

MASTERARBEIT

# LIVE & LEARN

LEARNING ENVIRONMENTS WITHIN HOUSING FACILITIES

Ausgeführt zum Zwecke der Erlangung des akademischen Grades eines Diplom-Ingenieurs

Unter der Leitung von  
Ao. Univ. Prof. Dipl.-Ing. Dr. Techn. Christian Kühn  
E253/1 Institut für Architektur und Entwerfen  
Abteilung für Gebäudelehre und Entwerfen

Eingereicht an der  
Technischen Universität Wien  
Fakultät für Architektur und Raumplanung

von  
Zuzana Kerekretyová  
Matrikelnummer 1127686

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## ABSTRAKT

Diese Diplomarbeit setzt sich mit dem Thema auseinander, in Sockelzonen von Wohngebäuden in der Seestadt Aspern in Wien, Schulen als Netzwerke von Lernräume zu errichten, als eine Alternative zum bereits geplanten drei große Bildungscampi.

Es wird ein mögliches typologisches Model vorgestellt, das ein Netzwerk von Bildungsinstitutionen mit Mehrfamilienhäusern kombiniert, so dass beide Nutzergruppen von einander eben über den ökonomischen Rahmen hinaus profitieren können.

Auf der Suche nach möglichen Synergien, ist einen Entwurf entstanden, dessen Spezifikum in der Kombination von einem überschaubaren Teil der Netzwerkschule und Baugruppen Wohnprojekt liegt.

Die Diplomarbeit beinhaltet auch einen Theorieteil, der als einen Ausgangspunkt für den Entwurf diene. Hier werden zuerst die theoretische Konzepte und Beispiele der errichteten Bildungsbauten, die in gewisse Weise eine engere Kooperation von Bildungsinstitution und der Residentengemeinschaft fördern, vorgestellt. Zweitens wird die Geschichte des gemeinschaftliches Wohnen in Wien kurzbeschrieben und die Entwicklung der Baugruppen Wohnprojekte anhand von ein paar Beispielen präsentiert.

## ABSTRACT

This master thesis deals with the implementation of a network of small modern learning environments into street level areas of residential buildings in Viennese Urban Lakeside Aspern as an alternative to the currently pursued project of three large school campuses.

This work introduces a possible typological model combining a network of small educational institutions with residential buildings while giving them an opportunity to profit from each other.

Applying this model and searching for synergies between the educational and housing functions led to the design of one particular building that is presented in this thesis. Its specificity is in the combination of a small school with a co-housing residential facility.

Besides the design project, this thesis presents, firstly, theoretical frameworks, conceptions, and examples of educational institutions which in some way promote a closer cooperation of a school with a residential community, and, secondly, describes a brief history and examples of communal housing and building cooperatives in Vienna.

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## 1 FOREWORD

At the outset of this thesis, this question was presented: What should a good school in the contemporary western world be like? I believe it should be

- an inviting space for exploration,
- a space for meeting and sharing for multiple generations,
- a space for exercise and trial and error,
- a place which provides advice and guidance.
- I see a school bound with and interwoven into a community.

Taking the opportunity to think about alternatives for schools and social infrastructure design in the newly developing Urban Lakeside Aspern, I combined my visions and ideals about school design within the given masterplan and requirements.

This master thesis deals with the implementation of a network of small modern learning environments into street level areas of residential buildings in Viennese Urban Lakeside Aspern as an alternative to the currently pursued project of three large school campuses. I introduce and develop a possible typological model combining small educational institutions with residential buildings while giving them an opportunity to profit from each other. For my design project I present one particular building as an example in which I implement this model.

Placing schools and community facilities in the ground floors of residential buildings solves the usual problem of unsightliness and ineffective use of these spaces – spaces which are usually hard to rent as apartments, and which cannot all be used as service facilities (such as shops, cafés, or offices). Educational spaces can enliven the street level, effectively use the space, and increase the social control of the public spaces in the residential neighborhood. On the other hand, schools often prefer large horizontally-oriented buildings of two or three levels, though the urban plan would allow higher structures. Therefore, putting together educational functions in the ground levels with residential functions in the upper floors results in a combination that is both cost and use-effective. Moreover, in combining schools with other facilities, I see the potential for preventing alienation within the residential neighborhood. This new plan may even trigger the building of social relationships and community life.

I bring the idea of a network of schools as a response to the question of whether to centralize or decentralize schooling facilities in a given area. I opted for networks of rather small schools dispersed throughout the neighborhood. Smaller and therefore much more comprehensible school units allow the building of tighter social links and community spirit.

The specificity of my project is that, in searching for further synergies between the educational and housing functions, I have chosen to combine one small school (which, however, belongs to a network of learning spaces) with a co-housing. This combination will provide mutual profits for both the school and the residents, since it allows a cooperative use of large spaces and expensive facilities such as the gym, meeting hall, music rooms, etc., and through that a livelier, more

receptive, and more cooperative environment will be created.

Regarding the content structure, this thesis consists of a theoretical part and a design project. The theoretical chapters serve as a basis for the design by bringing theoretical frameworks and conceptions of educational institutions which in some way promote a closer cooperation of a school with a residential community, and by describing a brief history and examples of communal housing and building cooperatives in Vienna.

When selecting examples, I did research on projects which are in somehow related to five bigger mutually interconnected concepts. The first category that interested me was MULTIFUNCTIONALITY as a way of connecting facilities with different functions under one roof. The CENTRALITY of a school building and educational function within a neighborhood (and so making it into a semantic core – a reference and meeting point for the neighborhood community) was a second recurring theme directly connected to the third theme, the FOCUS ON COMMUNITY and social relations within a residential neighborhood. Fourthly, the emergence of the school as a multifunctional center blurs the borders of the self-sufficient school as we know it. The concept of LIFELONG LEARNING emphasizes that learning is a natural part of life – experienced in a community of learners no matter what age. Lastly, I included examples of a rather radical experiment which break the inveterate concepts and understanding of a school as a separate educational institution. Therefore, instead of centralizing education in schools, it reaches beyond and uses the WHOLE CITY and its resources FOR LEARNING. These examples show how rethinking and contesting the role and position of school and learning in society has an impact not only on teaching strategies, school building design, but also influences urban planning strategies and the philosophical notion of “society” as such.

In chapter 4. I leave the school projects and concentrate on communal housing and building cooperative examples already built within Viennese subsidized housing. They reveal strategies of participatory planning and community projects, which show potential ways of attracting active inhabitants and increasing the interest of the residents for the shared spaces, which can lead to the successful development of the neighborhoods.

Finally, my own project follows. I present an urban plan of a vision of the school network. Then I present schemes of the development of the design and also include plans, drawings, and visualizations of the designed building.

With this project I aim to contribute to the ongoing discussion about developing learning and educational environments in the current situation of a growing Vienna. I emphasize the use of synergies, which goes beyond the scope of economic interests, but through sharing and multifunctionality helps to generate and cultivate community within a neighborhood.

## 2 BUILDINGS FOR EDUCATION GO MULTIFUNCTIONAL

Multifunctionality as the way of combining functions is playing an increasingly important role in school organization and architecture today. It can here be understood in two ways: as a multiple use of one space (e.g. an extended traffic corridor serves as a dining hall or an assembly hall as a small local theater) or as a mixed use facility that in order to enhance synergies brings together schools and some other functions under one physical and/or organizational roof, rather than building monofunctional entities. Both are taking place in different combinations and configurations. (Broekhuizen 25) The reasons why schools opt for multifunctionality include:

- ECONOMIC MOTIVATIONS - space and resource sharing, the use of the facility 24 hours per day and 7 days per week, alternative funding models (e.g. public private partnership), and a need for flexibility and adaptability
- A DEMAND FOR PEDAGOGICAL INNOVATION - individual approach, alternative pedagogy, project-based education, the inclusion of children with special needs, cooperation and mingling of various educational institutions, the inclusion of parents and family members into educational process, and life-long learning
- THE INFLUENCE OF SOCIAL FACTORS – an increasing demand for democratization and transparency in financial and educational matters, the inclusion of people with special needs, a need for life-long learning, and the strengthening of neighborhoods and relationships among neighbors.

Due to growing urbanization, migration and alienation in both urban and rural areas in the western world, western society is now in a situation where mixing compulsory education with other dimensions of life and social activities seems to be a plausible option. (Groenendijk 187- 189 and Kähler 230 - 231) Attempts to extend and integrate schools into other facilities are, however, not new at all. In the following chapters, two older concepts will be introduced in detail - the Village College in Cambridgeshire and the concept of multifunctional centers that developed in the Netherlands in the 1950s.



## 2.1 COMMUNITY SCHOOLS

When discussing multifunctional educational facilities, an important, yet diversely defined, term repeatedly appears: community school or community education.

As the name suggests, a community school is an institution where education is intertwined with and into the life of a community. Throughout the 20th century, different countries developed various models for linking educational institutions with communities. However, the understanding of community did not then and does not now take the same meaning in all contexts. Sometimes this term has referred to a residential or local community within the neighborhood, in other cases to a community created by school employees, pupils, and their families. For this thesis the former is of greater emphasis.

T. Jeffs and M. Smith identified the following possible characteristics of a community school. Although these are not present in all schools that identify themselves as community schools, most of them still carry a notion of at least one of them:

**OPENNESS:** The idea of openness is often a reaction to regular schooling, which is perceived as closed and insular. More openness is demanded from daily classroom practice, administrative process and the design of purpose-built community schools. Examples include:

- "absence of fences or walls keeping students in and the public out;
- retention or creation of public rights of way passing through the school site (in some cases the building itself) and placing the school astride natural thoroughfares between estates or neighborhoods;
- locating public utilities i.e. shops, libraries, job shops, leisure facilities, on campus;
- building on central rather than peripheral sites i.e. adjacent to the market square;
- open plan teaching areas." (Smith, Mark K. 'Community Schools And Community Schooling')

**FUSING:** This means creating tighter bonds between a local residential community and education, or even blending them together, creating a learning community and/or turning a school into a community of learners.

**Sharing or collaboration:** This is most often associated with the idea of shared facilities and collaboration with other agencies and groups. By opening up for local people's use (e.g. by providing its sport facilities for use outside the school needs), the school becomes a resource for the benefit of the whole local residential community (not only children and their parents). This economically motivated idea can be taken further by encouraging collaboration with statutory and voluntary welfare agencies, and by the development of the school as a resource base for social and community action (and so becoming the social center of the neighborhood). If the latter is to be achieved, accessibility becomes an important issue, and the ideal location for a school is sought (or created) around a central public "market place". Sharing is also an opportunity to reach for various co-funding mechanisms.

**DEMOCRATIZATION:** This term points to the attempts of parents, teachers and local communities to actively participate in the process of schools constitution, design and governance. Examples vary, from the mere development of schools' councils (involving students, parents, and staff, and the fostering of various parents groups) to suggestions that the school needs to be regarded more as a sort of community association, with the governing body including representatives of all the key stakeholders.

**CURRICULA INNOVATION:** The above notions obviously have an effect on the approach to the curriculum. "Ideas of 'fusing' and sharing may encourage people to look to the local community or neighborhood as a key reference point in building the curriculum." (Smith, Mark K. 'Community Schools And Community Schooling') This idea is best depicted by examples such as the Parkway Program in Philadelphia, with its emphasis on self-directed learning. Students were supposed to make choices about their own curricula and were taught not only by teachers but also by business people, workers, city officials, parents, and librarians at these adults' various workplaces spread around the city.

