Czech Technical University Prague
Faculty of Architecture

Waldorf Preschool for Bulovka Community

Master Thesis

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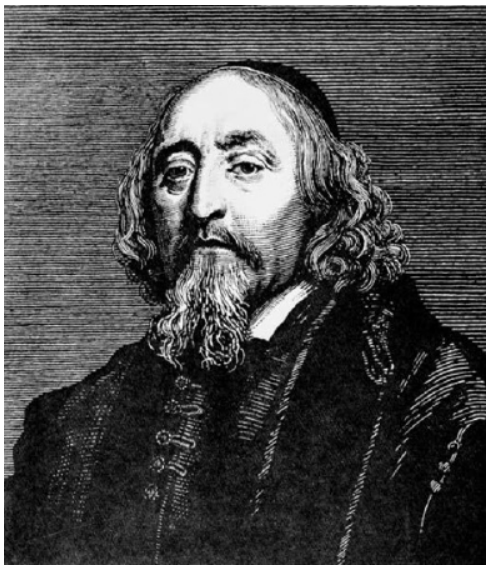
Abstract

Nationwide, we started to hear more about moving away from from standardized testing and too-early, high-pressure academics, the benefits of less screen time and more outdoor play, and the importance of handwork and handwriting. These ideas are not new to the Waldorf education and Waldorf education give particular importance to the architecture of its schools. According to the founder of these schools , Rudolf Steiner, real art should create a relationship between human beings and spirit. Following the design principles of Waldorf education, this thesis proposes a Waldorf preschool which would be located in Bulovka, Prague 8 - Libeň. This thesis focuses on finding a new way to design preschools, which enables children to discover themselves and nature. The thesis will highlight the principles of Waldorf education, how the education principles have an effect on architecture of the building and my own design ideas that I came up with by gathering and combining information.

JAN ÁMOS KOMENSKÝ

Czech philosopher, pedagogue and theologian



Jan Ámos Komenský (1592-1670)

Jan Ámos Komenský (born March 28, 1592, Nivnice, Moravia - died Nov. 14, 1670, Amsterdam, Netherlands) was a Czech educational reformer and religious leader, remembered mainly for his innovations in methods of teaching, especially languages.

He was a philosopher, pedagogue and theologian from Moravia but he is best known as a pioneer of education. He favoured the learning of Latin to facilitate the study of European culture. Janua Linguarum Reserata (1632; The Gate of Tongues Unlocked) revolutionized Latin teaching and was translated into 16 languages.

Komenský was one of the earliest proponents of universal education, and introduced foundational concepts like illustrated textbooks, teaching in native languages rather than Latin, and more progressive, logic based thinking instead of plain memorization.

He also pioneered social justice issues in regards to education, advocating for education for poor children, women, and disenfranchised people. His greatest contribution to the humanities was his conception of education and he strongly believed that the basis of society should be an educated citizenry.

Komenský introduced a number of educational concepts and innovations including pictorial textbooks written in native languages instead of Latin, teaching based in gradual development from simple to more comprehensive concepts, lifelong learning with a focus on logical thinking over dull memorization, equal opportunity for impoverished children , education for women, and universal and practical instruction.

RUDOLF STEINER

Austrian philosopher and educational reformer

Rudolf Steiner (1861- 1925)

Rudolf Steiner (born February 27, 1861, Kraljević, Austria—died March 30, 1925, Dornach, Switzerland) was an Austrian scientist, educational reformer and founder of anthroposophy which is a human oriented spiritual philosophy that reflects and speaks to the basic deep spiritual questions of humanity.

In his youth, Steiner was interested in the works of Goethe so he edited the poet's scientific works and from 1889 to 1896 worked on the standard edition of his complete works at Weimar. During this period he wrote his Die Philosophie der Freiheit (1894; "The Philosophy of Freedom"). In years, he started to believe in spiritual perception independent of the senses, he called the result of his research "anthroposophy," centring on "knowledge produced by the higher self in man." He founded the Anthroposophical Society in 1912

Steiner believed that humans experienced the world through a dreamlike consciousness but had since become restricted by their attachment to material things. The renewed perception of spiritual things required training the human consciousness to rise above attention to matter. The ability to achieve this goal by an exercise of the intellect is theoretically innate in everyone.

Steiner was interested in matching school activities with children's learning behaviors at different points in childhood. He suggested that the development of children passed through three stages.

PRESCHOOL EDUCATION

Early Childhood Development

Early childhood development in preschool

Preschoolers need to learn how to make choices for themselves and how to feel good about the choices they make. It is their job to „*learn to take initiative in socially acceptable ways*“ (Erikson, 1963).

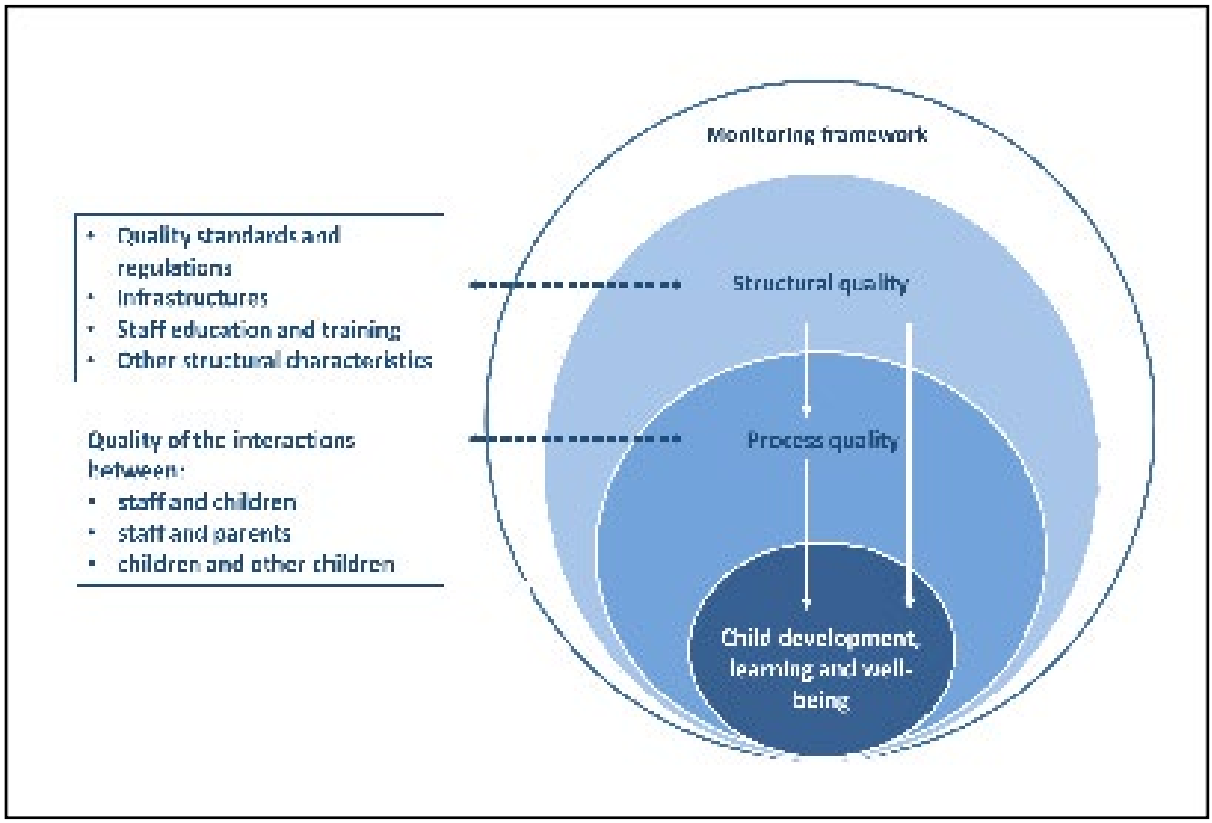
+ Cognitive early childhood development: A child's ability to explore and think about the world around them helps them to develop wonderful problem solving skills. The materials provided help stimulate preschoolers' minds and support Cognitive Development.

+ Social early childhood development: Another important aspect to support the development of young children is appropriate interactions with other people. This supports children's social development. It is helpful to have toys or set up experiences that encourage cooperative play for social development.

+ Emotional early childhood development:
Children who are supported in their attempts to learn new things realize they are capable beings and try more and more new things. The more they succeed the more likely they will develop positive self-esteem.

+ Physical development: Activities will help preschoolers to develop both their large (gross) motor and small (fine) motor skills. Both are equally important as pre-writing skills. They need to have control over their large muscles skills including their core, arms, legs, balance, etc. as well as their small muscles (hands, fingers, etc.).

+ Language development: Language and literacy refers a child's understanding of the spoken work and their communication skills and ability to express themselves. It helps improve their interactions improving their self-regulation and behavior management.



Framework to understand quality in early childhood education and care, (OECD, 2018[35]),

PRESCHOOL EDUCATION

Preschool Education in Czech Republic

The framework

The aim is for the child from early childhood to master the basics of key competencies and thus gain the prerequisites for its lifelong learning, allowing it to be more successful in knowledge society.

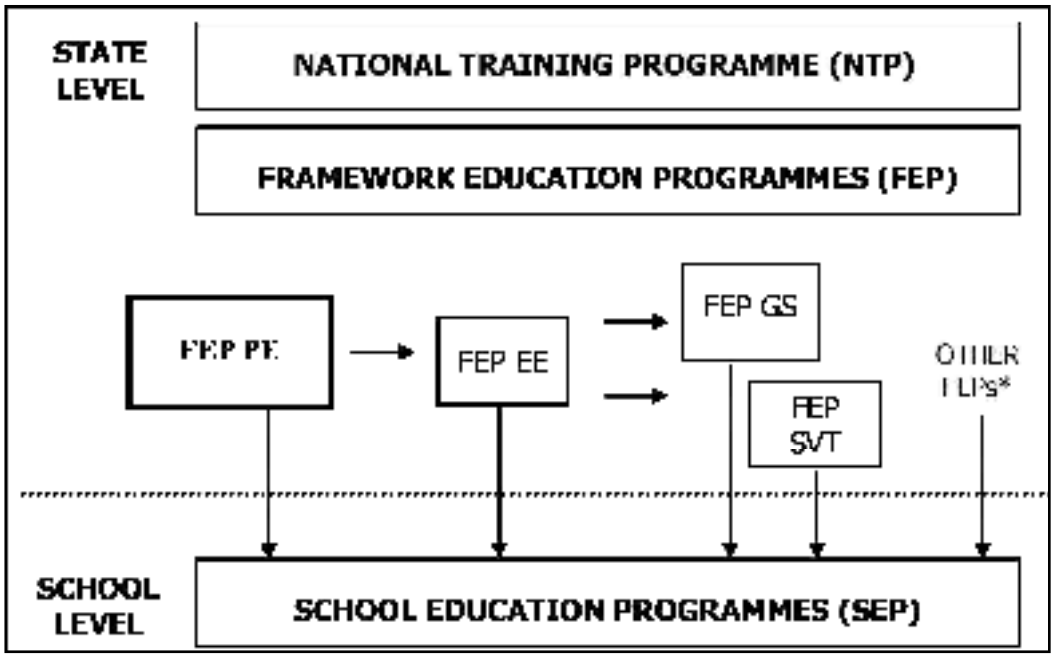
Preschool education is institutionally provided by nursery schools (including nursery schools with an adapted education programme) or is implemented in the preparatory forms of elementary schools. Nursery school is legislatively embodied within the educational system as a type of school. In the educational process as well as its organisation, it is therefore governed by similar rules like other schools. Preschool education is organised for children of the age normally from three to six years.

Preschool education can be provided for a fee with the exception of the final year of nursery school founded by the state, region, municipality or confederation of municipalities and of preparatory classes of elementary schools, where it is provided free of charge.

Classes of a preschool fill to 24 children; the founding entity can allow an exception to this number but at most by 4 children. The lowest number of children is set at 13 in the case of a one-class nursery school which is the only one in a municipality.

In preschools children are taught by teachers of nursery schools, who mainly have completed secondary education with a school-leaving examination specialised in preschool pedagogy.

The task of institutional preschool education is to complement family upbringing and in close connection with it assist in providing the child with an environment having sufficient multifaceted and adequate stimuli for its active development and learning.



System of curricula

FEP PE – Framework Education Programme for Preschool Education;
FEP EE – Framework Education Programme for Elementary Education;
FEP GS – Framework Education Programme for Grammar Schools;
FEP SVT– Framework Education Programme/s for Secondary Vocational Training.

PRESCHOOL EDUCATION

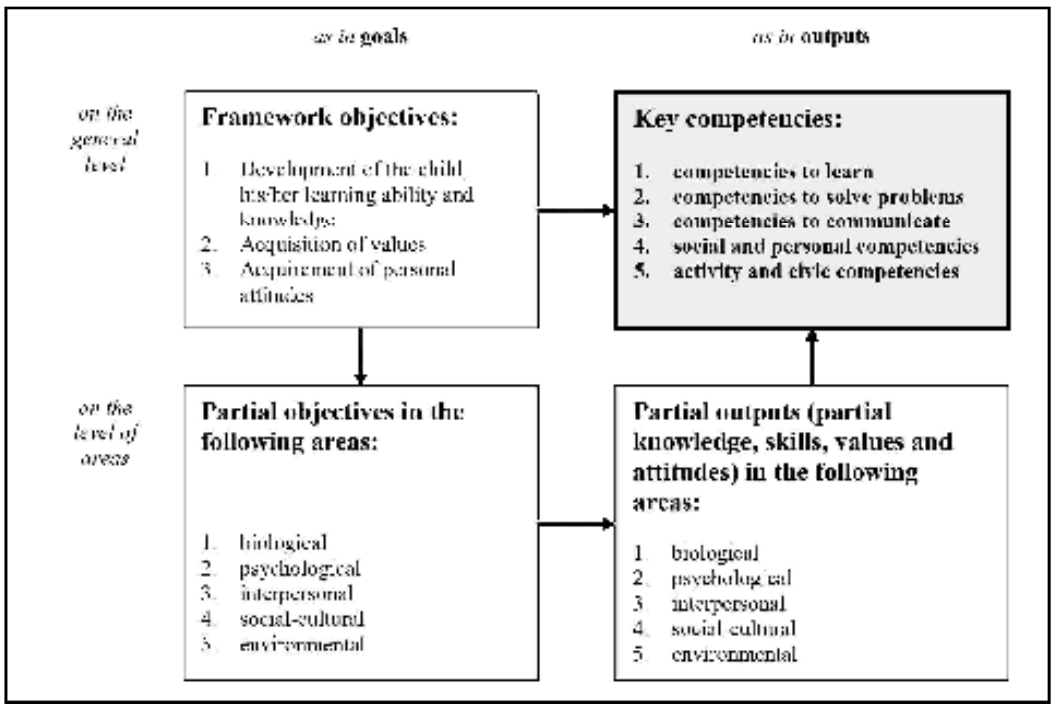
Preschool Education in Czech Republic

Preschool education objectives

FEP PE uses four target categories: setting objectives as in goals and objectives as in outputs, and that first on the general level and subsequently on the level of areas. These categories are:

+ Framework objectives - expressing universal preschool education goals
+ Key competencies - outputs, or rather general competencies achievable in preschool education
+ Partial objectives - reflect specific goals pertaining to individual education areas
+ Partial outputs - partial knowledge, skills, attitudes and values corresponding to partial objectives

These target categories are closely interrelated and correspond to each other. It shows that if the set objectives are consciously and systematically monitored and met in every-day practice, the outputs will be achieved. This means that if the teacher works with the children while constantly bearing in mind the set education goals, s/he is inevitably leading children to acquire and gradually improve their skills.



General goals are expressed through framework objectives; outputs through key competencies. Framework objectives are reflected in five education areas and take up the form of partial objectives.

WALDORF SCHOOL

Education

Steiner's first school in Stuttgart, Germany (1919)

Educational method

Waldorf schools educational method is based on anthroposophy. They offer a experiential, developmentally appropriate, approach to education. The integration of the arts in all academic disciplines for children from preschool through twelfth grade is important. Waldorf education aims to inspire life-long learning in all students and to enable them to fully develop their unique capacities.

The priority of the Waldorf education is to provide an easy-going and creative learning environment where children can find the joy in learning and experience the richness of childhood rather than early specialisation. The curriculum itself is a flexible set of pedagogical guidelines, founded on Steiner's principles that take account of the whole child. It gives equal attention to the physical, emotional, intellectual, cultural and spiritual needs of each pupil and is designed to work in harmony with the different phases of the child's development.

The core subjects of the curriculum are taught in thematic blocks and all lessons include a balance of artistic, practical and intellectual content. Whole class, mixed ability teaching is the norm.

"*Anthroposophy is a human-oriented spiritual philosophy that reflects and speaks to the basic deep spiritual questions of humanity, to our basic artistic needs, to the need to relate to the world out of a scientific attitude of mind, and to the need to develop a relation to the world in complete freedom and based on completely individual judgments and decisions*."


Steiner's philosophy of education was formulated in opposition to conventional German educational practices

The Waldorf approach

Waldorf's richly diverse and varied curriculum includes an immersion in a wide variety of artistic disciplines.

As they progress through the primary years, the student's capacity for independent and critical thinking is carefully developed The main features of the Steiner approach are:

+ Strong relationships: Children keep the same teacher for their entire kindergarten education, before transitioning to another teacher for the primary years (seven to 14 years old).

+ A holistic theory of child development: Children are seen as active agents of their own development, driven by natural, self-guiding forces that show them the way towards learning and growth.

A focus on aesthetic and artistic elements: The curriculum includes visual art, craft, music, dance, storytelling, and drama. Everything is presented to children in a creative, artistic way.

+ Play: Steiner teachers aim to create an environment that facilitates children's self-directed free play. In Steiner philosophy, free play supports the proper development of the will.

+ Rhythms and repetition: The importance of rhythm is recognised through a cyclical schedule of daily, weekly and yearly activities.

+ Real work: Steiner educators believe that the purposeful and useful work of real life, should be included in the early childhood programme.

+ Experiences in nature: In the early childhood years, children are especially open to learning from their environments and are encouraged to retain a sense of unity or communion with the natural world.

WALDORF SCHOOL

Education

Waldorf School of Philadelphia

Waldorf early childhood education

In Waldorf nursery-kindergartens, home care programs, childcare centers, parent-child programs and other settings, foundations are laid for later learning and healthy development, including life-long physical, social, emotional, intellectual, and spiritual growth.

The development of each individual child depends on health-giving experiences in the first seven years of life. An atmosphere of loving warmth and guidance that promotes joy, wonder, and reverence supports such healthy development. The most essential aspect of the work with the little child is the inner attitude of the educator, who provides the example for the child's imitation.

