SKALA 1:400

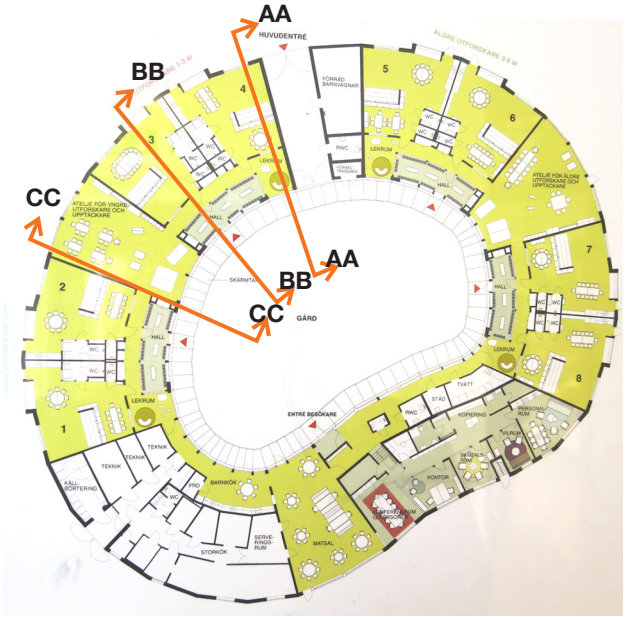


SECTION BB, SKALA 1:400



SECTION CC, SKALA 1:400

Windows in different sizes and with different placements create daylight diversity.



PLAN, SCALE 1:800

QUALITIES AND THINGS TO AVOID

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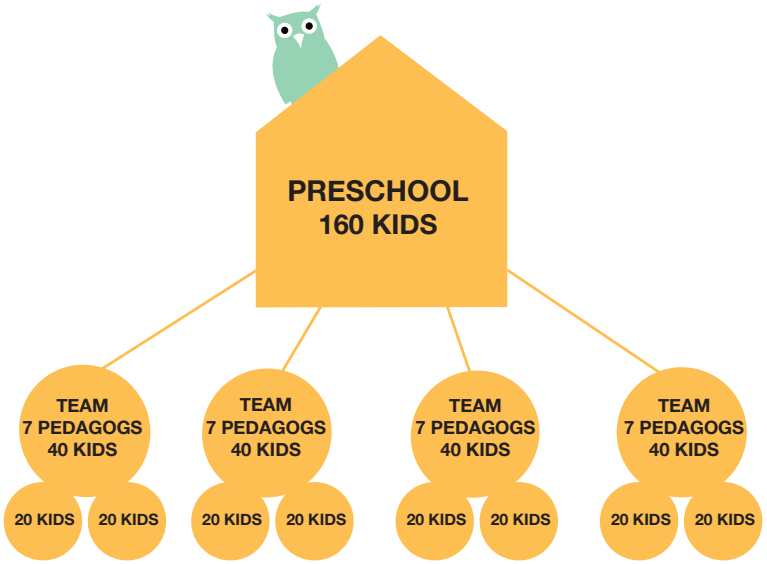
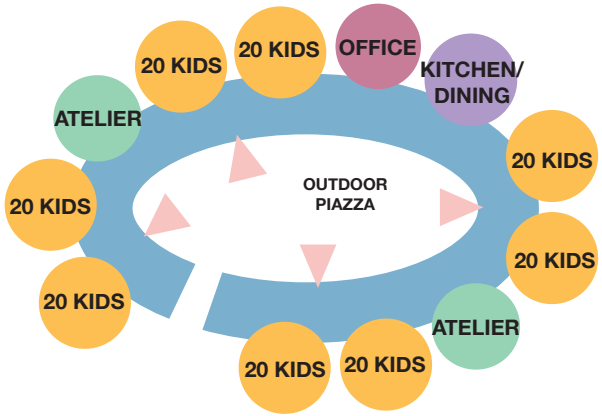
+ Visual contact between the outside and inside throughout the building
+ Glass surfaces between rooms allow visibility and strengthens the relationship between the rooms
+ Exciting room connections and many types of spatial features
+ A lot of daylight provide pleasant changes in light intensity and light color
+ Separate dining room allows one to work with long-term projects in the studio and residence are

−

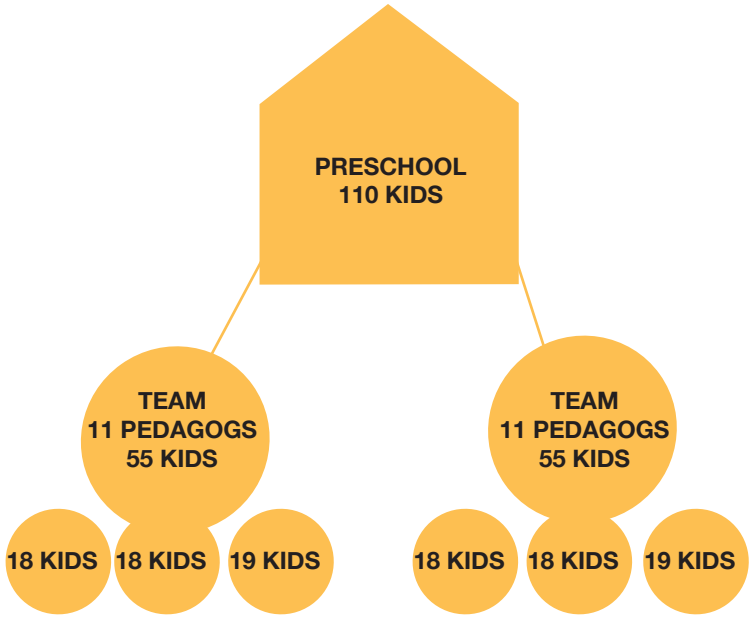
- Educators' office is secluded (prevents spontaneous meetings with parents)
- The semi enclosed courtyard is not used / not attractive for play
- Some educators believe that sections are too small, but that may be because they are used to work in a traditional preschool plan
- The doors between the corridor and the habitats pose a threat to injury and are "in the way"
- No real entrances outwards





FÖRSKOLAN PALETTEN

Telefonplan, Tham & Videgård, 2009



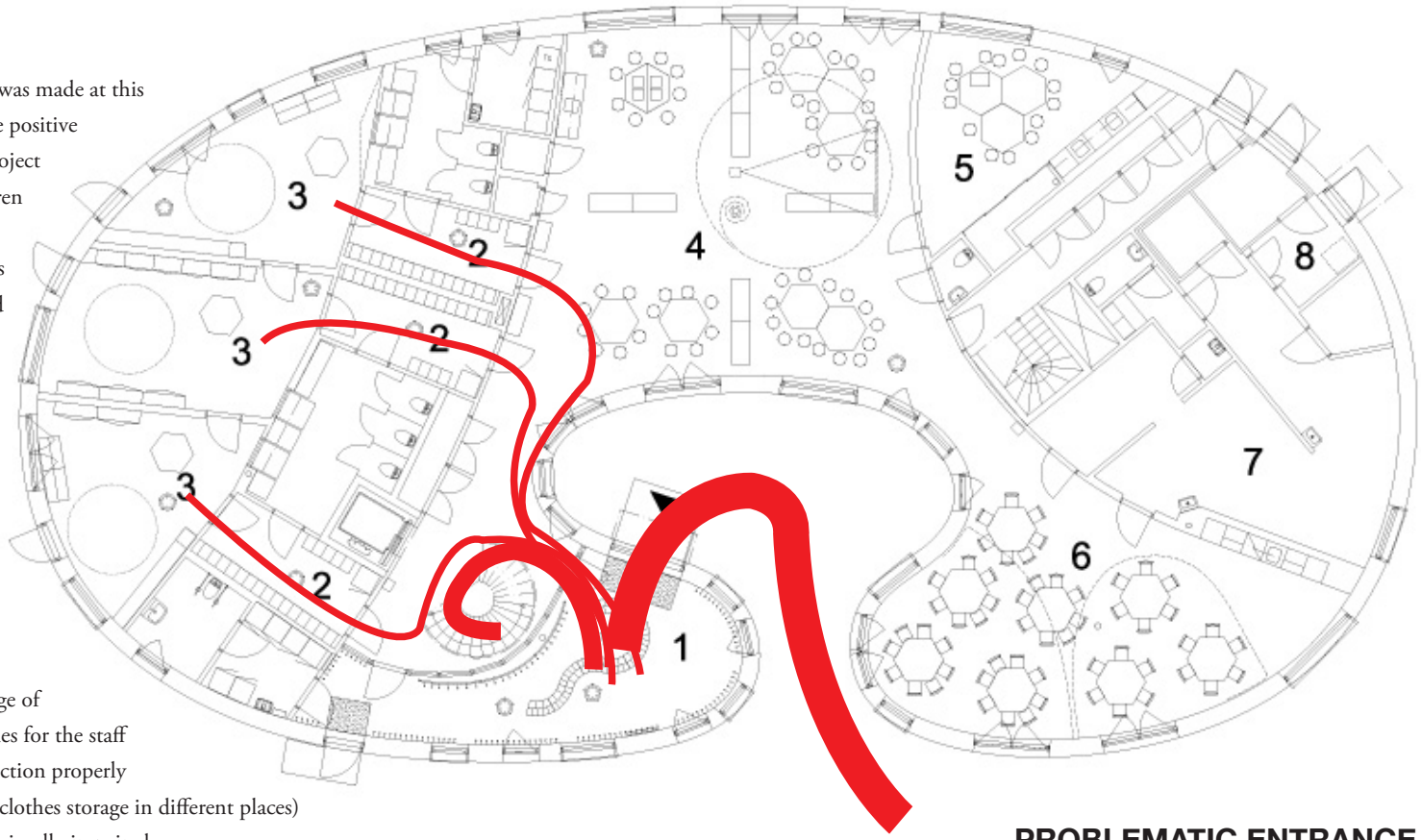
Exterior view.

THINGS TO AVOID

PLAN, SCALE 1:400

+

During the quick visit that was made at this preshool I did not recognize positive things that related to the project theme of space, light, children and interaction.However, Förskolan Paletten as well as Förskolan Ugglan were used as reference objects in deciding areas for the different rooms in the new preshool.



PROBLEMATIC ENTRANCE

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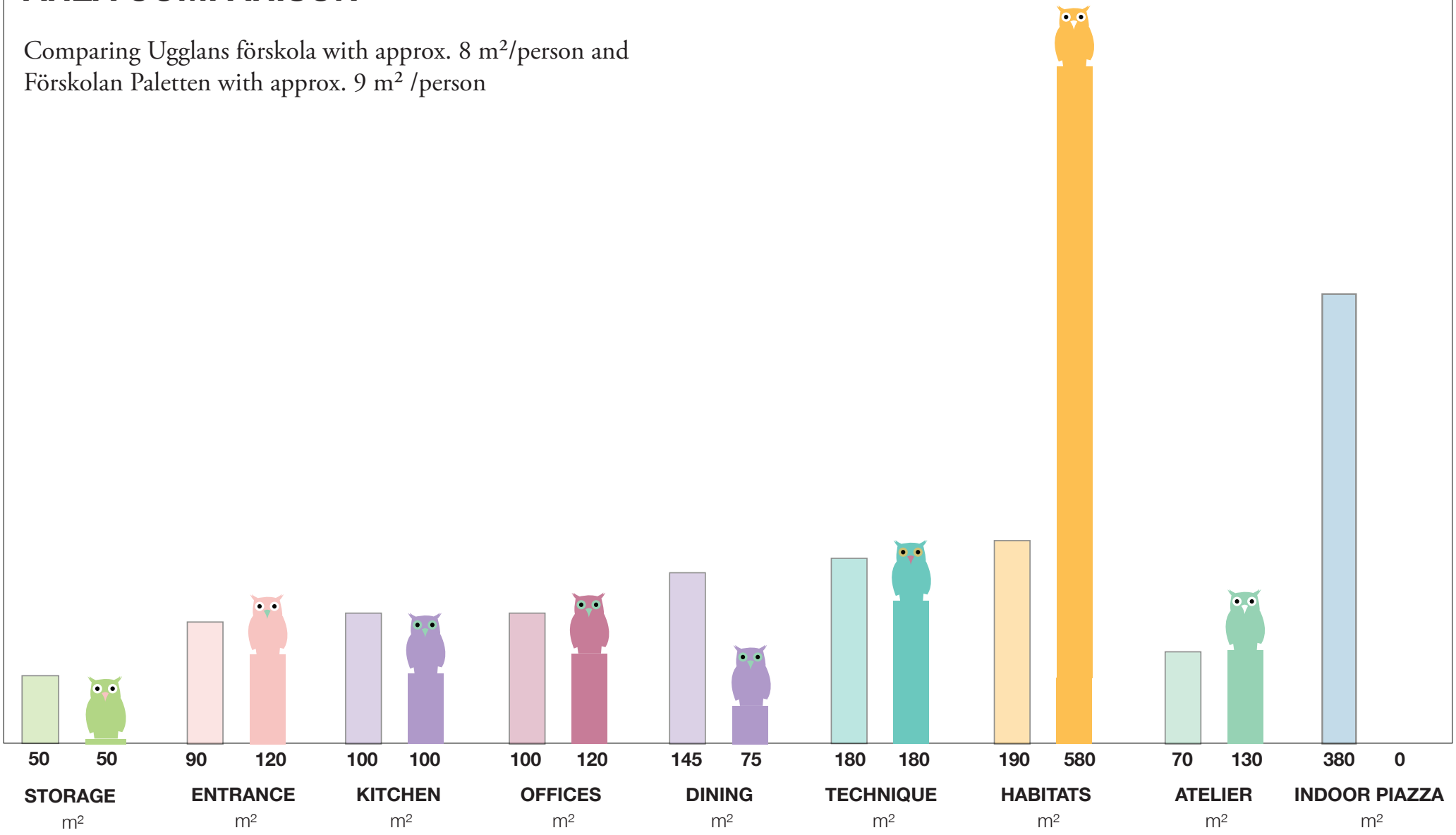
- Small ateliers
- Hidden entrance
- Small habitats
- There is no place for storage of valuables and outdoor clothes for the staff
- The entrance does not function properly (complicated with outdoor clothes storage in different places)
- No contrasts, difficult for visually impaired

AREA COMPARISON

Comparing Ugglans förskola with approx. 8 m²/person and
Förskolan Paletten with approx. 9 m² /person



2.1.8. Brief

- 4-8 sections
- 15-18 children/section
- At least 7,5 m² / child
- According to Danish architect Dorte Mandrup variation in the size of the floor area and ceiling heights encourages various types of activities; children do what the rooms (Lauri, 2010). The relationship between the safe sections, habitats and small places with smaler scale and the common areas of the piazza, atelier and dining area with their larger scale is important. It provides the ability to select a site for play: the possibility of peaceful or lively play, of rest and peace, of the opportunity to play many or alone.
- Enable collaboration between sections by placing those 2 or 3 together; educators welcomed to work in teams.
- Large exterior surfaces with different characters and qualities.
- Create a preschool environment that serves as a backdrop to the game, as constant source of play and exploration.
- Window placement adapted to children's scale, enabling interaction with natural light.
- Sufficient space for children's outdoor clothes and shoes organized in one place in connection with the entrances. The teachers private and working outdoor wear should be easily accessed from both the staff entrance and the preschool´s main entrance. This reduces stress and extra work when going indoors and outdoors and shortens the experienced distance between inside and outside.
- Educators' offices and rest rooms should be in contact with the business to enable spontaneous meetings with parents. Yet the staff should be able to have peace and quiet, preferably with a separate entrance.
- The preschool should be a place for the children to look forward to, at least occasionally.

Work with the Reggio Emilia relational reference points:

- Piazza
- Habitats
- Atelier
- Transformation and flexibility
- School and community
- Inside-outside relationship

How can a preschool on the plot enhance urban spaces?
How can a room organization inspired by Reggio Emilia function on the selected plot?

2.2.1 The site

A vacant lot in Majorna-Linné, Gothenburg was chosen, partly because the possibility for a new building / buildings on the site to stand independent and be viewed from all sides, thus get natural light from all cardinals which is a great advantage in creating rich and varied light. In Sweden, the importance of preschool children's closeness to nature is often stressed. This need can hardly be satisfied in the city district unless placing new preschools in parks and green areas, which neighbour residents oppose. Additionally, the plot is situated in a "drowsy" residential neighbourhood that would probably benefit from an infill. One side opens onto a tram road, one side to a modestly trafficked street, one side to a school and one side to a "park". The neighbourhood consists of a church, two supermarkets and residential buildings in the form of 8-storey high rise slabs, 2,5 storey detached brick house, built as homes for workers. The plot has previously accommodated 2-3-story brick houses which were demolished during the latter half of the 1900s. Up until about one year ago it was possible to play soccer at a small sports field at the site. Now the site hosts temporarily erected pavilions and Spekebergsgatans förskola with its 70 kids.

SKALA 1:10 000

The site seen from the crossing at Västergatan-Brunnsgatan. The tram tracks can be seen in the front with to tram stops close to the site.. A supermarket is situated on the right and 8 storey residential slab houses can also be seen.

View from the walking path between the site and annedalsskolan. Paviions housing a preschool with 70 children are situated on the site.