**LIFELONG EDUCATION:** According to some educators and philosophers (Henry Morris among them), learning is an activity for everyone, not just for children, and therefore schooling or learning environments should be a resource for all, no matter what age and population group one belongs to. Austrian philosopher Ivan Illich states that "a good educational system should have three purposes: it should provide all who want to learn with access to available resources at any time in their lives; empower all who want to share what they know to find those who want to learn it from them; and, finally, furnish all who want to present an issue to the public with the opportunity to make their challenge known." (Illich 54)

Since its origins, the concept of community education strives to improve the life of communities and neighborhoods and reform the schooling experience. There are two main causes for establishing a community school:

Firstly, community education could function as an agent of social improvement. Creating tighter bonds within a community and promoting education is a means of prevention of social deficits and problems within a community and of compensating for the inequality of chances of people living in disadvantaged neighborhoods. (Buhren 15)

Secondly, community education is seen as a means for a more fulfilling life. Behind the constitution of such an institution often stands a desire for a greater impact on education, an aspiration to co-create the school's system and curriculum, and investing extra time and resources to plan and maintain them according to the community's needs. However, crucial to the whole concept is the belief that education should not be left simply to teachers or to the state.

## 2.2 VILLAGE COLLEGE

Village College was an ambitious educational concept developed in Cambridgeshire, England in the 1940s by Henry Morris, a Secretary of Education for Cambridgeshire. After the First World War, major economical and social changes were influencing life in the rural areas in England. First of all, the introduction of machinery to farming caused the consequent loss of jobs on the land. Second of all, the movement from farms to towns and cities resulted in more opportunities. Finally, there were concerns about the loss of rural crafts. To address these problems of rural decline, Morris introduced a new institution that would offer "a rounded education for young people of school age whilst simultaneously providing a cultural, leisure and social center for the whole community." (Jeffs 5) By bringing together various vital but isolated activities in village life (e.g. YMCA, libraries, village halls, voluntary organizations such as Women's Institute and the Scouts, and art and drama societies) Morris strove to achieve synergy and

"abolish the duality of education and ordinary life. It would not only be the training ground for the art of living, but the place in which life is lived... It would be a visible demonstration in stone of the continuity and never ceasingness of education. There would be no 'leaving school!' - the child would enter at three and leave the college only in extreme old age. It would have the virtue of being local so that it would enhance the quality of actual life as it is lived from day to day - the supreme object of education... It would not be divorced from the normal environment of those who would frequent it from day to day, or from that great educational institution, the family... The village college could lie athwart the daily lives of the community it served; and in it the conditions would be realized under which education would not be an escape from reality, but an enrichment and transformation of it. For education is committed to the view that the ideal order and the actual order can ultimately be made one." (Morris qtd. in Smith 'Viewing Impington - Henry Morris And The Idea Of The Village College')

In the forefront of this very visionary and fresh undertaking was not the economic aspect, but rather the concern to enhance the fullness of life in the countryside. In Morris' own words: "We must associate with education all those activities which go to make a full life - art, literature, music, festivals, local government, politics." (qtd. in Jeffs, 44) He turned the usual priorities of the educational system upwards, claiming that adult education is the major part of education, and placing youth education within that framework. Therefore a Village College housed:

- "a primary school
- a secondary school for 250-400 pupils aged 11-15 drawn from the cluster of villages with laboratories and specialist rooms (also suitable for evening class use)
- an auditorium for assemblies, mid-day meals, physical education
- a library

- a specialized room for agricultural education
- meeting and lecture rooms for adult education, village meetings, and for use by affiliated societies and clubs
- shower baths and changing rooms for school students and sports clubs
- sport and recreation grounds for the use of all
- an infant welfare center
- land for a school garden
- rooms and facilities for indoor recreation, e.g. billiards
- houses on site for the Warden, up to five teaching staff and caretaker
- teaching staff of a new ilk 'country-bred' and university educated" (Jeffs 45-46)

Generally, providing genuine quality was clearly one of the pillars of Village Colleges. Through the provision of high quality Morris also wanted to gain those who would opt for expensive private schools and leave the countryside. The high quality should have been not only for the few bright pupils, but for all. Consequently, this attitude and striving for a perfect balance meant very high expectations on the educators and especially on the so-called "warden," a head teacher who was supposed to be "a servant to, and a leader of, the community. A person who possessed the intellectual capacity to educate, not merely instruct." (Jeffs 61) The warden's house was placed on the College premises, and this person was expected to be a moral authority and educator 24 hours a day, as well as responsible for coordinating all social functions that took place in the College. As compensation, extra courses delivered by the university should have been provided "to eradicate the cultural and intellectual isolation of rural teachers." (Jeffs 61) These attempts unfortunately only received a lukewarm welcome from the university, and integration in such a scale never really materialized. Afterwards Morris opted for oppressive supervision. It goes without saying that it was not always beneficial. Later, during the 1950s, youth and adult tutors were appointed. On one hand, they eased the load carried formerly only by the warden, and enabled the expansion of the community provision on site and in satellite villages. On the other hand, they signaled a division of the school and community staff, which would eventually lead to the dissolution of voluntary community work and to the fragmentation of the staff into departmental and managerial hierarchies, which undermined the initial idealistic intentions to dissolve the dualism between education and daily life and between work and private life, and to avoid narrow vocationalism.

The personality of Henry Morris proved to be central in maintaining the multifaceted balance of Village Colleges because after his death the concept received neither the governmental nor the personal patronage necessary to survive the avalanche of coming societal changes. (Jeffs 63-75) However, many of the Village College buildings, including Impington College, are still in use today. Enlarged and renewed, they commemorate one of the certainly most interesting educational experiments in England.

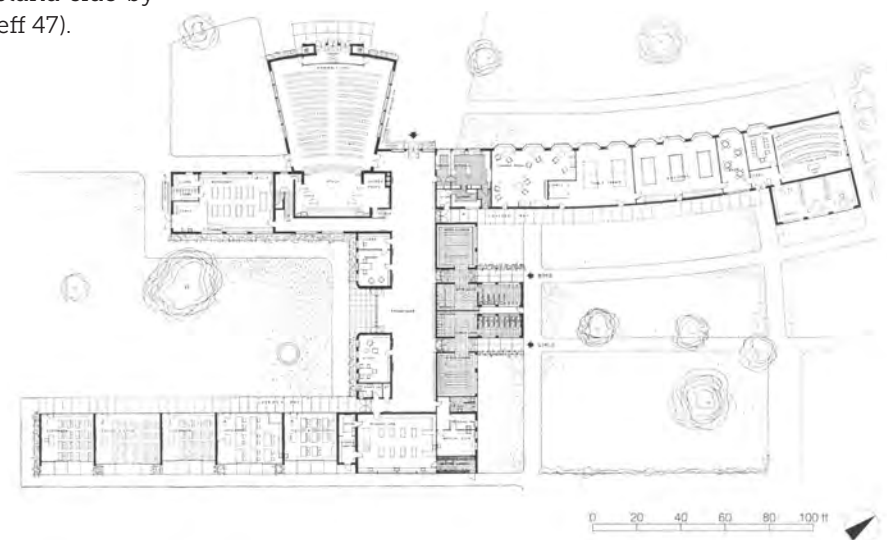
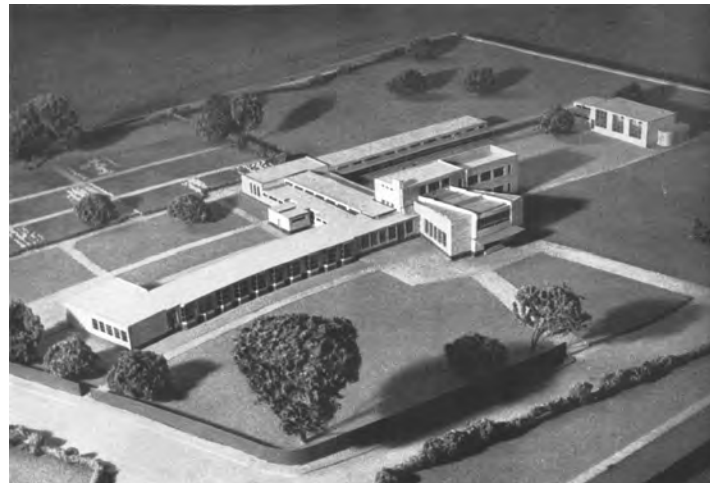


## 2.2.1 IMPINGTON VILLAGE COLLEGE

The most popular example of the Village College is the Impington College, designed by Walter Gropius and Maxwell Fry. Mark Dudek, a respected English architectural design consultant specializing in schools and children's centers, claims it was the finest work of Gropius in the 1930s and that it was largely imitated by school designers in the post war era. (Dudek 24)

Impington College was granted a modest and yet daring architecture, characteristic for well balanced composition, where each function received appropriate attention. The college was originally a one-story building with three main wings – a classroom wing, an adult wing, and an assembly hall. They were all approximately the same size and were organized around a central walkway, which was designed with a focus on the social dimension. It hosted exhibitions, meetings, and served as a spill-over area during intervals when evening concerts and plays were being performed in the school hall, with the intention to let people of all ages mix and interact. One side of the promenade was occupied by the warden's office and staff rooms, and the other was occupied by children's entrances and changing rooms. Classrooms were set slightly apart so that they could exist isolated. Even the furniture of the classrooms was chosen with great care and contributed to their airy and inviting impression. (Jeffs 41- 60)

Morris recognized the importance of high quality architecture and art for education, stating that an excellent building is as important as competent teachers. Not being satisfied with second rate, he invested much personal endeavors and time into raise funds, let the village colleges be designed by the best architects, and collected original masterpieces of art for their interiors. The works of art were not meant only as decorations but also acquired special attention within the building. Works of local artists, as well as of such personalities as Henry Moore and Barbara Hepworth, were displayed in the promenade that was designed with regard to this focus on high quality. (Smith 'Viewing Impington - Henry Morris And The Idea Of The Village College') The colleges were supposed to be special and distinct places to be in. They were supposed to enhance a rural landscape and "stand side by side with the parish churches." (Morris qtd. in Jeff 47).



## 2.3 MULTIFUNCTIONAL CENTRES IN THE NETHERLANDS

*"The air is filled with ideas. In a very dense cloud. And at some locations those ideas penetrate the clouds and drop down to earth. All you need is people, who want to function as funnels."*

*Frank Van Klingeren (qtd. in stroom.nl 2)*

In the Netherlands there was a significant movement in the 1950s towards multifunctional community centers. The objective of the municipalities and urban planners was to provide space for teaching children and, at the same time, create cores for the neighborhoods in new districts in order to strengthen local citizenship. These centers were meant to provide courses for adults, gym rooms, reading and study rooms, primary school, and kindergarten. The inspiration came from a sociological concept developed before the Second World War in the USA - a so-called neighborhood unit was believed to play a crucial role in the construction of social links within the boundary of a neighborhood. Urban planners particularly welcomed this concept, but the sociologists were skeptical of its direct application to urban planning; they doubted that tightly-knit social life would respect the neighborhood limits given by urban planners. The community building was a reaction to this criticism. Instead of strictly defining the borders of a neighborhood, an attractor (a community center) was to be set in its core to enhance social cohesion within the neighborhood. Dual use of facilities, such as opening the schools for afternoon use by the local residents, became a common practice. Rijnlands Lyceum in Oegstgeest, where a multifunctional sports hall and a community library were part of the complex, became the full embodiment of this idea.