This education, based on an understanding of the development of human individuality, offers protection and respect for the dignity of childhood. It includes an understanding of the unfolding development of the child from pre-birth to seven, including the unique significance of the development of walking, speaking and thinking in the first three years of life.

Activities in Waldorf early childhood education take into consideration the age -specific developmental needs of young children, from a focus on will-oriented physical activity in the first three years, then on imaginative play in the middle years of early childhood, and later a more cognitive approach to learning after the child enters school.

One of the elements of a Waldorf curriculum which is not commonly found in other schools is Eurhythmy. Rudolf Steiner created this performance art which is also used in movement therapy. It is an integral part of Waldorf curricula and complements the gymnastics component. Eurhythmy is a Greek word which means harmonious rhythm.

Nature-based learning

Play based learning

Educational principles

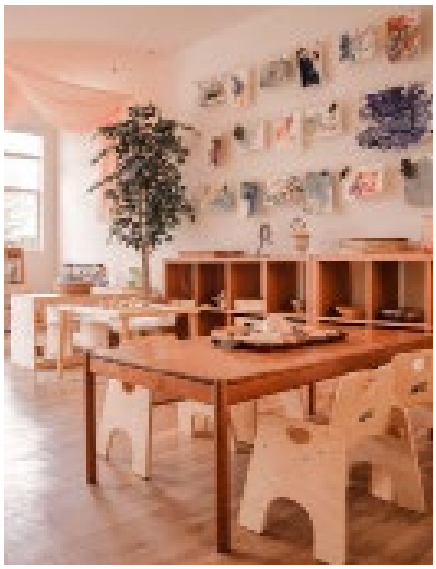
Waldorf education in schools may differ according to geography, culture, group size, age-range, and individual teaching approach. Granting these differences, Waldorf programs share certain fundamental characteristics:

+ Loving interest in and acceptance of each child
+ Opportunities for self-initiated play with simple play materials as the essential activity for young children.
+ Awareness that young children learn through imitation, through the experience of diverse sensory impressions, and through movement. Their natural inclination is to actively explore their physical and social environment. The surroundings offer limits, structure and protection, as well as the possibility to take risks and meet challenges.
+ A focus on real rather than virtual experiences to support the child in forming a healthy relationship to the world.
+ Artistic activities such as storytelling, music, drawing and painting, rhythmic games, and modeling that foster the healthy development of imagination and creativity.
+ Meaningful practical work such as cooking, baking, gardening, handwork and domestic activity that provide opportunities to develop unfolding human capacities. Here the emphasis is on the processes of life rather than on learning outcomes.
+ Predictable rhythms through the day, week and year that provide security and a sense of the interrelationships and wholeness of life. Seasonal and other festivals are celebrated according to the cultural and geographical surroundings.

WALDORF SCHOOL

Architecture

In the lazure technique, paint is applied with a rhythmical movement using large brushes.



Classrooms are open and spacious to allow for creative playtime

The built environment

In Waldorf schools, where no grading marks are assigned, the personal and social skills are developed in the curricula by stressing arts and acting, as well as a special sort of dance called eurhythmy, also developed by Steiner (Raab and Klingborg, 1983). The Waldorf buildings follow Steiner's claim whereby "*school must be a utilitarian building which demands an artistic form*" (Raab and Klingborg, 1983: 28).

The built environments are designed in a most peculiar fashion, inherent to Steiner's pedagogy, in which right angles and symmetries are avoided both horizontally and vertically and colour and light are manipulated in a specific manner, in accordance with Steiner's colour plans for ages and activities.

The built environment is itself a prerequisite for the fulfilment of pedagogical goals. Steiner defined specific formal codes for the design of school spaces, with incidence on the space's scenic character, in matters such as the classrooms' plan form, their colour and the role of the window. If compared to the conventional school spaces, this model reveals certain diversity, but is in itself limited, since it concedes prominence to visual rather than functional diversity: although the classrooms present asymmetrical form, they maintain their traditional function as mutually independent spaces.

In the early stage, the curriculum addresses the child as a bodily being, and appeals to the will, intuition, senses, imagination, and skills of imitation. The children make drawings with thick crayons in primary colours, paint wet-on-wet with watercolours, and produce colour-saturated drawings depicting the fairy tales and stories which are an important part of the curriculum at this stage.

Emerson Waldorf School Nursery, Chapel Hill, NC

Highlights

Waldorf classrooms support the child's well-being by allowing them to feel relaxed and at ease while enabling them to learn more effectively. In the early childhood classrooms, natural fibers and wooden toys along with a cozy setting offer a comfortable and safe space for children.

According to the research, a well-designed classroom:

+ Receives natural light
+ Is designed with a quiet visual environment
+ Uses warm colors on the walls and floor
+ Has a large area of free space for building and diverse learning/play
+ Has high-quality and purpose-designed furniture, fixtures and equipment
+ Allows ease of movement
+ Allows flexibility in learning varied activities
+ Contains ergonomic tables and chairs
+ Is modular, meaning the teacher can easily change the space configuration.

Questions that are gathered to understand the fundementals of universal learning (the built environment has to answer)
Physical: How the body can be trained for wellness using various activities. How children can be taught what's good to eat, etc.?
Mental: How traditional learning can be translated into more fun/experiential ways of developing reasoning?
World: How can children discover their connection to the planet, nature, culture, and the world around them?
Creativity: How can a child explore learning by doing things and exploring how things work by doing?
Art forms: How can a child explore various forms of art forms. E.g. Dance, Music, Painting, etc.
Evolution: How these forms of teaching will constantly evolve with time considering the larger span of time?

WALDORF SCHOOL

Architecture

Taraleigh Steiner Kindergarten and Playgroup, Australia

Highgate House School, Hong Kong

Ideals

One of Steiner‘s often over looked ideals for Waldorf Education in this connection was the development of a certain harmony between the approach to teaching applied visual arts – handwork and crafts – and the approach by which the forms and spaces of the surrounding classrooms were designed and built. He suggested, “*Imagine every schoolroom, not decorated in the way often thought artistic today, but shaped by an artist in such a way that each single form is in harmony with what his eye should fall upon when the child is learning his tables.* […] *art needs to take a quite different course during children‘s growing years from what is now accorded it.*” (Steiner, 1975, p. 38).

Traditional classrooms are often created to keep children in a row—confinement rather than a freedom. Waldorf classrooms are designed to be changed or adjusted based on the lesson or the subject matter, allowing children the opportunity of deeper and optimal conditions for learning.

Waldorf Schools‘ architecture and design goes under the following principals:

+ Interaction of the architectural environment and the educational process;
+ Adaptability and flexibility;
+ Environmental friendliness;
+ Age perception of the space;
+ Involving arts when creating the learning environment

The form should nurtures important elements in a child’s development by creating spaces in which to further everyday experiences within the ordered central spaces and encouraging the teachers and children to create their own worlds in the open teaching areas.

Kindergarten in Dobrin, Czech Republic

Design principles

The school‘s roof, according to Steiner‘s recommendations, should have a maternal gesture of protection. Often one can find the shape of the wings covering the building, an oblique or rounded shape.

The central entrance to the school should be clearly defined; rounded outlines and smoothly modelled entrance steps should invite a visitor to a school and offer easy upward movement. Similarly, all visible elements of the building design (windows, doorways, corridors, etc.) must be formed with awareness of their role. For example, corridors or hallways of Waldorf Schools often have arc shapes indicating the prospect of movement (Adams, 2005). The classrooms should be arranged within the building in accordance with an awareness of the qualities of different spatial directions.

Natural light is a very crucial factor in a Waldorf School, it is preferred over electric lighting in any situation. The design must be supported by daylight to the greatest extent possible. The dynamic qualities of natural light are much more pleasing than the stark and consistent light emitted by electric light fixtures (Jolley, 2010);

Window sills should be designed for children of all ages to be able to observe the natural environment. A low window in each room gives the children a glimpse of the garden, and high windows reveal the sky.

Rooms should reflect the welcoming rounded gestures as well as the windows, doors, ceiling, and furnishings can have a rounded or curved form.

While painting walls , Steiner insisted on using of transparent layer-painting technique providing a certain „dematerialization“ and giving a person freedom in the perception and interpretation of space.

WALDORF SCHOOL

Architecture

Architectural aspects

The architecture of the Waldorf schools follows its philosophy. Therefore, anthroposophical architects propose some parameters that can be identified in most Waldorf schools. Its spaces must be capable of delivering a totalizing experience of education, and the interior settings must be adequate for each activity carried out (craft classes, sculpture etc). They must also be consistent with the age and development cycle of the children who occupy them.

The classrooms that house the activities of the youngest children seek to reproduce the atmosphere of a home, functioning as an extension of it. In these spaces, different age groups relate to each other like siblings, subconsciously educating one other.

Each classroom has a recommended format so that geometric transformations can follow the internal development of children. In the early years, classrooms have a predominantly organic design. Little by little, the angle is introduced and the classrooms become more elongated. Therefore, anything that has more rounded lines, is unified, and is predominantly lighter, is usually designated for preschool students. Over the years, everything becomes firmer, more articulate, and angular. This strategy has the subconscious objective of guiding the child‘s understanding of the concept of forms, developing a deeper aesthetic sense.

The architectural elements of a Waldorf school are almost always an active part of the learning and development process of its children. In tandem with other curricular activities, Waldorf pedagogy proposes to work on concepts such as the metamorphosis of form, colors, and geometry in the most complete way possible, giving children the freedom to fully perceive and explore different environments.

Kindergarten Leipzig, Markurt Architekturkontor, Leipzig - Architekturbüro Denker & Zimmer, Berlin

Waldorfschool Moss Norway / Architects: Winfried Reindl, Imme Denker, Joachim Zimmer

WALDORF SCHOOL

Architecture

Marecollege, The Netherlands

Design Criteria

+ Designing environments for diverse life experiences
+ Spaces for child fitness improvement
+ Improving facilities such that they strengthen the ties between schools, families and regions
+ Considering sustainability in terms of the environment
+ A facility layout that strengthens ties between the kindergarten, parents and the community
+ Considering promotion of special needs education

The physical space is designed to be home-like in the way it is set up, and as free from exterior distraction as possible. The scale of the space should not overwhelm a small child and so where possible the ceiling is low, there are no 'hard' corners and it is decorated in soft tones.

A classroom is the architecturally defined area that contains each group of children and their teacher(s). Classrooms may be separated by full partitions or partial barriers that allow controlled visual or acoustical connections to other groups.

The classrooms themselves should be as open as possible, allowing supervision and the penetration of natural light. The classroom contains the required spaces for all recommended activities, as well as spaces for personal care.

There is a quiet corner, a home corner, an area for floor play and building large constructions, an area for activity and snack tables and chairs. The kitchen area is partitioned but usually within the room.

Adequate space is also necessary for storing children's and teacher's personal items, curriculum-materials, supplies, and equipment.

Budapest-Óbuda Waldorf School, Hungary

Architectural program

According to Ministry of Education, classes of a preschool school fill to 24 children, the lowest number of children is set at 13.

The indoor facilities have many features that are aimed at fostering children andf the need for extended daycare.

In Prague, the cold winters prevent children from playing outside freely so to improve children's physical strength, consider diverse activities in indoor spaces.

The variety of spaces stimulates children's curiosity and imagination.

Consider about multipurpose spaces to enable children to experience diverse activities, such as looking out observation windows adjusted to the height of children, and rock climbing and tree climbing, which encourage children's physical development.

Individual spaces may be able to be combined to form zones or groups of spaces with a similar purpose.

A facility can be subdivided into key functional zones
+ Main entry / reception area
+ Community space
+ Service provision and activity areas
+ Staff and administration areas
+ External activity areas
+ Daycare service

WALDORF SCHOOL

Architecture

Key spaces in terms of landscape

The relationship between the key spaces generate the greates amount and variety of play-learning activity and benefits across all the developmental domains. The key spaces are;

+ Active play: Spaces that encourage active play vary in topography, changes in height, develop body awarenss and build gross motor skills. These spaces feel energetic.

+ Experimental: Spaces for discovery and exploration. They are also flexible, alive and messy. They are filled with materials and have child-sized furnishings and storage. A space that supports creativity, constructing, building and idea generating.

+ Individual: Spaces that support quiet reflective moments, observation and listening. They feature small enclaves that are protected and cozy. This type of space would accommodate one or two children and could be on the edge of another play zone, most likely away from an active play area.

+ Gathering: Gathering spaces can be for a large or small group. These spaces are typically welcoming and focused on communiation and sharing. They offer seating, shade and they should have a balance of soft and hard features.

+ Ecological: Trees, shrubs and vegetation are strong elements of these spaces. They offer children access to water, soil and plants. They create habitat on different scales and they inspire creative thinking, invite observation and provoke inquiry.

Outside the classroom, children are encouraged to climb trees, play in gardens and creeks, and manipulate items like logs and mud

WALDORF SCHOOL

Preschool Education in Czech Republic

Waldorf schools in the Czech Republic both publically and privately funded are strongly promoting educational reforms that bring them together with other Czech reform schools.

Throughout the Czech Republic seven primary Waldorf schools exist in Ostrava, Pisek, Prague, Pribram, Brno, Pardubice and Semily. There are also two non-independent Waldorf elementary schools in Prague and Plzen that work under the direction of a public elementary school. And three non-governmental Waldorf elementary schools operate in Ceske Budejovice, Olomouc and Karlovy Vary. Waldorf high schools are located in Ostrava, Prague, Liberec, Pribram and a curative educational Waldorf School is located in Prague.

Some Waldorf schools operate as independent schools. This does not necessarily result in a loss of public funding, because elementary education is considered compulsory and is therefore financed by the Government. In general, however, these schools receive comparatively much less government support than public schools (about 20 - 30% less). Therefore income from school fees must cover the difference. The specific annual amount of government subsidies is also affected by the audit conducted by the State and the report written by the Czech school inspection authority.

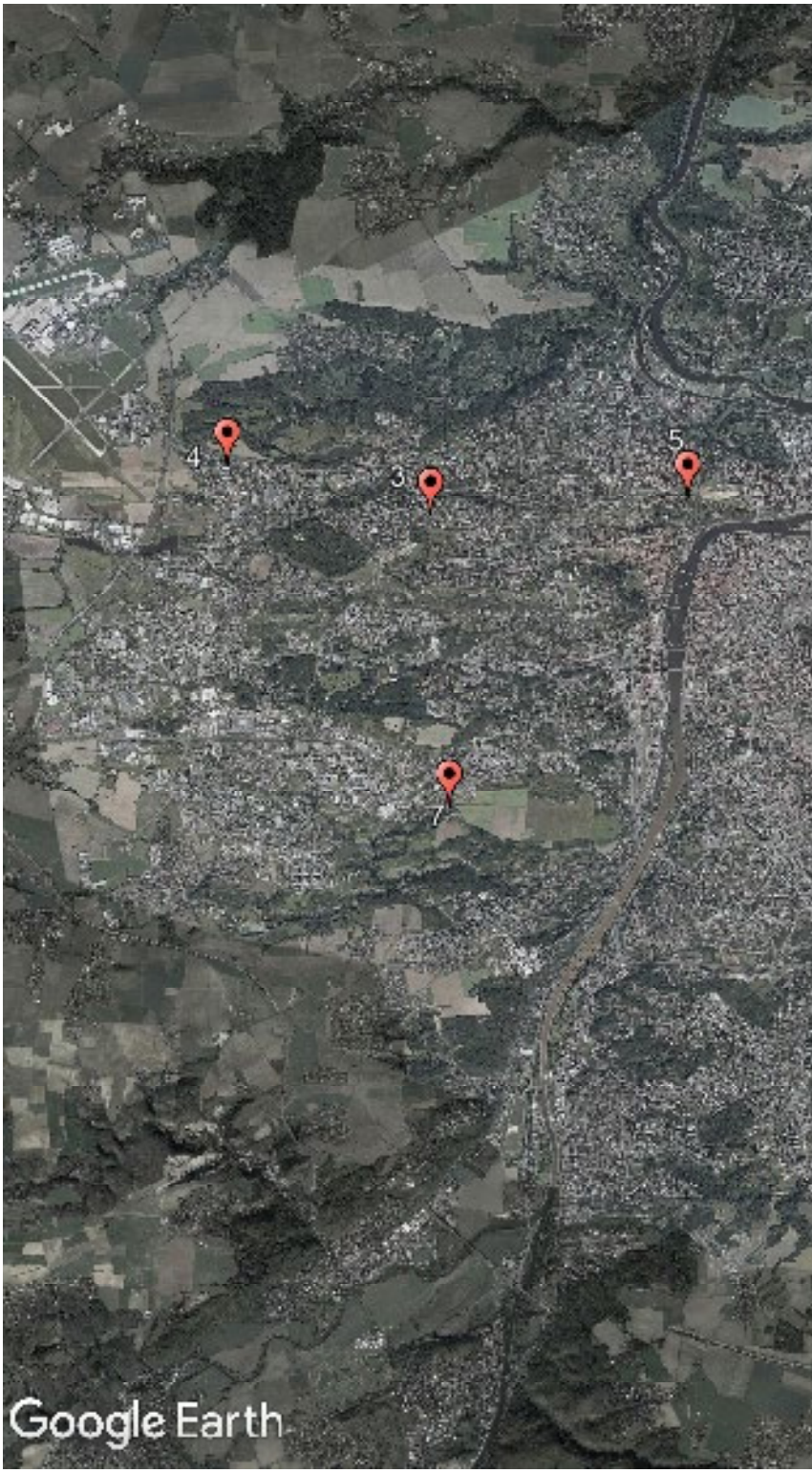
The Czech Waldorf Association coordinates the development of Waldorf education and represents the movement towards the Ministry of Culture and Ministry of Education. At the same time the association helps connecting new initiatives and organizes Waldorf teacher training. Each year a summer academy with lectures, workshops and art classes for the public takes place in Pardubice. In Prague and Pribram there are teacher-training facilities.