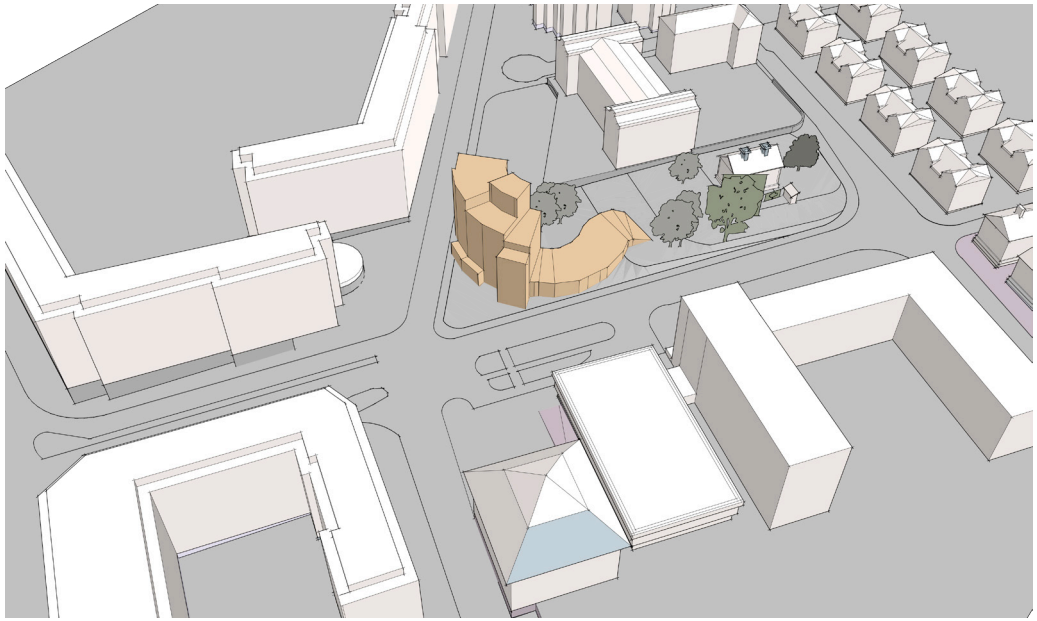
The site viewed from Brunnsgatan, The building behind is Annedalsskolan which is being renovated and therefore covered with fabric.

2.2.2 3d

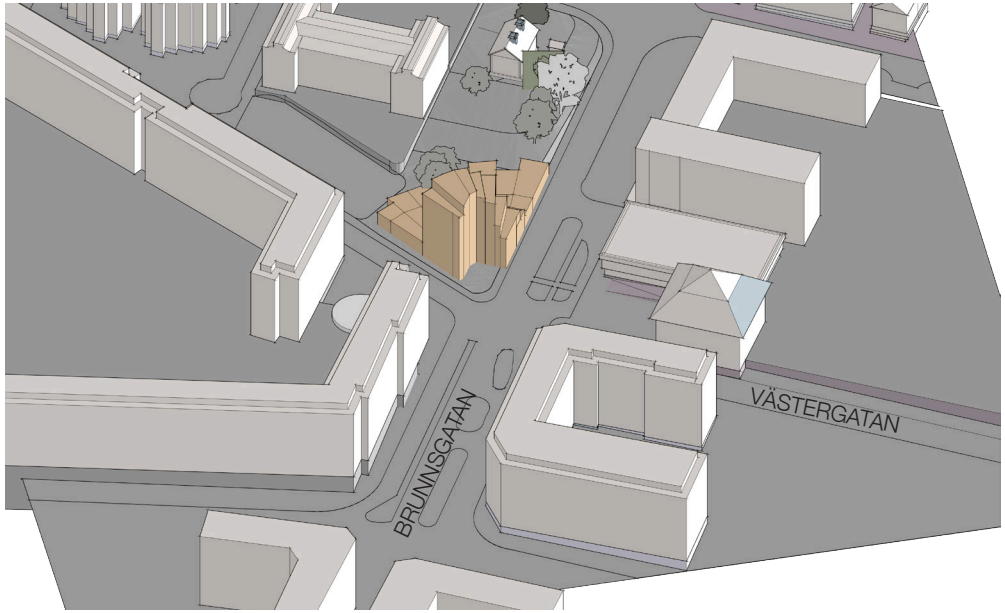
Volyme studies in the software Sketch-up was done, some examples are shown below. The studies were done with the attempt to:

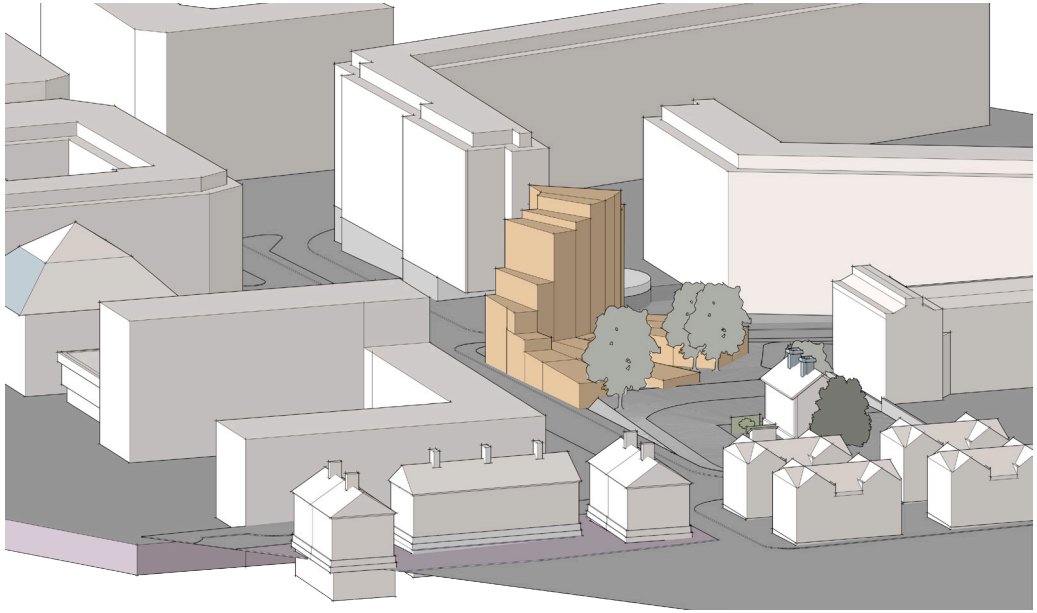
- Maximally exploit the plot by placing housing on top of preschool.
- Try to preserve as much as possible of the park as play environment for preschool children.
- Try to create a new building that relates in scale both to the 8-storey slab houses and the older detached 2,5-storey brick hoses. A building that boosts the street space in the crossing between Brunnsgatan and tram street Västergatan.

EXAMPLE 1. The curved shape that was tried out did not fit the site



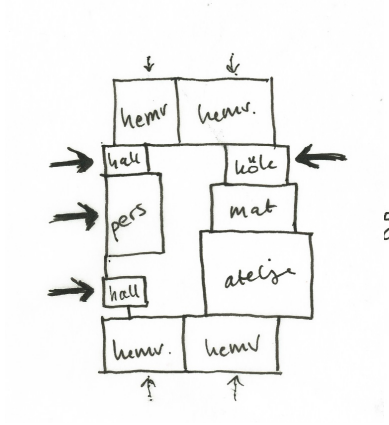
DEVELOPMENT FROM EXAMPLE 1. The graduations were kept.

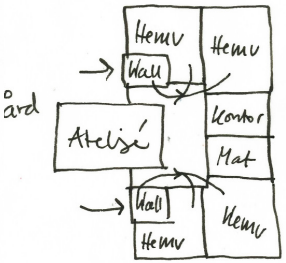


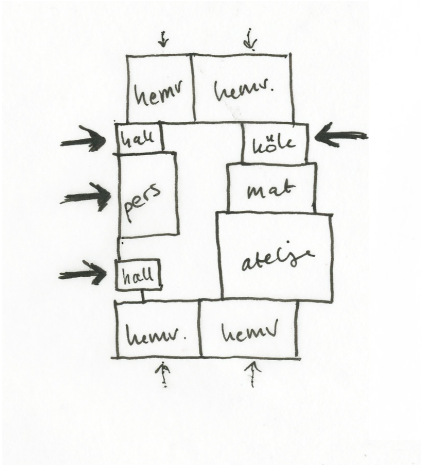


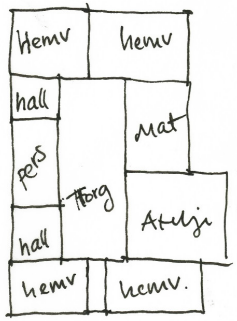
2.2.3 Sketches for the preschool

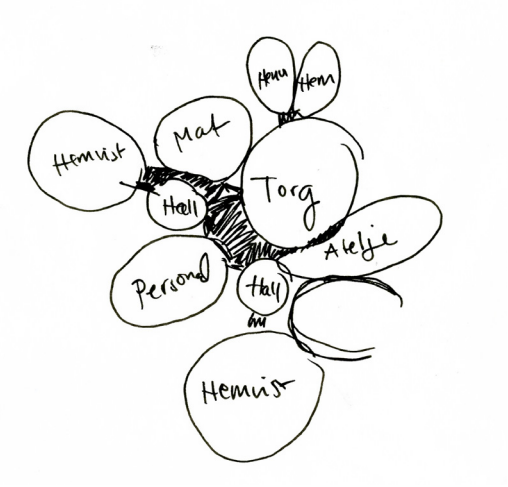
This is some of the first sketches of the room organization for the new preschool after the volume studies. The starting point was how Reggio Emilia preschools link rooms. Among other things, I sketched if the piazza would be completely in the center of the building, or if it would get veneers outwards to enhance the relation with outside. These first sketches assumed that preschool would be in one storey, but that changed when starting to work with the actual meassurements of the site.

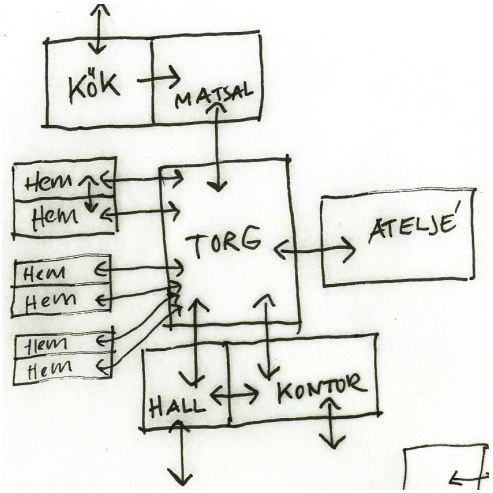


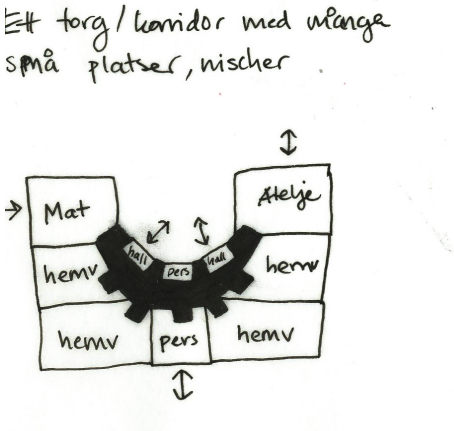




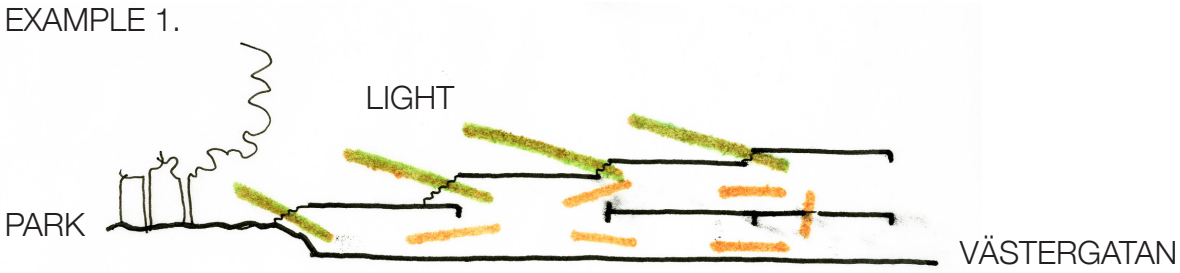






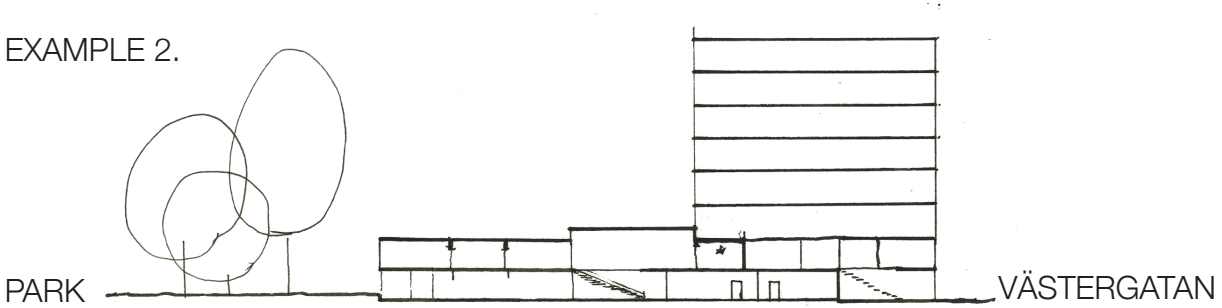


EXAMPLE 1.



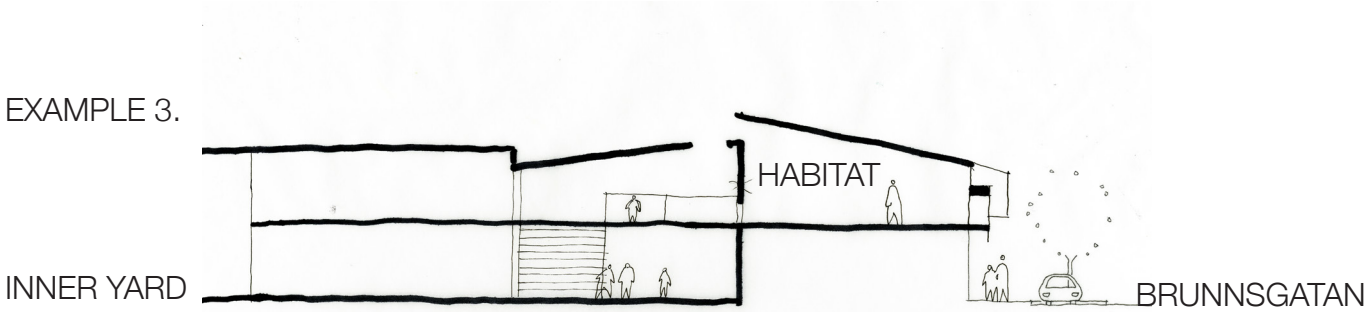
A sketch on how the height difference could be solved with roof terracces creating a stair, which allow light to be taken in.

EXAMPLE 2.



An alternative of how the hew residential houses rises in 8 storeys and the preschool lowers at the park side. In the end the idea of roof terraces melting into the park from example was combined with the higher housing.

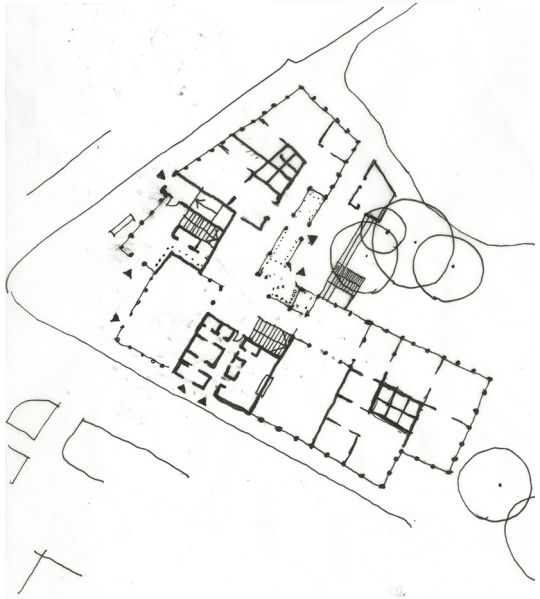
EXAMPLE 3.



The preschool could be closely situated by the street which is only lightly trafficed. This bacic concept was kept and develooped.

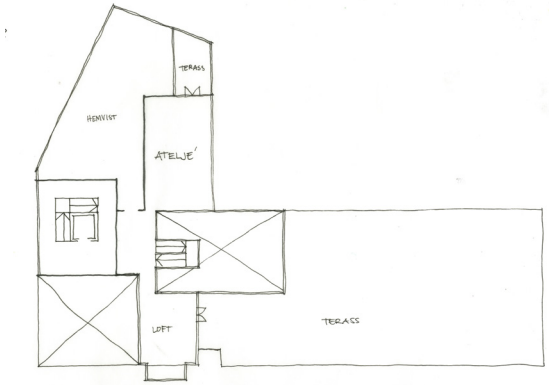
How can a preschool inspired by Reggio Emilia work at the site? In contrast to a typical Reggio Emilia plan this preschool got two floors to preserve as much as possible of the park. A courtyard and a roof terrace was created in order for the children to get more varied outdoor environments besides the park. Further, it was important to strengthen up the street spaces around the building's corners to Västergatan, the sketches show different solutions. In the end, the atelier and the indoor piazza were placed in the two corners like lantern (see sketch example 4). It was also important that all habitats had visual contact with both street and courtyard to strengthen the link between outside and inside.