In the 1970s the multifunctional centers gained broad governmental support expressed for example, in the publication "Building for School and Neighborhood." Aiming at promoting cooperation through the centralization and concentration of public welfare facilities and education, the multifunctional centers had been expected to lower the amount of administrative personnel needed, spare costs, and become triggers for interaction in residential neighborhoods. The ideas of concentration and joint use were also a reaction to the modernistic separation of functions in urban planning of the previous decades. (Broekhuizen 26-27)

The most radical attempts to transform the ideas of collectivity into buildings were planned by Frank Van Klingeren. Interestingly, he did not rely on public participation. However, through density and placing side by side the most different activities without partitions and hierarchy, he wanted to achieve "clotting" between the actors that should initially hinder each other but ultimately result in a form of interaction and deeper understanding. His multifunctional centers were artificial landscapes covered with a roof where social mingling was the ultimate aim. In De Meerpal in Dronten, for example, he placed "a theatre next to a bowling alley, a bar next to a market and a volleyball court next to an exhibition space". (stroom.nl 2) In the following section I will take a closer look at the center Het Karregat in Eindhoven that housed educational facilities as well.



The painting *The Battle between Carnival and Lent* by Jan van Brueghel from 1559 depicting a vivid scene from a city life inspired van Klingeren when designing the Het Karregat.

The second picture shows a mock-up of the Het Karregat design. The curved partitions were inspired by the forms Paul Klee used in his paintings.



## 2.4.1 HET KARREGAT

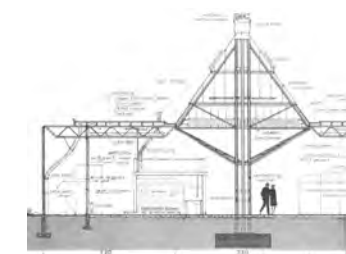
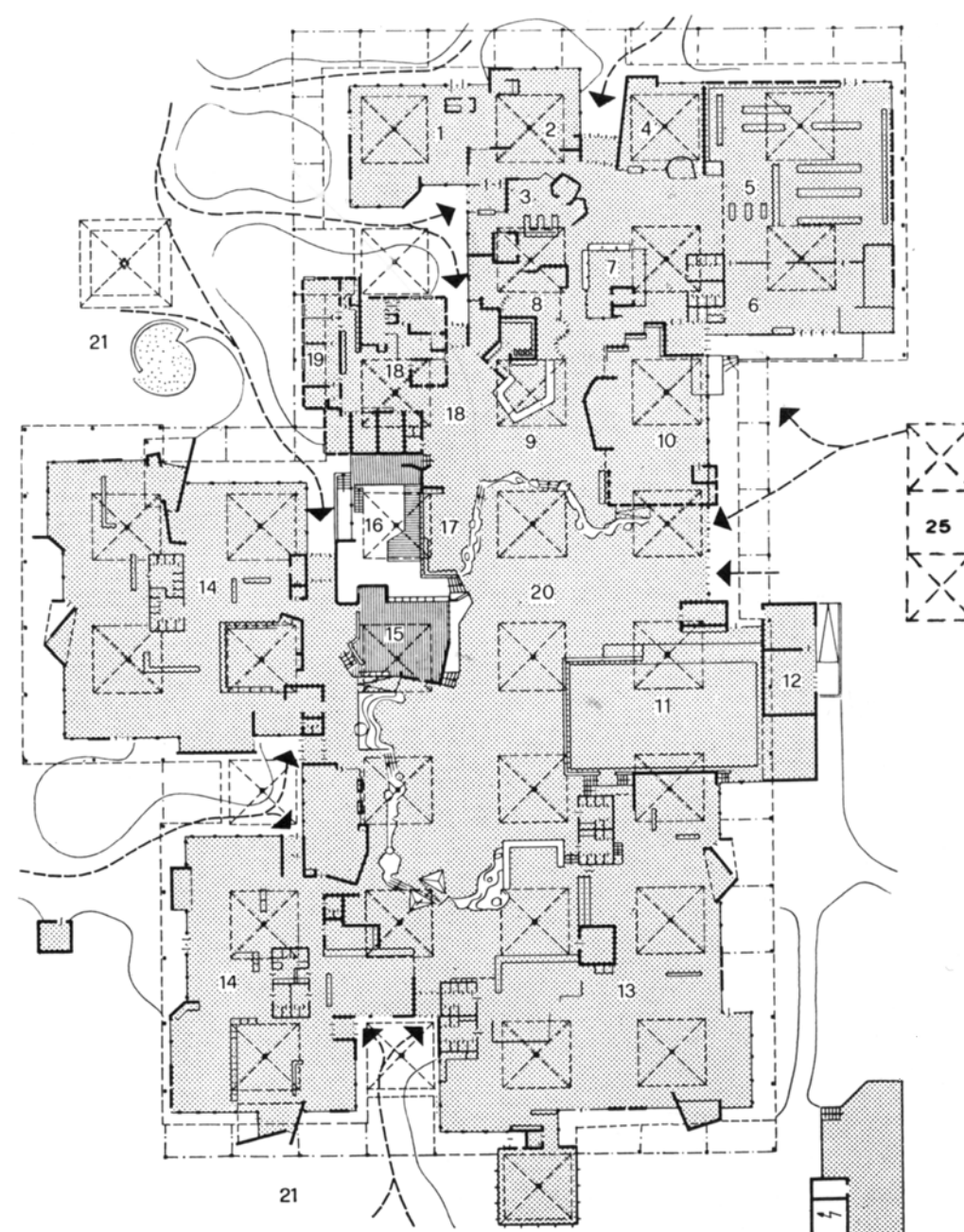
The story of Het Karregat began in 1970 when the municipality of Eindhoven agreed to involve residents of the newly built Herzenbroeken neighborhood in decision-making concerning local conditions and interests. The cooperation resulted in a decision to build a community center with shops, social, cultural, health, and educational facilities under one roof. Architect Frank van Klingereren, who already had experience with similar projects, was granted the commission. (Hegger, Pohl, Schmidt 120)

In 1973 the grand opening took place. Under a modular roof consisting of umbrella-like sheds spread a well lit landscape where different functions openly connected were grouped around a common hall, or a covered square. A shopping center with supermarket, a bank and a few small shops, a library, bar, a medical center, a community center, a gym, two kindergartens and two primary schools - they all should have profited from each other due to their spatial closeness. The space was distinguished by a few walls but mostly only by the changes in landscape - the stairs and height differences. In the interior design of the schools Van Klingereren gave up traditional walls. The 24 classrooms in the school were separated only by differences of levels, low walls and open shelves. The pupils used the community library, tested their mathematical skills in the supermarket, and exercised in the common gym. Their parents could borrow books and read newspapers while waiting for an appointment at the doctor's office, organize events with neighbors in the public hall, and fetch some groceries on the way home. Moreover, it was meant to be a raw space that welcomed adaptation. (Broekhuizen 57 and Hegger, Pohl, Schmidt 119-121)

This multifunctional center was a built manifesto of social utopia, and, according to Hertzberger, lacked a balanced and intelligent response to social reality. (Space and Learning 171) The integration of functions remained more a possibility than reality - the different functions did not profit from each other in a sufficient way. As a result, a critic claimed that the building "invites unrest" and in such a condition was not suitable for educational purposes. (Broekhuizen 57) Just four years after its completion, a radical renovation took place - partitions in schools were erected to fit the traditional teaching program. Later in the 1990s the facades were blocked off and the functions were divided, with separate entrances. (NAI)

Regarding the open plan school, it is clear from many examples from the past that architectural innovations in educational buildings have to go hand-in-hand with pedagogical reform. A traditional approach to schooling and a focus on frontal instruction is not supported by large open space. In such cases the teacher has to compete with the environment - be it either an open air classroom or a large multifunctional center - to win pupils' attention. Nowadays, educators and architects promote open plan layouts again, but this time they are motivated by a shift in pedagogy toward less frontal instruction, more teamwork, and less strict division of children according to their age.

Despite the breakdown of the original concept of Het Karregat, the publications dealing with the prevailing Dutch school model - the brede school - look back to it as a reference point for the current development of multifunctional schooling. After all, in 2010 an architectural competition was held for the revitalization of the complex, with a special focus on preserving its cultural and historical value. Its completion is scheduled for 2015.



Section - roof element

- 1 Drugstore
- 2 Hobby shop
- 3 Bank
- 4 Photo shop
- 5 Supermarket
- 6 Storage
- 7 Bakery
- 8 Flower shop
- 9 Restaurant, café, bar
- 10 Library
- 11 Sports hall
- 12 Technical installations
- 13 Roman-catholic school
- 14 Regular school
- 15 Hobby room
- 16 Youth club
- 17 Meeting hall
- 18 Billiard
- 19 Workshop for handicrafts
- 20 Central communal space
- 21 Playgrounds
- 22 Reading room
- 23 Music room
- 24 Shops
- 25 Service station

Floor plan



## 2.5 CURRENT CONCEPTS IN THE NETHERLANDS AND FLANDERS

In the past twenty years in the Netherlands, the concept of school as a multifunctional educational center developed into a dominant model for primary and pre-school education. In the mid-1990s the city of Groningen picked up the thread of multifunctional schooling as a response to the need for social renewal in disadvantaged neighborhoods. The municipality was looking for a solution to enable and motivate children to spend their after-school time more meaningfully. However, they had to face the problem that children of unemployed parents could not afford to pay for extracurricular activities (like sports and music lessons), and the working parents often did not have time to bring their kids to cultural or sports activities. At the same time, the national government wanted to increase the size of primary schools. Their solution was to incorporate school buildings into an extended complex where various activities could take place. This undertaking got a name, Vensterschool (open window school) for its openness and transparency that allowed the passersby to witness the adventure of learning taking place inside.

Further transformation of the concept earned it the name brede school. Since the 2000s it has spread to urban, suburban, and rural areas in the Netherlands and Flanders. There are many new buildings built, but still more and more existing schools have been transformed according to this concept. (Groenendijk 188-192)

### 2.5.1 BREDE SCHOOL

*It takes a village to raise a child.  
Old saying*

The so-called brede school – translated to English as extended, broad or sometimes community school - is the contemporary dominant prevailing model in primary and pre-school education in the Netherlands and Flanders. It emerged as a logical result of the development towards integrating education into more complex socio-cultural entities, mainly towards a full time and life-long education and towards activating neighborhoods. Studying relevant literature (Verstegen; Groenendijk; Broekhuizen, van Velsen; Hertzberger) I recognized three main reasons why this concept gained such popularity:

- The brede school can serve as a CENTER OF A NEIGHBORHOOD or a town physically, functionally, and socially.
- The brede school can function as an AGENT OF CHANGE, especially in disadvantaged neighborhoods.
- Joining social, cultural, and educational facilities under one roof can bring ECONOMICAL ADVANTAGES.

The following text will explain all of them in more detail.

