EXPLORING CURIOSITY

A preschool for small humans to grow

Maria Danho
Master Thesis 2026

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Abstract

Preschools in Sweden are expected to provide high quality educational environments, yet reports show that many fail to meet required standards due to insufficient support in areas such as staff development and pedagogical practices. With approximately half a million children between ages 1 and 5 years enrolled in the school sector, preschools play a central role in children's daily lives, as many spend several hours there each day.

The project examines how a preschool can be designed with children at its centre where architecture actively supports play, development and social interaction. The theoretical framework has guided the design choices with measures such as careful zoning to establish a clear and spatial structure that balances active as well as quieter environments. The spatial experience has been central to enhance the child's scale and perspective, with the intention of creating a coherent and inspiring environment.

The design proposal consists of a preschool of one storey with four departments and a central common space, located in the northern part of Mosås, in southern Örebro. The site is currently reserved by the municipality for a new preschool, while the area is under development with new housing planned around the site. This has also been the main challenge of the thesis as the lack of an established context made it difficult to relate the preschool to its surroundings. The proposal has therefore been illustrated with an example of what future neighborhoods in the area could look like.

The design draws inspiration from both pedagogical approaches and built examples, including Reggio Emilia and Montessori pedagogy, as well as preschools such as Råå förskola and Kindergarten Elsa Triolet. The chosen methods were applied across different stages of the process, where case studies and an extensive sketch phase formed the core of the work, while study visits provided first-hand spatial understanding and theoretical research deepened the knowledge of child-centred environments.

Key words: Pedagogical principles; Learning spaces; Spatial Design; Child-focused design

Acknowledgement

I would like to thank Isabella for her constant motivation and thoughtful insights. Björn for his valuable critique and feedback. And Sofia for her good advice and support. I am also grateful to my family and friends for their patience and companionship throughout this project.

Stort tack!

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INTRODUCTION

Purpose & Aim

Preschools should be places where children can play, explore and prepare for future schooling. The environment should be adapted, inspiring and supportive of the child's overall development. A recent report by the Swedish National Audit Office (Riksrevisionen, 2025) shows that many preschools in Sweden fail to meet required quality standards, often due to insufficient governmental support. The preschool sector is one of the largest in Sweden, with around half a million enrolled children, but in insufficiently supportive environments, children risk not receiving the stimulation necessary for their development. (Riksrevisionen, 2025)

The universal preschool system ensures that all children, from the year they turn three, are entitled to 525 hours of preschool education per year, corresponding to approximately three hours per day during the school year. Some children start preschool as early as one year old. (Skolverket, 2025a)

In addition to the free hours, it's common for children to attend preschool for longer than three hours, especially when their guardians are working. Ringdahl (2025) discusses a study conducted by the Swedish Association of Local authorities and Regions showing that children spend an average of 5.4 hours per day in preschool. Skolverket (2025b) also reports that up to 87 % of all children between the ages of 1 and 5 are enrolled in preschool. This indicates that many children spend several hours of their early years in environments outside their homes and away from their parents.

In an article by Pihlgren (2021), research shows that open floor plans can make it difficult for children to concentrate and find a sense of calm. According to a report by the Swedish Civil Contingencies Agency (MSB, 2011), rooms with doors also pose a risk of pinching for young children and are a cause of many accidents. Furthermore, it has been reported that approximately 7,500 children are injured each year in preschool environments, with one-third of these accidents occurring indoors, including pinching in doors, cuts from sharp objects and falls from stairs. MSB (2011) also summarizes that the most common type of accident, both indoors and outdoors, are falls caused by environments that aren't adapted to the users. Examples include doors with high thresholds, surfaces not designed for climbing and doors with pinching hazards.

According to Business Region Örebro (n.d.), Örebro is one of the fastest-developing cities in Sweden. Örebro Municipality (2022) is preparing new housing developments and has a planned detailed development plan for the northwestern area of Mosås, where they intend to create new residences, a smaller town center and a new preschool.

"We shape our buildings: Thereafter they shape us." (Churchill, 1943)

Children are our future and it's important to provide them with the best possible conditions for development. This involves creating safe and educational environments from an early age, giving them the opportunity to grow and explore. Architecture can shape spaces and environments that spark curiosity and stimulate the human senses.

This thesis investigates how a preschool can be designed and adapted for its users, while fostering an inspiring and safe environment for growth. The project examines how architectural design can incorporate pedagogical and spatial principles that support children's development.

Figure 2. Map over Örebro, Source Lantmäteriet.

Thesis Question & Objectives

How can design choices of material and space create a preschool environment that supports children's development based on pedagogical approaches?

The objective of this thesis is to develop a preschool design for a site in Mosås. The project will result in a comprehensive architectural proposal presented through drawings, 3D visualizations and physical models. It aims to demonstrate how spatial and pedagogical principles can be integrated to support children's development and everyday activities.

Method

Case Studies. A selection of built projects have been analyzed to gain a deeper understanding of how a preschool environment can foster and enhance creativity and learning. The analyses have varied in their focus across individual projects. Some have concentrated exclusively on flow diagrams and materials, whereas others have examined structural systems and spatial environments.

Study visit. A study visit to one of the preschools in the area took place during the early design phase to understand how daily routines could be structured. The purpose was to gain insight into the sequence of activities throughout the children's day, as well as to understand what functions well in an established preschool environment and what does not.

Literature. Theory regarding pedagogical principles has been studied to establish a fundamental understanding of practical design strategies. The findings served as guidelines throughout the design phase of the project. Additionally, literature addressing children's development and their needs in learning environments was reviewed to broaden this understanding. This provided clear and reliable information on what is required to design an effective preschool environment.

Sketching. In order to develop and a proposal for the preschool, a sketch phase was introduced during the early design stage. This method served as a way to "kill your darlings," allowing the best ideas to be identified and developed with strong justification for design choices. The sketches also functioned as a tool to communicate the main ideas before moving on to the detailed design stage.

Models. In addition to the sketch phase, simple concept-based models were built to create a clear understanding of the relationship between volume and space. This process supported the development of the main concept and helped eliminate less successful design choices.

Delimitations

An ongoing debate in Swedish society concerns the low birth rate and the potential future shortage of children. However, this doesn't directly affect the project, as the site in question currently has an active need for a new preschool due to the high number of families with young children in the area. The long waiting lists at existing preschools, clearly indicates a strong demand for additional preschool places.

This thesis focuses primarly on the interior preschool environment. The exterior environment and the schoolyard have been given a lower priority, partly due to time constraints but also because the subject concerns another part of architecture that is outside the chosen profile.

THEORY

Reggio Emilia. Ceppi and Zini (1998) describe how this pedagogical approach is applied in preschools and emphasize that the school environment must be flexible as well as be able to adapt to the children's needs and the demands of the day. The environment should accommodate changes throughout the day and over the long term. Through the use of adaptive architectural elements, the school environment can be subdivided into smaller, more intimate spaces, while also allowing for expansion and growth over time. The physical environment is regarded as the "third teacher," with all spaces functioning as workshops where children can explore and develop their autonomy. Preschools feature varied environments, yet certain functions remain consistent across different settings.

Ateliers. Studio and atelier spaces provide children with opportunities to explore and experiment with a variety of materials. These spaces complement the more "everyday" areas and allow children to engage with their creativity while supporting their learning processes.

Piazza. The piazza is a larger, central, communal area within the preschool. It serves as a meeting place for all groups and facilitates collaborative activities. Its purpose mirrors that of a town square, bringing together different people and activities in a shared, interactive space.

Essay. Jeanette Kunsmann (2025) writes in her essay Shaping Society that architecture for children should adapt the environment to their needs and offer a variety of spatial conditions, as all children are different. She relates this to Reggio Emilia, as the environment is considered the "third teacher," arguing that the entire building plays a role, not only spaces designated for play. Kunsmann highlights that areas such as hallways, wet rooms, and coatrooms should also be understood as environments for exploration and learning. For example, seating areas can provide opportunities for climbing, while furniture can be arranged to support interaction and social exchange.

Maria Montessori. Mark Dudek (2005) explains how Maria Montessori developed her pedagogical methods in her kindergarten, The House of Childhood. Based on her background in medicine and psychology she initially developed methods to support children with special needs in their learning and development. Her methods showed such good results and were later applied to typically developing children as well.

The house of Childhood consists of three classrooms with access to adjoining wet rooms and cloakrooms. The kindergarten was primarily one storey with the exception of the staff area and one external classroom located on another floor. All the furniture required to be movable and scaled to the height and size of a child, allowing for flexible arrangements depending on the activity.

A central principle in her pedagogy was freedom. Children were first shown how to perform tasks and then encouraged to carry them out independently. Montessori emphasised the importance of observation, children absorb knowledge by watching and gradually build the ability to do things by themselves, supporting their initiative in everyday activities.

Fredrich Fröbel. In an article by Sunnat Qosimov (2023), the pedagogical approach of Friedrich Fröbel is summarized. During the early 19th century, Fröbel developed ideas of what later became the foundation of the modern preschool. He believed that children were like plants in a garden that need care and nourishment to grow, which led to the term "Kindergarten". A central part of his pedagogy was the role of play in learning. He argued that children who play, develop an understanding of their environment as well as their social and cognitive abilities. Kindergartens often included activities such as dancing, singing and gardening. He also emphasized the importance of free play, an activity where children had the time and space to take initiative and decide how to play without involvement of an adult. This was seen as a way to develop independence, concentration and logical thinking. To support children's play, he introduced toys in different geometric forms, intended to reflect shapes found in nature.