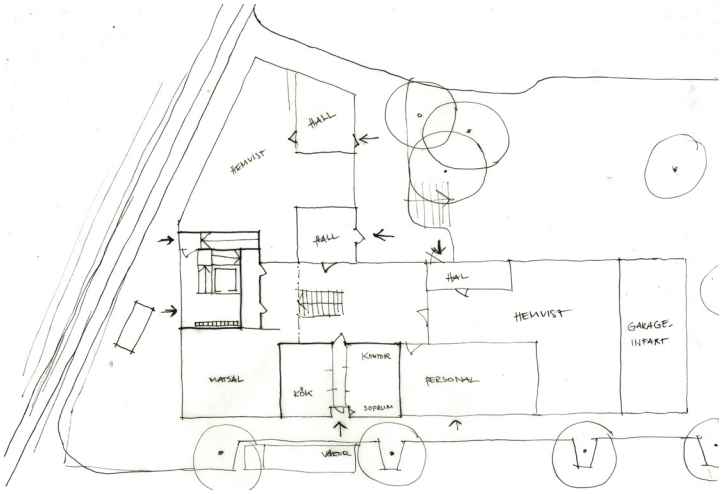
EXAMPLE 1, PLAN 2



EXAMPLE 1, ENTRANCE PLAN

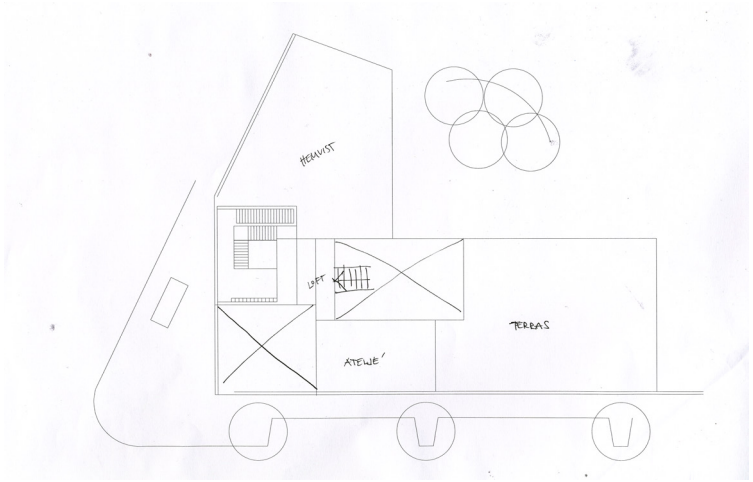
EXAMPLE 2, PLAN 2

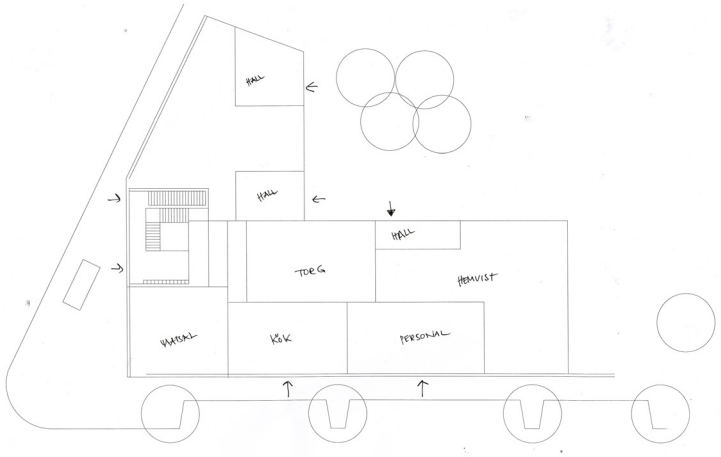




EXAMPLE 2, PLAN 2

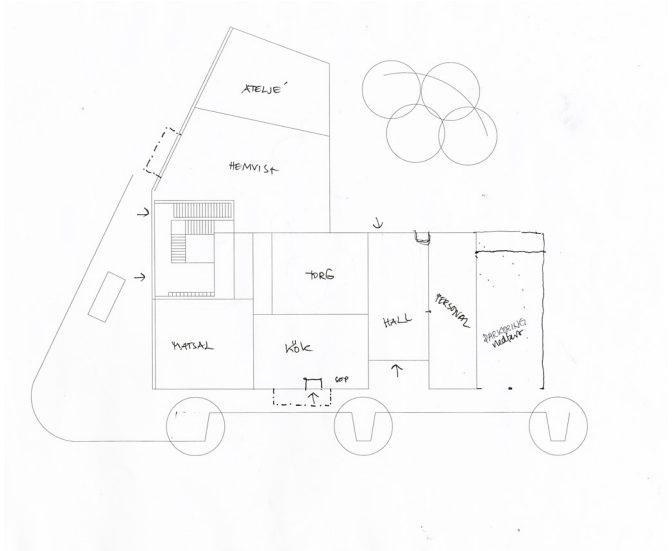
EXAMPLE 3, PLAN 2

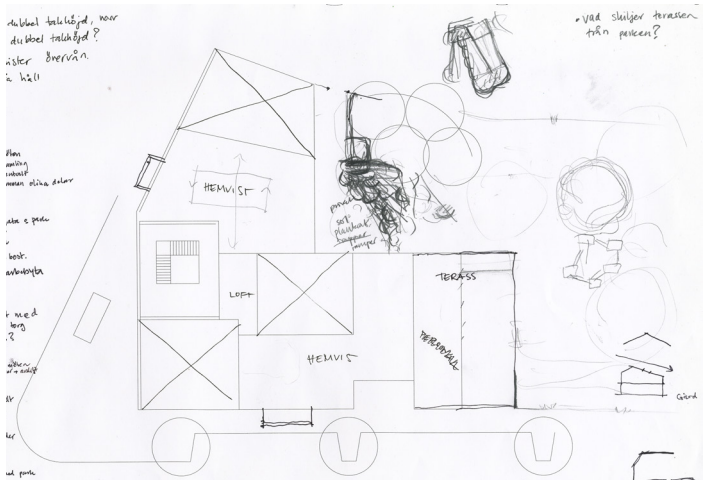




EXAMPLE 3, ENTRANCE PLAN

EXAMPLE 4, PLAN 2





EXAMPLE 4, ENTRANCE PLAN

2.2.4 The theme:
Spatialities, light, chidren – in interaction

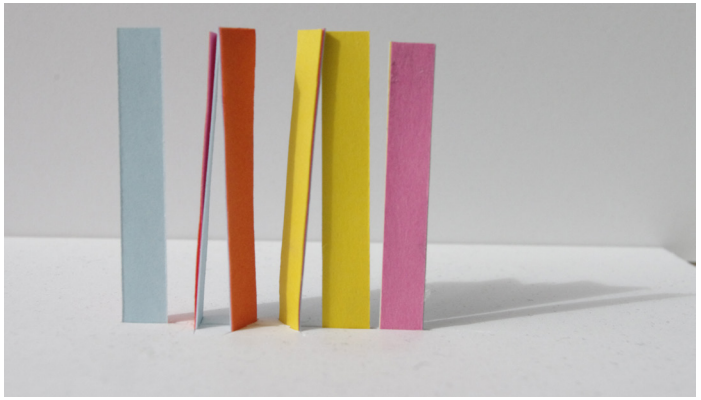
How can architecture be designed to be part of the pre-school´s exploratory activity? The theme of the project was developed from the research of the Reggio Emilia approach to be used when zooming in on the interaction of the children. How can architecture invite to interaction?

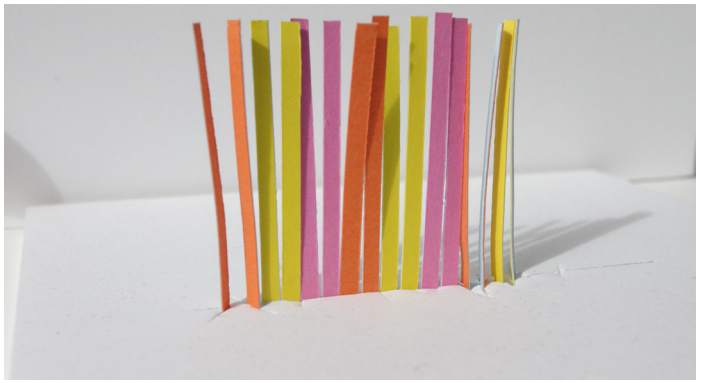
The decision to work to work with light was taken because: light transforms and can be changed, it can tell the time of day, the season, the weather, what happens outside and inside.

The inspiration pictures for the theme are in three cathegories: Interaction and light; Reflections and shadows; Facades in layers, and can be viewed in the appendix 2-4.

2.2.5 Mock-ups

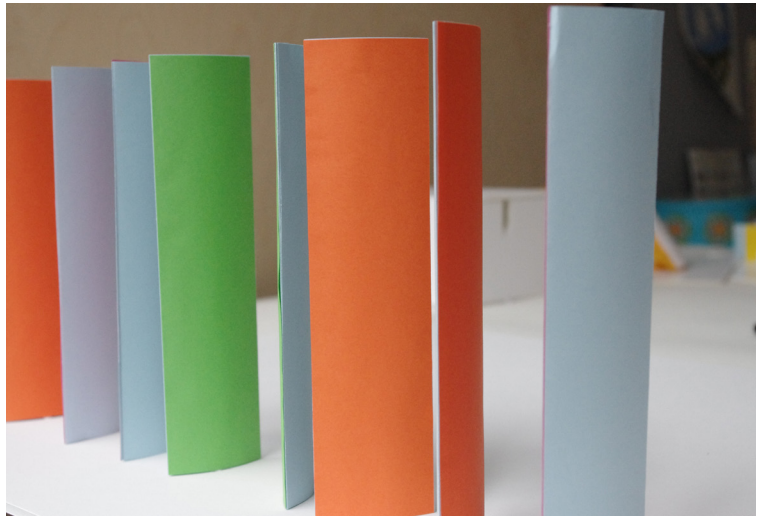
The mock-ups presented in this paragraph all have contributed directly to the result. The first sketch models were done in order to create playfulness with color and light. The idea came up with flat multicoloured tiles placed by the windows, like a jalousi for children with tiles to turn one by one with your hand (see picture 1-2).



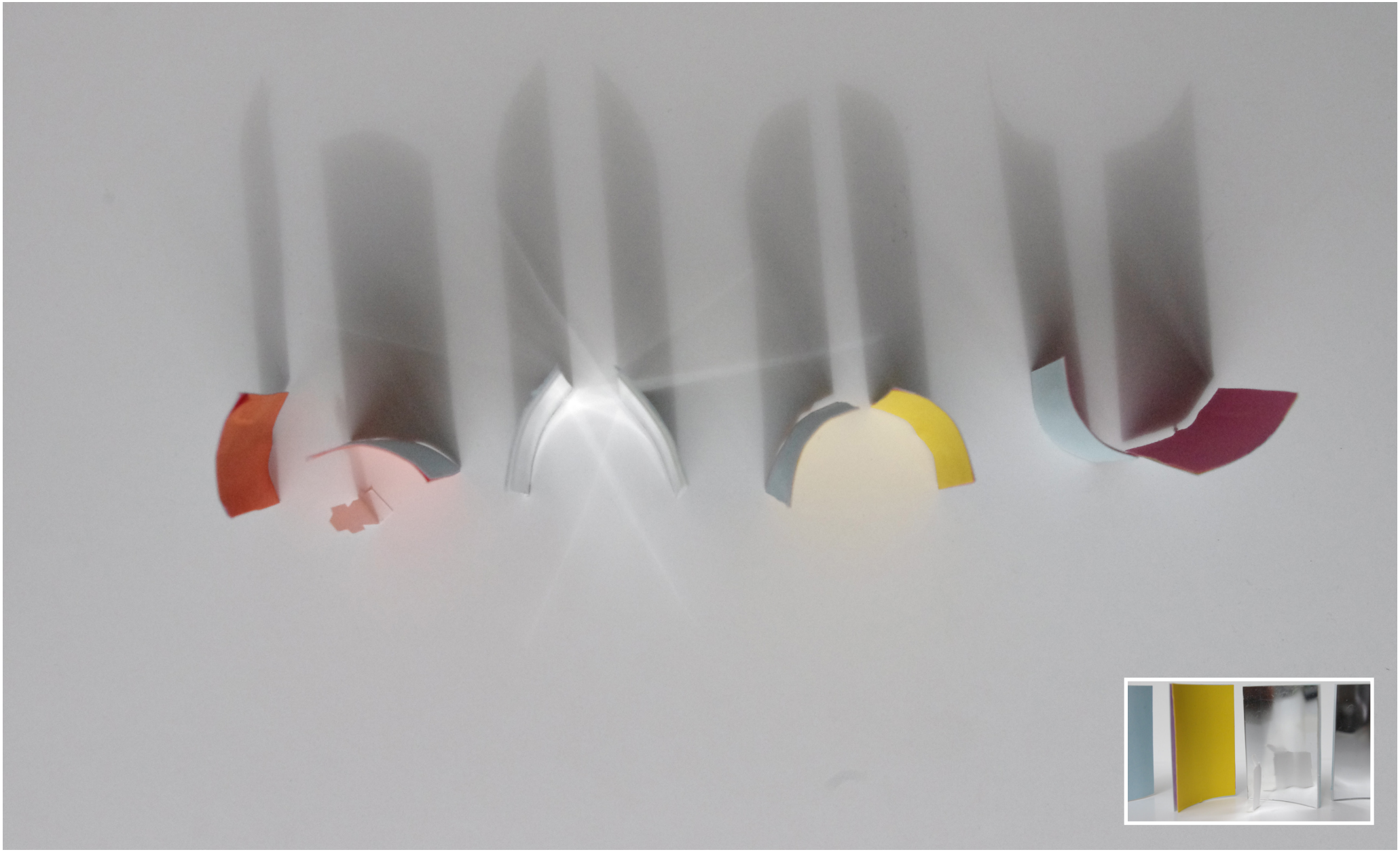


Picture 1-2.

Paper in only 4 colours were used for mock-up of tiles (see picture 1-3), standing together the colour of the tiles affected eachother creating many hues.



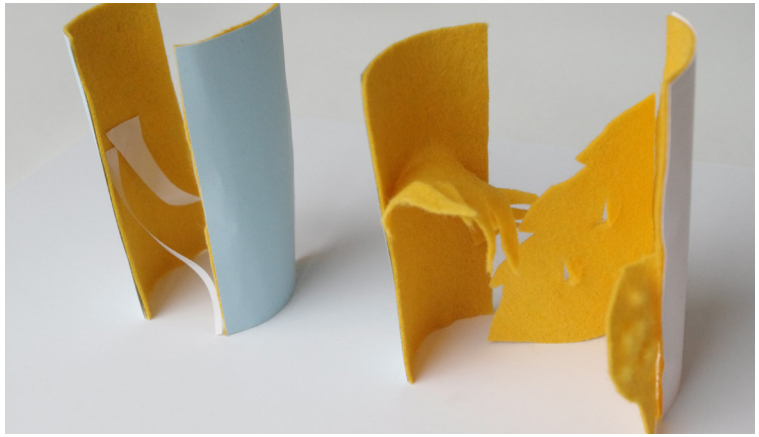
Picture 3.



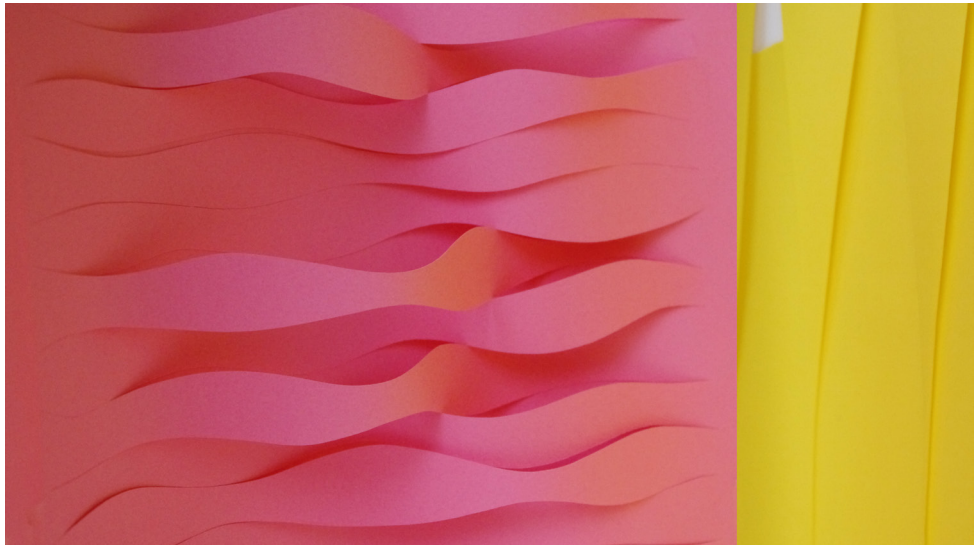
Picture 4-5.

Giving the tiles much more width width, it was discovered that curved pivoting walls could create many different spaces; the curved shape in itself was implying spatiality (see picture 4-6).