#### CENTRALITY

The position of the brede school is to be central - not only in terms of logistics (shortest ways) and in terms of spatial organization, but also socially and culturally. Brede schools are intentionally created as centers not only in new development areas that do not have a core of social life yet, but also in historical sites where the former core of the town has been lost or its original significance withered due to societal changes such as migration, alienation, and a shift in traditional social habits. According to some, it is the brede school which “bridges the gap resulting from the erosion of the social role of churches.” (Groenendijk quoting Rohmer 189) However, the metaphor points not only to the weakened role of church as a community-forming institution, but also to the disappearance of central meeting spaces and meeting opportunities in general. In contemporary housing areas, especially in the new development areas, a school seems to be the major meeting platform of the neighborhood, a place where the inhabitants get to know each other.

Moreover, as will be shown in two examples where the brede school was made to complement the historical center of a town, a school “planted” in the right setting can bring even further-reaching benefits. In the case of Lozen, Bocholt a village in Flanders, the municipality together with the school board decided to solve the unsatisfactory state of its primary and nursery schools and the necessity to renovate community institutions by building a community school directly on the church square. The result was also supposed to bring additional positives - activate the town square by providing room for markets, weddings, funeral processions, exhibitions, and a play park. Another example is in the city of Breda where a listed Romanesque Revival church was renovated in such a way that its function and building volume was markedly extended to a multifunctional community school/center.

These examples again underline the philosophy that the life of a community and the life of school are no longer two things that need to be separated but, on the contrary, through accumulation of meanings they can support each other with synergic effect. And, as the first example shows, it is not even necessary to bring all the functions under one single roof.

#### EDUCATION AS A MEANS FOR A SUCCESSFUL LIFE

The brede school can enhance the chances of inhabitants of disadvantaged neighborhoods, especially those with high rates of immigrants, by helping families better integrate into society.

Closer cooperation of various educational stakeholders (day care, school, after school care, welfare, etc.) is a key element for meeting the needs of children and the community. Services become more accessible, more compatible with each other, and more flexible in reaction to changes. (van Velsen)

Moreover, the increasing importance attached to education strengthens the position of the school in the society and neighborhood. It is believed that a good education opens the doors to a better, more successful, and healthier life.

#### ECONOMICAL MOTIVATION

The joint use of facilities and sharing construction and maintenance costs bring economical advantages. Due to them it is possible to maintain a certain level of facilities even in small villages. The pragmatic economical motivation for the concentration of the functions results from cuts in budgets for educational, social, and cultural institutions. It also goes hand-in-hand with the opportunity to get better equipped facilities and a richer offer of activities for less money all at one place. Likewise, prolonging the opening hours due to after-school use decreases the risk of vandalism.

The brede school is fully subsidized by the state, which provides a supporting legislation. However, the school is subordinate to local policy and funded by the municipality and other partners – school boards and other bodies (such as social work; child day-care; sport, art and other organizations). The recipe for the mixture is not prescribed in detail. (van Velsen) Usually the complex consists of a school, after and before school support, and community welfare facilities. In larger areas the brede school often brings together more than one school. In order to create greater flexibility, social cohesion, and cost reduction, in the Dutch society traditionally separate “schools of different blood groups” (non-denominational, Catholic, Protestant, and Muslim schools) are brought together under one roof. (Hertzberger 168) Other amenities such as a library, sport hall(s), a music school, an art school, a social center, a medical center, a community center, a senior club, etc., can be added according to the needs, preferences and possibilities of the locals. The degree of amalgamation of the individual organizations within the brede school differs from case to case, and is organizational as well as a design challenge.

#### CALL FOR ATTENTION

Even though the brede school provides a good alternative solution to many actual problems, natives who already have considerable experience with them point out several bottlenecks and challenges when applying the concept.

Sometimes the merging of functions is a result of economical or organizational necessity and resembles a “marriage of convenience” (Groenendijk 193) rather than a desired and effective combination. Some organizations want to keep their own identity and are afraid of being “swallowed up.” Managing fusion without losing face, a careful balancing of the common and the individual, and the readiness to adapt to a changing situation are inevitable as a subject of constant adaptation and negotiation. (Hertzberger, 171) At the same time, since a multifunctional complex has the tendency to grow, it is a constant organizational and design challenge to maintain the requirements of all parties and avoid the expansion of one party at the expense of another.

A growing number of users and a readiness to travel long distances to a chosen school means a lot of traffic, still mainly cars. As a result, large parking lots and kiss and ride zones are built. The amount of cars is a threat to security and an element potentially cutting the school area off from its neighborhood.

Another issue is vandalism, especially in the shared outdoor space. Notwithstanding the extended opening hours, there are still times when the brede school is empty, for example during the holidays. Besides fences, current solutions include patio design (enclosure from at least three sides), building playgrounds on the roof, and including dwellings on the estate in such an amount and distance so that the inhabitants feel obliged to be responsible to react to harmful activities and negative happenings on the school playground.

From the social community building point of view, one of the goals of the brede school in the Netherlands is to connect people of different backgrounds and views in the neighborhood. According to Groenendijk (192), In the Netherlands there are still a lot of people who opt for travelling long distances for their children to attend a private, special or alternative school of their choice. As a result they are then drawn out of the neighborhood context.

One of the challenges in designing the school space is the increasing demand for flexibility. The common practice when new housing estates are built is the following: at the beginning there is usually a temporary baby boom, since their inhabitants are very often mainly young families. Later, when the first generation of kids leaves the school and the district’s demographic composition changes, the size of the school is fixed at a lower number of pupils. In order to avoid the unpopular temporary container classrooms in the first years, school homes and school offices are built. It is planned that these, in the first year’s spaces used by the school, will be later transformed into apartments or offices. This is not a completely new idea. The problem is that not many “school homes” have actually become apartments in practice, since the typology and identity of a school and an apartment house differ from each other too much. As a reaction to this, a concept of so called “intelligent carcass” has been developed and applied on the Het Meesterwerk, for example. The trend towards flexibility leads towards less explicitly designed schools – they resemble office buildings in their external appearance as well as floor plan. However, it remains a challenge to enable flexibility without losing identity at the same time. (Groenendijk 192-195)

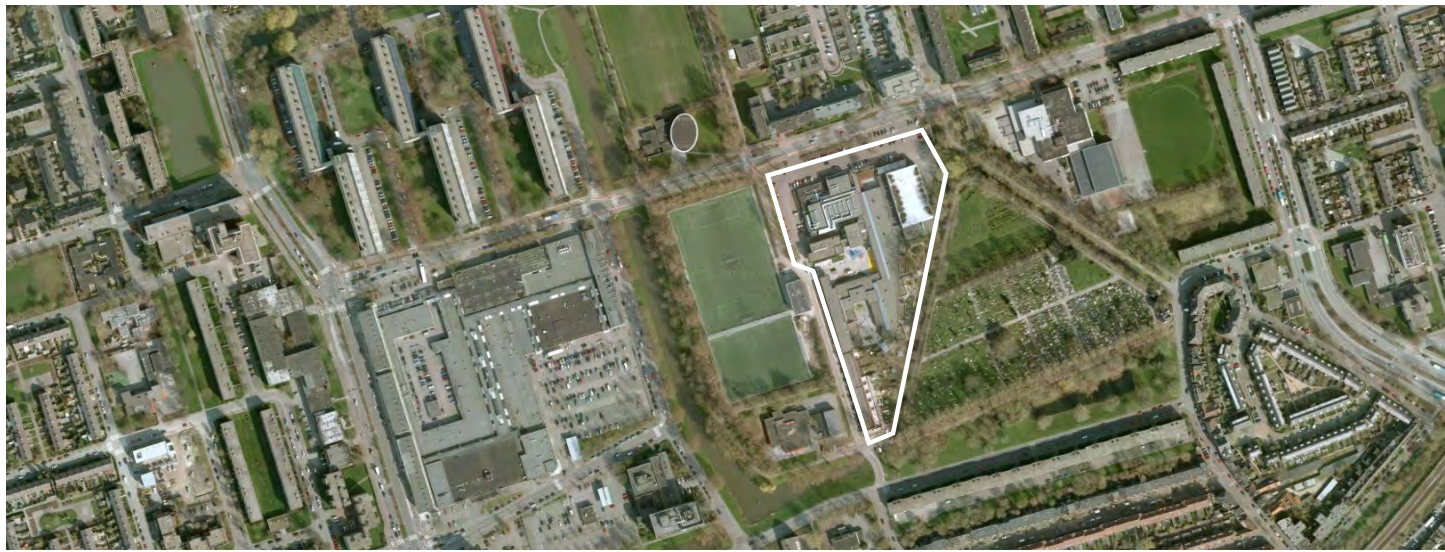
## 2.5.2 EXAMPLES

On the following pages there is a collection of various examples of Dutch schools built in the past twenty years.

I chose examples from urban, suburban as well as village locations, old schools as well as new ones. The focus is, nevertheless, on brede schools and buildings that combine educational facilities with housing.

<i>page</i>	<i>title</i>	<i>year</i>	<i>location</i>	<i>type of school</i>	<i>feature</i>
18-19	SPT Vensterschool, Groningen, NL	1996-1999	urban	vensterschool	multifunctional
20-21	De Eilanden, Amsterdam, NL	1996-2003	urban	Montessori	with housing
22-23	Kulturhus De Brede Blik, Giesbeek, NL	2002 - 2003	rural	"kulturhus"	multifunctional
24-25	Het Meesterwerk, Almere, NL	2000 - 2005	urban	brede school	with housing
26-27	Nesselande broad school, Rotterdam, NL	2001 - 2005	urban	brede school	with housing
28-29	Pannenhoef, Kaatsheuvel, NL	2003 - 2005	rural	brede school	with housing
30-31	De Matrix, Hardenberg, NL	2004 - 2007	suburban	brede school	multifunctional
32-33	Brede School Schalkwijk, Haarlem, NL	2002 - 2007	urban	brede school	with housing
34-35	Lorentz School, Leiden, NL	2003 - 2008	urban	brede school	multifunctional
36-37	MFS Zuiderkwartier, Tilburg, NL	2004 - 2009	urban	brede school	multifunctional
38-39	Balade, Waalwijk, NL	2004 - 2010	urban	brede school	with housing
40-41	Brede School De Boschkens, Goirle, NL	2006 - 2010	suburban	brede school	with housing
42-43	MFC and Housing Osdorp, Amsterdam, NL	2005 - 2011	urban	brede school	with housing
44-45	Open Wijk, Vlissingen, NL	2005 - 2011	urban	brede school	with housing
46-47	"Slingentouw", Waterrijk, NL	2007 - 2011	suburban	brede school	with housing
48-49	Brede School Esse Zoom, NL	2008 - 2011	rural/suburb.	brede school	with housing
50-51	MFA Nelson Mandela, Gouda, NL	2008 - 2011	urban	brede school	multifunctional
52-53	Brede School De Preneter, Vianen, NL	2009 - 2012	urban	brede school	with housing
54-55	Noordwijk Brede School, Noordwijk, NL	2007 - 2012	suburban	brede school	with housing
56-57	Huis van de Heuvel, Breda, NL	2006 - 2012	suburban	brede school	multifunctional
58-59	Primary School Lozen, BE	2007 - 2013	rural	brede school	multifunctional
60-62	De Staatje, Sas van Gent, NL	2011 - 2013	rural/suburb.	brede school	multifunctional





# SPT VENSTERSCHOOL, GRONINGEN

Architect: Atelier PRO

The Paddepoel, Selwerd and Tuinwijk Vensterschool represents an experimental school that combines a primary school with a number of socio-cultural and recreational facilities in order to provide education and a supportive after-school care in one place. A complex, consisting of a primary school, an after-school facility, a library, a community center, a pre-school play facility, a day-care, and home care facilities, was added to an existing sports hall and swimming bath.