Mateřská škola MAITREA - Sluštice

Waldorf Kindergarten Koněvova - Prague 3

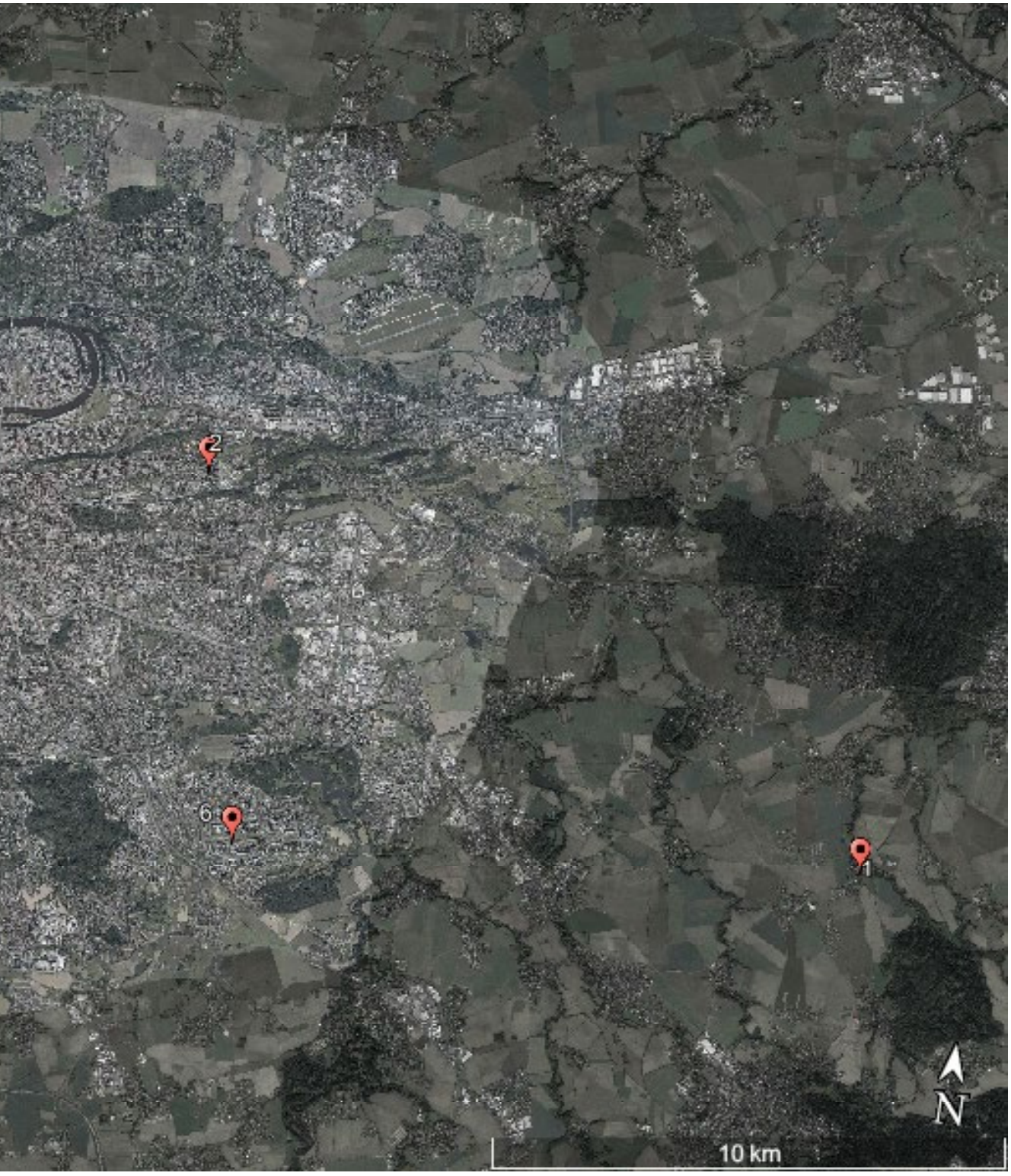
WALDORF SCHOOL

Preschool Education in Czech Republic



Waldorf schools in Prague

1) Kindergarten MAITREA - Sluštice
2) Waldorf Kindergarten Koněvova - Prague 3
3) Waldorf Kindergarten Dusíkova - Prague 6
4) Waldorf School Dědina - Prague 6
5) Family Club SETKÁVÁNÍ - Prague 7
6) Waldorf Elementary School and Secondary School Křejpského - Prague 4
7) Waldorf Elementary School - Prague 5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CASE STUDIES

Kindergarten in Dobříň

Architects: A8000
Year: 2014
Architects In Charge: Martin Krupauer, Jiří Střítecký
City: Dobříň
Country: Czech Republic

Dobříň (Litoměřice district) was chosen for the construction of a kindergarten for 30 children by the community. It is an unoccupied lot on the historic square, overlooking the river and the corresponding area for the garden. The basic vision of the building was its setting in the surroundings, connected to the landscape and the village.

The concept of the design was completely subjected to the historical context of the local folk architecture. The color and material solution is based on the perception of the spirit of the place, which is signed on the building by its „earthiness“. The building is based on a classic village house with a gabled roof. Rustic elements are also used on the facade, which is enriched with motifs of sculptural decoration referring to the decoration of traditional architecture associated with the area. The sculptor is Jiri Vorel

The kindergarten depicts the world of fairy tales for the children. Respecting their visions and wishes, it resembles a „cottage“ which, despite its crumbling appearance, provides harmony, warmth. The interior layout's spatial concept works to the maximum extent with openness and is limited to the sterility of kindergartens common in the Czech environment.

The child can scribble the wall and is not punished for it. The child becomes the master of space, which they can freely transform. There are no rules on how to deal with it, only a framework whose atmosphere is created by users. Within this understanding, the kindergarten will be constantly evolving and transforming.

The kindergarten is surrounded by a garden with fruit trees that are placed parallel to the eastern border of the plot. It is a one-storey building with a rectangular floor plan. The roof is a distinctive architectural element. From the north it is a classic saddle with an inclination of 35 °, towards the south the ridge gradually decreases and gradually approaches one wall of the building.

The timber rafters reflect the span. The pitch changes approximately 8 m from the northern gable and establishes a clerestory window, which basically illuminates the children‘s playroom with southern light. The interior is open under the attic where possible. Above the remaining areas, the attic space is closed. In the attic, there is a planned built-in for sleeping (approx. 25 places) with a swing and a slide, which will also serve as an escape exit.

The construction meets the conditions of construction in the floodplain. This concept was reflected both in the technical solution and choice of materials, as well as in the interior concept. The building is based on mass-concrete continuous strips and isolated footings. The vertical perimeter and internal load-bearing structures are made of ceramic blocks to withstand possible flooding.

Kindergarten in Dobrin / A8000 Photographs: Ondřej Bouška

CASE STUDIES

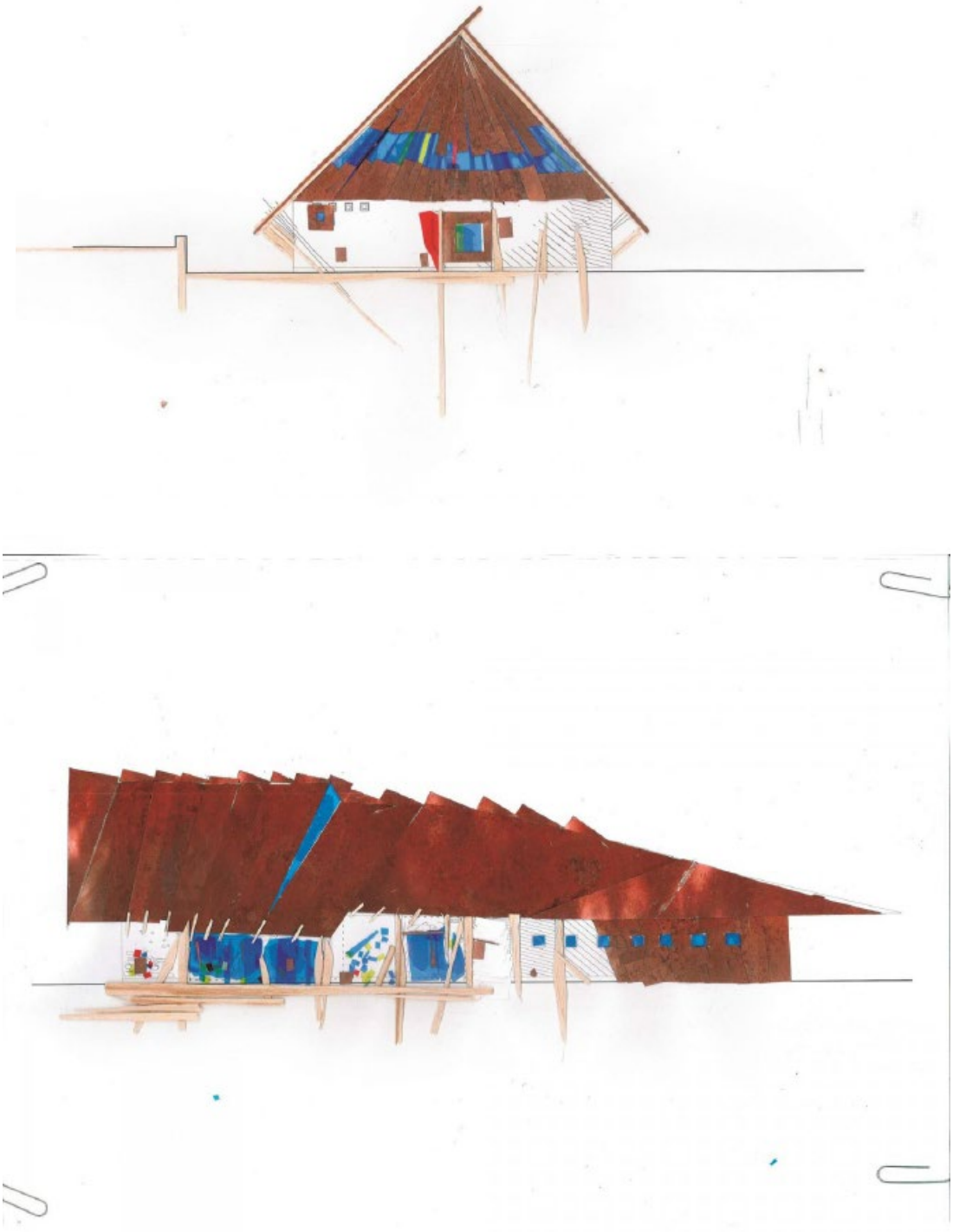
Kindergarten in Dobříň

Kindergarten in Dobrin / A8000 Photographs: Ondřej Bouška

Kindergarten in Dobrin / A8000 Photographs: Ondřej Bouška

CASE STUDIES

Kindergarten in Dobříň



Sketch views, Atelier 8000

Sketch views, Atelier 8000

CASE STUDIES

Strohballenbau Waldorf Kindergarten Leipzig

Architects: Architekturbüro Denker & Zimmer
Year: 2014
Architects In Charge: T. Markurt, Angela Wellershaus
City: Leipzig
Country: Germany

Strohballenbau Waldorf Kindergarten Leipzig comprises three group rooms with associated sanitary facilities and bedrooms.

The common room is expanded into a foyer and it is ideal for celebrating parties together; when the room is divided, it is used for round games or for eurythmy. When it is time to sleep, the children retreat „into the treetop“, that is, into the upper bedrooms.

The nature of the overall structure and morphology of buildings is supported by the principles of Waldorf pedagogy. The kindergarten is barrier-free so that an integrative group can also be accommodated. It is important to be well connected to the outdoor area.

The building materials used are largely natural. Mainly wood, clay blocks and clay plaster were used, the insulation of the outer walls and the roof are made of straw or cellulose insulation material.

The colouring was created by the natural hues of mostly untreated materials. Coloured clay plaster, wooden floors and wall heating integrated into the outer clay walls create a pleasant atmosphere in the interiors, ensuring a healthy indoor climate.

The largely natural building materials such as wood, clay and straw not only contribute to a warm atmosphere, but are also a pioneering solution in terms of sustainability, resource-saving consumption, energy efficiency and CO2 balance.

Two-storey timber frame construction with straw bale insulation, clay building panels as interior plaster, extensive green roof, elaborate rounded staircase construction in the foyer.

The design was created in collaboration with T. Markurt and Angela Wellershaus as the color designer.

Strohballenbau Waldorf Kindergarten Leipzig / Architekturbüro Denker & Zimmer

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VISION STATEMENT

Waldorf schools exercise the body, the soul and the mind. The body learns through exercise, the soul learns through relationships and connections, the mind learns in a way that is not directly connected any physical or emotional experience, as in the realm of pure thought.

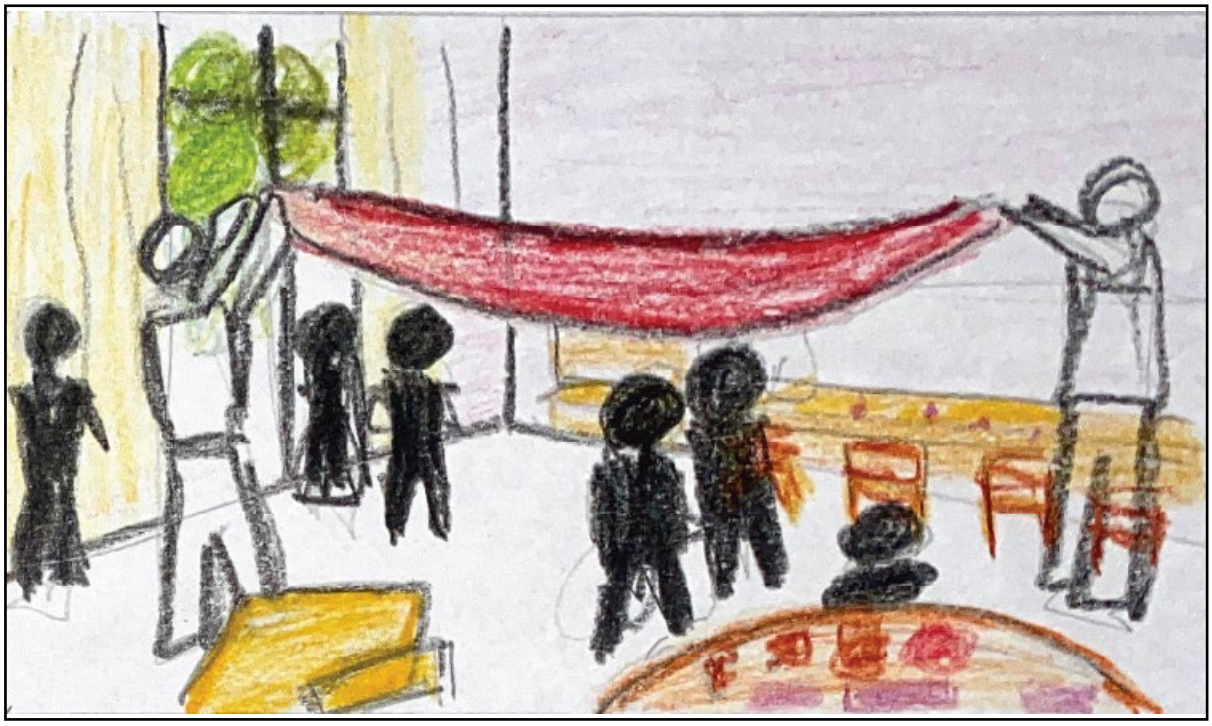
It is vital to have a design that lets the child explore their body, soul and mind.

PRESCHOOL AND ARCHITECTURE

Goals and alternatives

1- The composition of the interiors should be very flexible

Open and spacious classrooms to allow creative playtime, changing classroom lay-out and lots of movement.



PRESCHOOL AND ARCHITECTURE

Goals and alternatives

2- Comfortable and safe space for children with a cozy setting: A sense of comfort

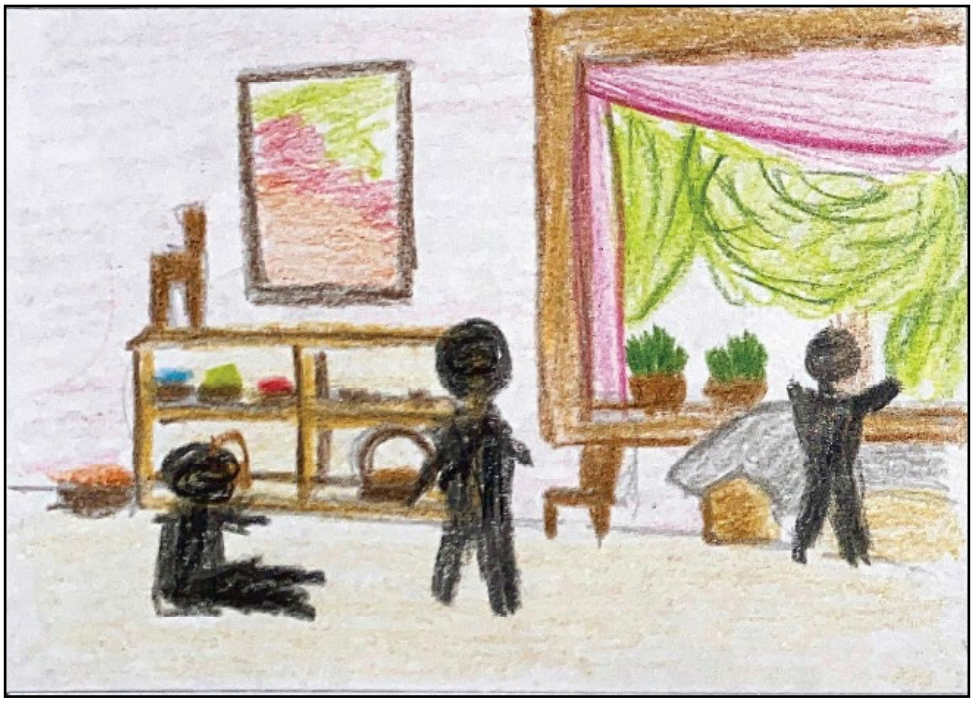
The classroom with its homey atmosphere becomes a metaphor for the home.