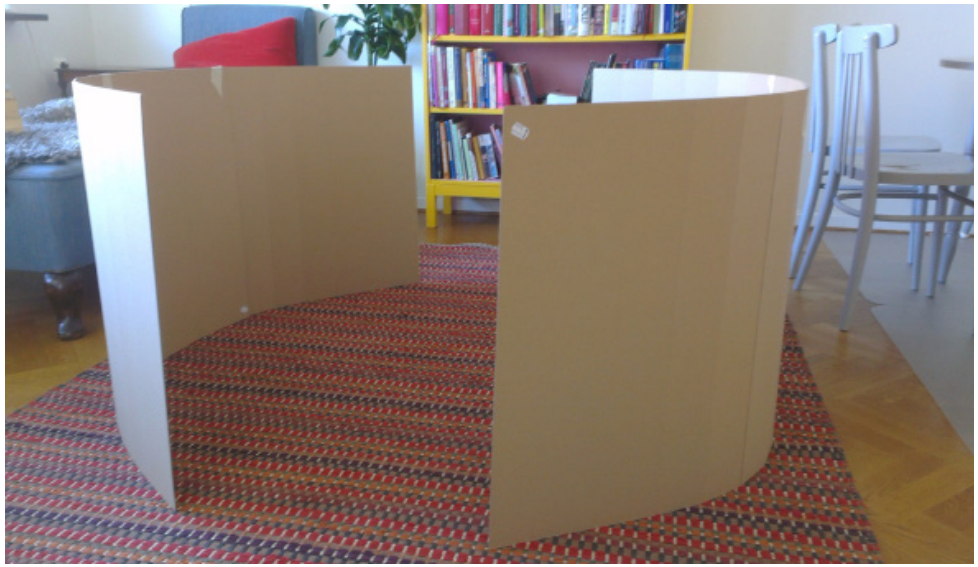
Curved shapes captures light in an interesting way, giving them different materials a rich play of light can be made possible, the materials and the colors reflecting light differently (see picture 4,5,7). This proved so interesting that the turnable walls were kept for further development. A full scale sketchy model (see picture 8) and drawing were made to find out measures that were small enough for the walls not to come across as clumsy, but large enough that the walls could create rooms for children.



Picture 6. Idea of curved, turnable walls with tactile details.



Picture 7.

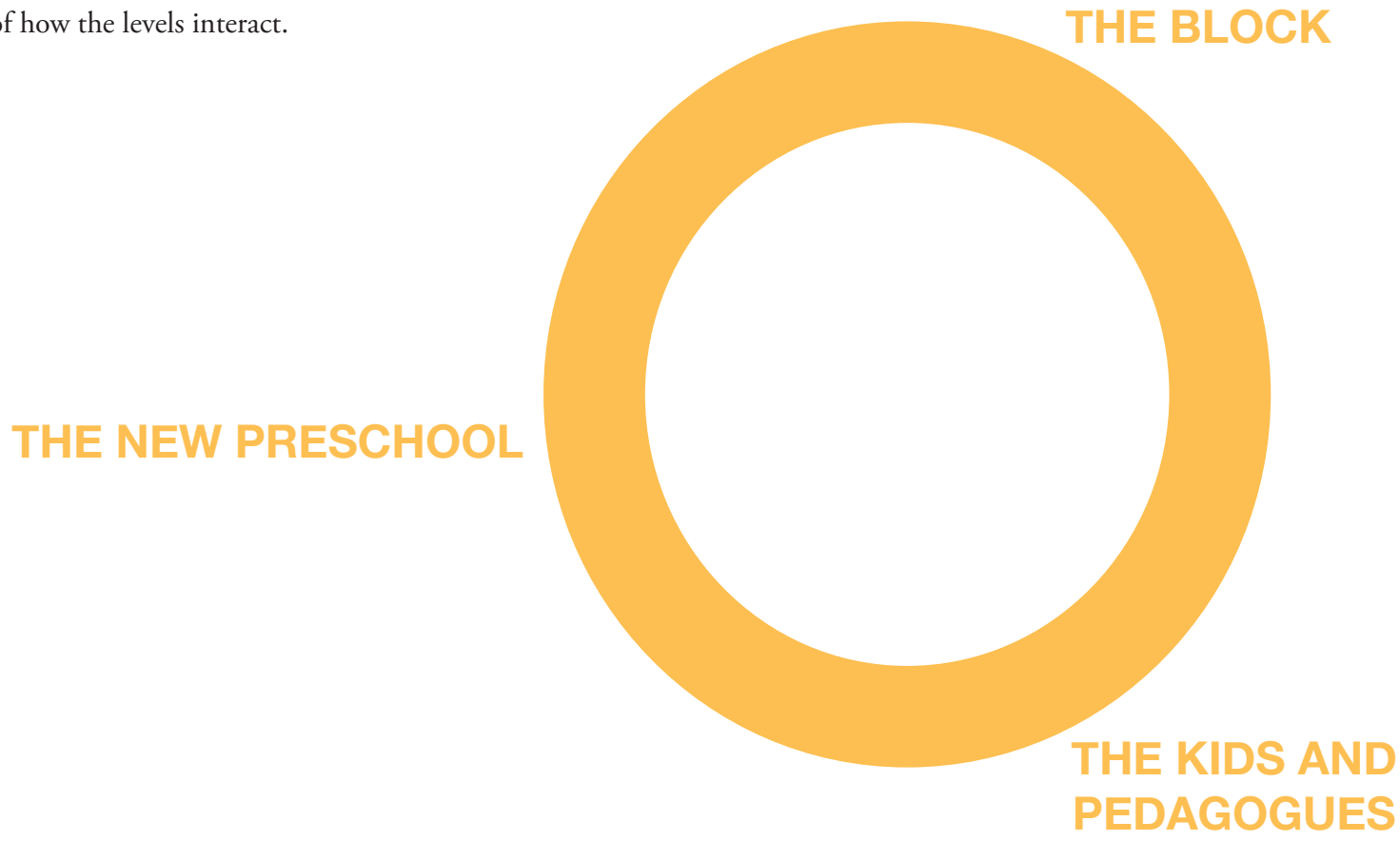


Picture 8. Full size mock-up.

3. THE RESULT

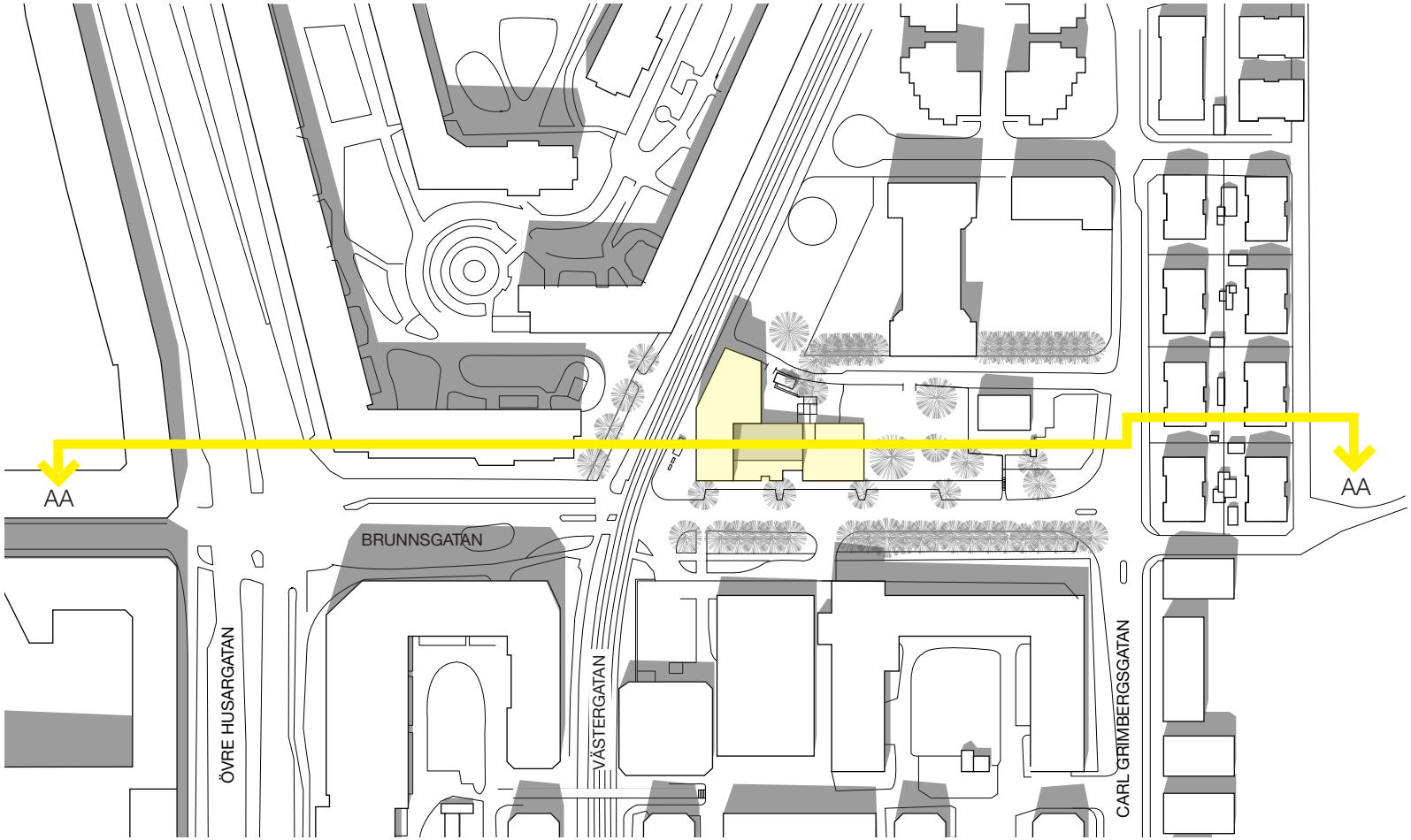
3.1 Intro to result

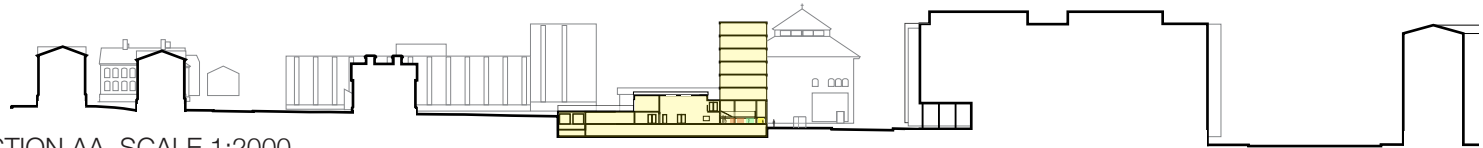
3 levels in synergy have been identified, mutually defining and influencing each another. Firstly the block, the new preshool will be presented one by one. In the end comes a short breif of how the levels interact.



3.2 The block

PLAN, SCALE 1:2000



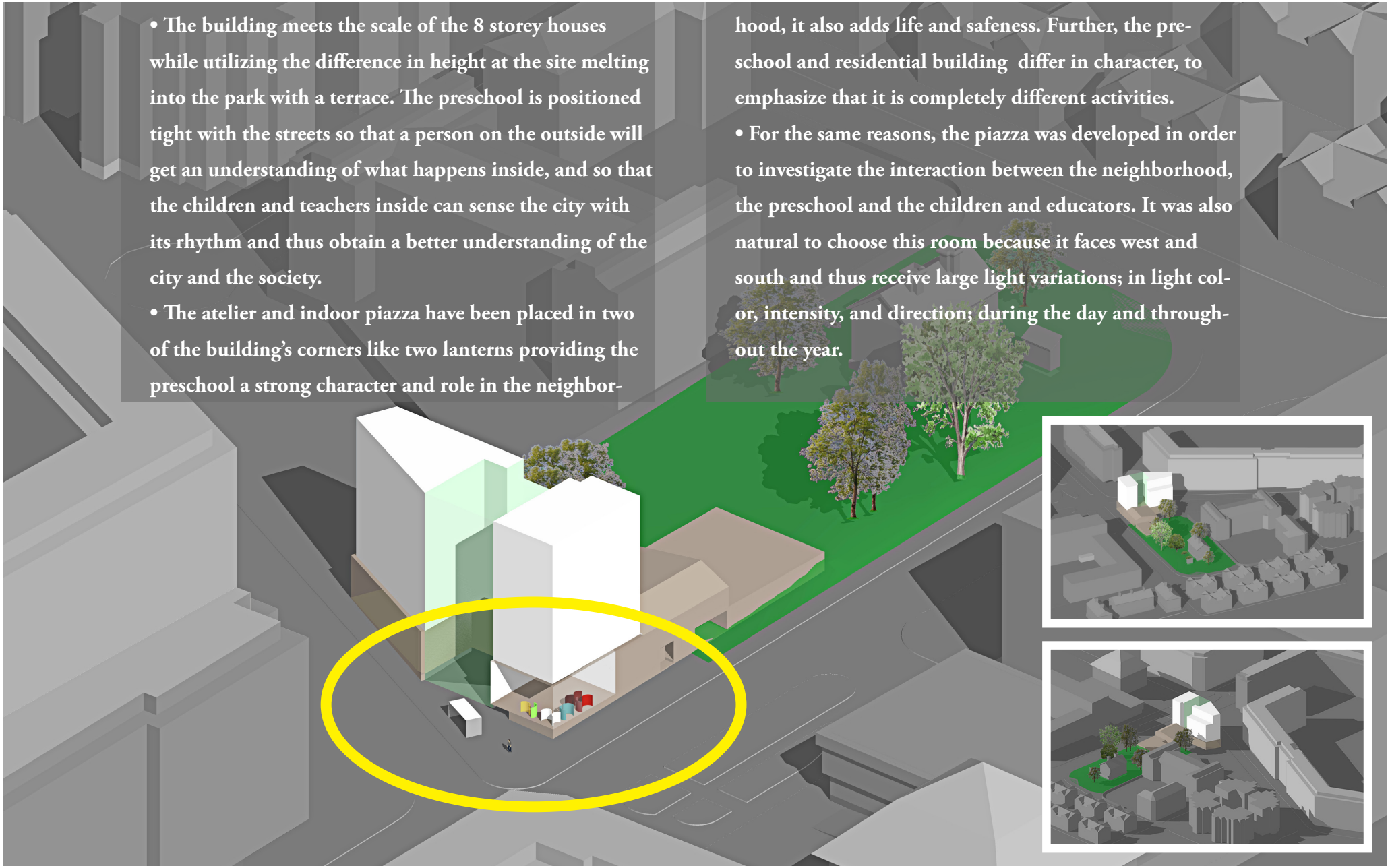


SECTION AA, SCALE 1:2000

• The building meets the scale of the 8 storey houses while utilizing the difference in height at the site melting into the park with a terrace. The preschool is positioned tight with the streets so that a person on the outside will get an understanding of what happens inside, and so that the children and teachers inside can sense the city with its rhythm and thus obtain a better understanding of the city and the society.

• The atelier and indoor piazza have been placed in two of the building's corners like two lanterns providing the preschool a strong character and role in the neighborhood, it also adds life and safeness. Further, the preschool and residential building differ in character, to emphasize that it is completely different activities.

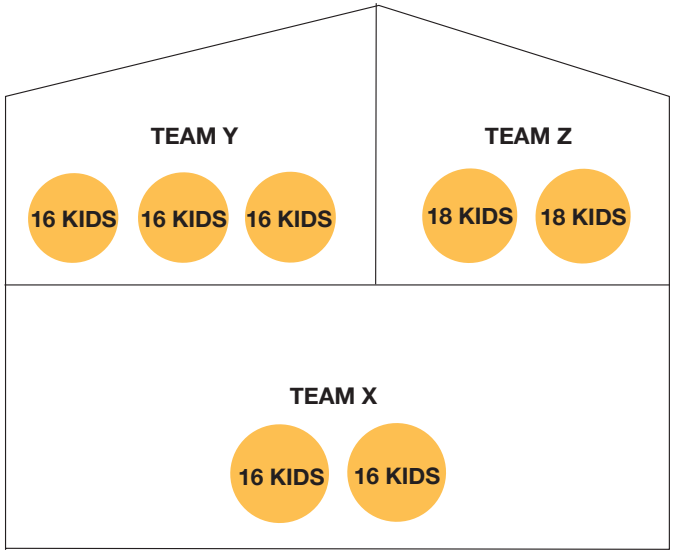
• For the same reasons, the piazza was developed in order to investigate the interaction between the neighborhood, the preschool and the children and educators. It was also natural to choose this room because it faces west and south and thus receive large light variations; in light color, intensity, and direction; during the day and throughout the year.