Mosjö förskola. It is chosen due to its location and one storey volume, which are relevant to this thesis. The building contains a variety of functions, which complicates everyday routines for both staff and children, partly due to its age. For example, the only connection between departments is through the playrooms, which disturbs the children and creates a complex, almost labyrinthine experience when moving through the building. The staff area is also connected to one of the departments, disrupting children's play when staff members pass through. Within the departments, however, there is a simple and logical spatial structure, allowing children to move freely between the spaces.

Discussions with staff reveal which improvements they would have preferred if the opportunity to add new functions had existed. One of the main issues is the lack of a designated dining hall. Having lunch in the same room where the children usually play contributes to higher noise levels and a lack of calmness. In contrast, preschools with a separate dining hall can provide a calmer atmosphere and a clearer separation between activities.

Some staff members also have experience working as substitutes in several different preschools and explain that one storey preschools are preferable from both a child's and a staff perspective. One reason is that the movement between indoor and outdoor environments becomes easier, as children are less dependent on adults when transitioning between the two.

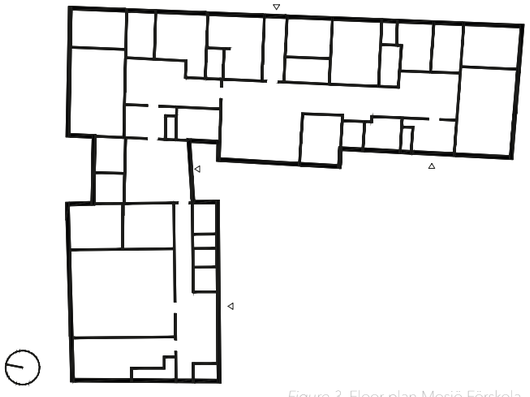


Figure 3. Floor plan Mosjö Förskola.

Lustigkulla Förskola, Knivsta
Arkitema 2017

The preschool has been designed according to a pedagogical approach emphasizing science and technology, with the objective of integrating educational experiences within a playful and engaging environment for children. The facility is organized into clearly defined sections and zoned rooms, each dedicated to specific functions and learning objectives. These sections are interconnected through shared spaces, such as the dining area, which additionally provides visual access to the kitchen, allowing children to observe meal preparation processes.

The common areas are intentionally designed to be easily accessible for the children and can be partitioned or adapted as needed to support different activities. Furthermore, the preschool includes an indoor winter garden, which serves as an educational tool for teaching children basic principles of gardening and plant cultivation.

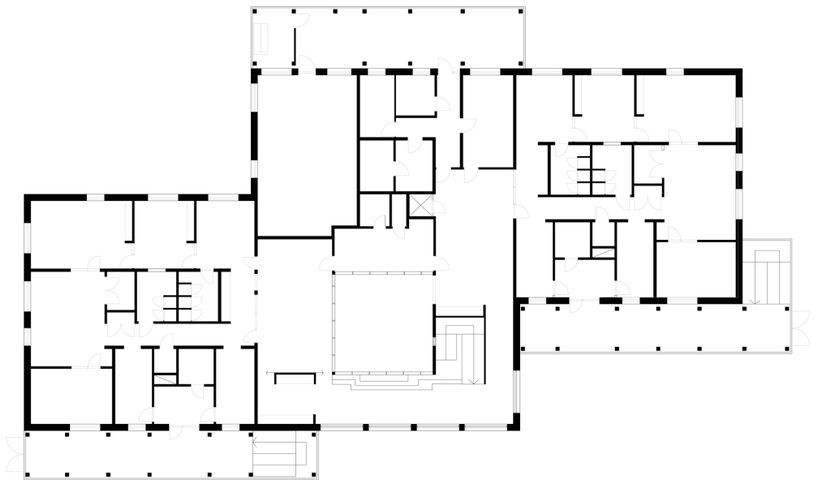


Figure 4. Floor plan Lustigkulla Förskola.

Leisure Center Jules Ferry School, France
DEMIAN 2025

The architects have integrated the large building into its surroundings by designing gabled roofs at different angles on the one storey structure, allowing it to blend harmoniously into the area. The main feature of the preschool is the exposed roof construction visible from the interior, which provides the indoor spaces with a generous and airy atmosphere. The construction continues outdoors, creating a protected environment where children can play without being directly exposed to the sun. The playground is filled with edible fruits and berries, offering opportunities for exploration and learning in an environment that is otherwise filled with movement and play.

The light and simple colors of the interior create a sense of calm and harmony in a usually energetic space. The preschool has a central hallway that runs through the building and connects the different functions of the house. The furnishings are built-in and adapted to the users, supporting independence and enabling children to use the environment on their own.

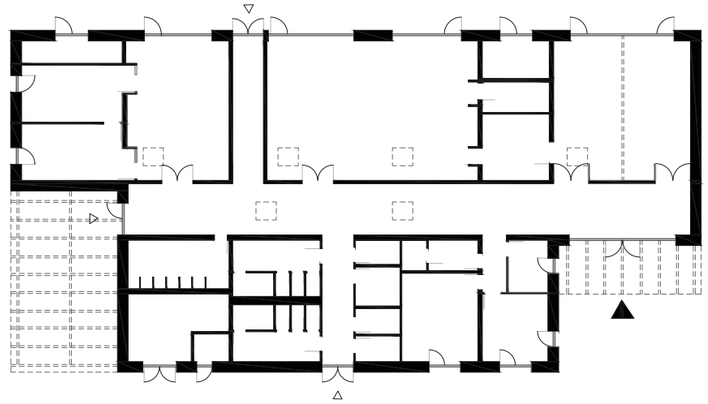


Figure 5. Floor plan Leisure Center Jules Ferry School.

Kindergarten Elsa Triolet, France
Richter Architectes et associes 2024

The architects have made conscious material choices for the building and have worked to create clear connections between indoor and outdoor spaces. The building is not only a preschool but also contains clear defined areas for different functions, even though they are located under the same roof. All the departments have a direct connection to the outside and have their own access to the playground. The architects have worked with natural light from above through skylights, which contributes to a sense of openness.

The floor plan of the preschool follows a rational structure with a clear connection between room functions and departments, which contributes to a good sense of orientation for the users of the building. The rooms have a simple and minimalistic environment, created through the use of soft wood and light interior walls. This interior allows children to imagine freely and create their own play environments.

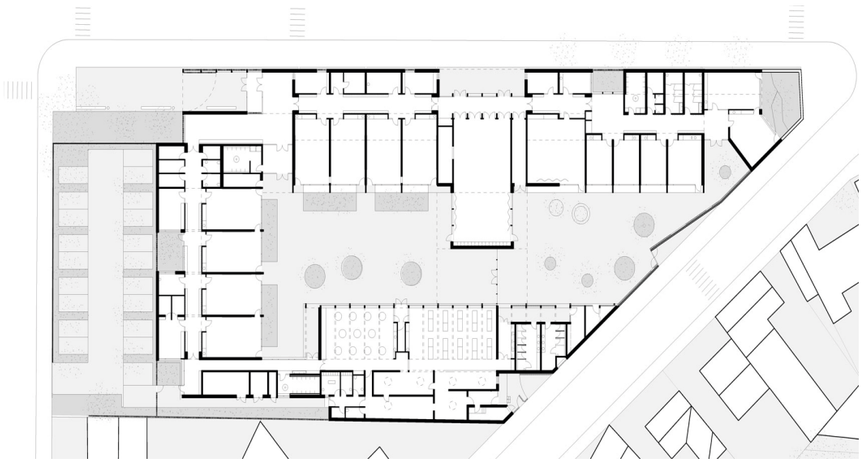


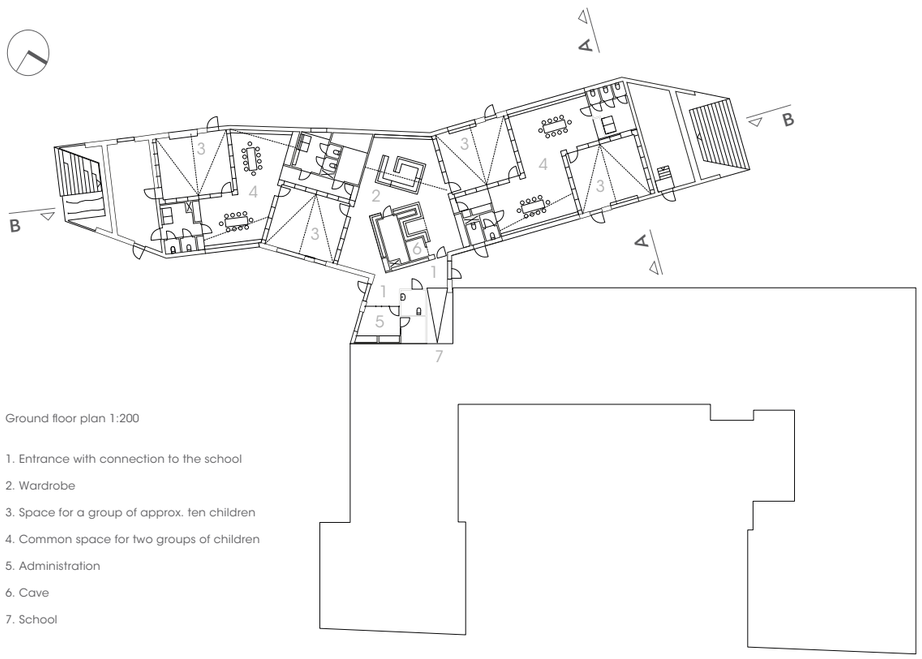
Figure 6. Floor plan Kindergarten Elsa Triolet.