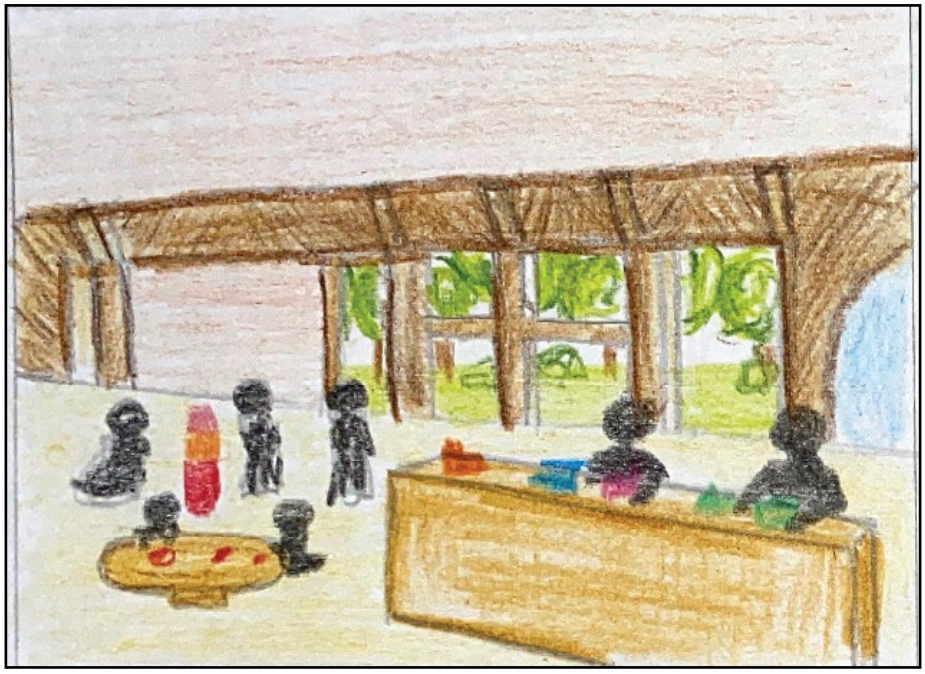
PRESCHOOL AND ARCHITECTURE

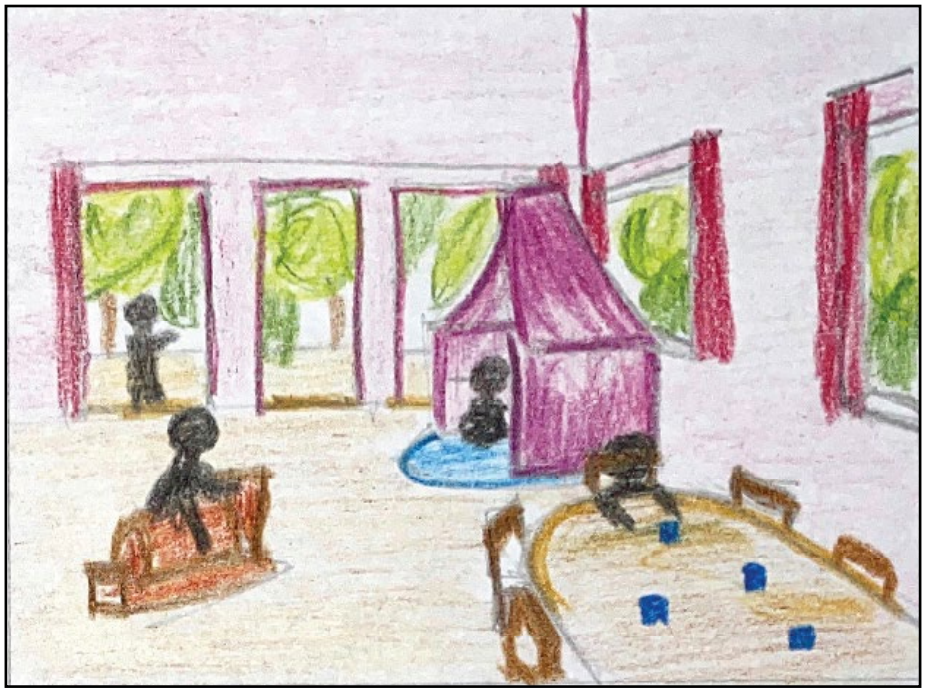
Goals and alternatives

3- Nature, inside and outside: The classroom should open to a central green area where children can move freely.

Let children have more connection with the outdoors by having windows sills lower. Allow outdoor greenery to be visible for the children and use natural materials for their imaginative play.







PRESCHOOL AND ARCHITECTURE

Goals and alternatives

4- Have spaces for discovery and exploration in the outdoors activity area.

A space that supports creativity, construction, building. Create play-learning activity areas.

PRESCHOOL AND ARCHITECTURE

Goals and alternatives

5- Produce infinite possibilities for interior atmospheres.

Illumination is done by natural lightning through windows and skylights.

DEVELOPMENT

Initial thoughts

Questions that are gathered to understand the fundementals of universal learning (the built environment has to answer)

Physical: How the body can be trained for wellness using various activities. How children can be taught what's good to eat, etc.?

Mental: How traditional learning can be translated into more fun/experiential ways of developing reasoning?

World: How can children discover their connection to the planet, nature, culture, and the world around them?

Creativity: How can a child explore learning by doing things and exploring how things work by doing?

Art forms: How can a child explore various forms of art forms. E.g. Dance, Music, Painting, etc.

Evolution: How these forms of teaching will constantly evolve with time considering the larger span of time?

DESIGN PRINCIPLES

Architecture

Important aspects

+ Comfort: The classrooms that are dedicated to 0-7 seek to offer a homey, welcoming, safe, and stimulating environment.
+ Harmony between the arts: It is very common to find spaces that exhibit artworks developed by students.
+ Rhythmic elements: It appears in architecture through the repetition of elements such as frames or pillars.
+ Nature, inside and outside: The connection (direct or indirect) with nature is considered highly beneficial for the psycho-emotional health of children
+ Natural lighting: Natural lighting is also highly valued in its schools.
+ Colour: The younger children's classrooms use primarily warm and light colors (especially reddish and orange).
+ Flexibility: It is essential that the composition of the interiors be very flexible, creating a living and active environment.
+ Geometric perception: Progressive transformations of geometric shapes in classrooms - as the age groups change - are very important.

Steiner defined specific formal codes for the design of school spaces, with incidence on the space's scenic character, in matters such as the classrooms' plan form, their colour and the role of the window.

+ Organic sustainable architecture
+ Green roof = maintain indoor temperature
+ Overall structure + morphology of buildings = supported by the principles of Waldorf pedagogy
+ Dimentional characteristics = central entance should be clearly defined
= all visible elements must be formed with awareness of their role
+ Natural light everywhere

DESIGN PRINCIPLES

Internal relationships

+ Reception / administration areas shall have a clear view of the main entry / waiting areas and be visible from adjacent staff areas.

+ Conference and meeting rooms should be accessible from the main entry / waiting area as well as from the staff area.

+ Learning spaces should be adjacent to the main entry / waiting area so they can be accessed after hours.

+ Staff areas shall be designed so they allow staff to move easily between the main entry / reception and service areas. Staff offices and amenities should be separate from service areas and community space for confidentiality and a quiet work area.

+ Corridors should provide for movement between the adult and between child activity areas without having to pass through child activity areas for reasons of child safety and program quality.

+ The main learning areas for child activities and learning programs should be centrally located and visually connected to incorporate a physical layout which encourages interaction and communication.

+ The design of the building should connect the inside and outside learning areas through visual connection.Children should be able to move freely between the indoor and outdoor learning areas and designed in such a way that supervision of both areas is maximised.

+ Toilets for children, staff and the public need to be available and accessible from each of the functional modules of accommodation used by those groups.

DESIGN PRINCIPLES

Curriculum

In the early stage, the curriculum addresses the child as a bodily being, and appeals to the will, intuition, senses, imagination, and skills of imitation.

Daily rhytms of free play, outdoor time, circle time, story time, visual arts, handwork and practical activities

Nature kindergarten ⟶ Playground and nature walks

+ Story time/puppetry
+ Circle time
+ Outdoor work & play = 2 classes to shelter from exreme weather, paint, bake and other nurturing activities
+ Creative playtime = have a big table to play on
+ Visual arts, handwork & practical activities = painting, colouring, modeling, sewing, finger knitting
= hand-on experiences are connected to the seasons
+ Parent & child classes = creating a rhytm for the child, supporting the senses, learning through imitation and play, sleep/meal times

DESIGN PRINCIPLES

Facility

The Steiner early childhood framework is based on the idea that all the senses of the very young child are very impressionable and vulnerable to over-stimulation. Very careful consideration is therefore given to the detail of the quality of all the aspects of the environment, both indoors and outdoors.

Zones

Individual spaces may be able to be combined to form zones or groups of spaces with a similar purpose. The relationship of functional zones is considered important to ensure that the facilities operate efficiently and effectively while promoting an atmosphere of friendliness and community involvement. The preference is for access to all services to be through the main entry / reception area.

+ Main entry / reception area
+ Community space
+ Service provision and activity areas
+ Staff and administration areas
+ Outdoors activity areas
+ Daycare service
+ Eurythmy

Relationships External

Facilities should be situated in a location with a pleasant outlook and maximum environmental benefits. They should provide a recognisable community focus for child and parent activities.

+ Location: Ideally, a preschool shall be located close to public transport, other community services and the general 'flow' of community.
+ Car Parking: Provide short term parking for parents to take children into the centre for at least 25% of the enrolment capacity. Design consideration must ensure that children and parents do not have direct access from the building into the carpark.
+ Internal: The internal plan of the preschool shall allow users to easily move between service and activity areas, have a strong sense of connectivity and enable efficient movement and supervision.

DESIGN PRINCIPLES

Facility

Internal Spaces

+ Main activity space
+ Small activity space
+ Teacher prep/staff
+ Foyer/Entry
+ Office
+ Kitchen
+ Staff/meeting room
+ Sleep room (for children under 2)

+ Storage
+ Laundry
+ Children’s toilets
+ Access/staff toilet

External Spaces

+ Verandah
+ Shed
+ Sandpit
+ Outdoor learning space

DESIGN PRINCIPLES

Planning and design

The planning and design of the preschool should provide an aesthetically pleasing physical environment for children from birth to age 8 that supports learning, development and well being, their families and staff.

Site

The positioning of facilities on new sites and within existing sites should consider the following:

+ The site must be physically and psychologically safe.
+ Off-street access for vehicles shall be provided for safe drop off and pick up of children, including taxi access and wheelchair access spaces.
+ Direct access to car parking areas shall be provided for children and families and for the safety of staff who work after hours.
+ The ability for a future covered drop-off area to be provided if children with additional needs are enrolled.
+ The relationship of new facilities with any existing facilities.
+ Play and outdoor learning area locations and their relationships to each other and to existing site facilities.
+ Access points for children, parents and community members considering safety and duty of care requirements.
+ Additional accommodation modules for programs and facilities to meet future requirements.

DESIGN PRINCIPLES

Planning and design

Buildings

The planning and design of the preschool should provide a family friendly environment, support for an integrated approach to program provisions and a high quality facility, considering the specific needs of infants, toddlers and young children, including the following:

+ The facilities shall meet all requirements for access for those with disabilities (including the design of the outdoor learning area).
+ A recognisable, community focus for child, parent and family activity.
+ Separate, shared and flexible spaces for children, families and service providers including being able to meet the needs of chan nges to services for the community.
+ A welcoming entrance, with clear signage and which provides a safe location and access for parents to deliver and collect children.
+ Family friendly designs where children and their families can feel comfortable, safe and secure.
+ An inviting natural environment that is culturally appropriate and will encourage the community to utilise available facilities for a variety of purposes.
+ A physical environment which supports integration of health, education and care and family services.
+ Facilities that meet the minimum requirements of all relevant legislation and standards.
+ A physical environment that maximises acoustic properties to support early childhood learning (including children with hearing disabilities)
+ Adult toilets that are accessible from an adult precinct without having to pass through child areas.
+ Circulation spaces that are clearly distinct from functional spaces.
+ Separate access to the adult precinct from access to child activity areas.

DESIGN PRINCIPLES

Interior area data

Activity Area

Function: To cater for wet and dry education and play activities in groups of varying sizes.

Planning: **+** This provides the major part of the indoor activity space.

+ The other children's activity area is the withdrawal room.

+ The design should enable flexible use of activity areas ie learning areas that can be changed frequently.

+ The Activity Area is to open to the veranda and outdoor learning area.

DESIGN PRINCIPLES

Interior area data

Office
Function: For use as the Director's office

Planning: **+** To be located near the entrance for easy adult access.
+ Consider an appropriate shape to enable it to be also used for small meetings.

Foyer / entry / reception
Function: To provide a point of entry for parents and visitors including a reception counter and work station.

Planning: **+** A safe place where parents can collect notices, pay fees and where visitors can wait and be seen.
+ Children are not to have unsupervised access directly to outside of the building.
+ The foyer is not to be used as a place to leave and collect children.

Kitchen
Function: The kitchen is used for food preparation and distribution as well as a curriculum resource for children. Kitchens shall be designed to prevent unsupervised access by children.

Planning: **+** Include a walk-in pantry unit for storage of food and ingredients.

Staff Preparation Area
Function: For use by staff for preparation of educational and resource materials.

Planning: **+** To be located away from entrance and activity areas.

DESIGN PRINCIPLES

Interior area data

Staff room / meeting room
Function: For use by staff for recreation and for meetings.
Planning: **+** To be located away from entrance.

Toilets - children
Function: Children‘s toilets
Planning: **+** Toilets shall be directly accessible from the Activity Area and the outdoor learning areas and be easily accessible for free access by children
+ Cubicles are to be fitted with privacy doors.

Toilets - staff
Function: Staff and disability access toilet located separately from children’s toilet area.
Planning: **+** No access by unaccompanied children.
+ Ensure toilet is not in close proximity to the kitchen.

Store
Function: The storage of cots, mattresses, trolley, games, play equipment, rolls of paper, flat paper, plastic bins etc
Planning: **+** Several smaller storerooms directly accessible to each activity area.
+ Mattresses shall be stored in a separate bay for hygiene reasons.

Laundry
Function: Laundry function is for regular washing of selected items
Planning: **+** Direct access to service yard and clothes line.

DESIGN PRINCIPLES

Outdoors area data

Outdoor Learning Area

Function: To cater for outdoor learning in groups of varying sizes

Planning: **+** The outdoor learning areas shall provide nencumbered accessible space per child.

+ Where a range of programs are being delivered that require specific outdoor space, separate spaces for each program are required.

+ The design of outdoor learning environments shall reflect the developmental, social and emotional needs of the user age group.

Car Park

Function: Provide short term parking for parents to take children into the preschool.

Planning: **+** Design consideration must ensure that children and parents do not have direct access from the building into the carpark.

Service Yard

Function: To provide for the secure location of rubbish bins, recycling bins.

Planning: **+** An area secure from child access with ready access from laundry and/or kitchen.

+ Gates and path access to the site frontage for easy bin collection.

DESIGN PRINCIPLES

Outdoors

The preschool setting will have a protected and safe outdoor area for play and work where the children can climb trees, hide in bushes or play in the sand or mud pit. The outdoor equipment is simple, with a choice of skipping ropes, digging or raking equipment, and logs and branches for building dens. Where outdoor space is limited, children are taken to the local park, playground or wherever they can experience nature. Where possible, children are introduced to gardening/composting in the kindergarten garden where there is an opportunity to become familiar with the process of growing from planting to harvesting.

+ Active play = active play in the topography
+ Experimental = discovery and exploration
+ Individual = observation and listening
+ Gathering = communication and sharing
+ Ecological = trees, shrubs, vegetation

DESIGN PRINCIPLES

Classroom

The Steiner early childhood approach is based on an understanding that the senses of the young child are sensitively impressionable and that everything that surrounds children has a direct or subtle impact on them.

+ The physical space is designed to be home-like in the way it is set up, and as free from exterior distraction as possible.
+ The scale of the space should not overwhelm a small child and so where possible the ceiling is low, there are no ‘hard’ corners and it is decorated in soft tones of pink to create a gentle, secure feeling.
+ Each child has his/her own coat peg with their name or a picture above it and somewhere to leave a change of shoes.
+ There is a nature table which follows a seasonal theme and the decorations are also seasonal, always displayed with moderation, using soft material and pastel colours.
+ There is a quiet corner, a home corner, an area for floor play and building large constructions, an area for activity and snack tables and chairs.
+ The kitchen area is partitioned but usually within the room.

+ Receives natural light
+ Quiet visual environment
+ Warm colours on the walls and floor
+ Large area of free space for building & diverse learning / play
+ High quality and purpose-designed furniture, fixtures and equipment
+ Allows ease of movement
+ Allows flexibility in learning varied activities
+ Contains ergonomic tables and chairs
+ Modular (the teacher can easily change the space configuration)

PROJECT LOCATION

Bulovka

Location criteria

Ideally, a Waldorf preschool should be located close to public transport, other community services and the general ‘flow’ of community.

The conceptual site design has to be integrated into the design of the overall site, including vehicle and pedestrian movement, parking, entry, service points, and constructed or landscape features.

The positioning of facilities on new sites and within existing sites shall consider the following site planning issues:

+ The site must be physically and psychologically safe.

+ Off-street access for vehicles shall be provided for safe drop off and pick up of children, including taxi access and wheelchair access spaces.

+ Direct access to car parking areas shall be provided for children and families and for the safety of staff who work after hours.

+ The ability for a future covered drop-off area to be provided if children with additional needs are enrolled.

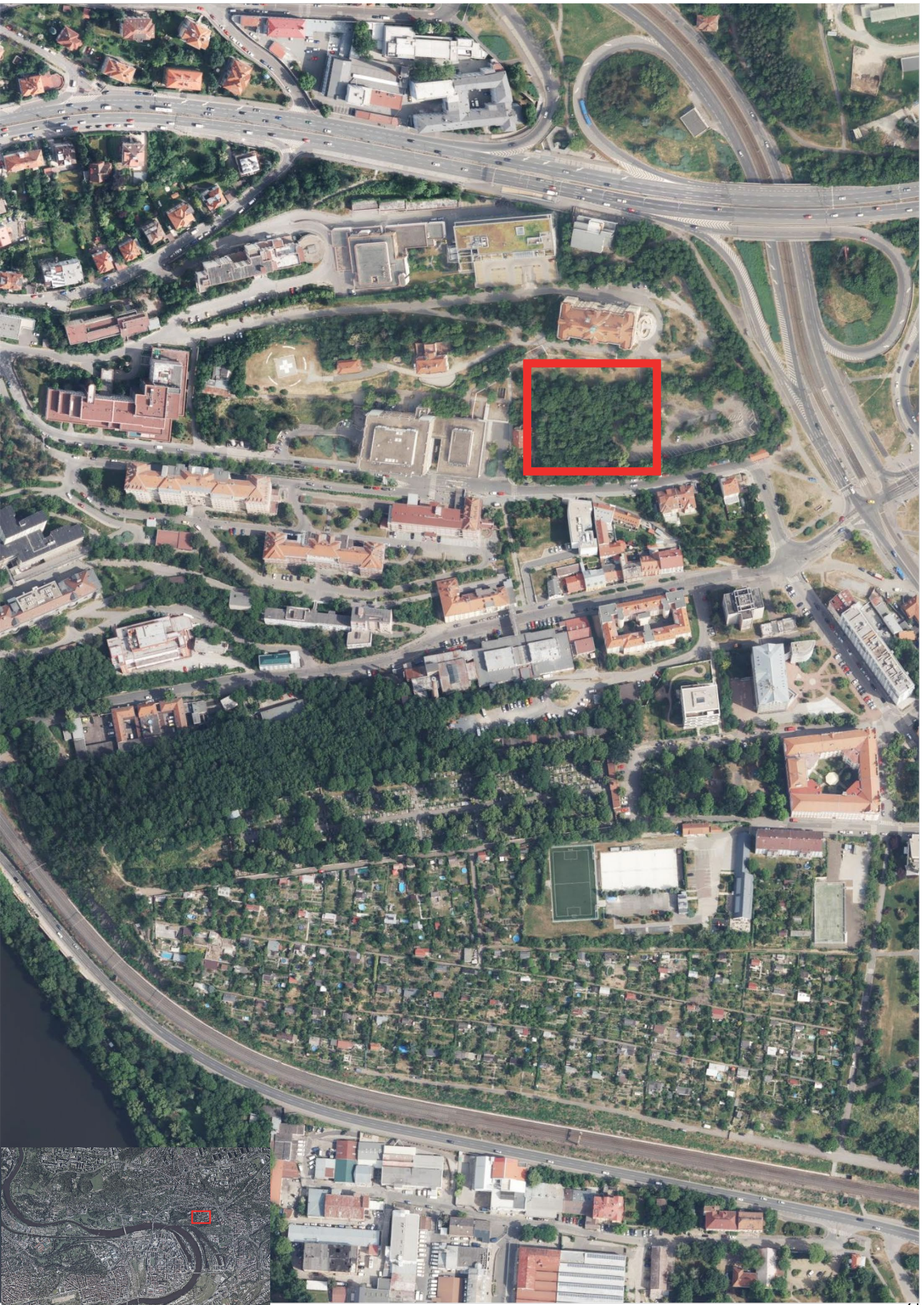
+ The relationship of new facilities with any existing facilities.