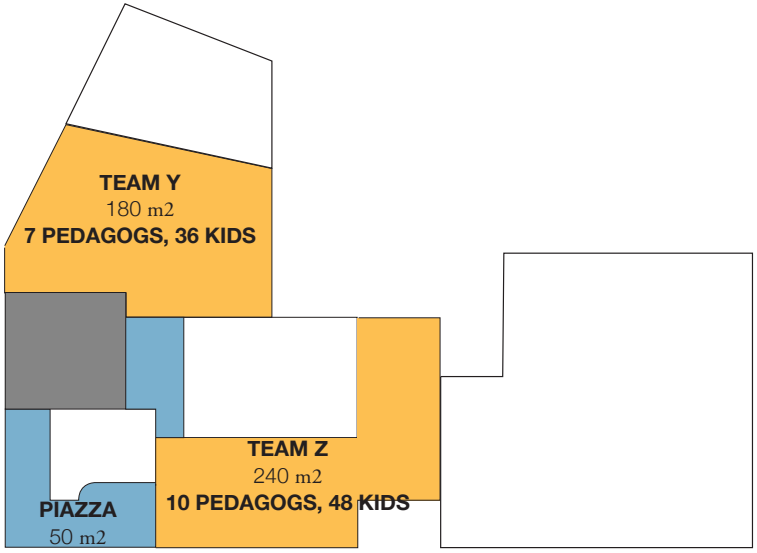


3.3 The new preschool

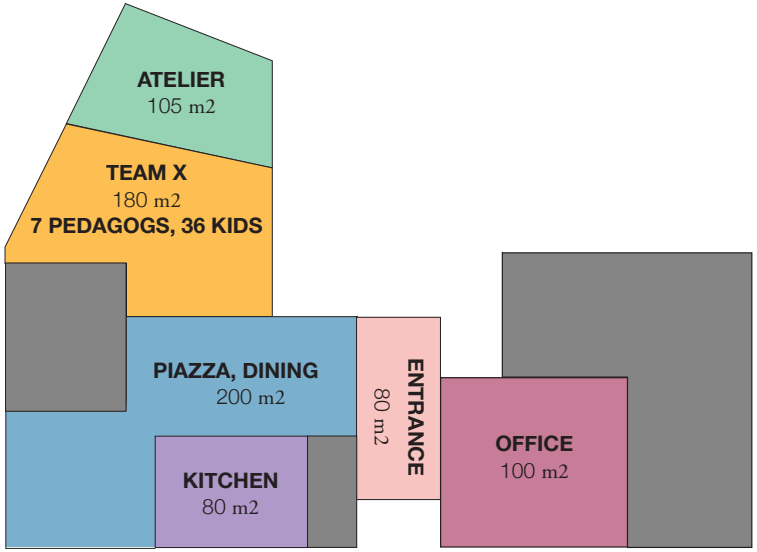
The scope for the preschool was set in accordance with the earlier mentioned Gothenburg guidelines as well as the national guidelines for preschools. The result is:

- Totally approx. 1240 m2
- Approx. 8,6 m2 / child calculated on the areas that children have access to.
- Approx. 7,9 m2 / child and staff calculated on the areas that children have access to.
- 24 pedagogues, 120 children, 2 kitchen staff





PLAN 2, SCALE 1:400



ENTRANCE PLAN, SCALE 1:400

Here follows a summary of the design of the preschool plans, relating them to the research. The layout of the entrance floor is presented first.

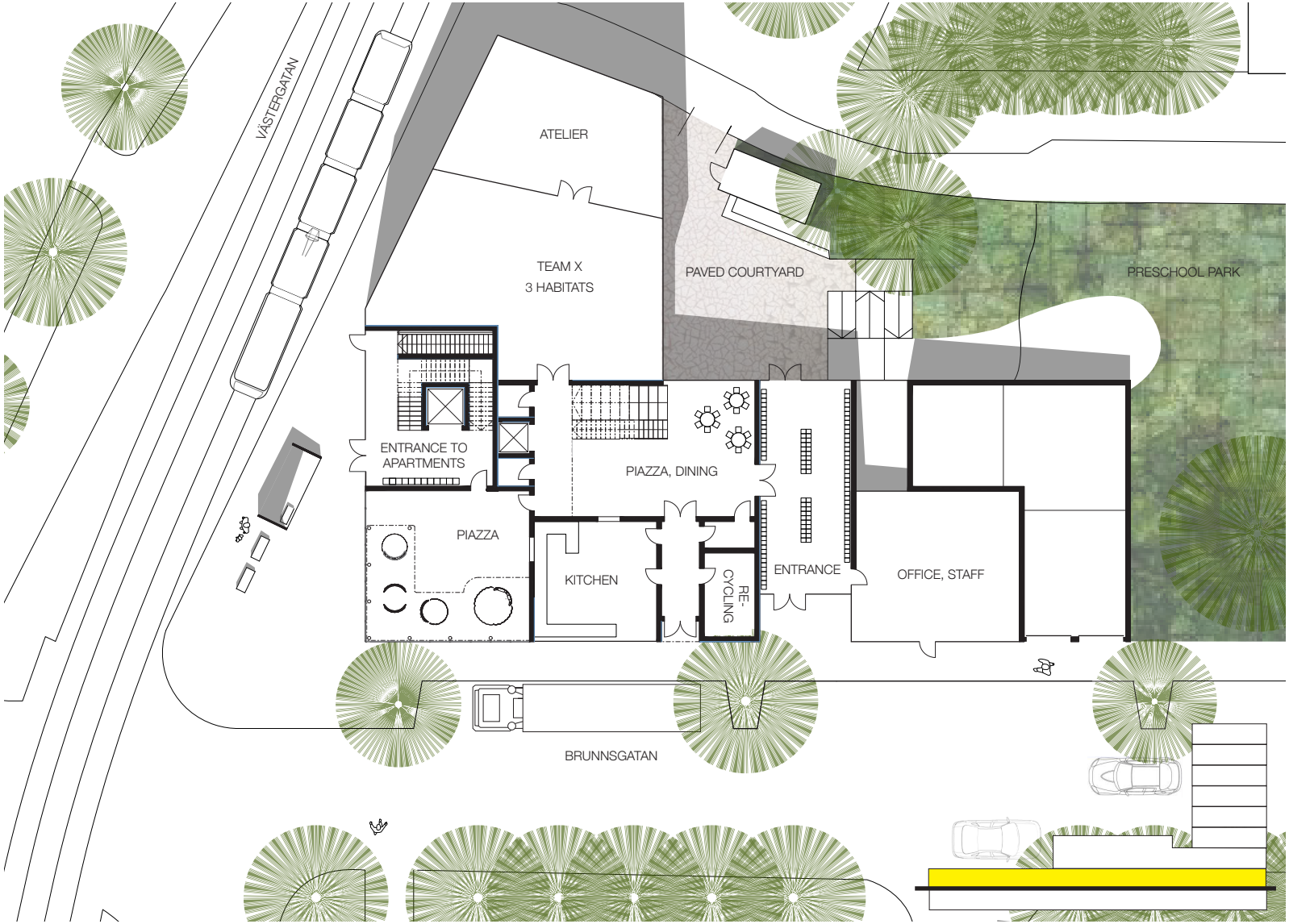
ENTRANCE FLOOR

The piazza has been located in the center of the preschool, this is a place for meetings between children, parents and staff. In the two storey high piazza the two floors binds together in a wide staircase whose one half is designed with deep high steps and therefore will be a place to play or to have story readings. Also, the two parts of the piazza have generous loft balconies, to allow more spontaneous meetings between people from the different storeys. The studio is also with double ceiling height, it gets light mainly from the north giving a soft light that is often preferred in aesthetic work. The indoor piazza continues out towards the corner of the building, together with the atelier functioning as two lanterns conveying what's happening inside the preschool. Especially the outer part of the piazza is meant to serve as a sort of filter between the inside and outside.

The preschool's main entrance faces Brunnsgatan and has a chance for sun and shelter and should be a place for those brief but important everyday meetings between people. By placing a main entrance to the street, a more private paved courtyard with an additional entrance was created. Along with the park and the large terrace, which was made possible thanks to the height difference, the children have 3 different play areas outdoors. All three preschool units has frontage to both the street and towards the courtyard. Inside the habitats the children have visual contact with the street and can follow what is happening in the city and view the tram coming.

The kitchen was placed beside the car street Brunnsgatan to facilitate the easy delivery. Staff and residents have parking in the basement. The entrance to the apartment building have been placed on Västergatan to help well-being and security on the block.

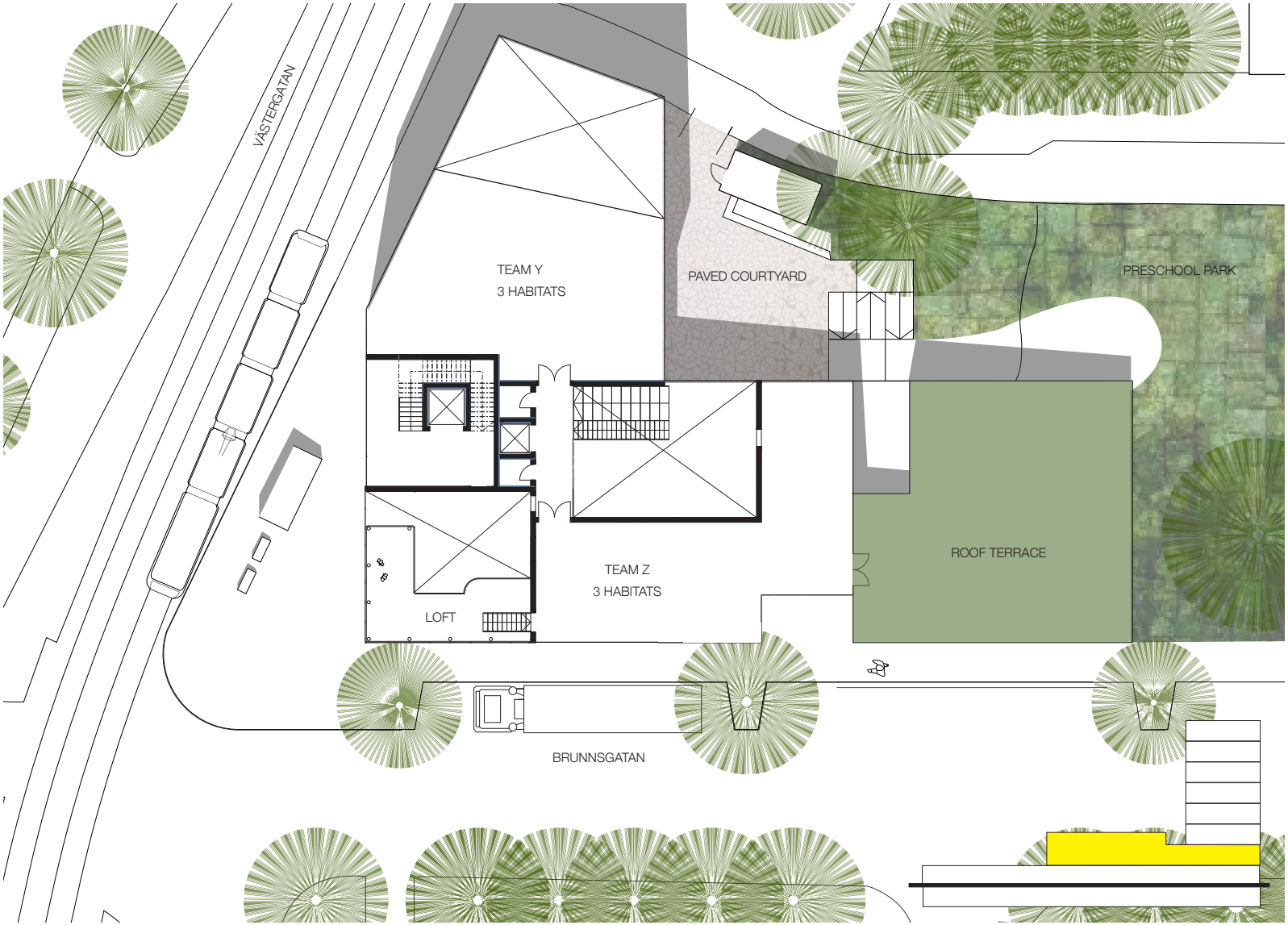
PLAN, SCALE 1:400



2ND FLOOR

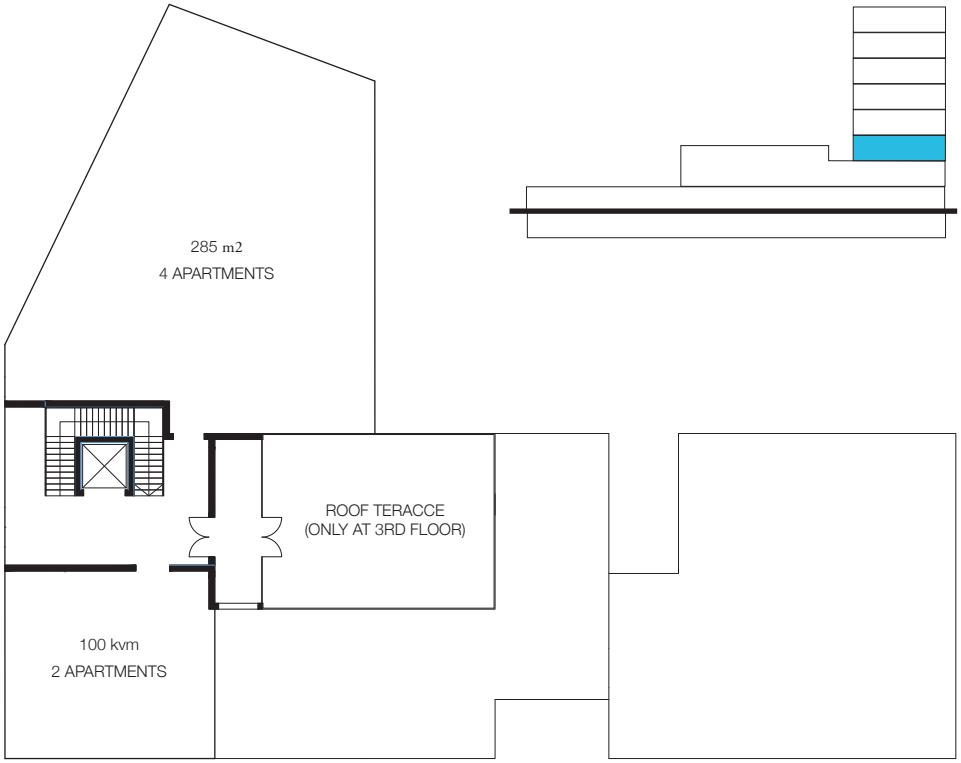
Here is the plan of the 2nd floor. Here we see the top two units. Team Z has direct access to roof terrace that connects to the park.

PLAN, SCALE 1:400

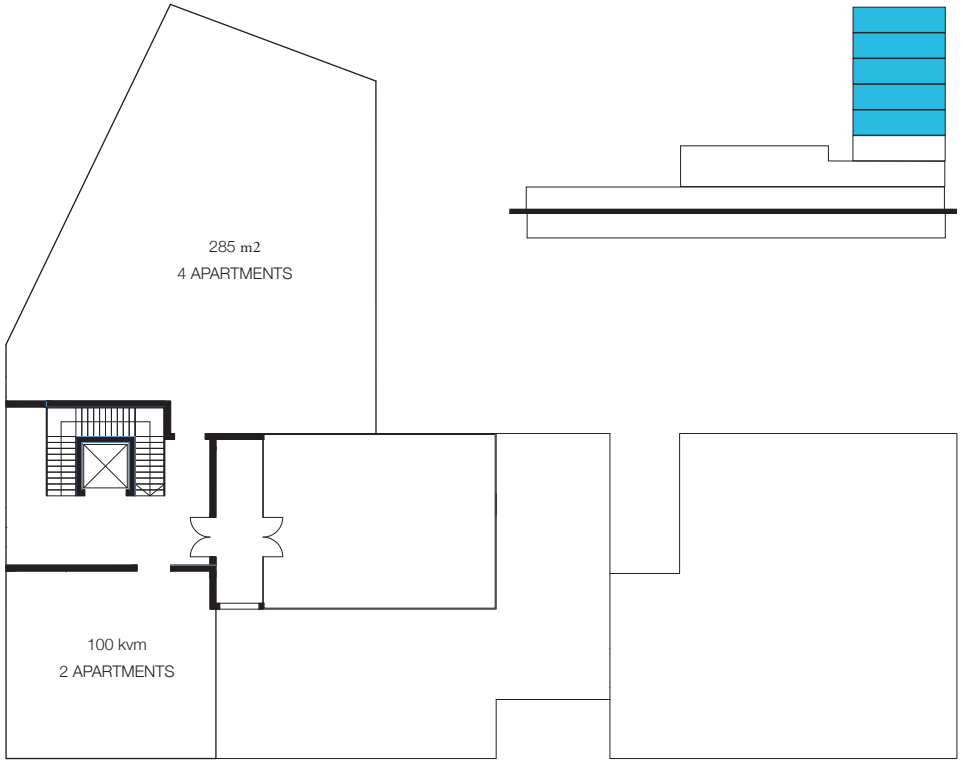


3.4 Apartments

The residential floors 3-8 have approximately 36 apartments, here presented in a schematic way. If one were to further develop the project, it is likely that the top residential floors should be scaled down to give the building a lighter impression. There is also a basement with storages and parking for residents and staff (that has not been developed in detail).