As the Vensterschool is situated in a green zone between sport fields and a cemetery, for the sake of maintaining security when the buildings are not in use, there are nine private houses with gardens on the estate overlooking the courtyard and the walking / cycling route along the facilities.

The building itself is composed of smaller entities – box-shaped classrooms/houses, each with an own identity, that create a village-like character. Each classroom has direct access to adjacent courtyards, playgrounds and a central inner square. The main entrance is situated within a plaza-like courtyard, called Vensterplein (Window square) accessible from the street – it is the melting pot where all the users meet. Enabling an independent use, the primary school, swimming bath and the pre-school play facility have their own separate entrances as well. (Groenendijk 210-213)

DESIGN: 1996 - 1999  
COMPLETION: 1999

ADDRESS:  
Eikenlaan, Selwerd Paddepoel  
Groningen, Netherlands

LOCATION: urban

CLIENT:  
Municipality of Groningen

FUNCTIONS:  

- primary school
- kindergarten
- crèche
- after - school facility
- sport hall
- public library
- community center
- home - care service
- housing

COST:  
€ 4.144.000,-

AREA: 6,318 m<sup>2</sup>

HOUSING:  

- Number of dwelling units: 9
- Typology: row houses

SCHOOL:  

- Type: vensterschool
- Degree of education: primary, kindergarten, crèche
- Number of classes: 16 primary school, 4 kindergarten, 1 crèche
- Typology: hall school consisting of a system of central halls / streets and squares

CONNECTION BETWEEN THE DIFFERENT FUNCTIONS:  
independent from each other but profiting from each due to spatial proximity

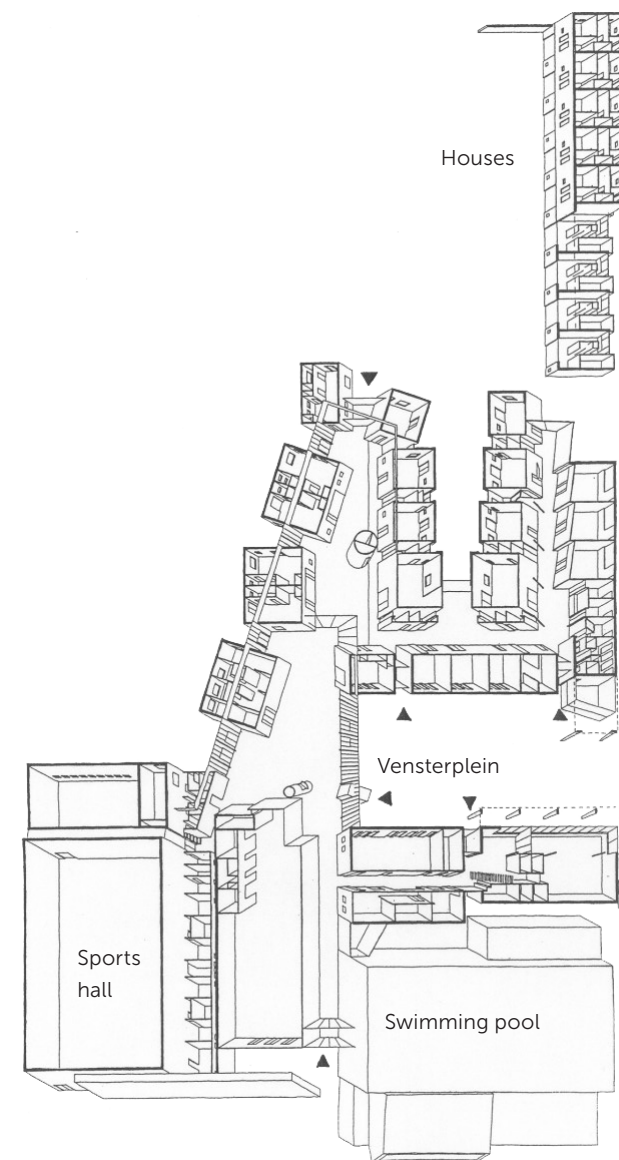
SHARING WITH PUBLIC:  

- sport facilities
- library

OUTDOOR SPACE:  

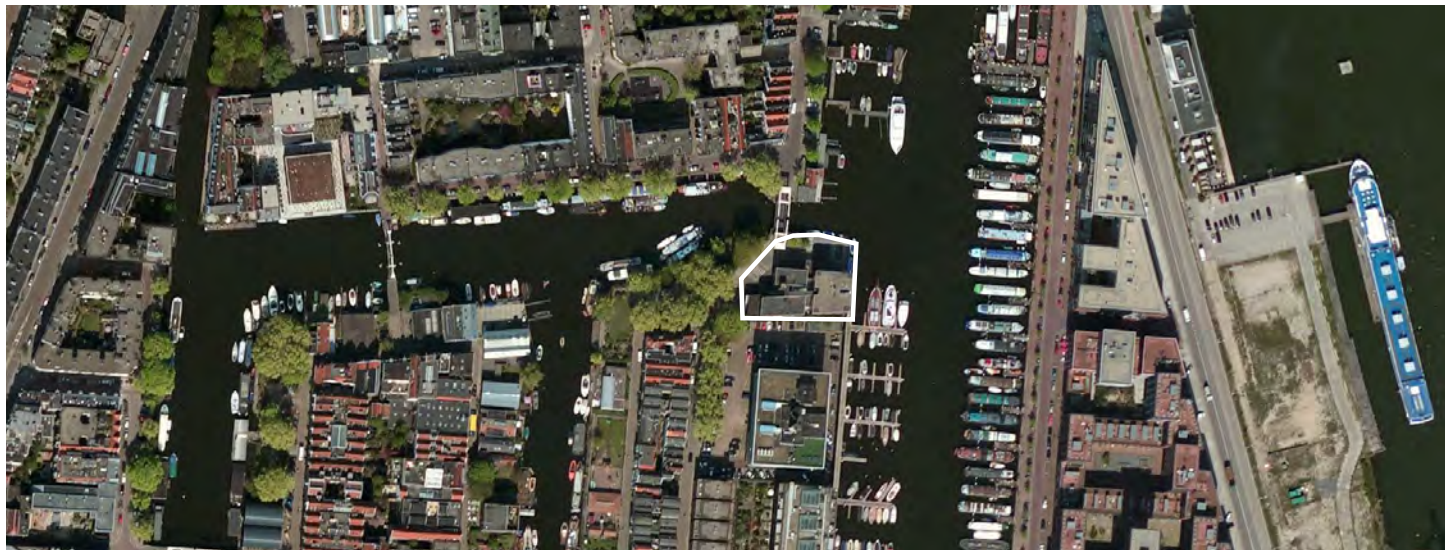
- common playground
- small playgrounds / outdoor classrooms accessible from the classrooms
- central plaza
- adjacent sport field

VERTICAL DIMENSION:  
the school is rather horizontal



ATELIER PRO. 'Vensterschool'. atelier PRO. Web. 5 Mar. 2015. <[http://www.atelierpro.nl/en/projects/94/vensterschool#VPRdb\\_nF-9U](http://www.atelierpro.nl/en/projects/94/vensterschool#VPRdb_nF-9U)>  
 GROENENDIJK, PAUL. 'The School As Community And Neighborhood Centre'. Contemporary Dutch School Architecture. Ton Verstegen and Dolf Broekhuizen. 1st ed. Rotterdam: NAI, 2008: 210-213. Print.





# DE EILANDEN, AMSTERDAM

Architect: Hermann Hertzberger (school), HM Architecten (houses)

This example shows a successful combination of a primary school and housing. The school however is not a general but Montessori school. The building of a relatively small size occupies a spot on the water with a very good view on the Amsterdam city. The eleven classes and other common rooms of the school are on the first two levels. On the other three levels there are eight large owner-occupied apartments with large balconies accessible through a central outdoor gallery. The school and the housing units have separate entrances and circulation areas, and share only the lift and a playground in front of the building. In between the individual dwelling units there are three meter wide caesuras through which the sunlight gets into the main hall of the school. The school is composed of just a few, though well designed elements. The core of the building is composed of a central hall with a sunken multifunctional play area. The design solution allows flexible transformation of this area into a closed space for sports using flexible partitions, open hall for playing and large school meetings. Moreover, by the use of the partitions a stage can be articulated for staged events. For this purpose the stairs are oriented towards this area to allow watching from above. Under the stairs there is a smaller sunken platform with the opposite role – playing and learning in a more introverted - hidden place.

DESIGN: 1996  
COMPLETION: 2002, 2003

ADDRESS:  
Grote Bickersstraat 102  
Amsterdam, Netherlands

LOCATION: urban

CLIENT: Imca Vastgoed, BV

FUNCTIONS:  
• primary school  
• housing

AREA :  
1.333 m<sup>2</sup> educational facility  
4,000 m<sup>2</sup> housing  
1.333 m<sup>2</sup>

HOUSING:  
• Number of apartments: 8  
• Typology: internal access gallery

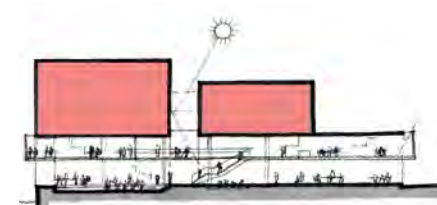
SCHOOL:  
• pedagogy: Montessori  
• degree of education: primary  
• no. of classes/children: 11  
• typology: hall school with a linear access gallery

CONNECTION BETWEEN SCHOOL AND HOUSING:  
independent from each other

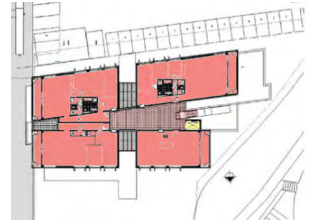
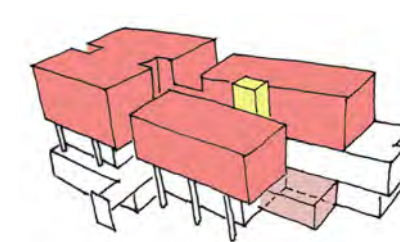
SHARING:  
• elevator  
• outdoor playground