Figure 7-9. Images of Kindergarten Elsa Triolet.

Råå Förskola, Helsingborg
Dorte Mandrup 2013

The departments are placed with a space between each other, creating a generous central common area and giving the preschool an open floorplan through the building. Room dividers are both functional and practical with built-in shelves and storage that allow children the opportunity to store their toys and equipment independently. The accessible furnishings strengthen the children's independence, enabling them to bring and return relevant material for play and learning. The interior follows a cohesive style, with light green flooring and plywood throughout the building in both furnishing and walls.

The preschool maintains a strong connection to the outdoor spaces and surrounding landscape through generous windows along the entire building, which contributes to good daylight conditions. Each department has its own roof structure allowing additional natural light entering through the ceiling. The design for the preschool is inspired by the surrounding landscape in the area and its close connection to the coast, which also provides with beautiful views.



Ground floor plan 1:200

1. Entrance with connection to the school
2. Wardrobe
3. Space for a group of approx. ten children
4. Common space for two groups of children
5. Administration
6. Cave
7. School

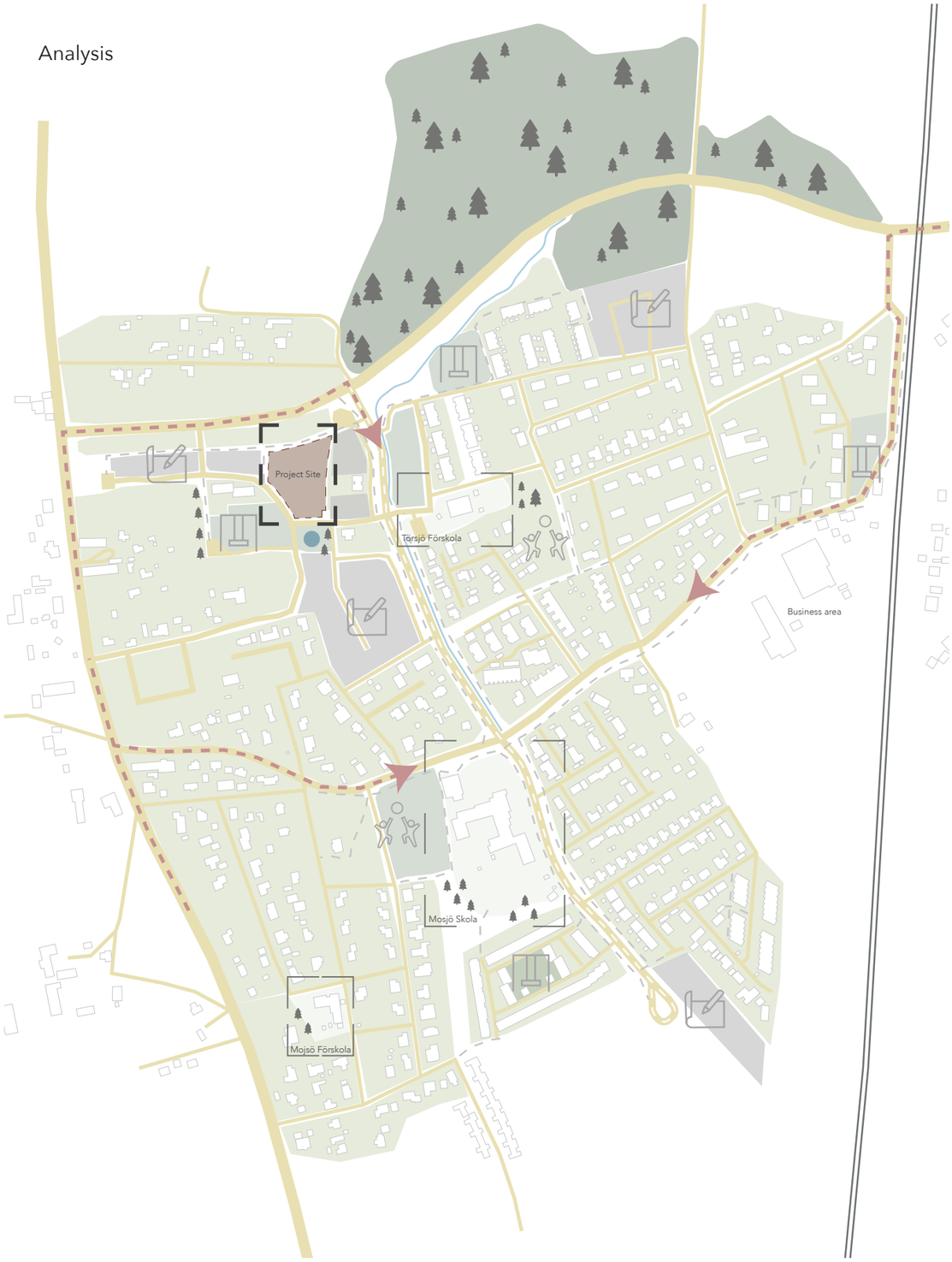
Figure 10. Floor plan Råå Förskola.

Figure 11-13. Images of Råå Förskola. Credit: Adam Mørk

THE MAIN MATERIAL

Figure 14. Exterior perspective of entrance.

Analysis



Area entrance

School/Preschool

Project Site

Planned new housing

Tree areas

Sport field

Playground

Bus route

Car road

Pedestrian road

Figure 15. Site analysis

Mosås is located approximately 10 km south of Örebro's city center. The area mainly consists of private villas and rowhouses. Some of the villas were built in the early 1900s while others were constructed in the 2000s. The rowhouses are between 2 and 10 years old, and several new housing projects are planned for the area.

The area has an existing primary school that serves children from preschool class up to sixth grade. There are also two preschools, one of which was built in 2021. Despite these facilities, there's already a need for an additional preschool, both due to the municipality's planned residential expansion and because many young families already live in the area. The distance to the nearest shops and services is about 1.5 km. The range of local services within Mosås is very limited and currently consists mainly of a pizzeria and a few car related businesses.

Public green spaces in the area are limited, as most homes have private gardens. However, there are a few smaller playgrounds that serve as communal meeting places, as well as a football field located close to the primary school.

To the west of the area runs road 690 (the old Kumla Road), which connects to Örebro's inner city in the north and Kumla in the south. To the east runs the railway line between the same two locations. Mosås is largely surrounded by farmland in all directions, with a smaller forest area to the north.

Mosås has one main residential street with two side streets connecting to Kumla Road. Between these streets are local neighborhood streets serving the residential parts of the area. Public transport runs along the main residential street, providing accessibility to Örebro.

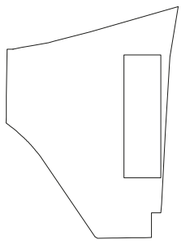
The architecture is clearly characterized by the use of wood as a building material, both in facades and structural components. A few of the older houses and the old station house have brick facades, while some others are plastered. The area mainly consists of two-storey buildings, with a few apartment buildings in the northeastern part reaching three storeys.

Figure 16-21. Images of the site.

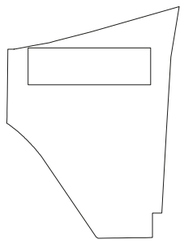
Design Process

The sketch phase started with an analysis of the building's placement on the site. Consisting of the shape of the site together with a simple rectangular volume the study explored the effects of sun orientation, shading and the building's relationship to the street.

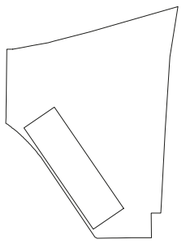
Furthermore the guidelines for the building were set. All departments required entrances facing the courtyard, while staff areas were given a separate entrance, the common room needed to be centrally placed and "dirty zones" were not to be mixed with clean areas.



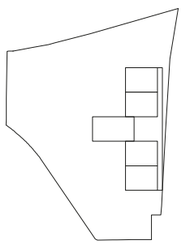
+ Welcoming from the street, clear entrance placement
- Limited shadows



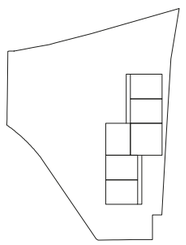
+ Welcoming from the street, clear entrance placement
- Limited shadows, limited road accessibility



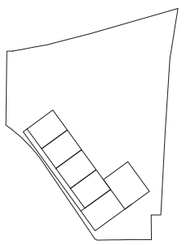
+ shapes the area, provide shade on the playground, good road accessibilty



+ Department entrances facing courtyard, separate staff areas, common room central
- limited daylight access to staff area, staff dirty zone through clean corridor



+ Department entrances facing courtyard, separate staff areas with good daylight
- Staff entrance via courtyard, department dirty zones through clean corridor



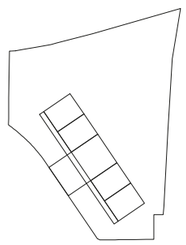
+ Department entrances facing courtyard, separate staff areas with good daylight
- Common room too far away from the center, too long corridor

Figure 22. Shape study.

After multiple iterations of form and program placement the preschool developed into a rectangular volume with a protruding staff and kitchen wing along the outer long side facing the street, this enabled for good access of daylight in both kitchen and staff area while maintaining a central position for all the departments. The protruding volume also provides separate and private zones for both delivery and staff entrance.