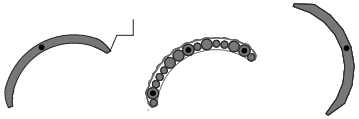
RESEDENTIAL FLOOR 3, SCALE 1:400



RESEDENTIAL FLOORS 4-8, SCALE 1:400

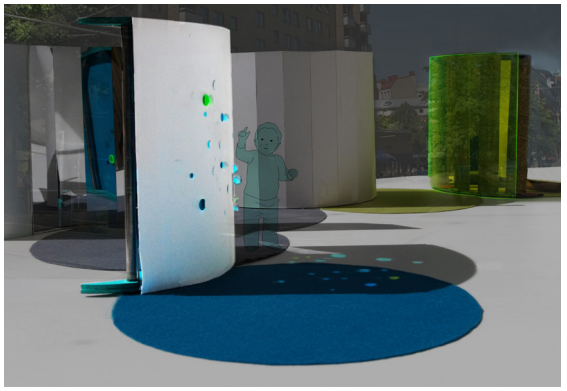
3.5 The children and the pedagogues

TURNABLE WALLS IN 4 THEMES



TEXTURE / SHADOWS

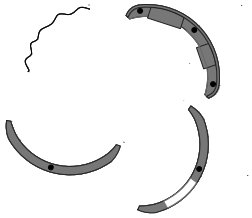
TEXTURE / SHADOWS / REFLECTIONS

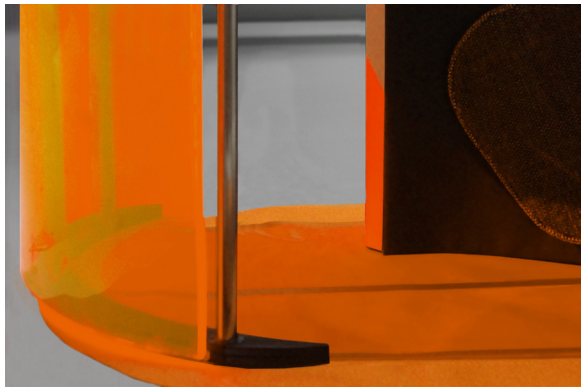


REFLECTIONS / COLD HUE

Here is the revolving walls with 4 different themes.

The walls are to be rotated by the children. The walls need to be designed so that you can only rotate slowly so no one can get hurt. 9 walls with eight different looks were made. They have 3 different structures, which eases production, and are in 4 themes. In this way, children can vary turning up the walls with the same theme and color, or make combinations with them. At place, they are complemented by a curtain to create variation.



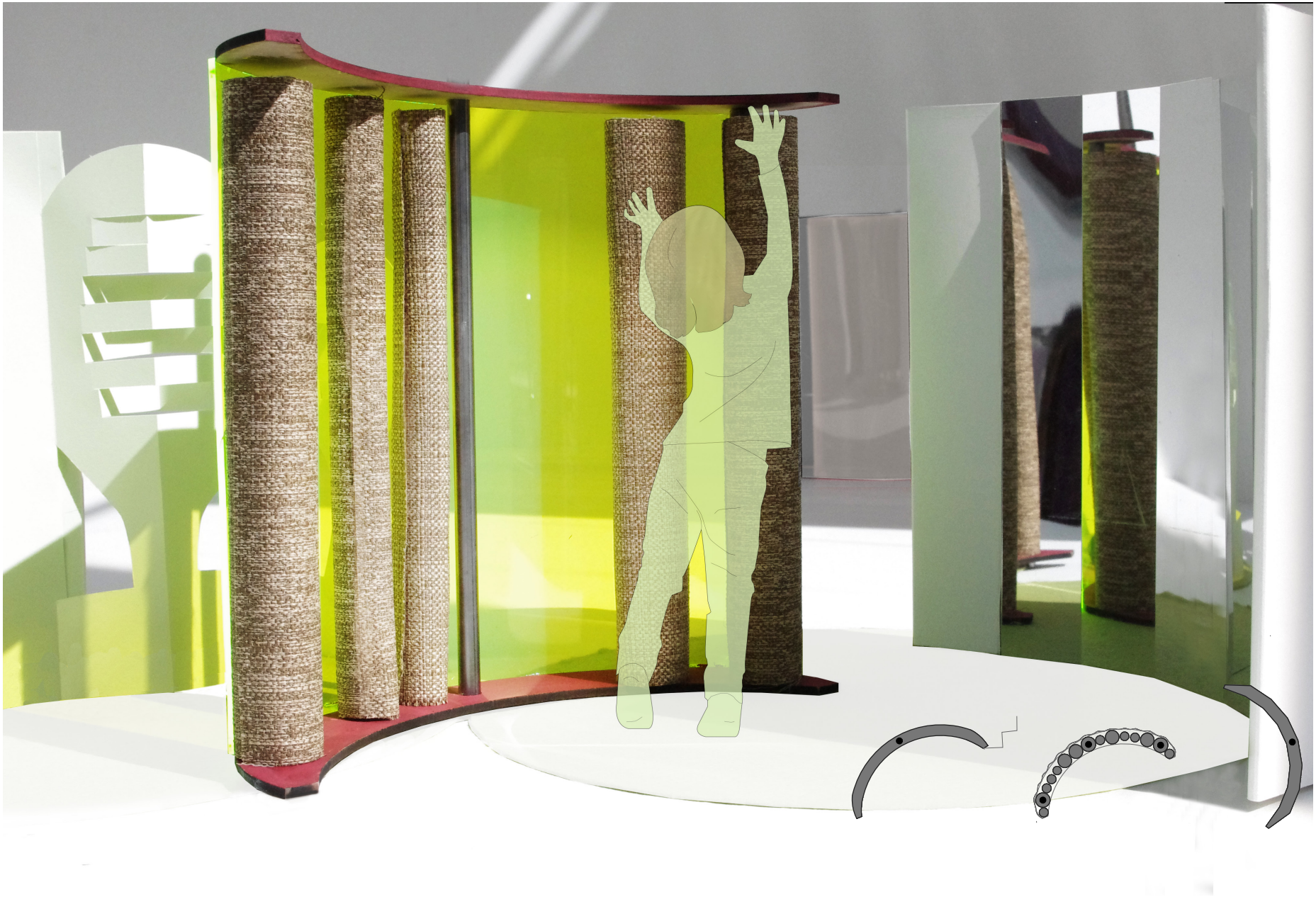


DRAMA / WARM HUE

TEXTURE / SHADOWS / REFLECTIONS

Here we see walls from two different themes: texture / shadows and reflections. The theme of texture / shadows are those with green-brown-red colours, here are pillows shaped as pipes that kids can take out and play with or keep in the wall. The tube shape was used because it gets interesting shadows. Both the tubes and the opposite wall are meant to include some type of light-absorbing material which may allow calm and more intimate play. The two walls with theme reflections are identical and have mirrors on the concave side. They could be used when children dress out or want to have disco.

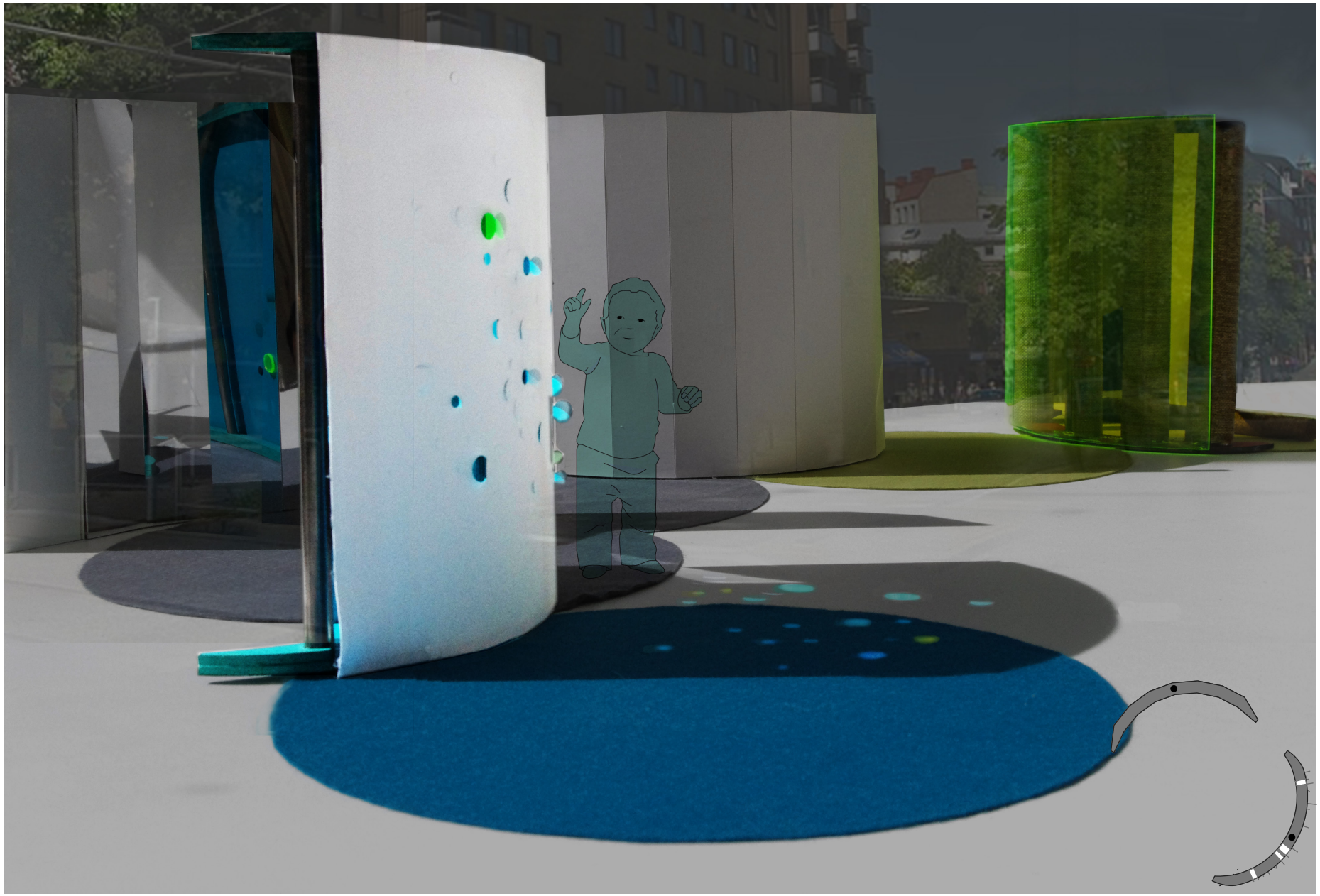
TEXTURE / SHADOWS



TEXTURE / SHADOWS AND REFLECTIONS

COLD HUE / REFLECTIONS

At the foresight is a wall with theme of cold hue. From the sketch models I chose to continue with strong contrast on the walls to provide interesting color hues when they stand together. One of the walls has apertures to be opened.



COLD HUE

DRAMA / WARM HUE

The fourth theme is drama / warm color. One wall has removable cushions. An opening in another of the walls can be used for puppet shows or to play supermarket.

WARM COLOUR

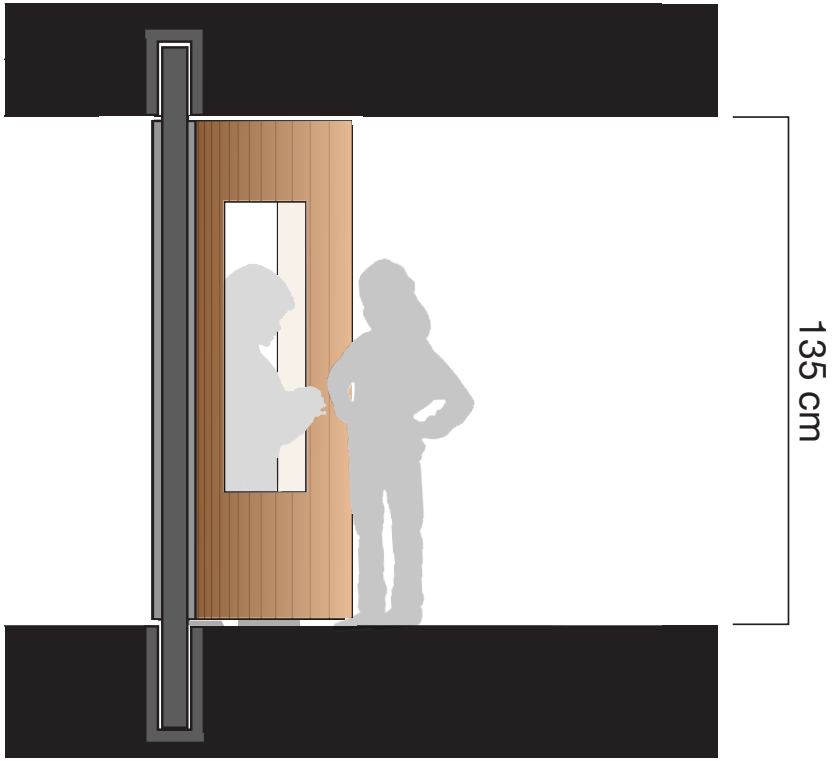
PIAZZA ZOOM IN

The following side shows a plan of the piazza with the walls, it is 3 pairs with 2, and 1 theme with 4 walls as 4 walls together provide multiple options. The number of walls adapted to the room size. The section shows the height of the walls, just under 135 centimeters. To take advantage of the room height of 5.6 meters and creating variety of

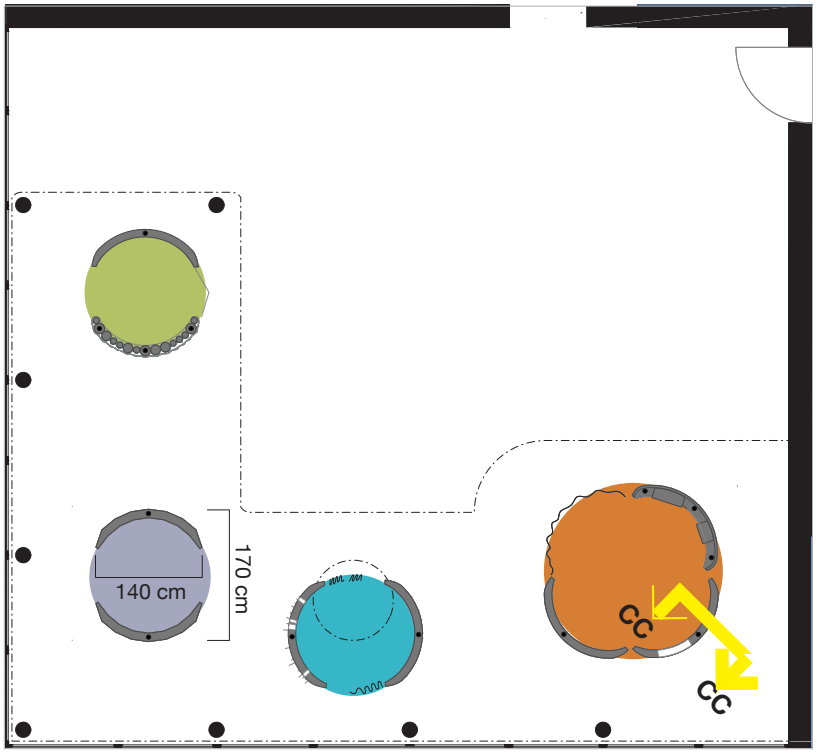
spatial features in the piazza a loft is on top of the walls. The screens have pipes anchored to the floor and the attic floor, allowing rotation. This is also a technical issue because it could create such a large torque that the walls can not stand alone. The theme cold color has an opening in the balcony over giving over light. Otherwise, the natural light was the basis of this project. It is very likely that you need to add artificial lighting during the darker seasons. To increase the comfort 4 mats were added.

The room has a glass facade beyond the freestanding supporting pillars, which givs a lighter facade putting focus on the walls.

The screens would probably have a wooden frame and the concave sides would be covered with a sheet material. Most walls' convex sides have sound absorbing material and a surface of fabric or sound absorbing felt material.