OUTDOOR SPACE:  
• playground shared with residents,  
• nearby public park

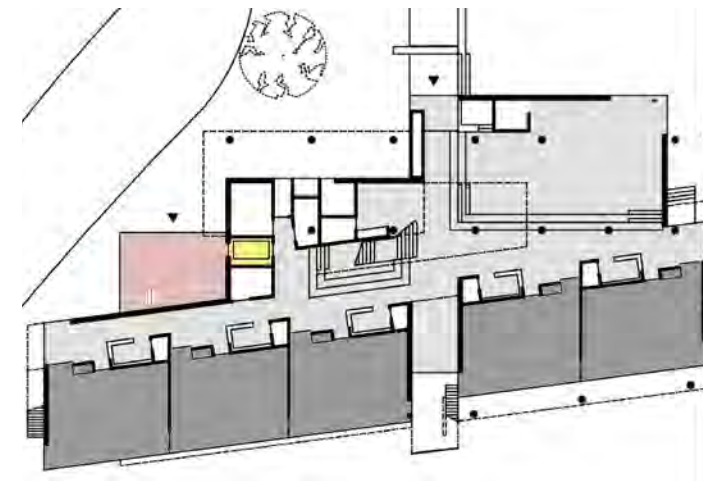
VERTICAL DIMENSION:  
visual connection between the two school floors, attention is focused on multifunctional hall; central gallery of the school is visible from access galleries for dwellings via caesuras



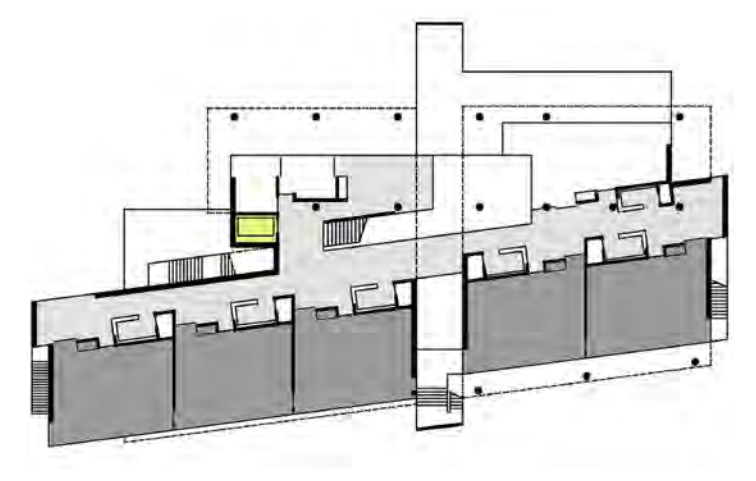
Longitudal section



2nd floor - housing



Ground floor - school



1st floor - school



AHH.NL. 'De Eilanden Primary School'. Web. 5 Mar. 2015. <[http://www.ahh.nl/index\\_en.html](http://www.ahh.nl/index_en.html)>  
HERTZBERGER, HERMAN. Space And Learning. Rotterdam: 010 Publishers, 2008: 138-140. Print.  
HM.NL. 'BICKERSHOEK AMSTERDAM'. Web. 5 Mar. 2015. <<http://www.hm.nl/projecten/wonen-/bickershoek-amsterdam.aspx>>  
SCHOLENBOWEN.BE. "De Eilanden' Montessori School Amsterdam Herman Hertzberger'. Web. 5 Mar. 2015. <<http://www.scholenbouwen.be/sites/default/files/pdf/projects/amsterdam-ms-de-eilandeneng.pdf>>





# KULTURHUS DE BREDE BLIK, GIESBEEK

Architect: GAJ Architecten

A good example of combining two different concepts developed in two different countries is the so called Kulturhus De Brede Blik in the center of Giesbeek, a village in the east of the Netherlands. It combines a brede school – primary school, kindergarden, day-care facility - with a Scandinavian concept of "kulturhus" (culture house) - a cultural center, library, internet café, and infant health center.

To stimulate contact between the different users the functions have not been situated in separate units, but rather interconnected. The heart of the community center is the main hall which can be used for a variety of purposes from theater to religious service. The main composition axis is the central space through which all the rooms are accessible. Being situated in an elevated terrain, the school has also several separate entrances. Through a very sophisticated work with the landscape – the whole complex resembles a fortress and ditch system - the architects were able to create access to outdoor spaces and playgrounds for both the kindergarden in the lower level as well as all parts of the school in the upper level.

DESIGN: 2002  
COMPLETION: 2003

ADDRESS  
Kerkstraat, Giesbeek, Netherlands

LOCATION: rural

CLIENT:  
Zevenaar Local Authority

COSTS: € 2.760.000

FUNCTIONS:  

- primary school
- kindergarden
- nursery
- day care
- culture center
- library
- internet café
- multifunctional community room

AREA : 3.500 m<sup>2</sup>

SCHOOL:  

- Degree of education: nursery, kindergarden, primary
- Number of classes: 15 primary school, 3 kindergarden + nursery
- typology: clusters of classrooms organized around a linear central hall /void

CONNECTION BETWEEN FUNCTIONS:  
 all accessible from central hall, interconnected rooms and sharing of larger and multifunctional rooms

SHARING:  

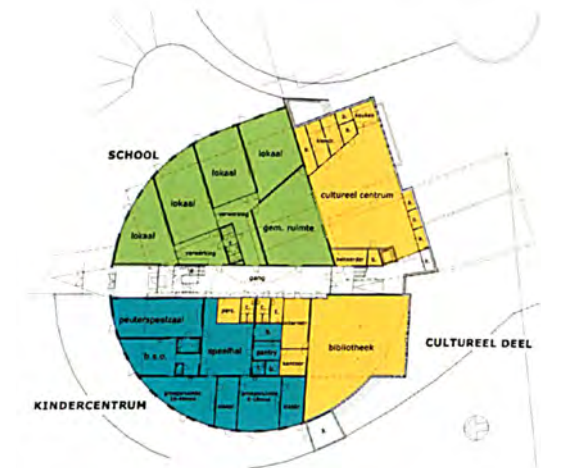
- access hall
- multifunctional hall

OUTDOOR SPACE:  
playgrounds around school

VERTICAL DIMENSION:  
visual connections via central void



1st floor



Ground floor

■ Pre-school  
■ School  
■ Culture center

ARCHITECTUUR LOKAAL. 'Kulturhus De Brede Blik Giesbeek'. Web. 5 Mar. 2015. <<http://arch-lokaal.nl/wp-content/uploads/2012/02/GiesbeekKulturhus-De-Brede-Blik.pdf>>  
 GROENENDIJK, PAUL. 'The School As Community And Neighborhood Centre'. Contemporary Dutch School Architecture. Ton Verstegen and Dolf Broekhuizen. 1st ed. Rotterdam: NAI, 2008: 206-209. Print.





# HET MEESTERWERK, ALMERE

Architect: SVP Architectuur en Stedenbouw

This brede school for 0-12 year-old children is located in the ground and first floor of a housing block. In this project the concept of "school homes" was applied. The ground floor serves exclusively for educational purposes. The first floor originally accommodated 27 apartments accessible from a separate entrance, three patio houses, and four "school homes," which serve now as classrooms, but shall be converted to apartments later.

The architects used patios in the ground floor to get more light into the building recesses and to divide the building into four smaller parts for the different age groups. Besides classrooms and their own sanitary facilities each part has also a larger multifunctional space on the same level or sunken slightly into the terrain. One of them, accessible also from the common central promenade, which connects the two main entrances, is larger and can be divided into two parts.

For the needs of children is designed an exterior space in the patios as well as a playground across a pedestrian path. Between the patio houses, flats and school homes there is a common roof terrace. The building program is relatively densely packed into two to five floors but due to sensitive work with light and space, a spacious and child friendly space has been achieved.

DESIGN: 2000  
COMPLETION: 2005

ADDRESS: El Grecostraat 171,  
Almere, Netherlands

LOCATION: urban

CLIENT:  
Development Ymere Amsterdam

COSTS: € 7.200.000

FUNCTIONS:

- primary school
- kindergarten
- day care
- dwellings

AREA :  
7830 m<sup>2</sup>

HOUSING:  
Number of apartments: 30

SCHOOL:

- Type: brede school
- Degree of education: kindergarten, primary
- Number of classes: 20 + 6 temporary
- typology: clusters, each with a central core, connected via central hall

CONNECTION BETWEEN SCHOOL AND HOUSING:  
independent from each other

SHARING:

- outdoor playground
- terraces on the school roof

OUTDOOR SPACE:

- playground shared with residents
- public park nearby

VERTICAL DIMENSION:  
visual connection between roof terrace and atriums of school

SPECIAL FEATURES:  
flexible school homes



Ground floor

- Classrooms
- Atriums



ARCH-LOKAAL.NL. 'Slimme School Het Meesterwerk Almere'. Web. 5 Mar. 2015. <<http://arch-lokaal.nl/wp-content/uploads/2012/02/Almere-Slimme-school-Het-Meesterwerk.pdf>>  
 GROENENDIJK, PAUL. 'The School As Community And Neighborhood Centre'. Contemporary Dutch School Architecture. Ton Verstegen and Dolf Broekhuizen. 1st ed. Rotterdam: NAI, 2008: 222-225. Print.  
 SVP-SVP.NL. 'SVP Architectuur En Stedenbouw - Almere Slimme School'. Web. 5 Mar. 2015. <<http://www.svp-svp.nl/index.php/almere-slimme-school#.U8P7ZPmSx8E>>





# NESSELANDE BROAD SCHOOL, ROTTERDAM

Architect: Cita Architecten

The Nesseland brede school occupies first two floors of two wings in a centrally located and well accessible housing block. The three schools are located in a low-rise wing, each articulated in the facade design. They can be entered from a welcoming central entrance with reception and through separate small entrances from the inner courtyard. The inner courtyard is enclosed from all sides and most of it is used as a playground. The kindergarten and child day-care have their own separate playgrounds as well.

The other three wings of the complex and a sixteen storey high tower, which serves as an orientation point, are occupied by different forms of dwellings. In the low rise wings, there are ground floor flats with private gardens, gallery apartments and there are apartments for seniors in the tower. For the use of common spaces, access to the inner courtyard is possible through three gates which are open while the school is in use. A medical center, café for locals and gym and multifunctional room (for after school use and religious services) are accessible either directly from the street and /or from the main entrance. (Groenendijk 202-206)

DESIGN: 2001, 2002  
COMPLETION: 2005

ADDRESS: Robert van 't Hoffstraat, Rotterdam, Netherlands

LOCATION: urban

CLIENT: Woon Compas, PCPO, Rotterdam Local Authority

FUNCTIONS:

- 3 x primary school
- after-school care
- day care
- kindergarten
- multifunctional rooms
- sports center
- medical center
- café
- dwellings (for seniors, group homes for the disabled)
- social and cultural work

AREA: 22.310 m<sup>2</sup>

HOUSING:

- Number of apartments: 110 for elderly, 2 group homes for the disabled
- Typology: diverse

SCHOOL:

- Type: brede school
- Degree of education: kindergarten, primary
- Number of classes: 34
- Typology: clusters connected via linear hall and common multifunctional spaces

MEDICAL CENTRE:  
own access from a gallery on the first floor

CONNECTION BETWEEN FUNCTIONS:  
via main entrance

- SHARING:
- entrance hall with concierge
  - inner courtyard
  - sport facilities

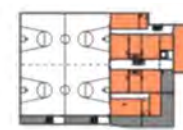
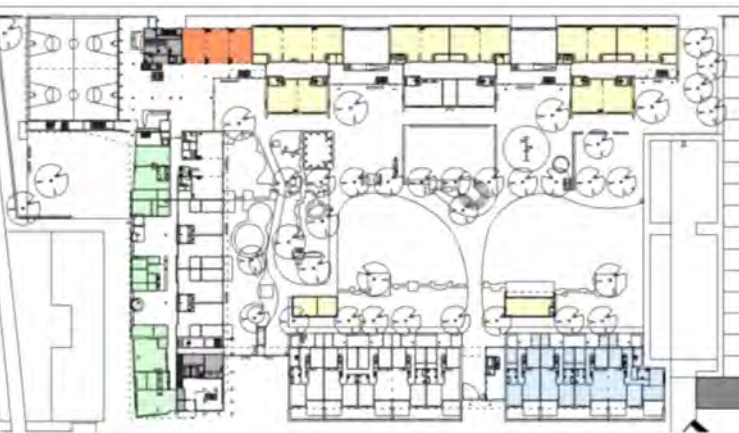
OUTDOOR SPACE:  
playground shared with residents, nearby public park

VERTICAL DIMENSION:  
the building is rather horizontal

1st floor



Ground floor



Basement

- Sport, changing rooms
- Classrooms
- Pre-school
- Apartments



CITA.NL. 'Multifunctioneel Centrum Nesseland'. Web. 5 Mar. 2015. <<http://cita.nl/images/pdf/Mfa-Nesseland.pdf>>  
GROENENDIJK, PAUL. 'The School As Community And Neighborhood Centre'. Contemporary Dutch School Architecture. Ton Verstegen and Dolf Broekhuizen. 1st ed. Rotterdam: NAI, 2008: 202-205. Print.