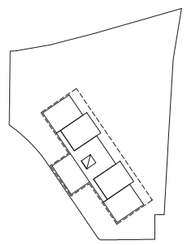
The common area is also centrally located and oriented toward the courtyard creating a direct connection between indoors and outdoors. Each department has its own entrance toward the courtyard, good daylight access from two directions and an easy and efficient connection to the common area via its clear corridor.

Once the overall volume was set the design process continued into a more detailed phase, focusing on refining the proposal in parallel with floor plan and facade design.

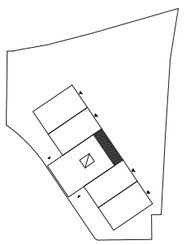


First draft of the shape

Volume had a too long corridor and the facade was too long and uninviting towards the courtyard. An overall flat volume without interesting corners.



By pushing back the outer departments the corridor was reduced, strengthening the spatial connection between staff and departments. The atrium serves both a functional role and enhances the access of daylight throughout the space.



The roof was extended, enabling shadow while also giving a cohesive appearance from above, although each module shifted. Part of the roof features an exposed structure, creating a bright and weather protected area for children during play.

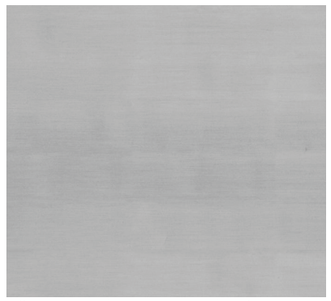
Figure 23. Iteration of design.

Building Materials


Wood panels for facade


Window frame

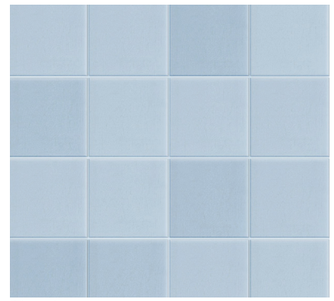

Roof tiles

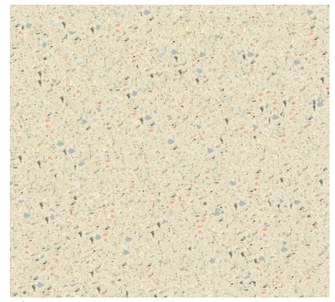

Alluminium sheet window detail


Concrete ground in atrium


Pine wood for pergola

Figure 24. Exterior materials.


Tiles in wet rooms


Flooring entrance & wetrooms


Flooring play rooms

Walls

Furniture

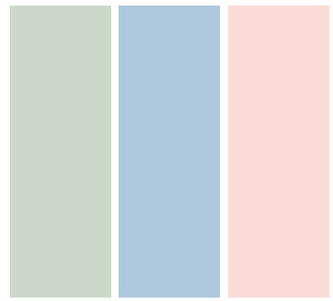

Furniture

Figure 25. Interior materials.

Figure 26. Site plan 1:1000 [A4]

The placement of the building helps define and activate the new residential street, with service functions facing the street. The arrangement provides a vehicle-free courtyard on the quieter side, sheltered from traffic and overlooking the neighbouring villa gardens. The preschool entrance for children and guardians is the first natural point when arriving along the new residential street and signals the building's public character while providing easy drop-off access. The building's orientation also provides natural shade to the courtyard during the afternoon hours, improving comfort for outdoor play. Additionally, the public park across the street is easily accessible via the two exits from the preschool playground.

Space Program

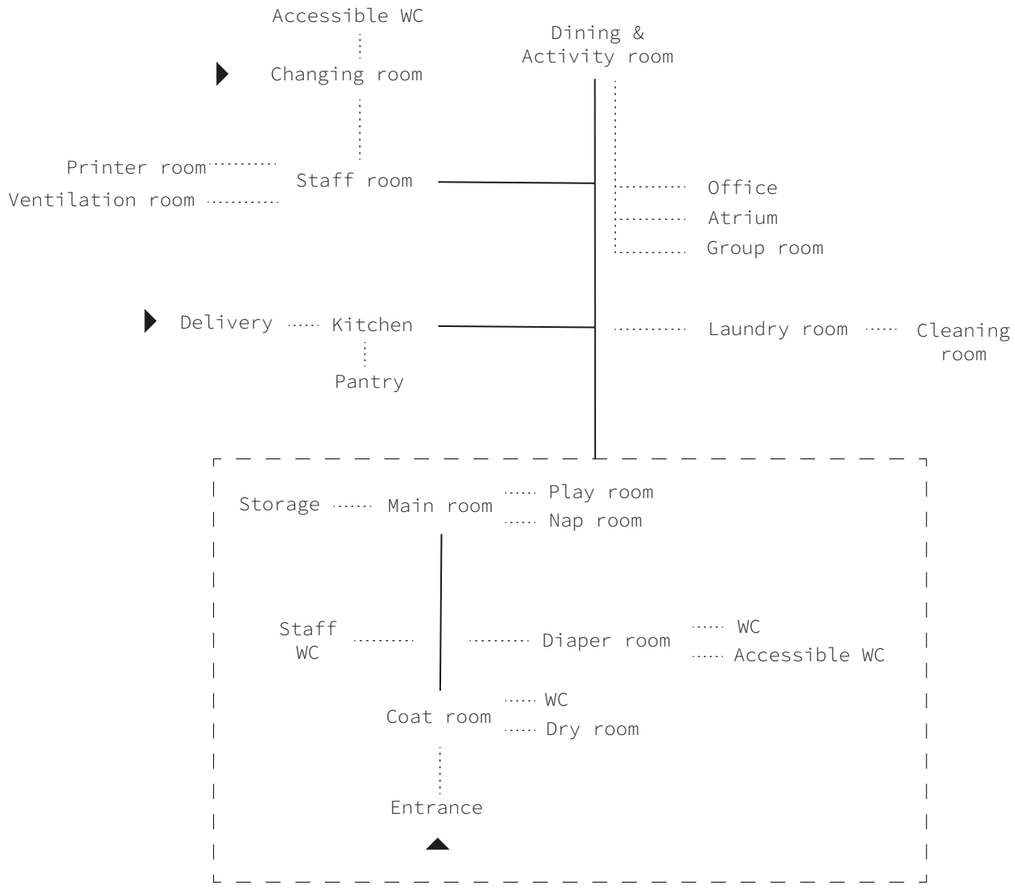


Figure 27. Space program.

(4x) Departments	m^2
Main room	39
Nap room	20
Play room	15
Storage	2.8
Staff WC	1.9
Hallway	5
Entrance	4
Coat room	16.5
WC	1.5
Dry room	2.8
Diaper room	13.9
WC	6.6
Total	129 (516)

Staff	m^2
Group room	14.8
Office	12.5
Staff room	31
Printer room	2.7
Changing room	6.9
Accessible WC	4.8
Kitchen	39.5
Pantry	3
Delivery	8
Cleaning room	3
Laundry room	6.7
Ventilation room	62
Total	194.9

Shared spaces	m^2
Dining &	
Activity room	76.5
Atrium	18
Hallway	101
Total	195.5

In each department: 18 children with 3 teachers

4 departments = 72 children in total

Playground 35 - 40 m^2 per child

Space zones per child m^2

Active play	20
Calm play	6
Physical play	14
Total	2880

Site area 5500 m^2

Outdoor functions	m^2
Footprint of building	958
Bycycle parking	40
Car parking	92
Drop off/ Pick up zone	285
Delivery zone	100
Playground	3350
Storage (x4)	10 (40)
Staff outdoor space	75
Total	4655