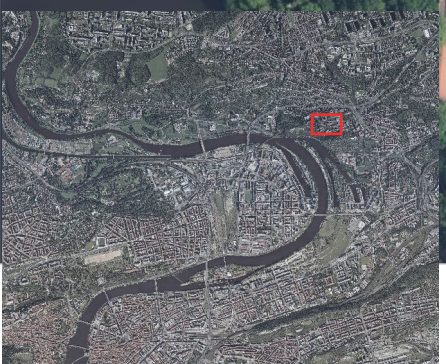
+ Play and outdoor learning area locations and their relationships to each other and to existing site facilities.

+ Access points for children, parents and community members considering safety and duty of care requirements.

+ Additional accommodation modules for programs and facilities to meet future requirements.

The location





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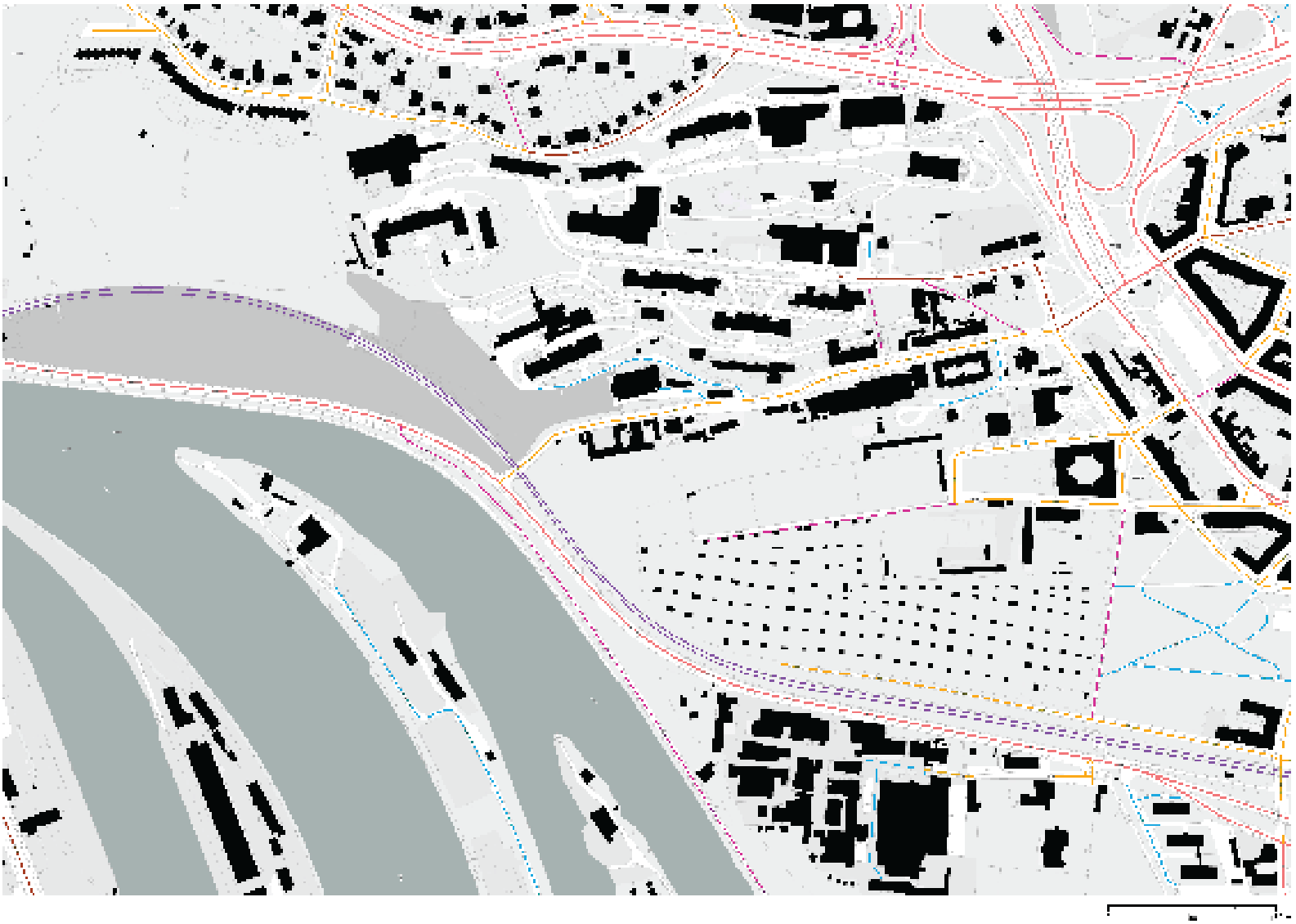
PROJECT LOCATION

Bulovka - connections



The project location is situated by Bulovka Hospital which is a large teaching hospital complex in Prague, adjoining the White Rock in Prague 8 - Libeň near the defunct homestead of Bulovka.

The main function of the area is healthcare services. It also has residential buildings, shops and a restraurant.

Accessibility to the public transport is important for Waldorf schools and there is a tram station by the hospital but the hospital area is not well connected to the rest of the city so the public transport options are pretty limited.

The paths are not pedestrian friendly in the hospital premises

- Expressway
- 1st class road
- 2nd class road
- 3rd class road
- Class I local roads
- Local communication
- Railway tracks
- Tram tracks
- Subway tracks

Bulovka - greenery

The project area which is at the edge of the hospital premises is connected to the area that has a high density greenery.

Although Waldorf is not an exclusive nature-learning environment, nature-based curriculum is a concept with which Waldorf educators are very familiar. There are proven health and cognitive benefits to being out in nature.

This can give the children opportunities to do activities in the outdoors that can touch their senses, it can boost their performance after a walk in nature (city walks don't produce the same results.)

Parks

Parks to restore

Accessible by node

PROJECT LOCATION

Bulovka - building floor / height arrangement

Apart from the differences in the terrain heights, there is quite a large variation in the height of the buildings, which does not affect the positive perception of the space. Some of the buildings are off-scale, some too tall, others disproportionately small.

The hospital area mainly covers one area, which is surrounded by single-family houses, the “Bila Hora” protection area or the “Pod Korabem” area.

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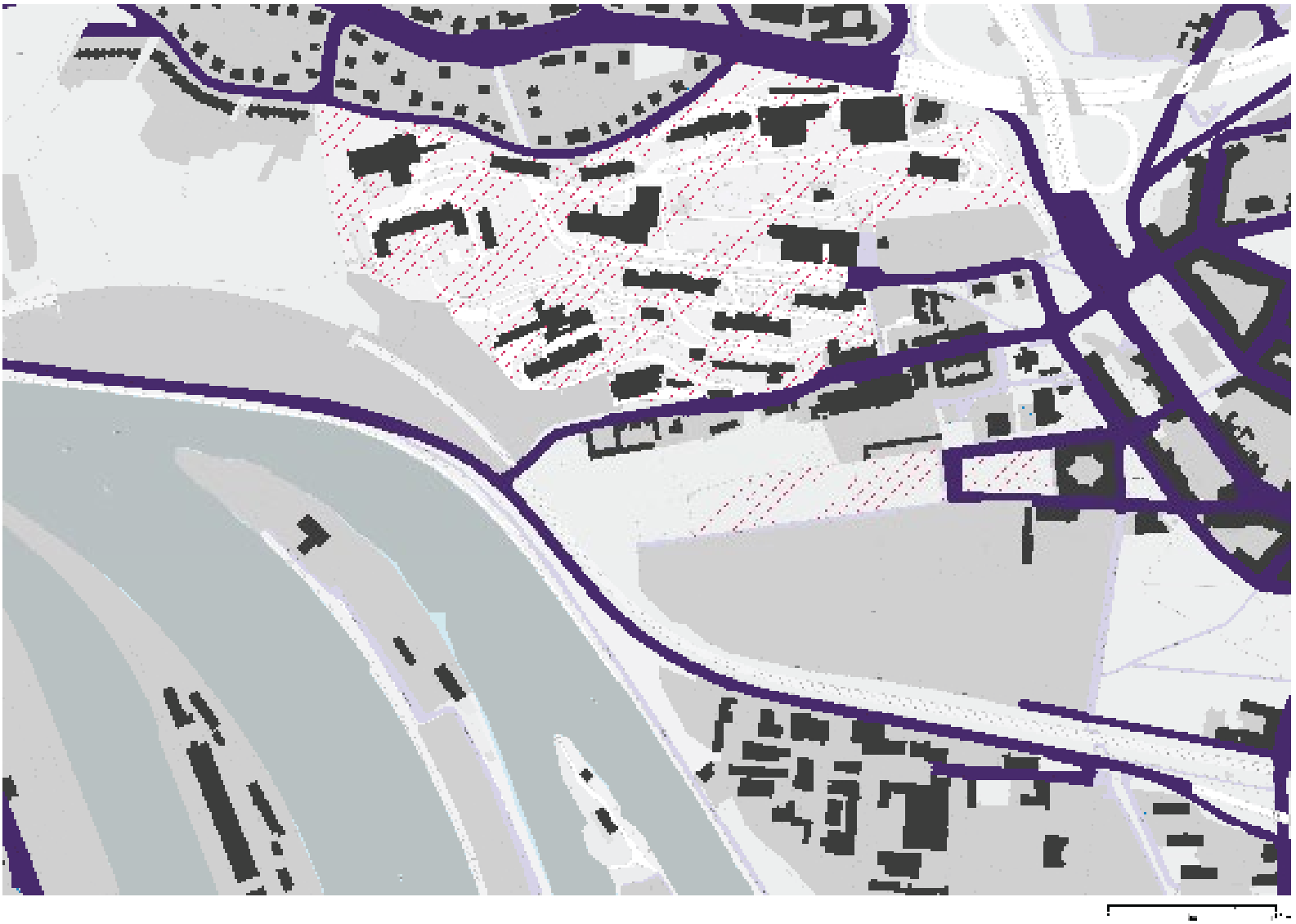
Bulovka - public accessibility / publicly accessible spaces



The space is generally medium to very dangerous for pedestrians, and this is mainly a hospital where safety and care should come first.

The hospital premises are accesible during a specific time so this lets the preschool have limited access for the public.

Accessibility (time)

Purposeful approach

Inaccessible

Street space

PROJECT LOCATION

Bulovka - built-up area

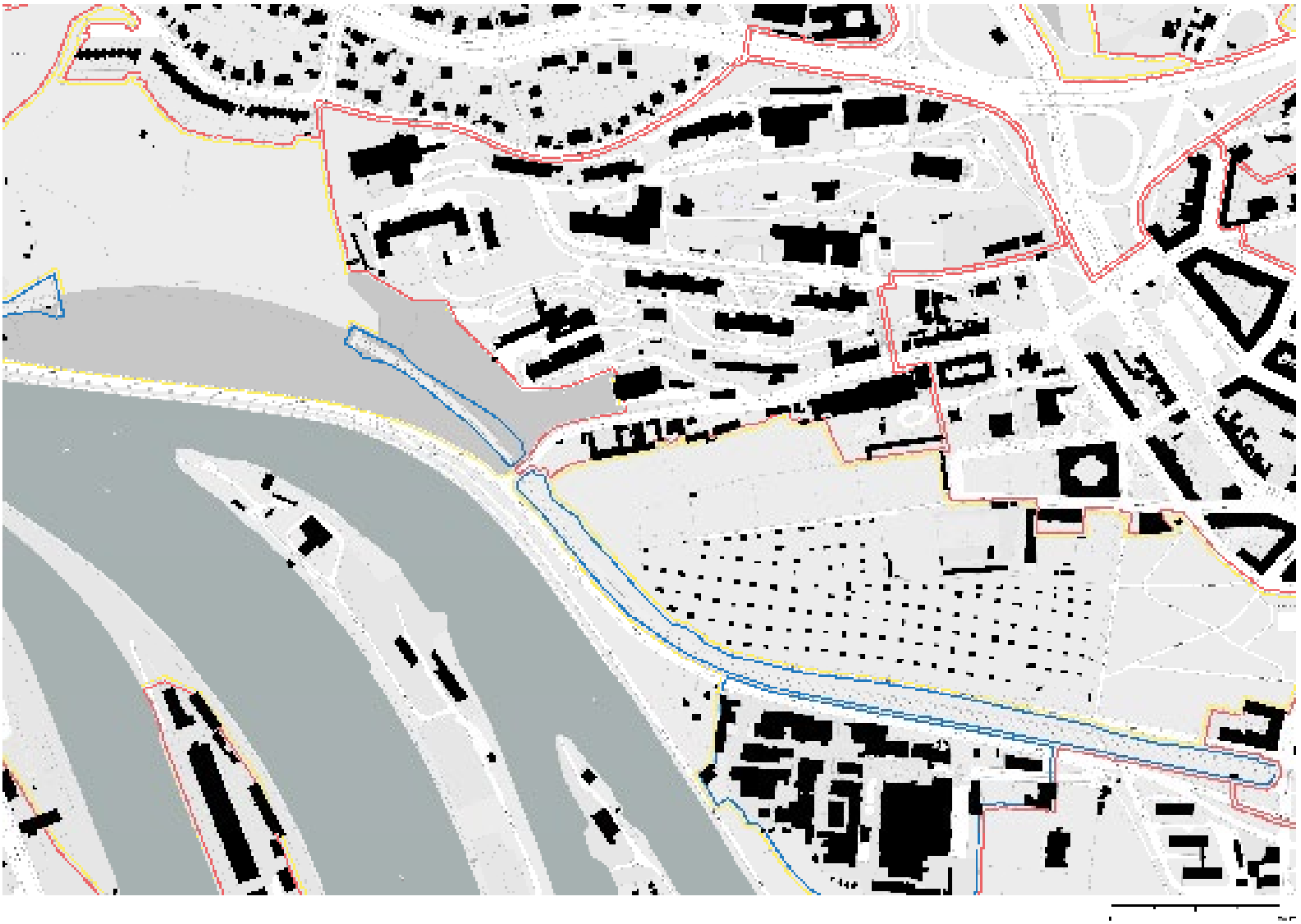
The built-up area plan shows the relationship between built and unbuilt space and in Bulovka, the building density is low but since it is a hospital area, the buildings contain empty spaces. It is visible that the greenery is dominant in this area so the preschool will be facing the Vltava river directly.

The effect of the terrain on the placement of the buildings can be seen in this plan.

The area is not close to the forest land or an other area for the stimulation for the senses so during the design process, the connection with the nature will be considered.

- Built-up area & courtyard
- Other area
- Gardens
- Orchard
- Vineyard
- Water area
- Permanent grassland
- Forest land
- Fertile ground

Bulovka - state localities



The use of state localities is determined according to the predominant use by means of aggregated types of use of the current state.

The area for the hospital premises is considered as residential use.

- Landscape use
- Residential use
- Production use
- Recreational use

PROJECT LOCATION

Bulovka - lookout points

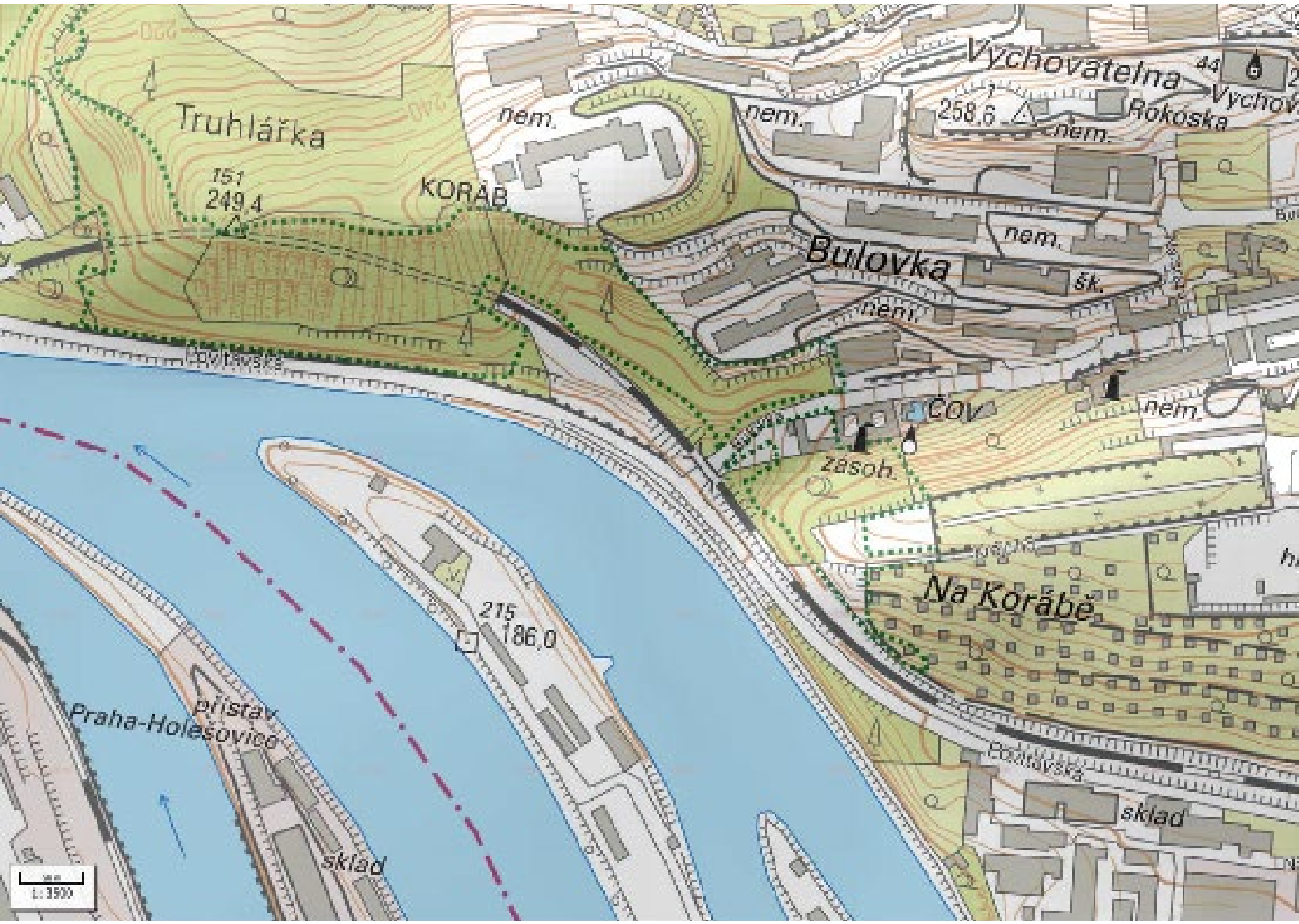
Due to the fact that Bulovka is located on a hill, the views are phenomenal. There is a nice sight on practically all sides. The most interesting views of the center of Prague are the great advantage of this area.