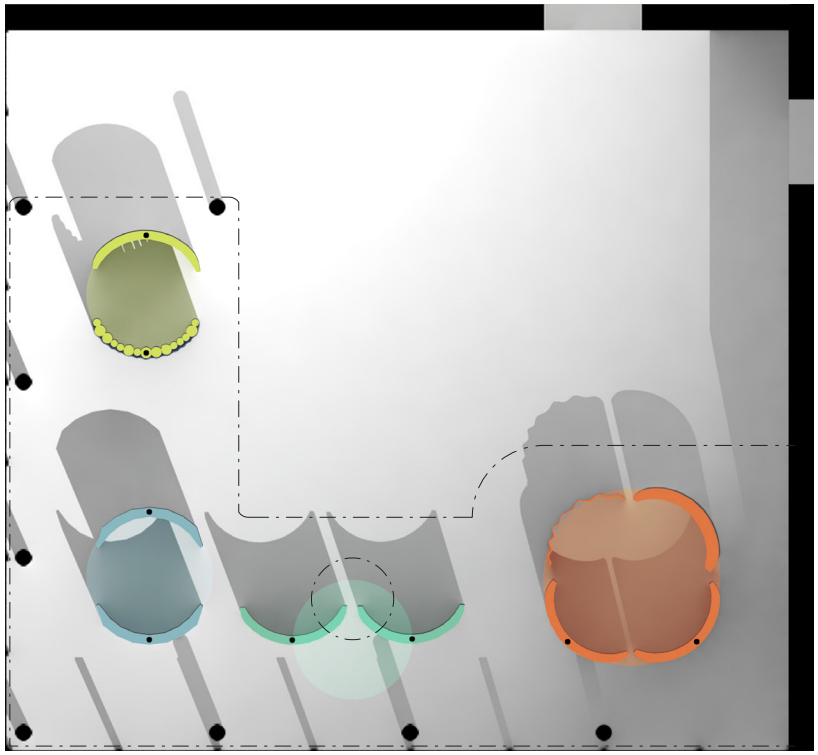
EXAMPLE SECTION CC, SCALE 1:20



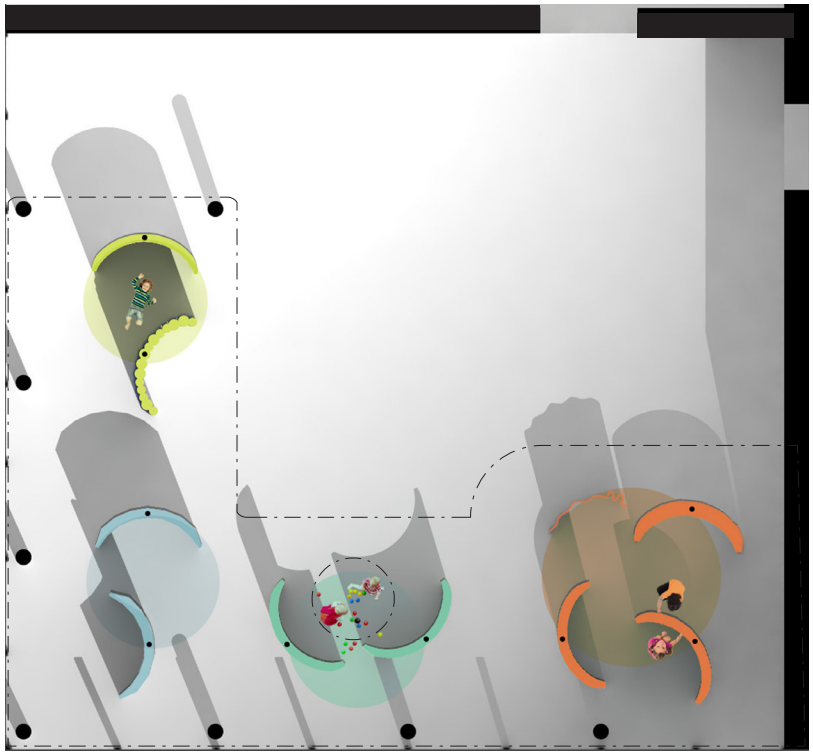
PIAZZA, CUTTING AT 135 CM, SCALE 1:100

3.6 Interacting

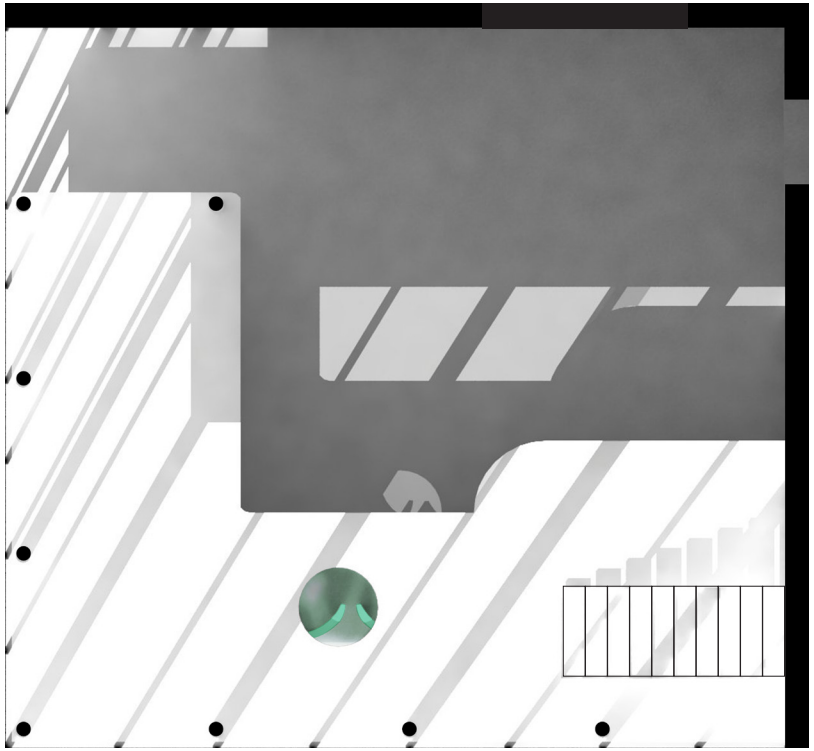
3 MOMENTS



ENTRANCE FLOOR, CUTTING AT 130 CM HIGH,
SCALE 1:100



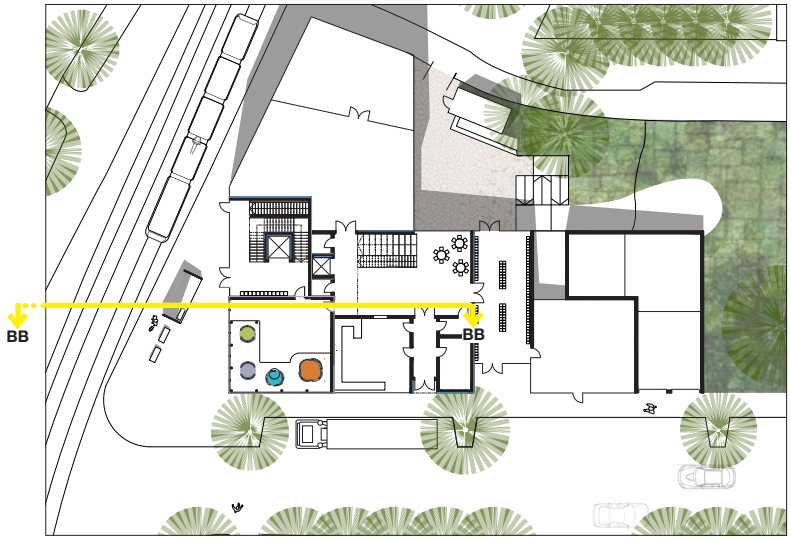
ENTRANCE FLOOR, CUTTING AT 130 CM HIGH,
SCALE 1:100

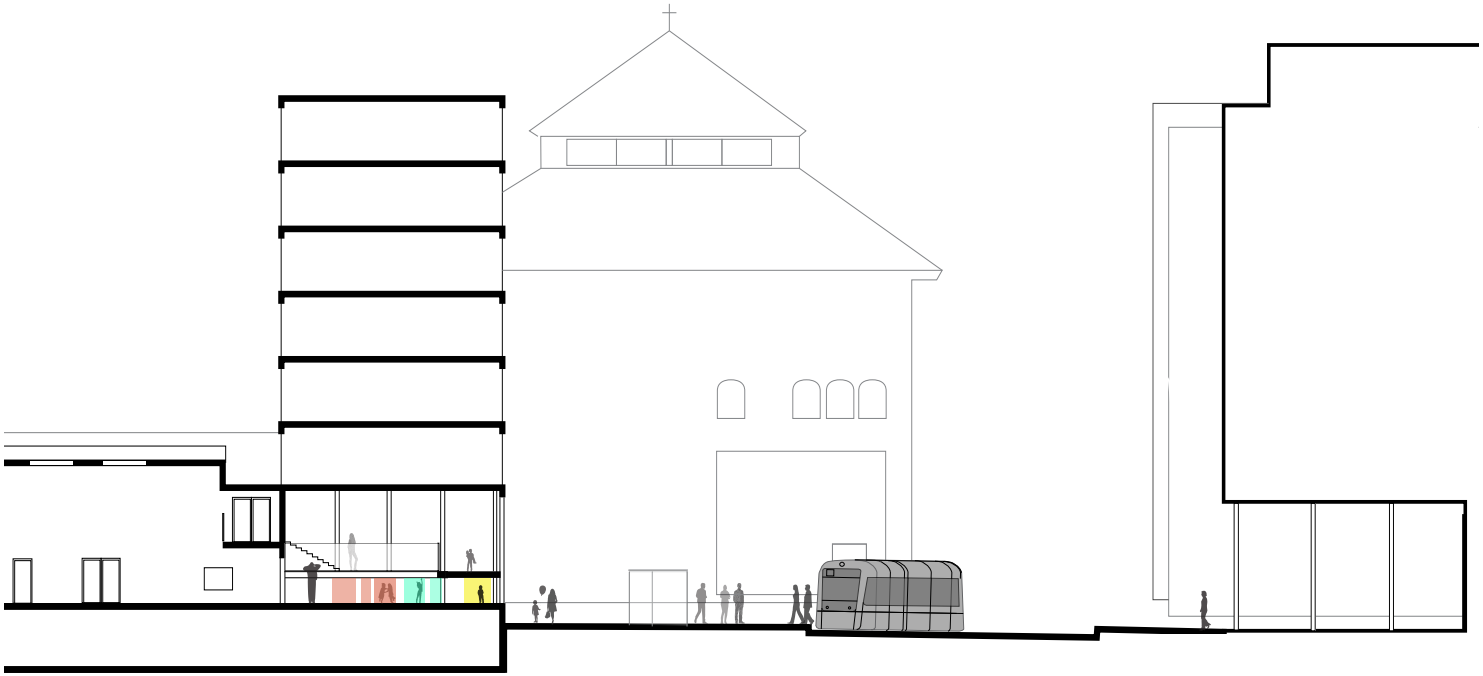


LOFT OF 2ND FLOOR, SCALE 1:100

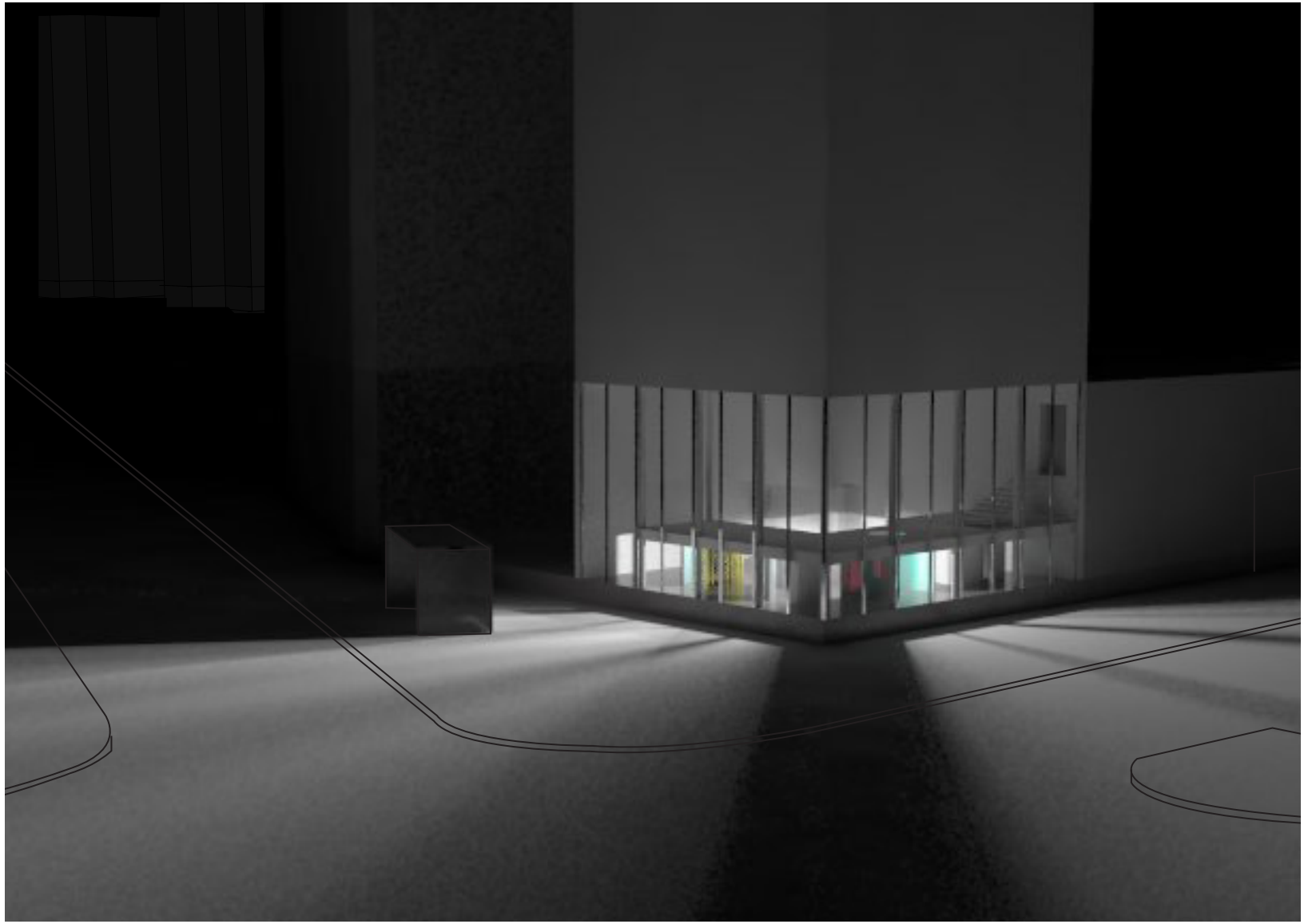
This is how the piazza might look in 3 differnt moments. The first two snapshots show the entrance floor while last plan shows the 2nd floor, thus, you can then enter the loft from the 2nd floor.

Amidst the walls the kids will be at the same eye height as adults on the street The children will be able to use the rotating walls as a backdrop for their games. Maybe they bring pillows, costumes, books and figurines one day, whereas the following month, the teachers provide them with materials with different reflective properties to explore. Probably the children would develop games in relation to the space and the light they create.





SECTION AA, INDOOR PIAZZA IN RELATION TO STREET SCENE, SCALE 1:400



The daylight changes the experience of the environment, the children turn the walls and rooms and light are changing. By the placing of the preschool and the piazza, the childrens play will continously redefine the block.

4. REFLECTIONS

4.1 The design issues and the learning process

In periods I have lost myself in a fixed distance focus, first in the present preschool situation in Gothenburg, then in drawing a new preschool from scratch, then in the rotating walls. This became clear during the examination, when the opponent saw the walls first only as product, he did not not perceive them as part of a larger whole. Why was that? Certainly they could easily be taken for being only a product; e.g. they share some common parts and could be repeated. But the walls are products closely related to a context, both defined by it and changing it through children interacting.

When the project started, I stood at a crossroads. Formulating the project description I brought the main question 'How can architecture facilitate for light to become a part of the children's play and research in preschool?' The question could have been investigated by working with modifications to existing preschools instead of drawing a concept for a new preschool.

Without being fully aware of the width they implied, the following sub-questions were put up:

- How can dynamics in architecture be created with light?
- In what ways can preschool architecture, influenced by the Reggio Emilia approach, contribute to a child friendly and sustainable urban development?
- How can interactive architecture be designed to become a part of the preschools exploration?

I was upset at the how preschool situation is handled in Gothenburg, at the same time curious of the Reggio Emilia approach to both early childhood education and architecture. I did not want to choose either or, either focusing drawing a preschool or design something that supports children's interaction with room and light. As a result of choosing to work on multiple levels I miss not having time to develop both the preschool and the walls further. It would be interesting to continue studying how the revolving walls work with light, i.e. light from different directions.

Architecture, interior design or product design? It has been a process for me to understand that a key feature of this work is the fluctuations in the scale from the children to the neighbourhood. How do the children alter light and spatial features by turning the walls? How does daylight change the experience of the rooms? How is the experience of interior / exterior changed by light changes? Here lies also the benefits of working on multiple scales levels: of studying the effects that a specific design decision has on several levels; and the opportunity to adapt and make changes to one part of the design in order to create a strong whole.

I found that the different scales require a similar (but not necessarily identical) presentation in order for their relationships to become clear. In some additional weeks after the

examination, I have worked with how the relations between the scales are presented. I have tried to work them closer together visually reusing and displaying certain colours throughout drawings, photos and pictures at different scales.

4.2 Relevance to stakeholders

THE NEIGHBOURS AND PASSERS

Building permits for central sites in Gothenburg are often reversed by residents and others, a possible reason for the extensive use of pavilions and temporary building permits. The proposed building would occupy a green spot in the neighbourhood, so I have aimed to give something back to the residents. Consequently, I have located the main entrances towards the streets and preschool rooms with diverse activities face the streets, thus contributing with safeness and life to the block. In addition, the location of the studio and indoor piazza in two of the building's corners could make the way to work or school more eventful for residents and people passing by. Those rooms would also function for exhibitions of the children's' work that could be viewed from the street. Parents on their way to collect their kids can get a first impression of the day at preschool. Not to forget however, the new residential building will shade neighbouring properties during part of the day.

PROPERTY OWNERS AND TRADE

The neighbourhood with its undefined street scene in the crossroad between Brunnsgatan and Västergatan, could have a stronger character with the new infill. A well-adapted new building in addition to adequate preschool places could enhance the economic value of the surrounding properties, welcomed by tenant-owners and house owners. I presume that more homes and workplaces would strengthen trade in the neighbourhood.

THE MUNICIPALITY

The proposed size of the preschool is consistent to the municipal guidelines that new preschools should have at least 3 sections.

THE CHILDREN

The 120 conceived children is a great number for a preschool, thus the design of the habitats would be crucial in order to satisfy the children needs for both rest and activity; to read in peace or use the whole body in lively role play. Imagining a design development of the habitats, an additional staircase / staircases might be added to facilitate a new connection between the storeys and reduce disturbance from peers passing by.

Inside the habitats the children would have visual contact with the street, the yard and the park, looking out they would be able to follow what happens in the city, to sneak on people, animals and cars.

In the part of the indoor piazza which faces the streets,

the children would be positioned in the same eye height as an adult standing on the street. The children would be able to use the revolving walls like a stage set for their games. I imagine the children bringing pillows, costumes, books or figurines one dag, while in the following month being provided by the teachers with materials with diverse reflective qualities to explore. Maybe the children would develop games in relation to the space and light they create.