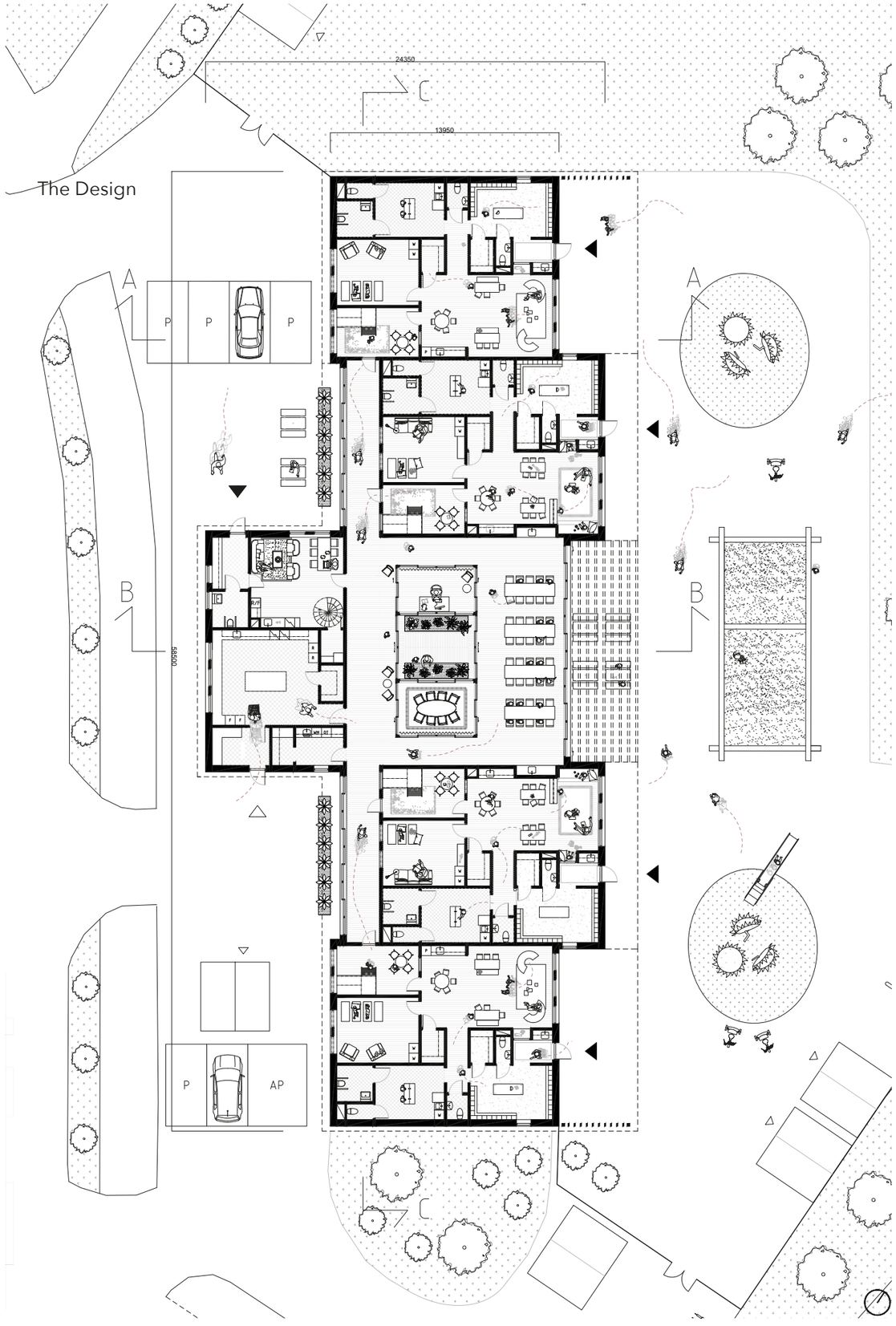


Figure 28. Entrance floor 1:300 [A4]

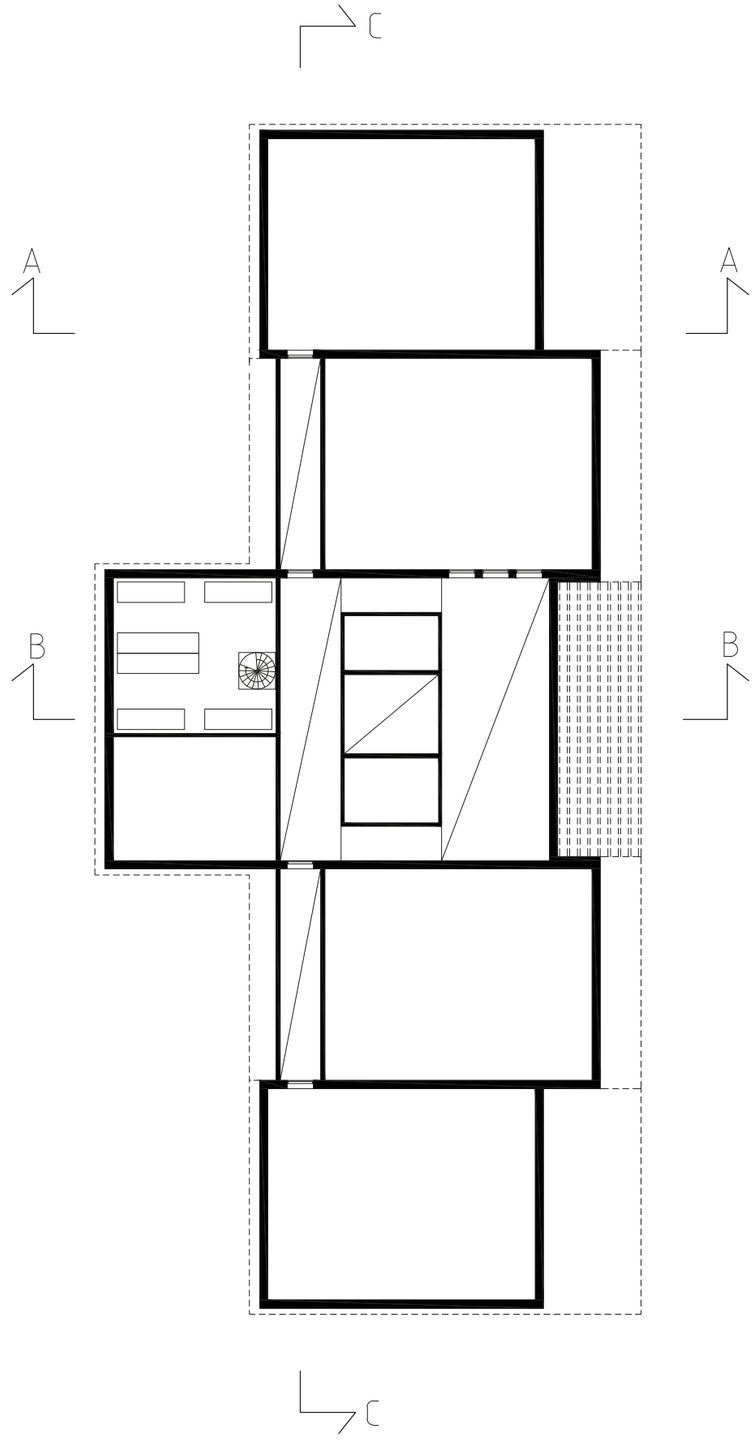


Figure 29. Second floor 1:300 [A4]

Figure 30. Section A-A 1:300 [A4]

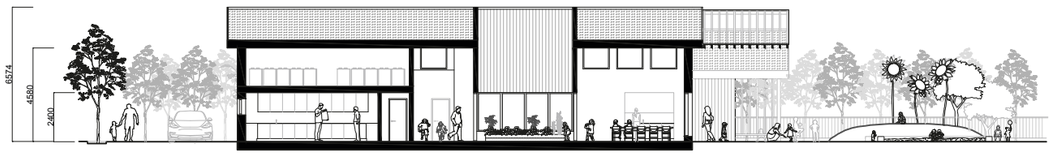


Figure 31. Section B-B 1:300 [A4]

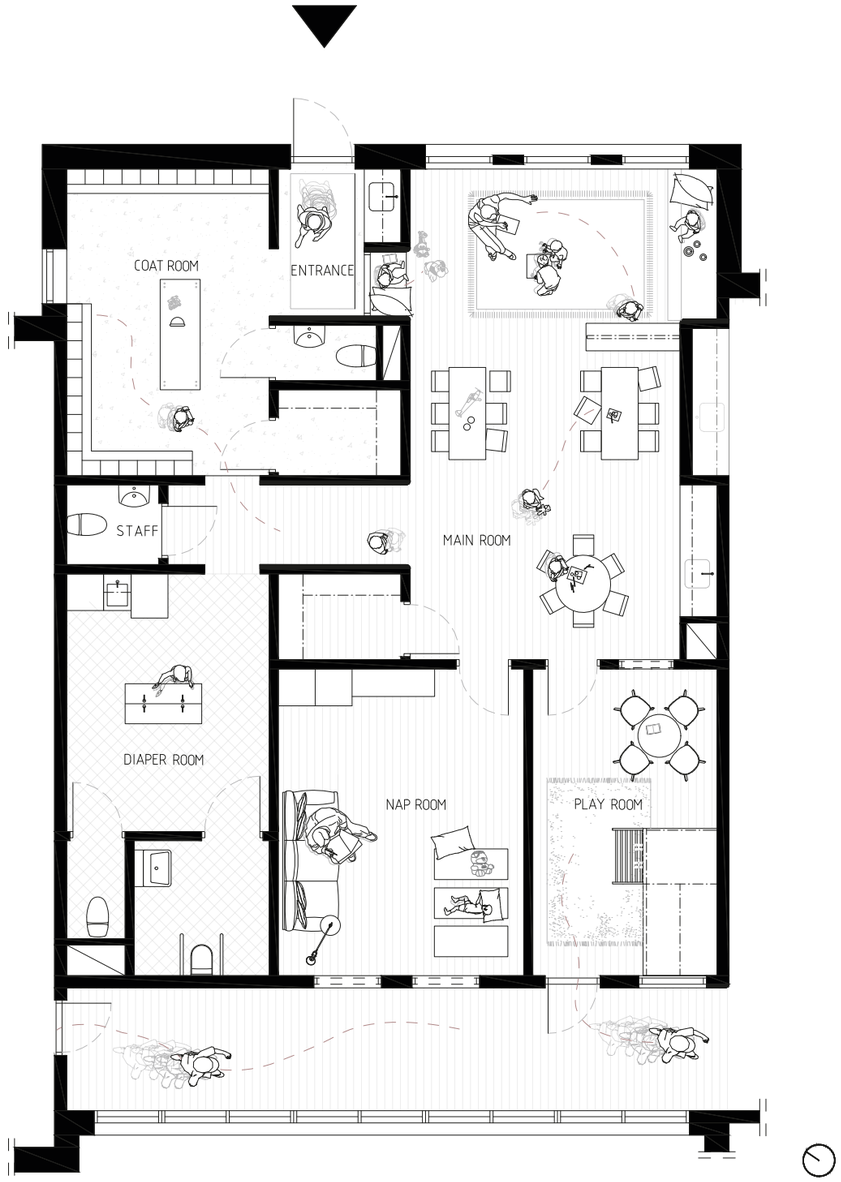


Figure 32. Department inzoom 1:100 [A4]

Each of the departments are designed with identical layout and have the same spatial features, this to ensure equality no matter which department the children attend.