# PANNENHOEF, KAATSHEUVEL

Architect: dat architecten

The new brede school Pannenhoeef was a part of a revitalization project within the Kaatsheuvel residential district in Waalwijk. According to the plan, detached houses from the 70s were replaced and renovated and instead of them a new multifunctional complex with a school, medical center (GPs, dentist, speech therapy and cesar therapy), home care apartments for the elderly was built together with a neighborhood contact point responsible for social work and welfare. For this purpose 48 houses in the heart of the neighborhood were demolished to make place for this new district.

The district point is a low rise block which in scale and facade design fits to the neighborhood.

The apartments and houses in the complex were planned to enable home care when the elderly need it. Several different housing typologies were used here: detached single family houses with a garden, various types of apartments, and a care hotel called "zotel".

From the beginning the synergies of this connection were sought. Therefore the elderly help in the community school and the oldest pupils take internships in the care hotel.

The primary school caters for 300 pupils and is flexible in size. Some classes are built like school apartments and can be transformed into apartments in case the school downsizes. Across the street, opposite the school entrance there is a community center with an after school facility and club rooms for all age groups.

In the courtyard there are playgrounds for toddlers and pre-schoolers and meeting places for residents.

DESIGN: 2003 - 2005  
COMPLETION: 2005

ADDRESS: Paulus Potterplein, Kaatsheuvel, Netherlands

LOCATION: rural

CLIENT: Casade Waalwijk

FUNCTIONS:

- school
- medical center (GPs, dentist, speech therapy and cesar therapy)
- neighbourhood contact point for social work and welfare
- home care apartments for the elderly with various degree of care

GROSS BUILDING AREA : 11307 m<sup>2</sup>

HOUSING:

- Typology: duplex apartments with garden / terrace, gallery access apartments

SCHOOL:

- Type: brede school
- Degree of education: primary
- Number of children: 300
- Typology: double loaded corridor extended by multifunctional spaces

CONNECTION BETWEEN FUNCTIONS:  
pupils help in the care hotel, elderly help in the school

SHARING:  
inner courtyard

OUTDOOR SPACE:  
inner courtyard, nearby public park

VERTICAL DIMENSION:  
the building is rather horizontal



Ground floor



Longitudinal section

- School
- Medical center
- Neighborhood contact point
- Care hotel
- Apartments
- Storages and technical rooms
- Outdoor greenery





# DE MATRIX, HARDENBERG

Architect: Architectenbureau Marlies Rohmer

De Matrix community school in the center of the new Marslanden housing estate in Hardenberg is a clear eye-catcher and landmark in the neighborhood. It has a symmetrical composition with a three-storey-high common sports and community center in the middle. Around it four equally sized clusters are organized. They provide smaller spaces with which the users can better identify. All the clusters have a flexible column structure that allows easier adaptation of the spaces according to changing educational needs. Each cluster comprises 5 classrooms and contains a small central meeting space, which can be used as a play hall, a computer room, a library or a waiting area.

The clusters provide space for two primary schools, a childcare facility, a toddler playgroup, a physiotherapy/speech therapy office, and conference rooms. The central part of the building consists of a multifunctional assembly hall which can be merged with its adjacent classrooms to provide a single large meeting hall for conferences, festivities, religious services etc. Above the central part are situated the gyms. On their rooftop there is a connection with the playgrounds on the terrain via two spiral stairs designed as a play apparatus. The surrounding outdoor space offers a wide variety of possibilities to learn, play and discover.

The ornamental white fiberglass cassette facade contributes to the robust and yet playful image of the brede school.

DESIGN: 2004  
COMPLETION: 2007

ADDRESS: Erve Odinck 3-7,  
Hardenberg, Netherlands

LOCATION: rural / suburban

CLIENT:  
Municipality of Hardenberg

COSTS: € 5.625.000

FUNCTIONS:

- 2x primary school
- primary school
- welfare functions, such as childcare, nursery and physiotherapy
- sports center

TOTAL AREA: 6.465 m<sup>2</sup>

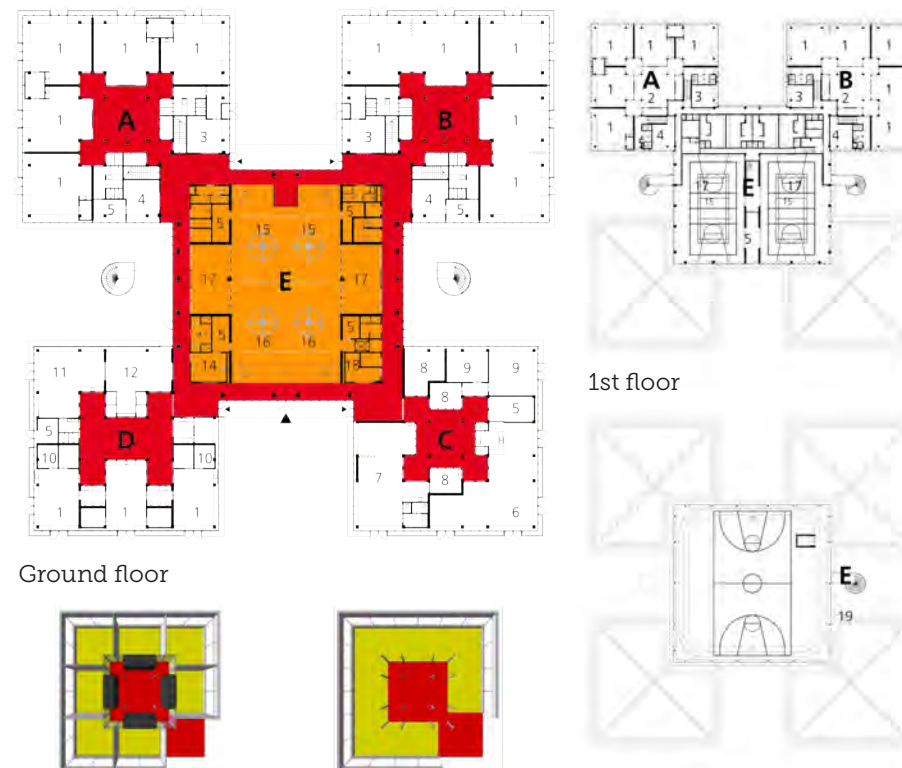
SCHOOL:

- Type: brede school
- Degree of education: primary, pre-school, nursery
- Number of classes: 20 primary school, 4 pre-school and nursery
- Typology: clusters, each with own central common space, organized around a central multifunctional hall

OUTDOOR SPACE:

- different playgrounds for every cluster
- rooftop playground

VERTICAL DIMENSION:  
the building is rather horizontal



Clusters - flexibility

2nd floor - roof

A - Public primary school

B - Protestant primary sch.

C - Various participants

D - Childcare

E - common

1 group room  
2 processing room  
3 director  
4 construction coordinator  
5 storage

1 group room  
2 processing room  
3 director  
4 construction coordinator  
5 storage

6 nursery playground  
7 (child) physiotherapy  
8 treatment /consulting room  
9 office administration (pc)  
5 storage

1 group room  
10 sleeping room  
11 after school care  
12 crafts  
13 staff / administration  
14 kitchen  
5 storage

15 playground / gym  
16 common room  
17 board room  
14 kitchen  
18 congerie  
5 storage  
19 sports roof



ARCHITECTUREGUIDE.NL. 'Community School De Matrix, Marlies Rohmer, Hardenberg'. Web. 5 Mar. 2015.

<[http://www.architectureguide.nl/project/list\\_projects\\_of\\_architect/arc\\_id/1924/prj\\_id/2093](http://www.architectureguide.nl/project/list_projects_of_architect/arc_id/1924/prj_id/2093)>

GEZONDESCHOLEN.EU. 'Brede School De Matrix'. Web. 5 Mar. 2015.

<[http://www.gezondescholen.eu/sites/default/files/marlies\\_rohmer\\_-\\_brede\\_school\\_de\\_matrix\\_hardenberg.pdf](http://www.gezondescholen.eu/sites/default/files/marlies_rohmer_-_brede_school_de_matrix_hardenberg.pdf)>

NIERMEIJER, JOOST. Information About The Projects Open Wijk And Brede School De Matrix For A Thesis. 2014. E-mail.

Rohmer.nl. 'Community School The Matrix'. Web. 5 Mar. 2015. <<http://www.rohmer.nl/en/project/brede-school-de-matrix/>>





# BREDE SCHOOL SCHALKWIJK, HAARLEM

Architect: Architectuurstudio Herman Hertzberger

The complex of the Schalkwijk brede school is located on an island, surrounded by canals, and is significant because of its unusual solution of opening to public. The architect decided to let the pedestrians (public) cross the rooftop playground. This is common space shared also by all the educational and community facilities and apartments. For the smallest children there is an enclosed patio for playing accessible from the ground floor. The thirty apartments, a day care facility, and a sport hall are also accessible from the carefully designed roof.

The two autonomous schools that compose one compact entity, function separately but they share a common multifunctional hall in the middle that they can use together as a whole or divide it with partitions into two parts. There is also a sports center with an own entrance shared by the schools, community center, as well as by public.