The view of the Vltava and the uneven terrain can enhance the senses of children.

Bulovka - photos

PROJECT LOCATION

Bulovka - morphology



The site has an uneven and hilly terrain. It has a view of the river Vltava. In an abandoned quarry, the boundary between the goodies / Beroun (Ordovician) stages is exposed. From the west, the Dobrotiv Formation (dobrotiv, Ordovician) rises to the surface, west of the Bulovka contagious pavilion, the Řevnice quartzites have been discovered the Libeň Formation is only partially exposed, and the profile continues with the Letna Formation, which is exposed in the railway cutout. There are typical mineral deposits here.

In some places, it is possible to find the remains of acidic rocky steppe vegetation.

Bulovka - vegetation

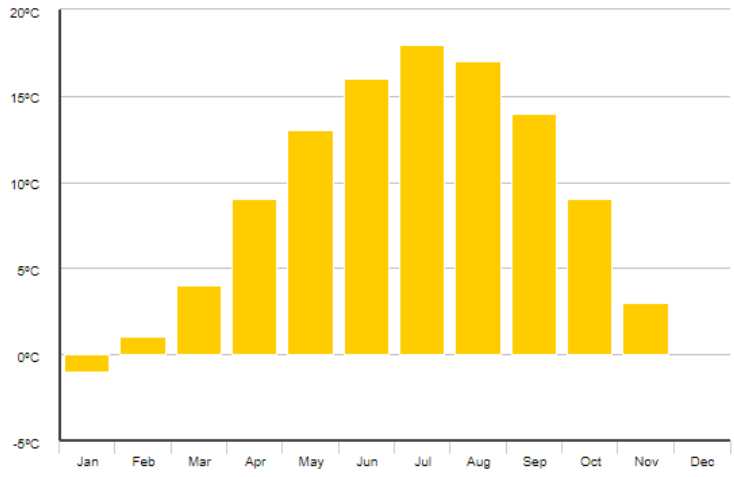
Common dragonfly (Berberis vulgaris)

Almost 190 species of vascular plants have been described at the site, of which, according to the Black and Red List of Vascular Plants in the Czech Republic, one local species is classified as critically endangered (C1), 4 species among endangered (C3) and 7 species as almost endangered (C4a).

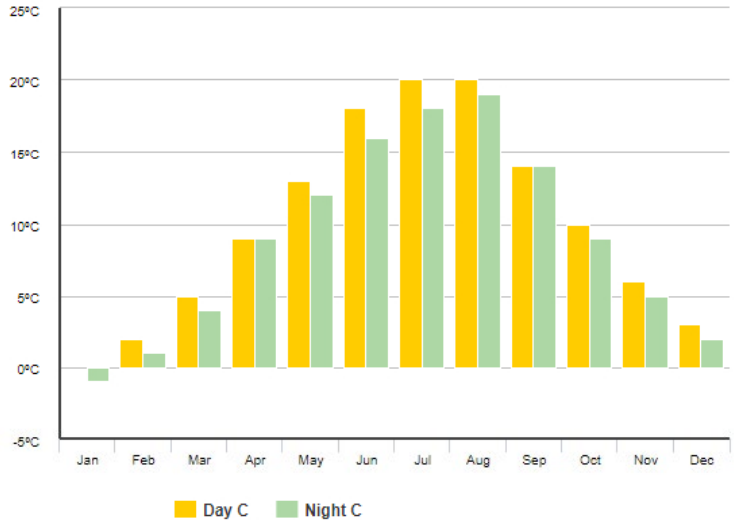
Looking at the representation of individual species by floor, the tree floor consists of representatives of the species birch (Betula pendula), winter oak (Quercus petraea), summer oak (Quercus robur), maple (Acer campestre), plum (Prunus domestica), cherries Prunus avium, Pyrus spymaster, Robinia pseudoacia or Fraxinus excelsior.

PROJECT LOCATION

Climate & weather averages in Prague, Czechia



Average temperature



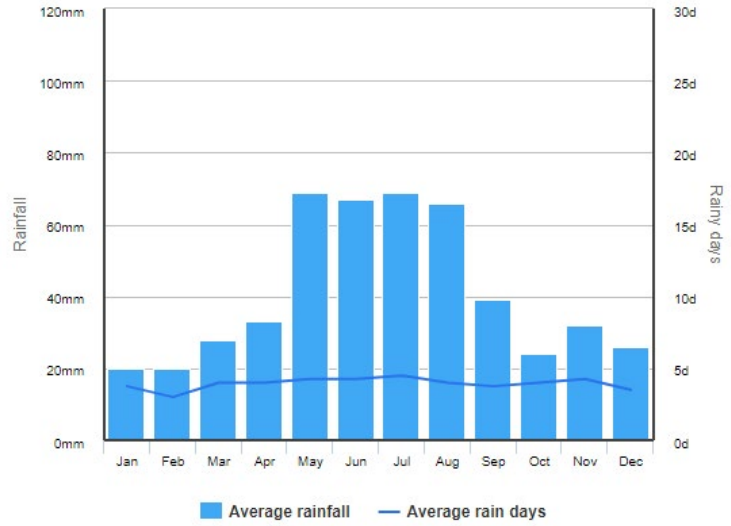
Average day/night temperature

The winters are relatively cold with average temperatures at about freezing point, and with very little sunshine.

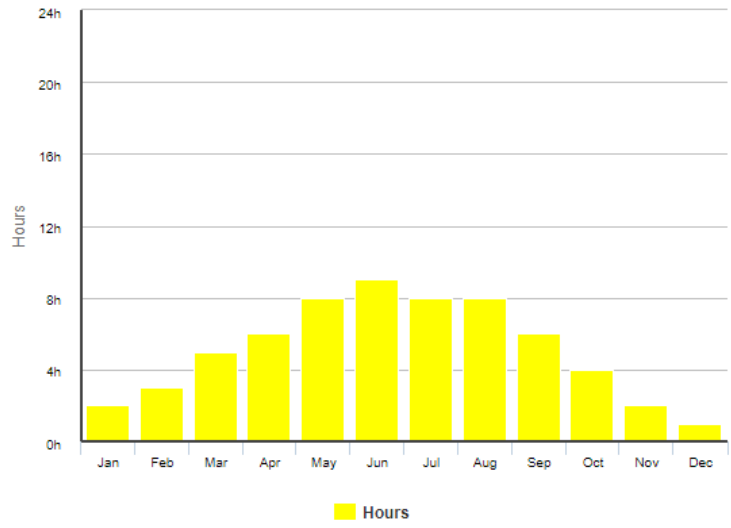
Summers usually bring plenty of sunshine and the. Nights can be quite cool even in summer,

The driest season is usually winter while late spring and summer can bring quite heavy rain, especially in form of thundershowers.

Prague is also a windy city with common sustained western winds and an average wind speed of 16 km/h (10 mph) that often help break temperature inversions and clear the air in cold months.



Average rainfall



Average daily sunshine hours

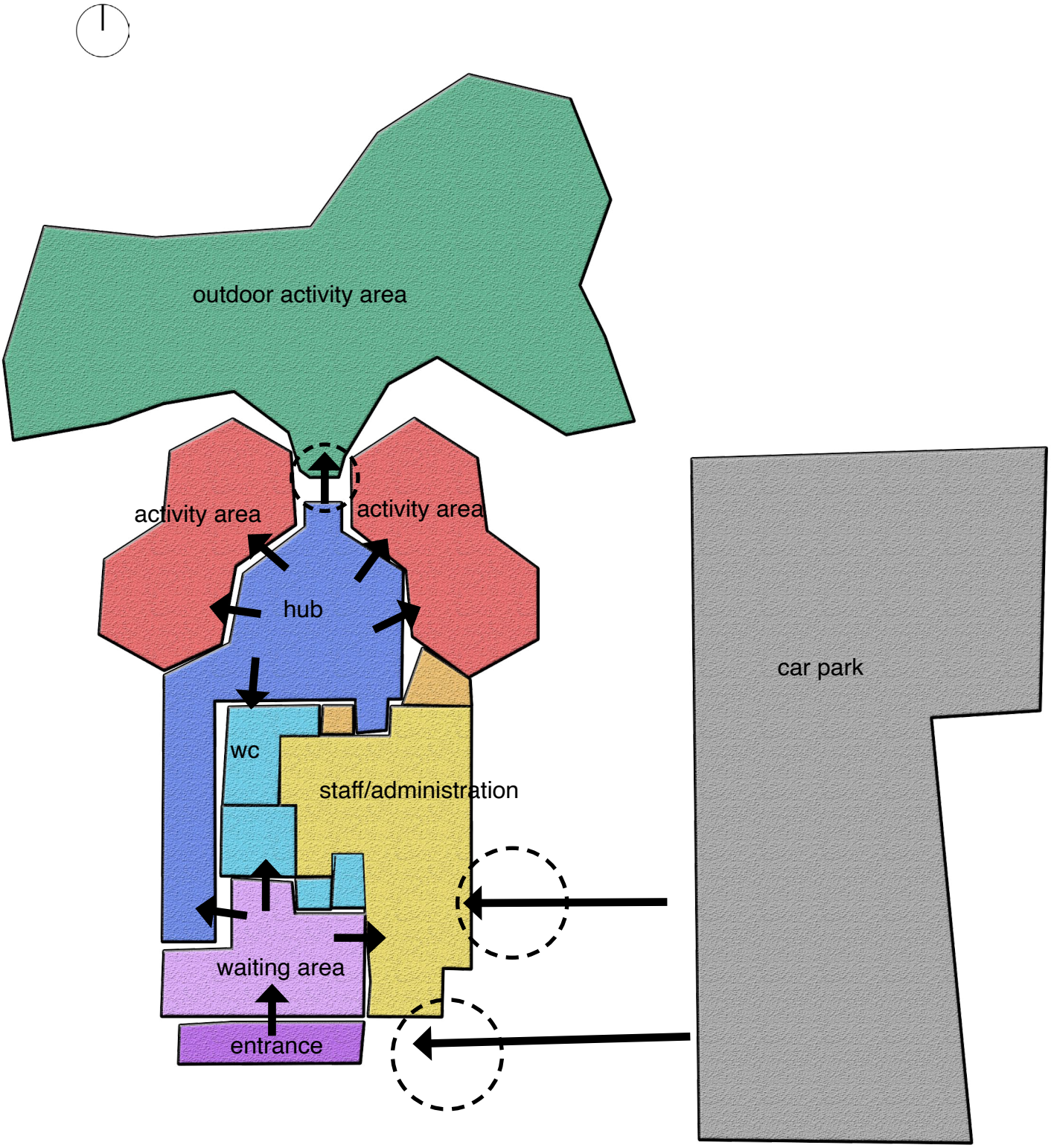
The weather analysis gives and idea of how the weather would be like while the children are having their outdoors activities in the nature. Waldorf education nurtures a reverence and interest for nature.

This is done by having children play within nature. In this way, direct experiences of nature are constant in Waldorf early childhood.

Children play outside, in natural vs. playground settings, in all weather and all seasons. Outside the classroom, children are encouraged to climb trees, play in gardens and creeks, and manipulate items like logs and mud.