From the entrance there is a clear visibility to the main room via a full-length window, creating an open and airy atmosphere. The window also forms a seat niche allowing the children to climb up to and sit, and play in a more intimate space while still remaining connected to everyone. To access the corridor of the preschool, all departments are connected through the smaller play room to create accessibility and maintain the similar floorplan for each department. The play room also provides a calmer space and more secluded environment for children in need of a reduced surrounding, it features and encourages exploration with a built in climbing playhouse.

The diaper room serves as both a functional space for changing and bathroom visits but also as a playful environment, with a central fountain-like sink the children can use the room for water play while being in a water protected area.

The departments are designed with long sightlines across multiple rooms, creating an open and spatial environment while still maintaining strongly defined rooms. Internal windows vary in height within the department to create different sightlines for both children and adults. For example the smaller play room has a low window positioned close to the floor for seated children to see through, as well as a much higher window aligned with the built in playhouse.

Figure 33. Perspective of department.

Figure 34. Seating nisch perspective.

Figure 35. Perspective of diaper room.

Figure 36. Corridor perspective.

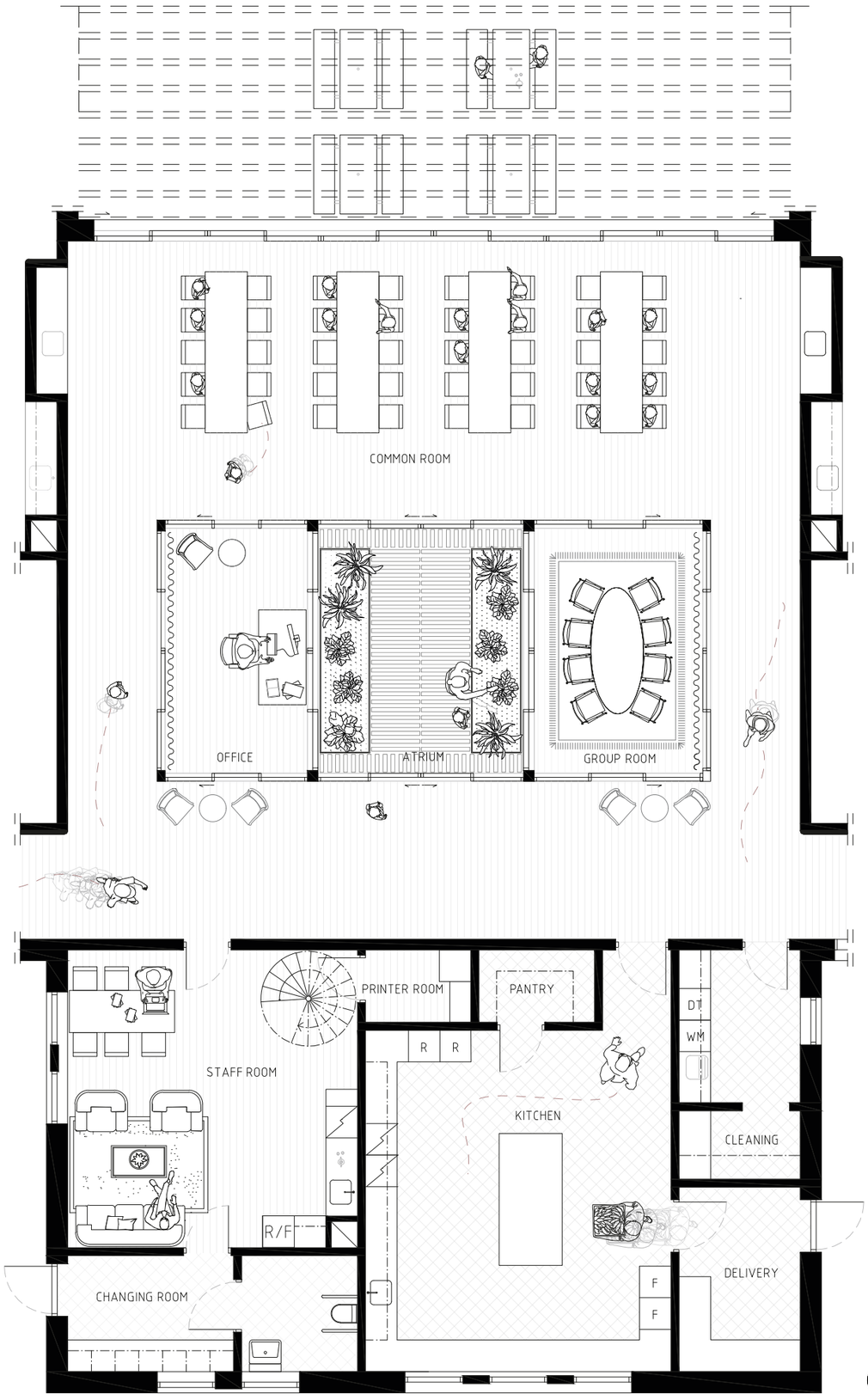


Figure 37. Central volume inzoom 1:100 [A4]

Right in the center of the preschool lies the atrium to create an educational space for children to engage in simple gardening activities and learn through interaction. The central volume functions as the shared space between the departments and connects the external wing of staff functions and kitchen.

The activity room is designed as a flexible space, with a main purpose of being a dining hall during lunchtime. It offers a visual connection to both the atrium and the playground and enhances a scene of spaciousness with its doubleheight ceiling.

Beside the atrium is both the principal's office and a group room for meetings and calls, both rooms are fully glazed with frosted glass to maintain a sense of privacy while being visible. The central rooms are positioned closer to the activity room, creating a possible place for an informal waiting area while also reducing the otherwise long corridor.

The kitchen functions mainly as a preparation area where lunch is delivered, but it is also equipped for simpler cooking. Next to it is the staff's main room where they take breaks and meet colleagues. From here there is also access to the only part of the building with a second floor which is used for the ventilation systems.

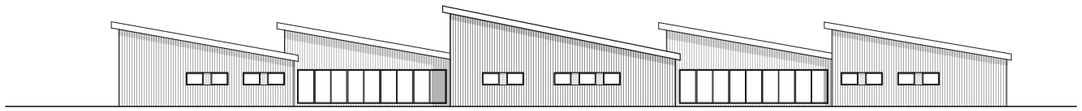
Figure 38. Perspective of activity room.

Figure 39. Perspective of atrium.

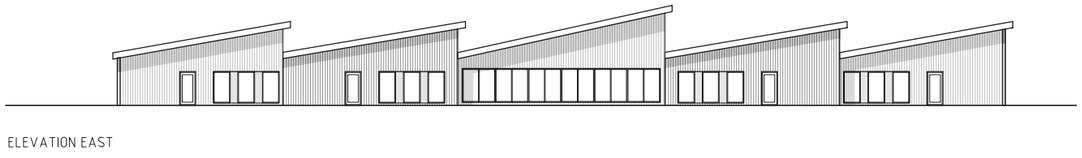
Figure 40. Office perspective.

Figure 41. Group room perspective.

Figure 42. Perspective section C-C 1:150 [A4]

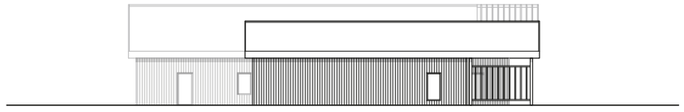


ELEVATION WEST

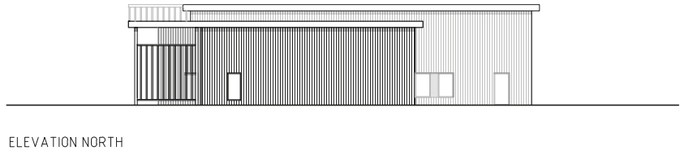


ELEVATION EAST

Figure 43-44. Facade facing west and east 1:400 [A4]



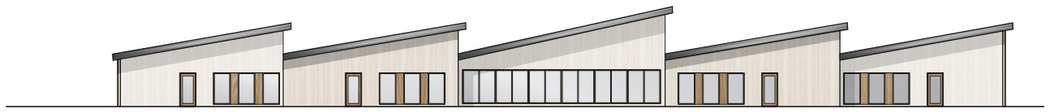
ELEVATION SOUTH



ELEVATION NORTH

Figure 45-46. Facade facing north and south 1:400 [A4]