The generous staircase in the indoor piazza could be used for story reading and theatre. The deep planes on the one side of the stairs would be a place for playing in between the floors, the play binding the storeys and people together.

In the large atelier children would be able to do a quick drawing or immerse themselves in lengthy projects, the kids would not have to stop and clean up their work between each meal. At the preschool yard, children could cycle or gather at a sheltered place underneath preserved trees. The play in the larger park would be affected by seasonal fluctuations where snow, plant material and insects could be materials for children's games.

THE PEDAGOGUES

The large size of the preschool and the imagined quantity of rooms could benefit educators in that they could choose to be responsible for one room and its theme, thus specializing on their own area of interest. Despite the physical distances between the working teams the piazza with its loft would allow spontaneous meetings between teachers and ease cooperation.

THE PARENTS

The hall, indoor market square and the small private yard would be places where parents could meet teachers, other parents and children. In accordance with the practices within Reggio Emilia there would be information and documentation of the children's projects for parents to take note of.

THE NEW RESIDENTS

The conceived residents of the new senior dwellings would have a large range of services and trade close at hand. All apartments should be able to get daylight from 2-3 directions. Residents would share a large terrace from where they could view the green park where preschool children play on weekdays.

4.3 Societal, ecological, economical and technical implications

Many preschools in Sweden are separate single-storey buildings, built 1960-1990, ideally located a bit secluded from the city hustle and bustle. The city of today is shaped by adults' agenda, places for children consist of school, home, playgrounds and organized activities. What does that reflect, what does that tell about the views on children?

The importance of children's free play in nature has often been emphasized in Sweden, not surprising in a sparsely populated country with a lot of greenery.

In contrast, the need for more preschools in Majorna / Linné faces the lack of vacant lots whilst many city dwellers want to preserve as much as possible of parks and green areas.

I have occasionally followed the discussions in recent years about how Gothenburg can become more child friendly city; for example a new tool for child consequence analysis has been developed in city planning, and 2012 was appointed Child Culture Year. Politicians see the need to highlight child perspectives when more families than ever are choosing to live in town; in order to reduce travel time, for the proximity to friends and the range of culture and entertainment. Surely, the city has a broad range of possible activities for both adults and children in leisure time.

Here lies a paradox: many children spend half of thier waking hours in prescchool, nonetheless pavilions are consistently used to solve the shortage of preschools.

In relation to the number of children who live in Gothenburg, you rarely see kids in the central parts. Children under 7, 8 or maybe 9 years, are always dependent on an adult accompanying them; their freedom of movement is limited. Motor traffic is one of many potential threats.

In conformity with Reggio Emilia, Svennberg and Teimouri (2012) believe in small children's capacity to explore issues of cityplanning and the formation of the future city. They further argue that children have unique experiences of their surroundings that differ from those of adults. The authors stress that understanding ones environment is as a precondition for participating in the social debate.

In this context, I question:
How can I design a preschool in Majorna Linné that puts the best interest of children first?

I have strived to create a new preschool with an urban character; it closes up to the street and continues up in an 8-story house. The goal has been to take advantage of the urban-like qualities, and explore how they can enrich children's preschool years. The location of the preschool allows children to get to know the city with its rhythm, and for people on the street to understand something about what is happening inside.

It would be an investment to build a new preschool and

new housing, which would have long-term consequences for the neighborhood for many years to come; some consequences for stakeholders are mentioned in section 4.2. Densification is not always a best choice, although it is often positive for the environment and means i.e. fewer transports.

One could imagine that the need for pre-school places would decline drastically in the future, and that the need for both the current temporary pavilions and a new preschool would disappear. However, unlike the temporary pavilions that would leave more or less tracks on the spot after they were taken away, I think that the proposed preschool would have so many general qualities that it could be used for other activities in case that the need would arise.

It would be interesting to compare the estimated long-term costs and benefits of realizing the proposal to the cost of the temporary preschool pavilions. Additionally, issues such as material selections, technical construction, floor plans and window placements would need to be developed when realizing the proposal.

References

ELECTRONIC ARTICLES

Andersson, Erik, Miss i prognoser bakom värsta kön i Majorna-Linné, Direktpress Göteborg, publicated 2011-10-30;
Flanke, Johan, Över 6000 nya förskoleplatser, Ny tid Göteborgsområdet, publicated 2011-05-30;
Samara, Adam 800 nya förskoleplatser, Nyheter P4 Göteborg Sveriges Radio, publicated 2012-18-24;
Åsberg, Johannes, Barnperspektivet, YimbyGbg, publicated 2011-09-10;
Boplats Göteborg, Centrum ska bli bättre för barnfamiljer, date of publication unknown;

PRINTED ARTICLES

Lauri, Tomas, Arkitekturen lyfter förskolan, Arkitekten nr. 3 2010;
Unknown author, Lika stor lekyta som en gris, GP, publicated 2011-01-18;
Unknown author, Fler barn - inte färre, GP, publicated 2011;
Unknown author, Politikernas löfte: Minskade barngrupper, fler nattis och utökade öppettider, GP, publicated 2011;
Unknown author, "Var är lekrummet?", GP, publicated 2011;
Liljemalm, Anna, Demonstration I kväll: Nu får det räcka, GP, publicated 2013-05-15;
Sydvik, Per, Agerar mot stora förskolegrupper, GP, publicated 2013-05-14;
Haptén, Annika; Norén, Maria; Grip, Cecilia; Örtegren, Sara; Martner, Gustav; Lundberg, Christer, Infria era löften om mindre barngrupper, GP, debate article, publicerad 2013-05

INTERVIEWS

Karrberg, Jonas, förskolelärare på Spekebergsgatans förskola, interview 2013-01-31

MASTER THESIS

Sääf, Anna, 2007, Att få sätta spår-om medbestämmande och platstagande på skolgården, examensarbete SLU;
Lövkvist, Ulrica, 2012, Barns fysiska lärandemiljöer i förskolan, examensarbete Göteborgs Universitet;
Sernhede, Fanny, 2011, Svaleboskogens förskola, examensarbete Chalmers tekniska högskola;
Olsson, Hedvig, 2012, En ny förskola i lerum, examensarbete Chalmers tekniska högskola;

BOOKS

Barsotti, Anna. 1986. Staden och regnet, ett temaarbete på daghem i Reggio Emilia. Upplaga 1. Distributör: Mariedamfilm AB;
Berg, Marjanna. Rapport R2:1983. Brukaranpassning och integration i anpassbara förskolor och fritidshem. Lund.

Lunds universitet;
Ceppi, Guilio and Zini, Michele and Branzi, Andrea and Rinaldi, Carla and Vecchi Vea and Petrillo, Antonio and Brunder, Jerome and Icaro, Paulo and Sarti, Alessandro and Veca, Alberto (ed.) 1999. Children, spaces, relations, metaproject for an environment for young children. Upplaga 2. Reggio Emilia, Milano. Reggio Children;
Colliander, Marie-Anne och Stråhle, Lena och Wehner-Godée, Christina. 2010. Om värden och omvärden, Pedagogik i praktik och teori med inspiration från Reggio Emilia. Upplaga 1. Stockholm. Stockholms universitets förlag;
Grut, Katarina (red.). 2005. Exemplet Reggio Emilia, pedagogik för demokrati och regional utveckling. Stockholm. Premiss förlag;
Ceppi, Giuilo, Zini, Michele, Branzi, Andrea et al, (ed.), 1998, Children, spaces, relations, metaproject for an environment for young children, Reggio Children;
Häikiö, Tarja. 2007, Barns estetiska läroprocesser, atelierista i förskola och skola. Upplaga 1. Göteborg. Göteborgs universitet;
Lenninger, Anna; Olsson, Titti, 2006, Lek äger rum:planering för barn och ungdomar, Stockholm, Formas;
Svennberg, Mie och Teimouri Mania (red). 2012. Barns rätt till staden, Om arkitekturpedagogik som demokratiskmetod i Göteborg. Movium;
Wallin, Karin.2001. Reggio och de hundra språken. Upplaga 1. Stockholm. Liber;
Wallin, Karin. 1993. Flygande mattor och forskande barn, om filosofin på ett daghem i Helsingfors jämfört med tankarna i Reggio Emilia. Upplaga 1. Stockholm. HLS Förlag;
Vecchi, Vea. 2010. Art and Creativity in Reggio Emilia, Exploring the role and potential of ateliers in early childhood education. Upplaga 1. Oxon. Routledge;
Vecchi, Vea och Giudici Claudia. 2008. Children, art, artists, the expressive languages of children, the artistic language of Alberto Burri. Upplaga 3. Reggio Emilia. Reggio Children;
Wik-Thorsell, Anna Lena. 1974. Berätta för barn utan bok och med. Upplaga 1. Falköping. Gummessons tryckeri AB;
Målaremästarna och Lokalförsörjningsförvaltningen Göteborg. Inspirationsguiden, rum för lärande. 2005, Modell för upprustning av skolbyggnader, distributörer: Målaremästarna och Lokalförsörjningsförvaltningen Göteborg;
Ecophon AB. 2002. Begränsa inte dina sinnen, ljudet och den lärande miljön. Upplaga 1. Hyllinge. Saint-Gobain Ecophone AB;
Barn och unga i fysisk planering, Stadsbyggnadskontoret i Göteborg, S2020, (initiators), 2012, BKA, Barnkonsekvensanalys;
Målaremästarna, LFF Göteborg, 2005, Inspirationsguiden-Rum för lärande;
Nr 6 Temaserie från Tidningen Förskolan, Lärarförbundets förlag och Tidningen Förskolan, 2004, Förskolans pedagogiska rum - med plats för alla sinnen;

APPENDIX

1. Project description
2-4 Inspiration boards for the theme

The end

How can architecture facilitate for light to become a part of the children´s play and research in preschool?

Background

Living in the urban district of Majorna-Linné in Gothenburg I daily pass by preschools accommodated in standard modules. Miss calculation of the number of small children in the population prognosis has lead to an extensive queue. With the use of standard modules Majorna-Linné has found a temporary solution. However the lack of places is not a new problem. It seems more families with children choose to live in the urban parts of Gothenburg than before.
Bulding permits for new preschools in the urban area are routinely appealed. The use of standard modules impairs the environment of the neighbourhood. The basic design of the modules has been done with adults as a target group. The scale is not suited well for children. The standard modules lack identity and doesn´t relate to the context of the site in scale, orientation, material etcetera. The fact that they are temporal obstructs feelings of belonging and activities making the environment a place of one´s own.

Can the preschool consolidate the neighbourhood environment? That is the belief in the district of Reggio Emila, Italy.

I began studying the Reggio Emilia view of the preschool environment as the third teacher and the entire environment seen as a workshop for the children´s autonomous learning. Over the years, through collaboration between educators and architects, a number of spatial categories and concepts have been developed. I recognized some spatial categories and concepts that would be interesting to work with in the urban district of Majorna-Linné. That strengthens both the neighbourhood district and the quality of the environment within the preschool:

- Architecture facilitating a dialogue between inside and outside
- Transparency
- Atmosphere with precise identity
- The school can be/is used outside school hours for gatherings
- Large spaces for communication and documentation both inside and outside

Reflecting on possible sites for new preschools I have decided to work with a site near the crossing of the streets Västergatan and Brunnsgatan. The site is interesting for the following reasons:

- The preschool Spekebergsgatans förskola with approximately 70 children is temporarily housing in standard modules at the site. It cannot move back into its former locales in Annedalsskolan and there is no solution to where it should go.
- There is a demand for preschool places.
- A new structure at the site has the potential of strengthen the street scene.

The site is interesting from a light and façade aspect since it has a street on one side, a green space on one side, a tramroad and a tramstop on one side and a footpath on one side. The area has a certain monotone character in spite of its mix of high-rise slabs, old school buildings and 19th family brick houses.

Further Reggio Emilia concepts for the preschool environment includes:

- A central piazza; a space for meetings, interaction and narratives
- Transformability/flexibility
- Filter spaces which let the inside environment sense what is happening outside
- An entrance that provide information of the school and its activities.

Objectives

Work with light and transformability as a theme to investigate how a preschool can contribute to a child friendly and sustainable urban development.

I want to research how interactive architecture for children can be created with light as a “material”. The light reforms and has narrative qualities. It tells about the time of day, the season, the weather, of what is happening outside/inside. Children in the Reggio Emilia preschools can experiment with light, by light tables etc.

Issues

How can architecture facilitate for light to become a part of the children´s play and research in preschool?

- How can dynamics in architecture be created with light?
- In what ways can preschool architecture, influenced by the Reggio Emilia view, contribute to a child friendly and sustainable urban development?
- How can interactive architecture be designed to become a part of the preschools exploration?

Target group and area

Preschool children, teachers and staff at preschool.

Conditions and limits

This practical part of the master exam last between w. 4-w.16. I have no real budget for the project, however I plan to go on a few small study trips. Maria Niklasson on Abako Architects will give external critique during the project time.

Because I will not have a specific client in this project, I will seek to discuss my work with a preschool teacher.

Implementation and timeplan

- thursday v. 3

Phase 1,

- Structure and formulate the project, project description

v.4-5

Phase 2,

- Investigate the architecture in different preschools through studyvisits and analysis
- Look for a site, place or existing building
- Discuss and choose one site/building

v.6-v.7

Phase 3

- Make a “reading” of the choosen site and develop a number of proposals
- Create a moodboard/imageboard
- Discuss and decide focus, objective

v.8-v.10

Phase 4

- Line up goals, requests to ease additional research
- Investigate how the users could interact with the architecture

v.11

Mid presentation

12, v.14-16

Phase 5

- Develop a design with the aim of modelwork, drawings, 3D modelling etc.
- Create presentation material, prepare for oral presentation

v. 17

Present the work

v. 18-wednesday v. 21

Phase 6

- Write report

V. 22

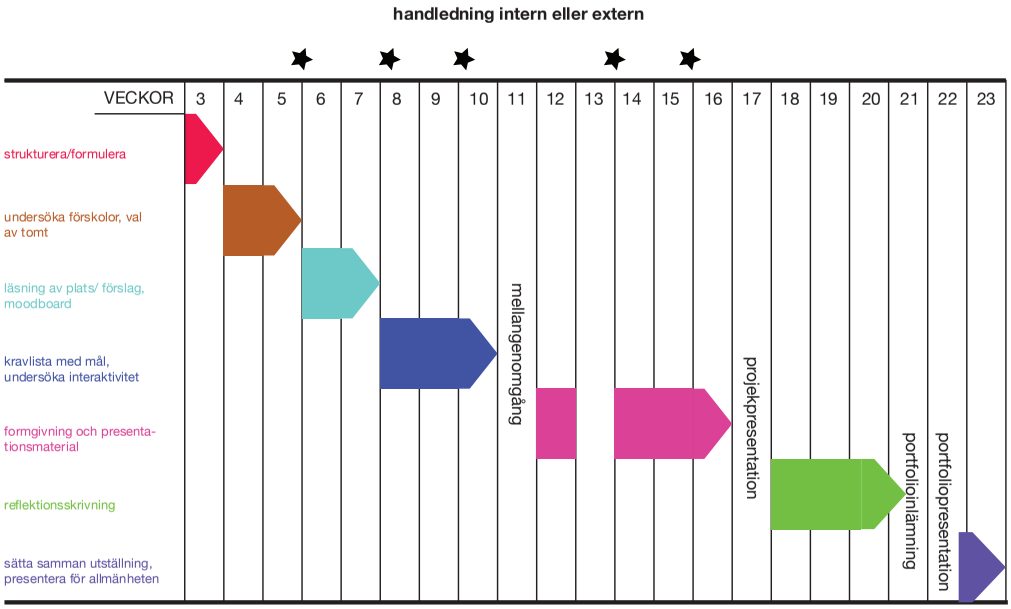
Portfolio presentation

thursday v.22 – friday v.23

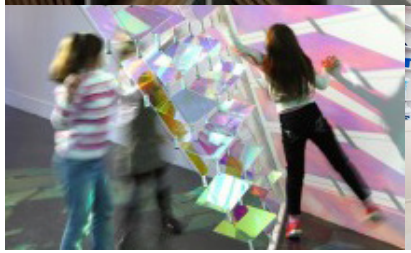
Phase 7

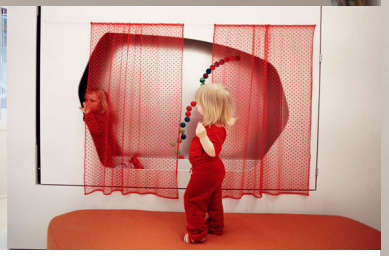
- Present work and report
- Make exhibition

TIDSPLAN

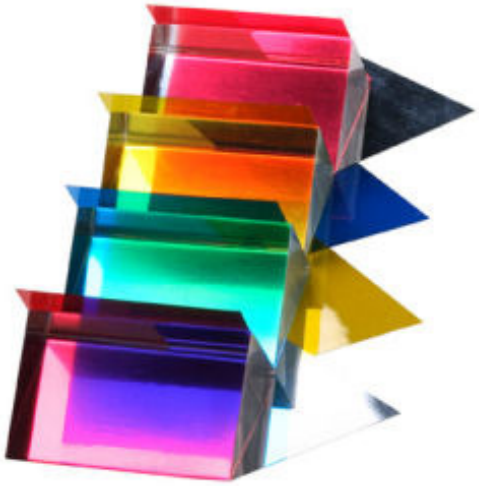


INTERACTION AND LIGHT





COLOUR, REFLECTIONS, SHADOWS



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