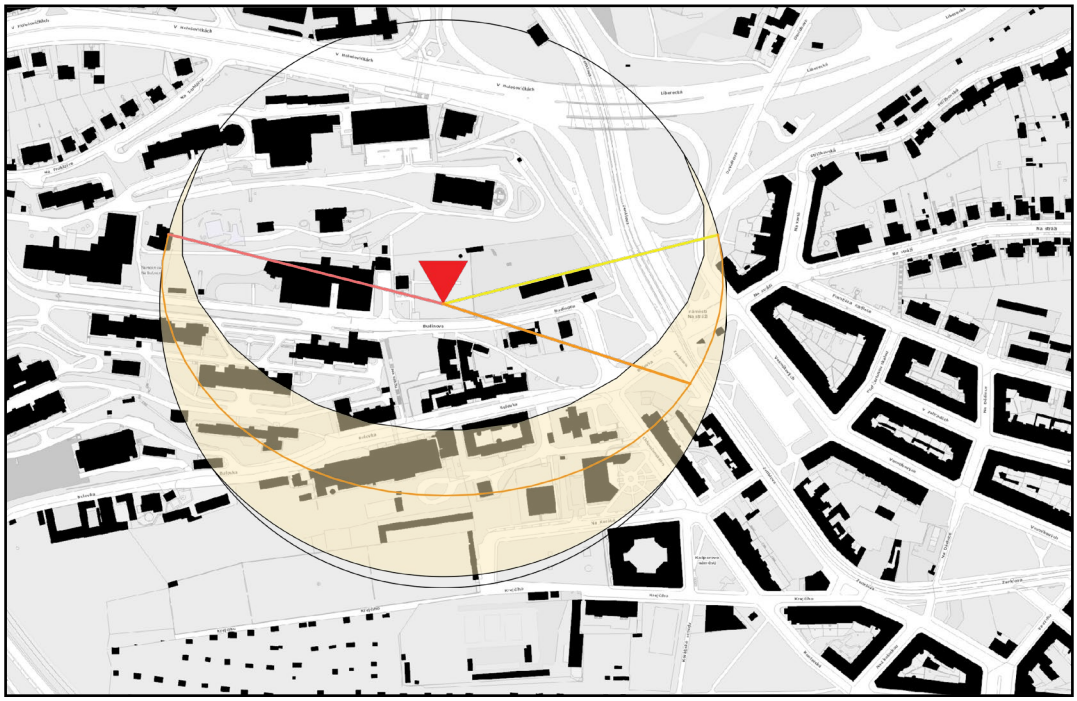
CONNECTIONS

Spatial diagram

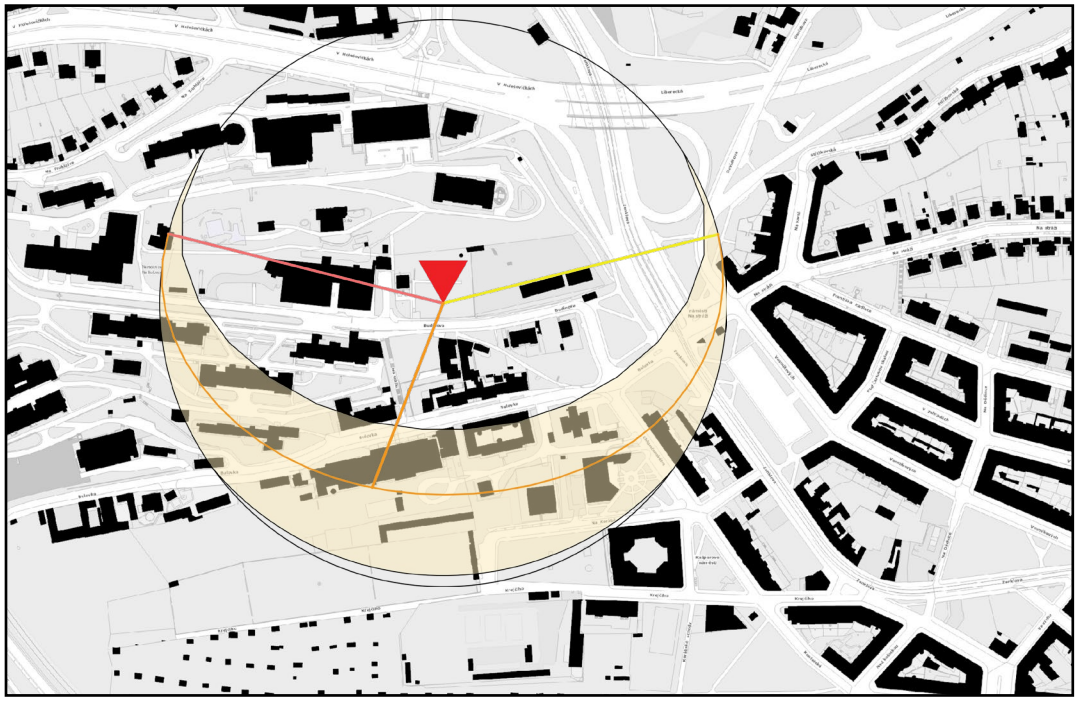


PROJECT LOCATION

Sun movement and sunlight phases

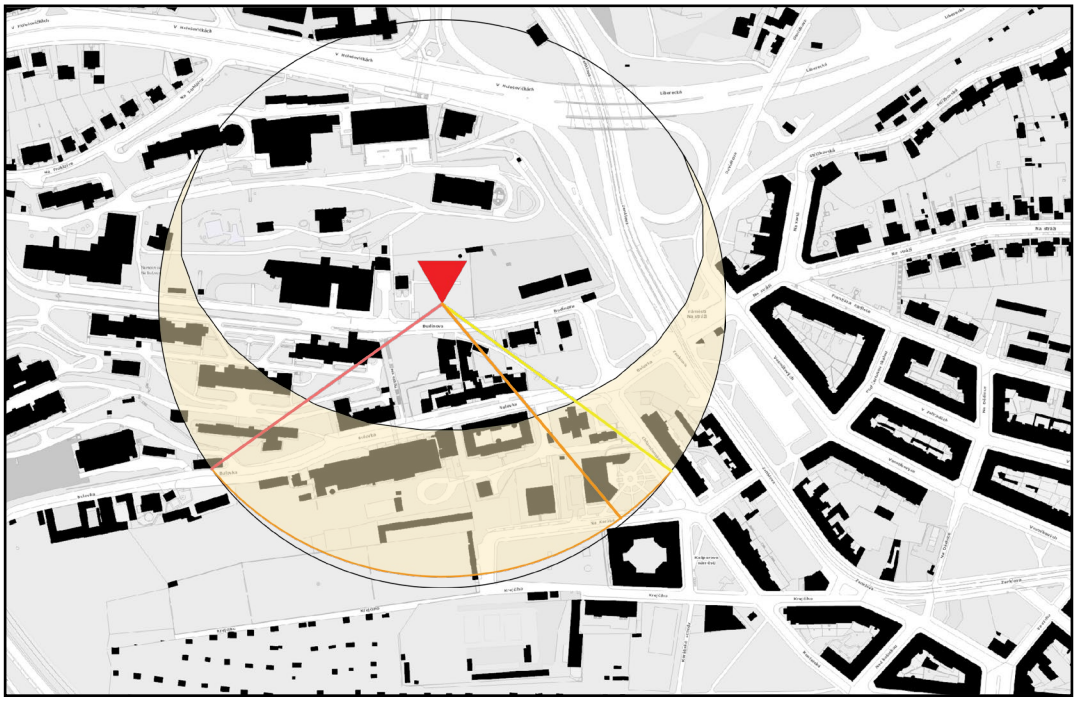


12 April 2022 09:00 am

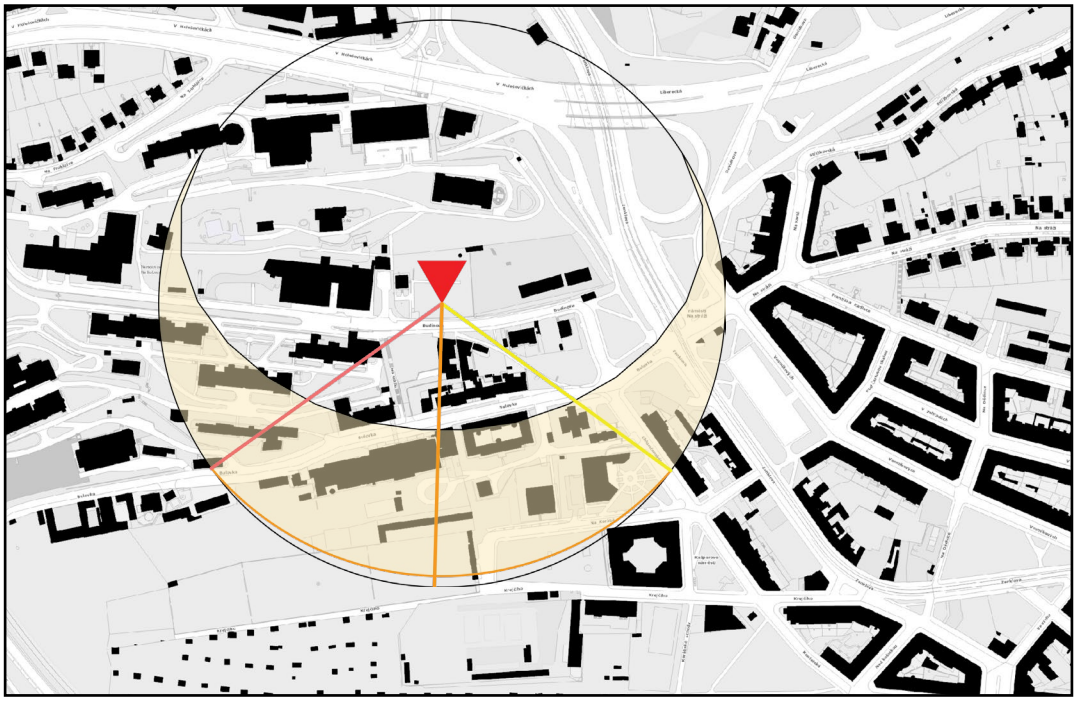


12 April 2022 02:00 pm

Sun positions at sunrise, specified time and sunset. The thin orange curve is the current sun trajectory, and the yellow area around is the variation of sun trajectories during the year. The closer a point is to the center, the higher is the sun above the horizon. The colors on the time slider above show sunlight coverage during the day.



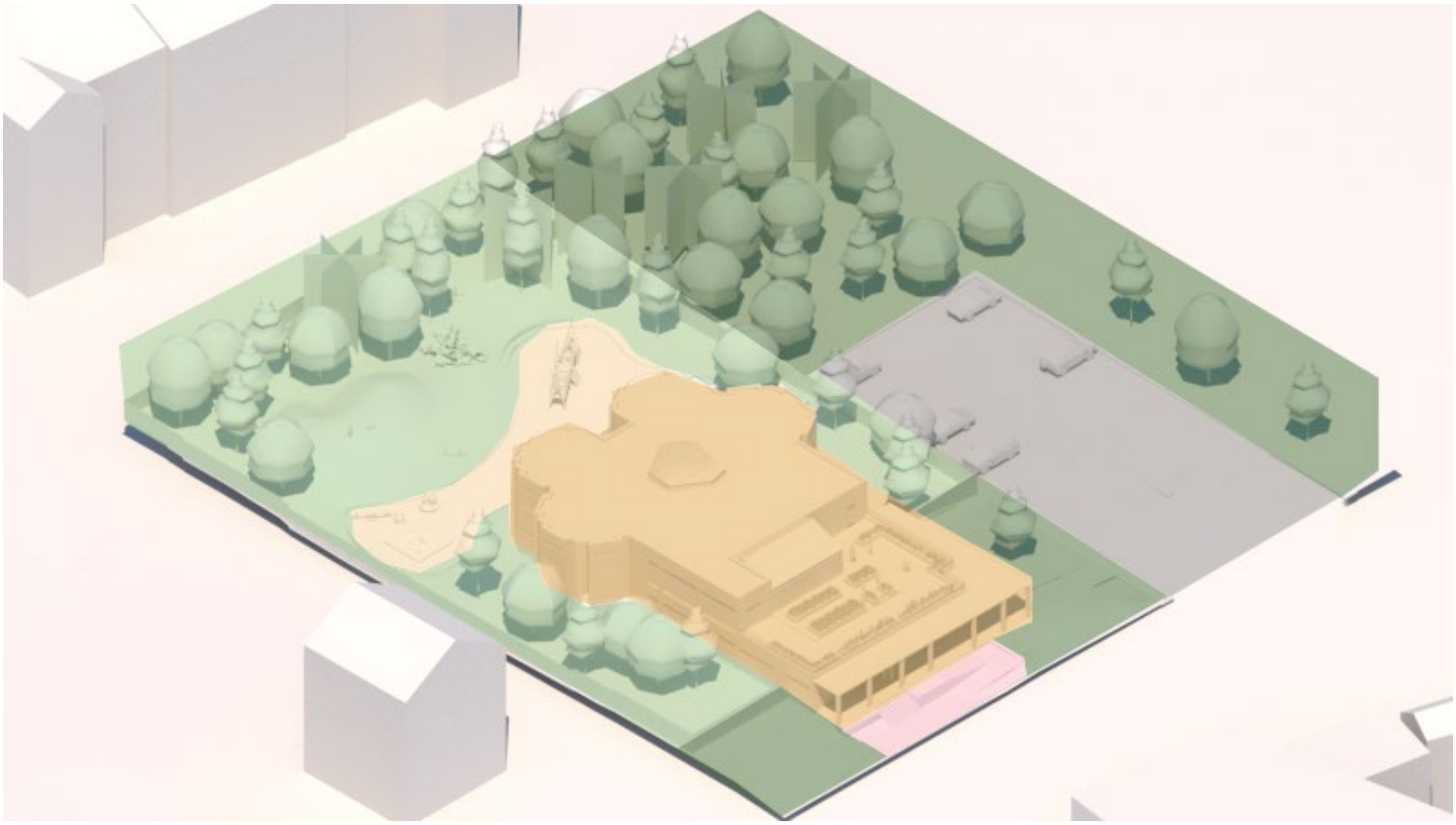
12 December 2022 09:00 am



12 December 2022 02:00 pm

PROJECT LOCATION

Site plan - 1/1000



DESIGN

Site plan - 1/300

This developmental approach entails educating the “whole” student. Hands-on experience is crucial to the curriculum, and creativity of any sort is encouraged. Because of their focus on nature, the Waldorf School needed to be built of natural materials, be well integrated with the site and supportive of the many indoor and outdoor activities the students and teachers partake in. Because of the importance of nature, a rooftop garden was designed as well as the outdoor activies area with a playground. The design needed to be organic, reaching out into the site to provide the views of the outdoors.

The form of the building nurtures important elements in a child’s development by creating spaces in which to further everyday experiences within the ordered central spaces. The organic shape of the classroom areas follow the design principles of Waldorf education.

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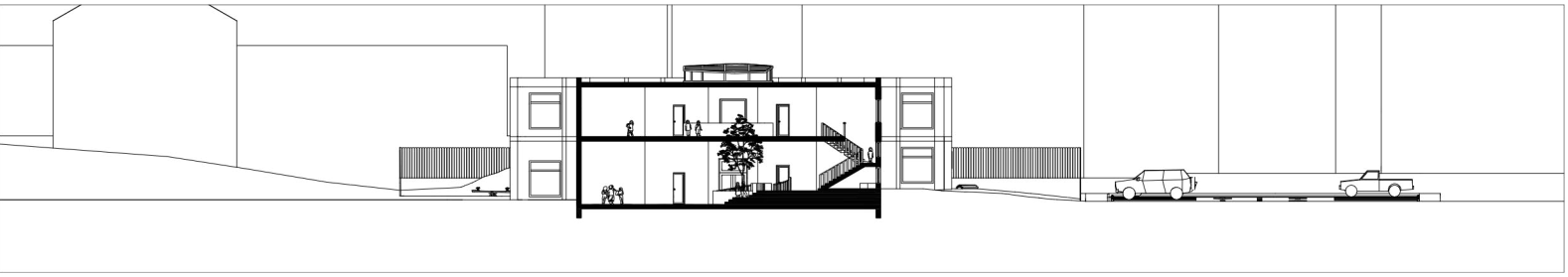
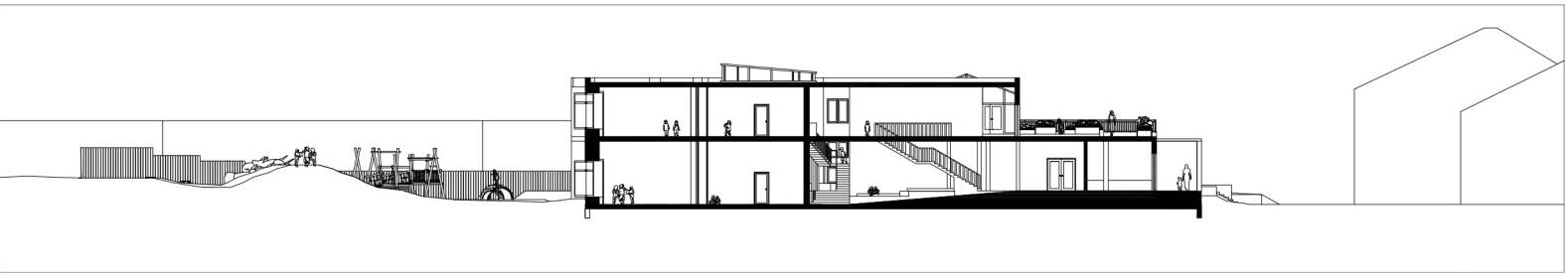
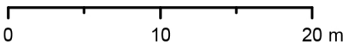
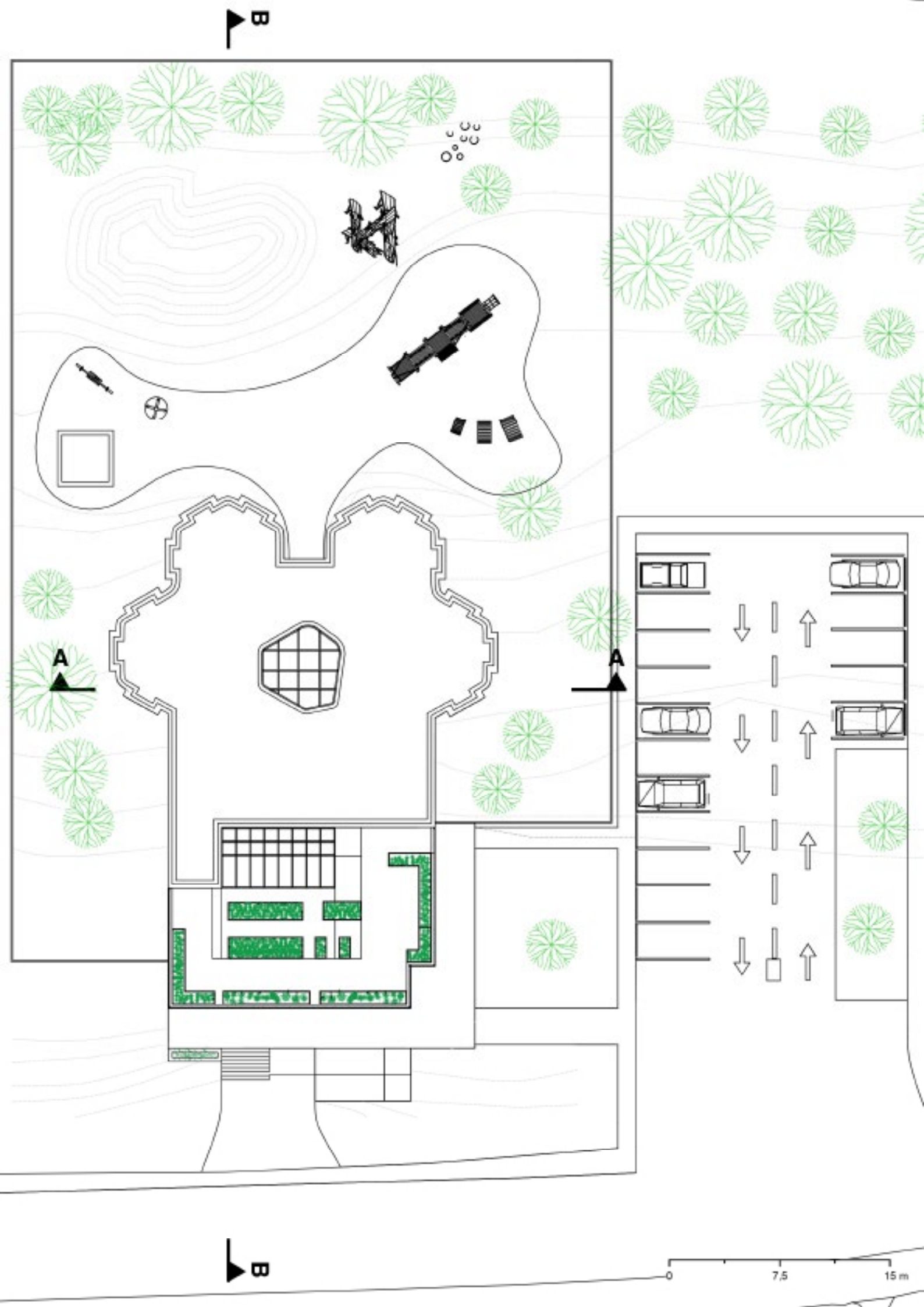