ELEVATION WEST



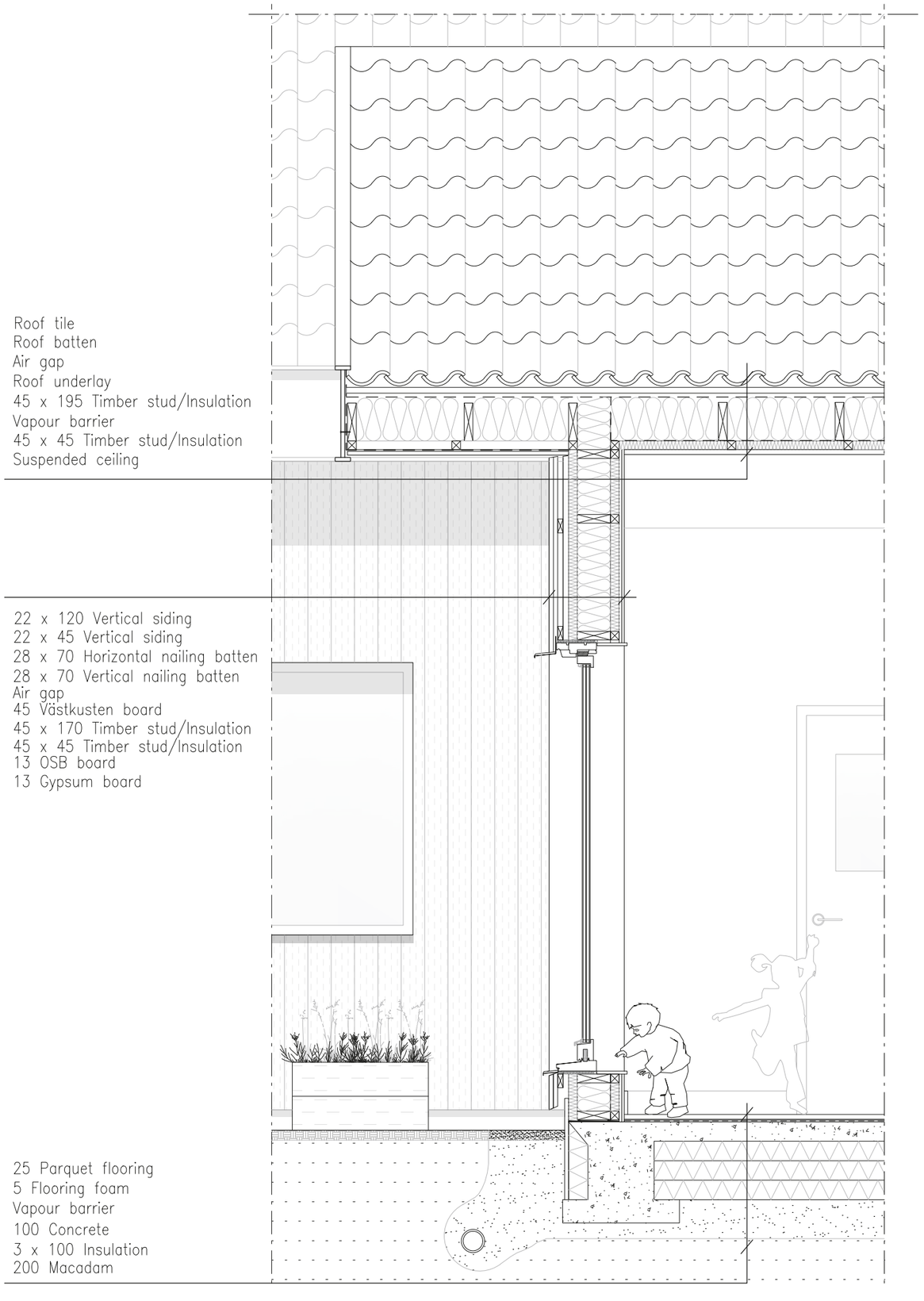
ELEVATION EAST

Figure 47-48. Facade facing west and east 1:400 [A4]

ELEVATION SOUTH

ELEVATION NORTH

Figure 49-50. Facade facing north and south 1:400 [A4]



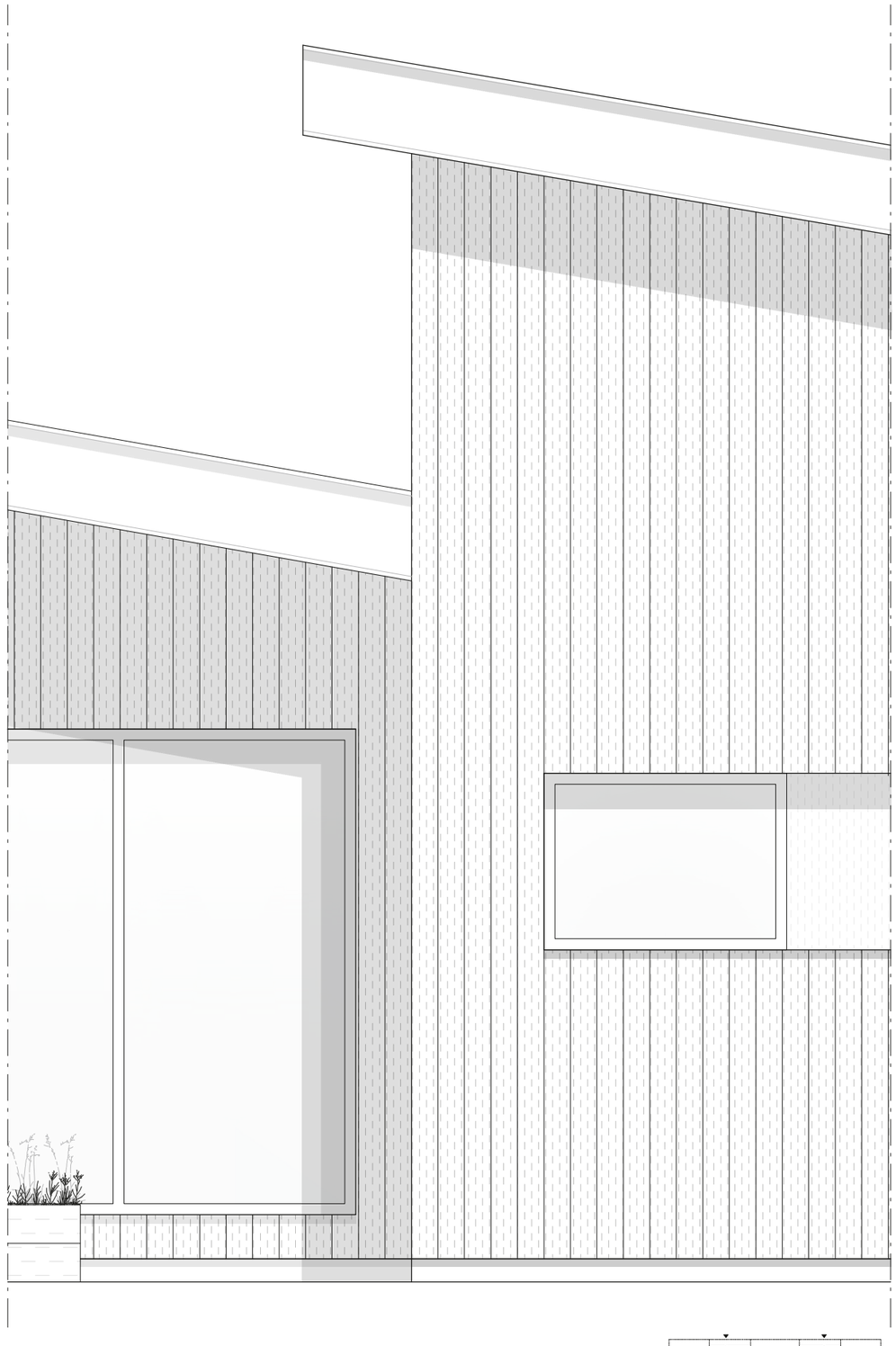


Figure 51. Detail section and facade 1:25 [A4]

Figure 52. Exterior perspective

Figure 53. Pergola perspective

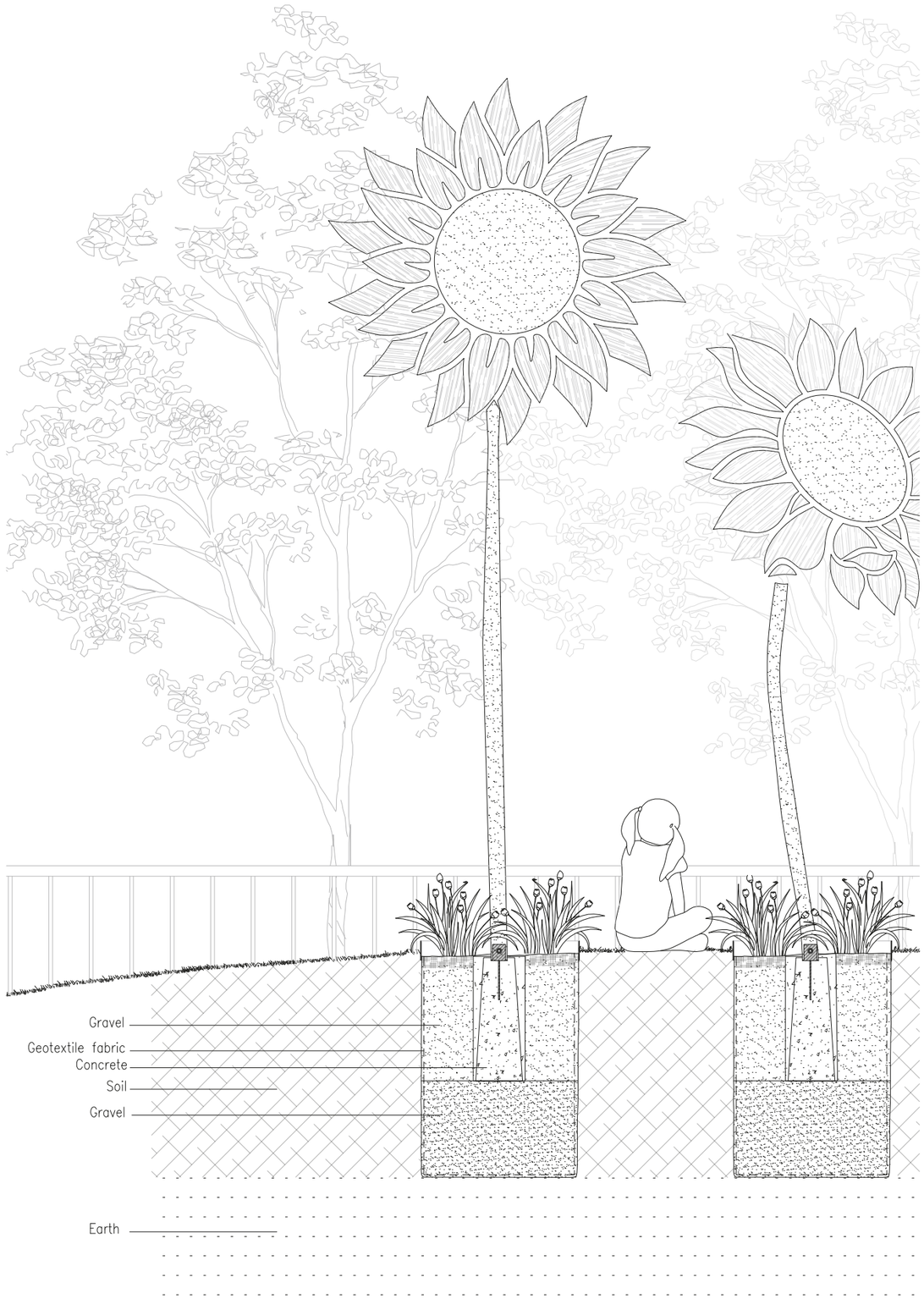
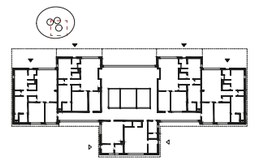


Figure 54. Detail section 1:10 [A4]

Two landscaped hills are designed into an otherwise flat and level playground to create variety in the topography. The hills are topped with conceptual sunflower structures to add a playful character to the area while also providing shadow during the sunny days. The sunflowers are mounted on poles anchored deep into the hill and are in metal to ensure a long-lasting stability and durability. The hills are climbable for the children and are a place where imaginative play and creativity can take form.



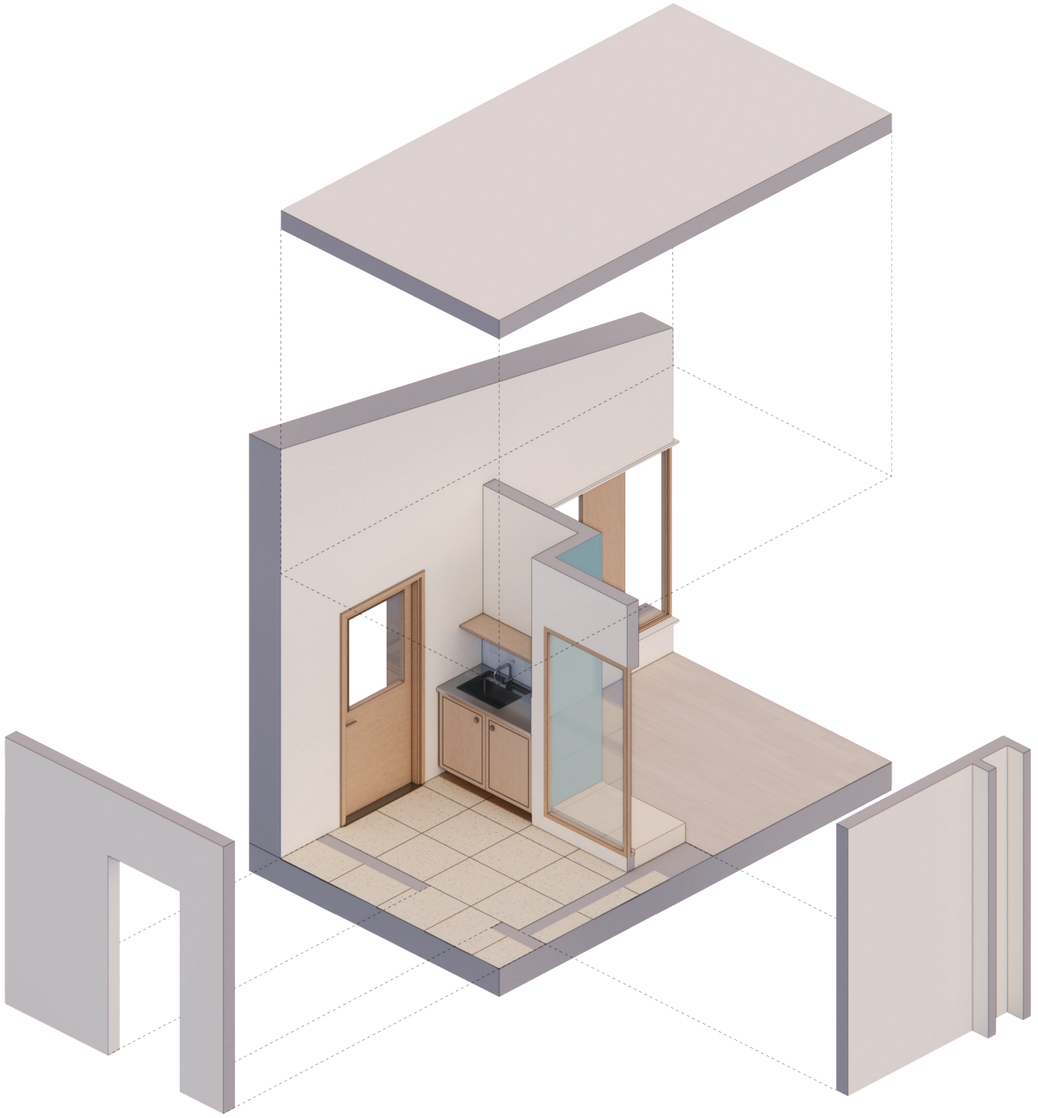


Figure 55. Detail section 1:10 [A4]

The entrance functions as a threshold between the interior and exterior preschool environment. It is where daily greetings and goodbyes take place and is intended to create a smooth transition between private and preschool life.

Access to water from the entrance was a necessity for the children playing outdoors, both for drinking as well as an opportunity for water play. The entrance has a direct connection to the coat room while also maintaining clear visibility to the main room where the children spend most of their indoor time. The terrazzo flooring in the entrance is the same as the coatroom area and has been chosen due to its ability to conceal dirt brought in from outdoor clothing and footwear.

Models

Figure 56. Landscape model 1:1000

Figure 57 - 58. Section model 1:100

DISCUSSION

Conclusion

This thesis investigates how a preschool can be designed beyond the requirements established by the Swedish National Agency of Education, with a focus on how architecture can support children's development. Throughout the design process, the spatial experience together with the material qualities of the building were considered central aspects of the project.

Through the theoretical studies, it became evident that there are multiple interpretations of how design can create creative and stimulating environments for children and how pedagogical approaches continuously inspire and build on one another. For example the Reggio Emilia pedagogy introduces specialised rooms such as the atelier, as a place where children can explore their creativity through arts and craft. Jeanette however argued that creativity is not limited to a specific room. Even rooms such as the bathrooms can encourage creativity with water as an element. While adults often perceive these rooms through their practical function, children may experience it differently. The same applies to the hallway. Adults often perceive it as a communication space between rooms, children however may experience it as a place for movement by crawling or running to the next destination.

Fröbel described children as plants in a garden that require nourishment from a caretaker in order to grow. He also considered that free play among children contributes to social and cognitive development. Montessori was clearly inspired by Fröbel and further developed his ideas. Her approach was to first introduce activities to the children and later let them practise it themselves. Reggio Emilia in turn, introduced environments specifically intended to stimulate imagination and creativity. Together, these pedagogical approaches demonstrate that there is no singular ideal environment for children. Instead preschools should provide a diversity of spatial experiences that support children's varying needs, both for their development and learning but also for their different personalities.

Based on this understanding, an important part of the sketching phase was to imagine how different children might behave in a room. This led to an ambition to create a variety of architectural experiences throughout the preschool.

For example, the smaller play rooms were designed with low windows to establish a visible connection to the outside or the main room, while other spaces such as the nap room keep a sense of more privacy.

One of the challenges encountered during the project concerned the relationship to the surrounding context. Since the area is currently under development the site appears as a blank canvas with few existing elements to directly relate to. To solve this, the design process involved an assumption of how the future area could develop based on the municipality's plans as well as observations from surrounding residential streets. My experience of the area is a very calm and familiar environment where children move freely between homes and streets. Therefore I imagined the preschool as an extension of this atmosphere, as an additional playground for children to visit and be around even after closing hours.

An interesting aspect if there would be a change to further develop the design would be to work more with the ceiling by exposing the ventilation structure and playing around with the pipes. The exposed ventilation system would both give a playful and educational experience. By removing the ceiling the design could also benefit by bringing in more natural daylight through skylights to the deepest part of each department. As the building is about 14 m wide the deepest rooms risk not receiving enough daylight even though there are windows from both east and west. The skylight would then be both functional in terms of brightening the room but also inspiring by allowing children to experience the weather variation and the difference between seasons.

Another aspect of continuing to develop the design would be to work with the outdoor space. Although the outdoor environment fell outside the scope of this thesis, I believe it would tie everything together and strengthen the concept. One direction toward this development would be, just as the ventilation pipe on the inside, to expose the water drainage on the outside and collect the water from the roofs to create a playful water area for the children. This illustrates how architectural elements can take on different meanings depending on who experiences them.

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List of figures

AI APPENDIX

The only AI used in this thesis has been ChatGPT, which has served both as a text editor, correcting grammar and structure, and as a sounding board for discussing relevant ideas. Its use was discussed with the supervisor and approved.

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ACE360 - Nordic architecture
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ACE425 - Master thesis preparation:
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Master Thesis 2026