A-A section I 1/500



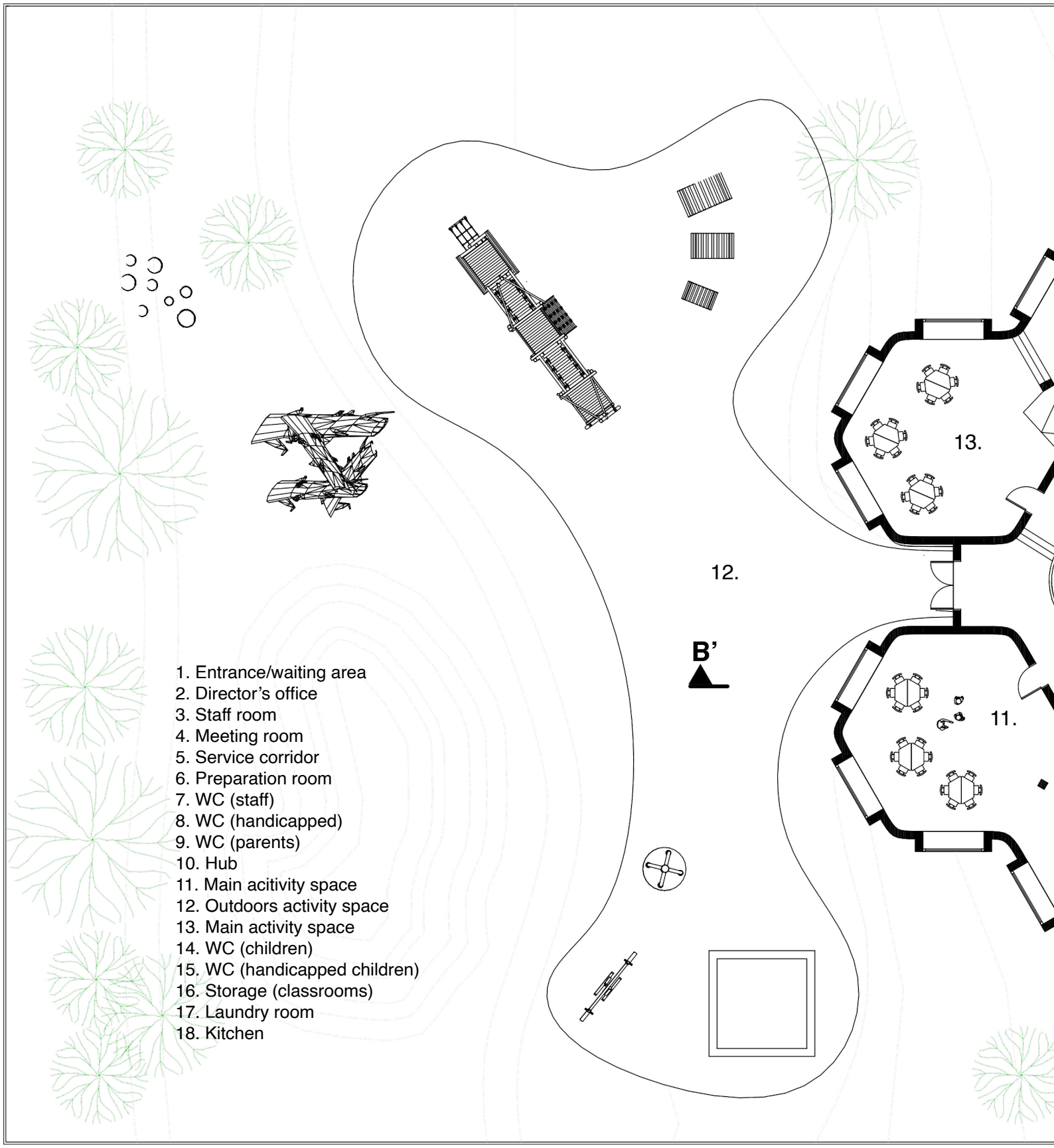
B-B section I 1/500



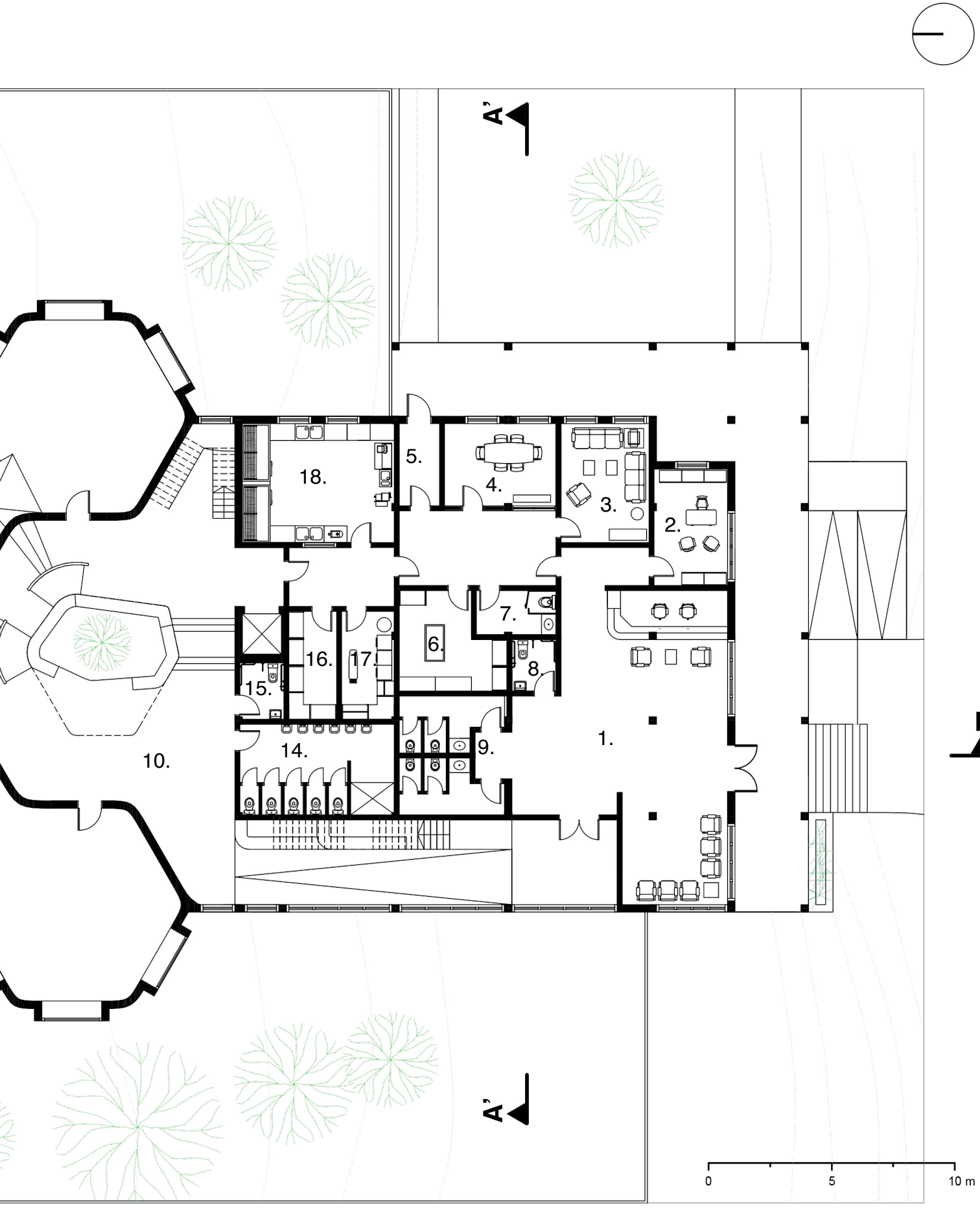

B
A
A
B
0
7,5
15 m

DESIGN

Ground floor - 1/200

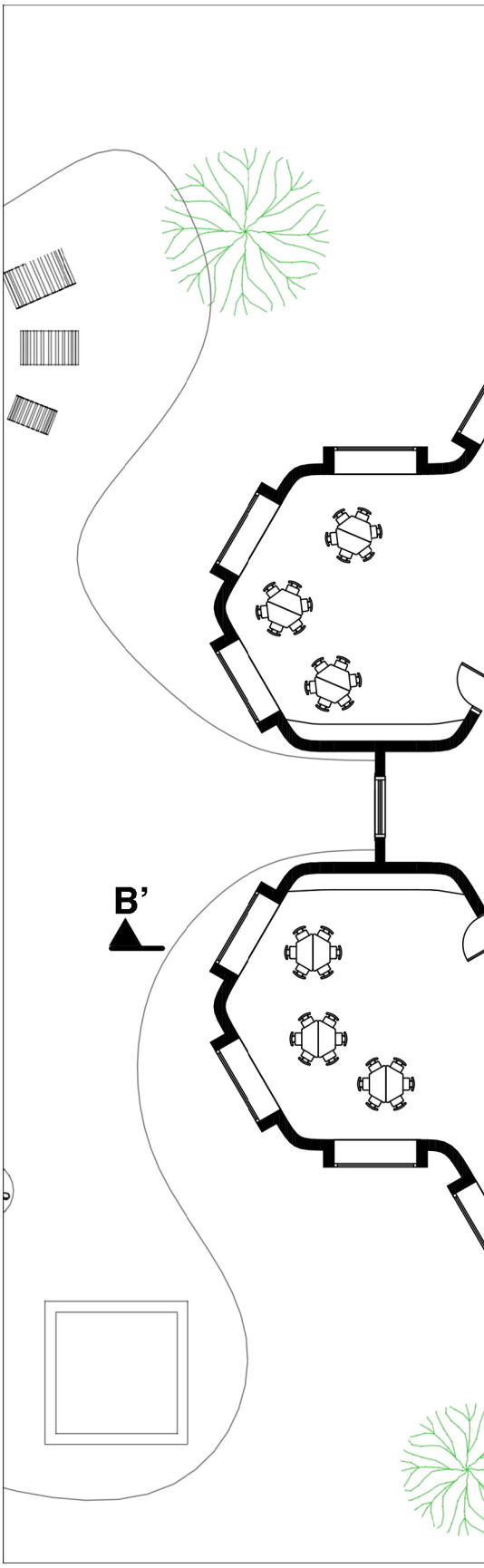


1. Entrance/waiting area
2. Director's office
3. Staff room
4. Meeting room
5. Service corridor
6. Preparation room
7. WC (staff)
8. WC (handicapped)
9. WC (parents)
10. Hub
11. Main acitivity space
12. Outdoors activity space
13. Main activity space
14. WC (children)
15. WC (handicapped children)
16. Storage (classrooms)
17. Laundry room
18. Kitchen

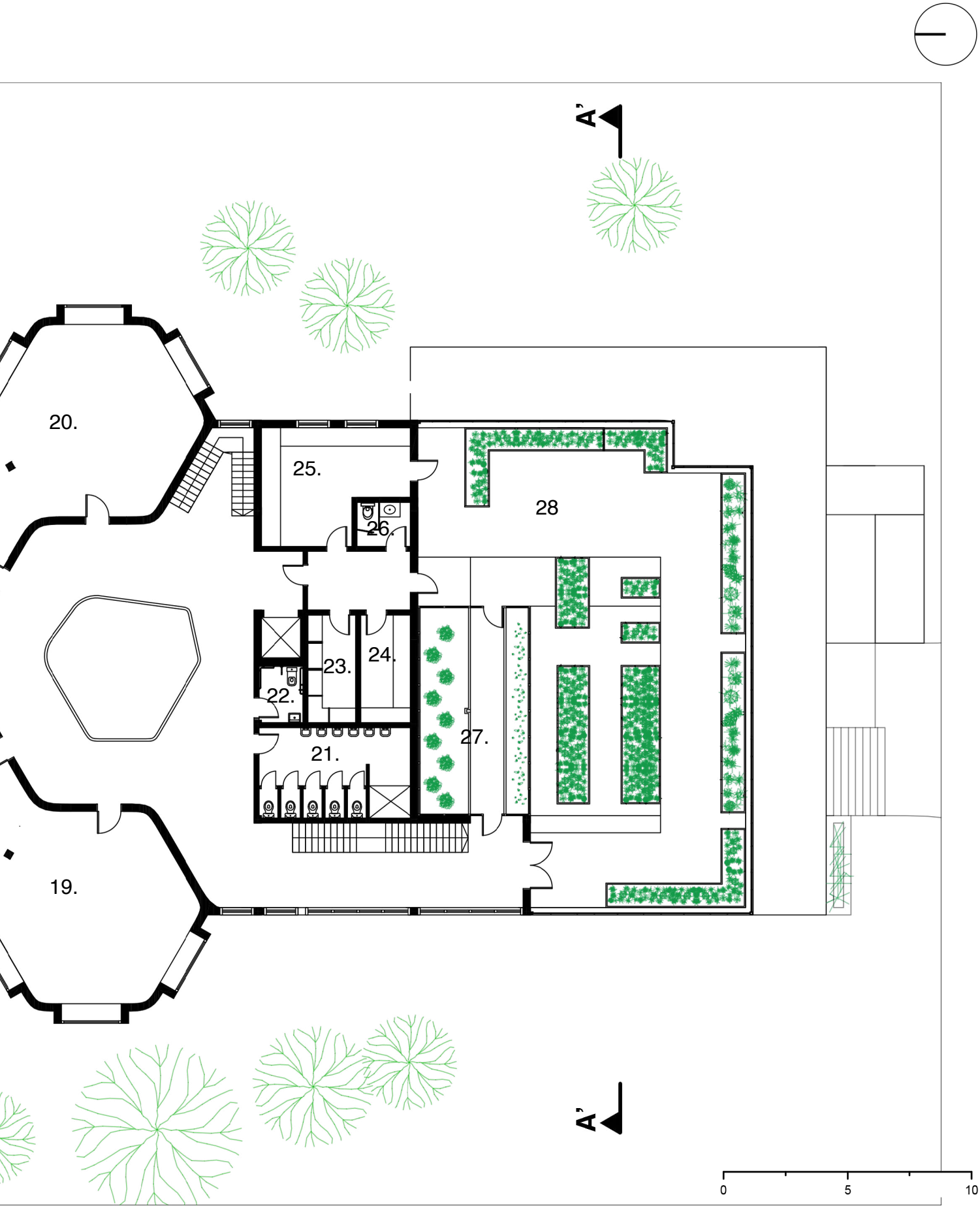

A'
A'
B'
1.
2.
3.
4.
5.
6.
7.
8.
9.
10.
14.
15.
16.
17.
18.
0
5
10 m

DESIGN

First floor - 1/200

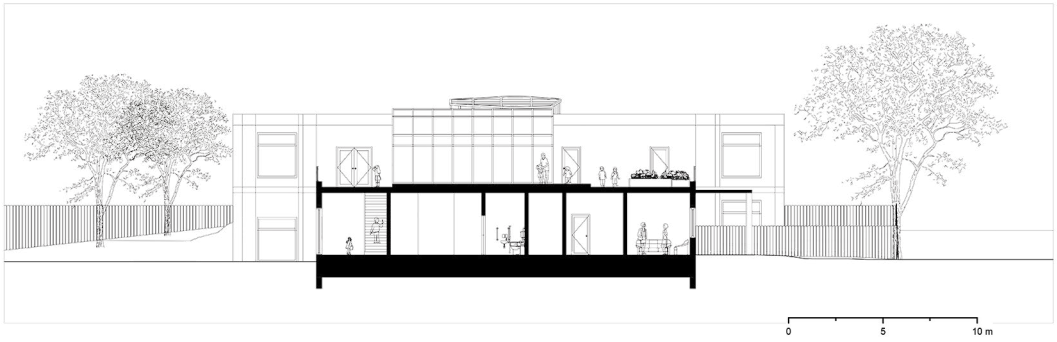


19. Main activity area
20. Main activity area
21. WC (children)
22. WC (handicapped children)
23. Storage (classrooms)
24. Storage (classrooms)
25. Storage (rooftop garden)
26. WC
27. Greenhouse
28. Rooftop garden

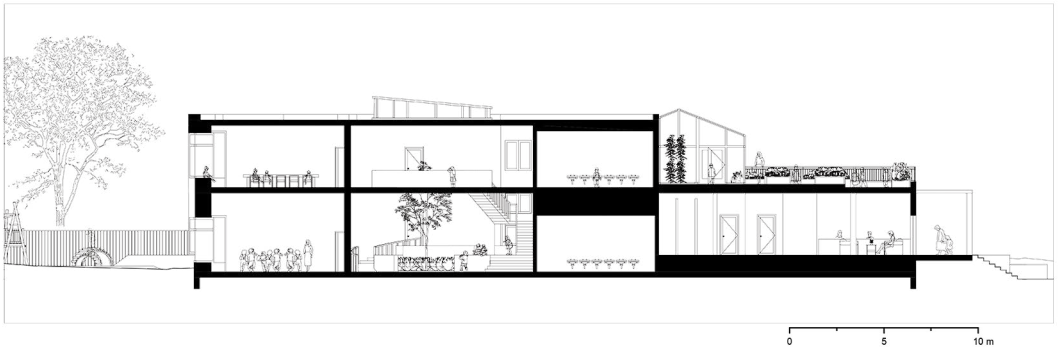

A'
20.
25.
26.
28
23.
24.
22.
21.
27.
19.
A'
0
5
10 m

DESIGN

Sections and elevations



A' - A' section



B‘ - B‘ section

North elevation

South elevation

East elevation

West elevation

DESIGN

DESIGN

DESIGN

Toys from the natural materials were placed in the design since it is an important aspect in Waldorf education. In the outdoors activity area there are different elevations for children to partake in activities like rolling, climbing etc

DESIGN

Soft colours were used in the design and wooden furniture is placed for children to have their own corners in their own area. The top two pictures are from the corrdior that leads to the hub area

DESIGN

The hub area lets children have their own zone within the building when they are not in their classes. The hub area has accesibility and it has indoor plants which suits the idea of having nature inside in Waldorf education. The skylight that opens to the roof lets the building have natural lighting as well as big windows.

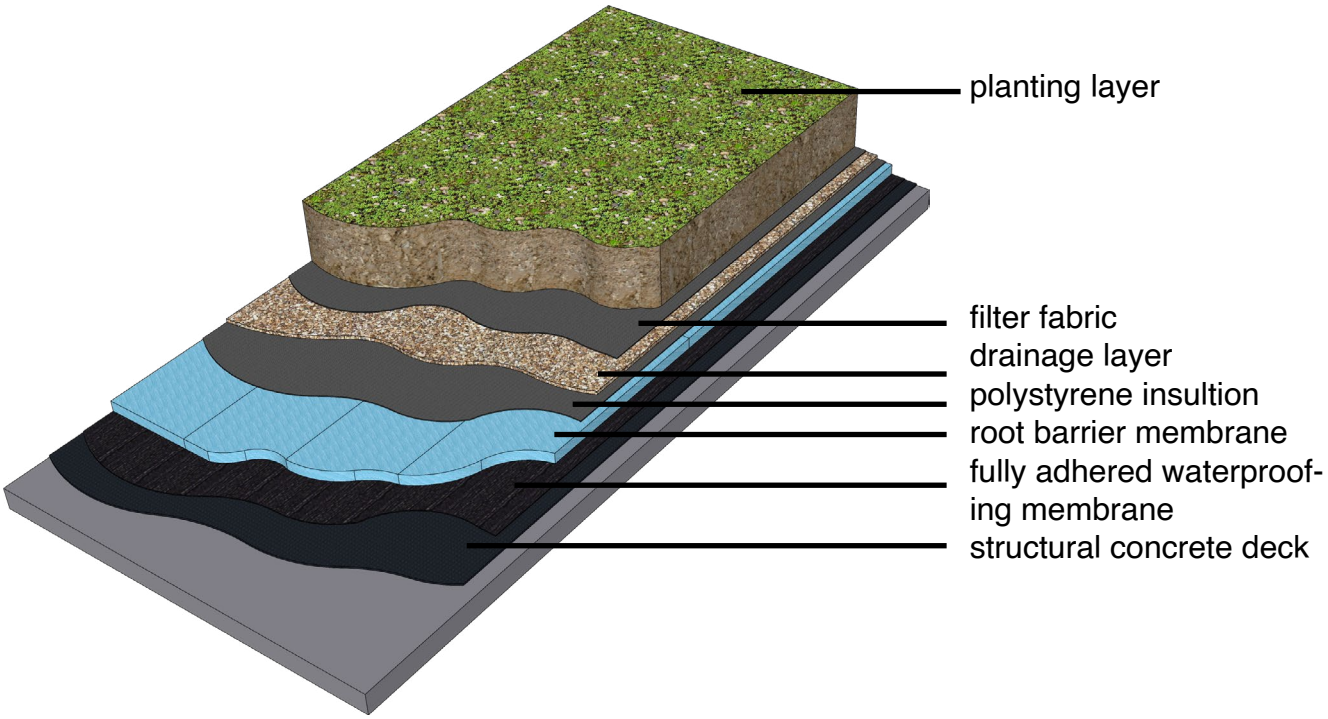
DESIGN

In the rooftop, there is a greenhouse and a rooftop garden. Because of the orientation of the building, the outdoors area does not get efficient sunlight for the plants to grow so a rooftop garden was considered in the design. Gardening is educational and develops new skills including responsibility– from caring for plants. ,understanding– as they learn about cause and effect (for example, plants die without water, weeds compete with plants) and self-confidence – from achieving their goals and enjoying the food they have grown.

DESIGN

The classrooms are designed to have an organic shape without corners. It is important to have a big open space for activities that children will do so two hexagons are brought together to create a more playful environment by having one area for acitivities with tables, chairs and the other for more free ones.

DESIGN


planting layer
filter fabric
drainage layer
polystyrene insultion
root barrier membrane
fully adhered waterproof-
ing membrane
structural concrete deck

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