DESIGN: 2002 - 2007  
COMPLETION: 2007

ADDRESS: Bernadottelaan,  
Haarlem - Meerwijk, Netherlands

LOCATION: urban

CLIENT: Haarlem Local Authority

## FUNCTIONS

- 2 x primary school
- pre-school play group
- child care
- neighbourhood center
- gym
- dwellings

GROSS BUILDING AREA:  
brede school: 5.300 m<sup>2</sup>

## HOUSING:

- Number of apartments: 33
- Typology: gallery access

## SCHOOL:

- Type: brede school
- Degree of education: nursery, kindergarden, primary
- Number of classes: 21
- Typology: linear clusters connected via central hall and multifunctional meeting room

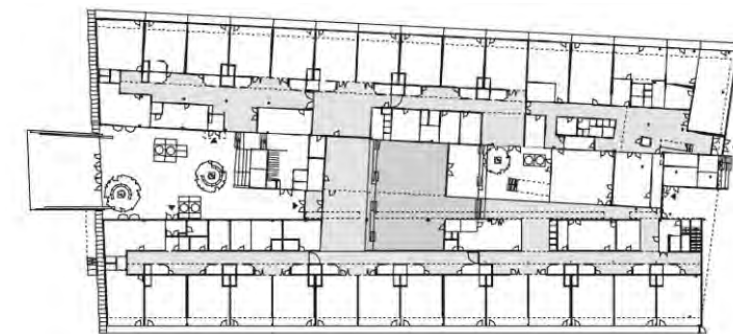
CONNECTION BETWEEN SCHOOL AND HOUSING:  
entrance to dwellings is via the common outdoor space

## SHARING:

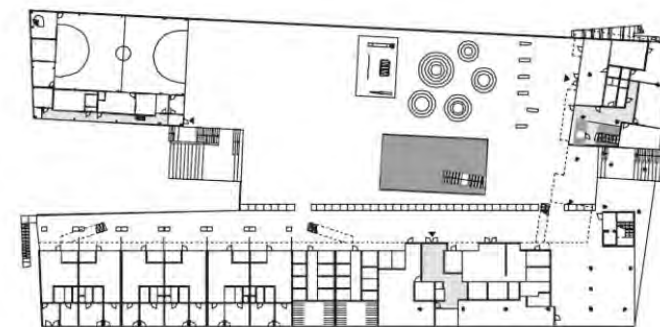
- outdoor spaces
- sport center

OUTDOOR SPACE:  
playground shared with residents

VERTICAL DIMENSION:  
the building is rather horizontal; the outdoor space on different levels creates an artificial landscape consisting of visually exposed areas as well as more introverted courtyards



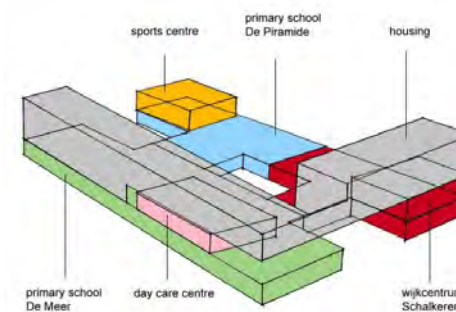
1st floor



Ground floor



Longitudinal section



Functional scheme

AHH.NL. 'Schalkwijk Extended School, Haarlem, The Netherlands'. Web. 5 Mar. 2015. <[http://www.ahh.nl/index\\_en.html](http://www.ahh.nl/index_en.html)>  
ARCHITECTUURHAARLEM.NL. 'Brede School Meerwijk'. Web. 5 Mar. 2015. <<http://www.architectuurhaarlem.nl/node/1040>>  
HERTZBERGER, HERMAN. Space And Learning. Rotterdam: 010 Publishers, 2008: 170, 198. Print.  
HEVO.NL. 'Brede School Meerwijk Haarlem'. Web. 5 Mar. 2015. <<http://www.hevo.nl/nl/referenties/referenties.aspx?itemID=23>>





# LORENTZ SCHOOL, LEIDEN

Architect: Atelier PRO

Lorentz school is a solitary building positioned between two residential blocks. The building itself is surrounded by an open playground.

The school is relatively large, it caters for 900 pupils. The design challenge was to articulate the large building into smaller and better manageable units, however, making it easily understandable for children, and creating "a feeling of a small school despite the size of the institution" (OECD, 164). The architects divided the school into three three-storey-high houses. Each has an own entrance and is marked by one color. Within a house each age-group has their own storey. Classes and playrooms are entered from a wide corridor where computer and working stations are situated. In the center of the floor plan, there is a common gym surrounded by other common spaces – an auditorium for 100 people, documentation center, and library.

The building is a very positive example of working with the vertical dimension – the stairs, terraces and landings weave the common rooms on different levels together and thus create very diverse and attractive meeting spaces, where children from different groups can interact.

DESIGN: 2003 - 2008  
COMPLETION: 2008

ADDRESS: van Vollenhovenkade 17, Leiden, Netherlands

LOCATION: urban

CLIENT: Gemeente Leiden Dienst Bouwen & Wonen en Bureau Openbaar Onderwijs

COSTS: € 5,187,000

FUNCTIONS

- primary school
- housing

AREA: 4,700 m<sup>2</sup>

SCHOOL:

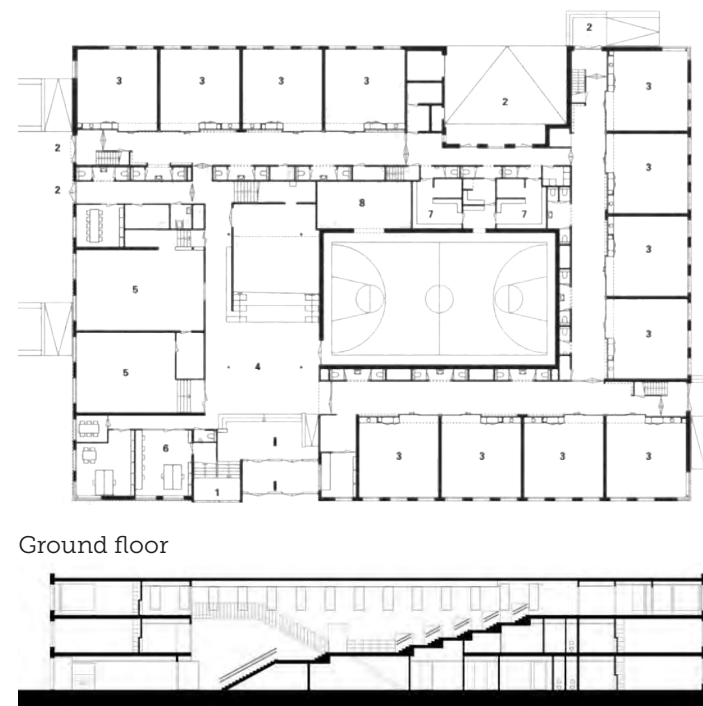
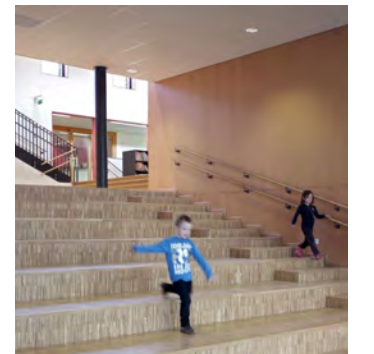
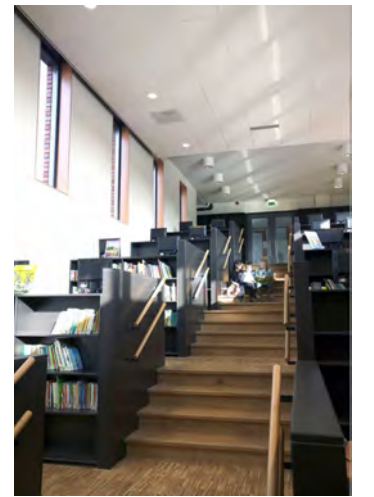
- Degree of education: primary
- Number of classes: 38
- Typology: clusters around a common core

OUTDOOR SPACE:

- playground shared with residents

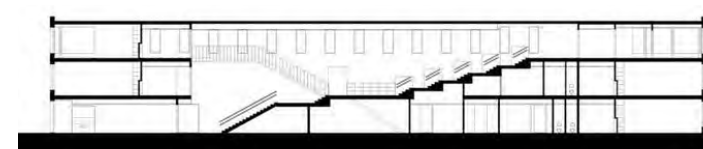
VERTICAL DIMENSION:

the core of the building is designed vertically into a sequence of common spaces - auditorium, documentation center, library



- 1 main entrance
- 2 side entrance
- 3 classroom
- 4 auditorium
- 5 playroom
- 6 administration office
- 7 cloakroom
- 8 storage

Ground floor



Longitudinal section

Scheme







# MFS ZUIDERKWARTIER, TILBURG

Architect: Atelier PRO

This brede school was erected to complement the heart of a revitalized residential district named Zeeheldenbuurt in Tilburg. The L-shaped ensemble was added to the central square with a church and nunnery in such a way that it created an enclosed courtyard in the middle. The playgrounds are elevated to accommodate parking underneath.

The brede school program includes a neighborhood community center, kindergarten, primary school with thirteen classes, apartments and work and leisure facilities for people with a handicap, and even a psychiatric health center. The combination of independent functions and a sense of community has been given an architectural form by hollowing out and 'eroding' the mass of the school building from the inside and the outside and then linking these hollows and incisions by means of a well-thought system of corridors and stairs. As a result, this brede school has many different spaces waiting to be discovered by the children.

DESIGN: 2004 - 2009  
COMPLETION: 2009

ADDRESS: Wassenaerlaan 38,  
Tilburg, Netherlands

LOCATION: urban

CLIENT:  
Gemeente Tilburg - TIWOS

COSTS: € 9,356,890

FUNCTIONS:  

- neighbourhood center
- kindergarden
- primary school
- apartments, work and leisure facilities for people with a handicap
- a psychiatric health center
- dwellings

AREA: 9,053 m<sup>2</sup>

HOUSING:  

- Typology: varied

SCHOOL:  

- Type: brede school
- Degree of education: primary
- Number of classes: 13 primary school, 2 kindergarden groups
- Typology: combination of clusters and double loaded corridor around a central hall

CONNECTION BETWEEN SCHOOL AND HOUSING:  
 sharing of common spaces in the central hall

SHARING:  

- outdoor space
- dinning room, sport hall, etc.

OUTDOOR SPACE:  

- playgrounds

VERTICAL DIMENSION:  
 an elaborate system of voids, open galleries staircases and interior windows enables visual connections between both school floors



1st floor



Ground floor







# BALADE, WAALWIJK

Architect: dat architecten

The multifunctional complex Balade in Wajwijk is an exceptional example of combining the brede school with a variety of housing typologies aiming at creating a micro-society under one roof. The housing here is not strictly functionally separated from the school, and the degree of connection between the different facilities is higher than usual.

The complex hosting a parking space, a primary school, child care, medical center, and dwellings has a shape of two asymmetrically intersecting linear blocks. In the cross-section, a four-storey-high void with a central staircase was planned in order to connect all the floors and functions visually and functionally. Oriented to the void there are common rooms – a grand café shared by all users on the ground floor, an orientation point with a reception next to the main entrance, a sitting/waiting/working/reading spot on the first floor, and a common living room on the second floor. These spaces are designed so that they have something to offer for all the users and inhabitants, regardless of their age and health conditions. A gym intended for dual use is placed in the underground.

The complex offers a wide variety of dwellings – on the lower floors there are supportive housing and assisted apartments for the elderly which offer a wide variety of home care, and on the upper floors are located a traditional gallery and corner or corridor types of apartments, which are available/intended for rent. All these are connected to the common core via a gallery or corridor. Besides the main entrance there are other entrances into the dwellings, so that the social interaction is an option and not an inevitability.

The building volume cuts the ground into four yards, different in size and character. Due to the position of the building, it was possible to keep most of the original trees, and the green character of the vicinity stays unchanged.

The facade reflects the diversity of functions. Shapes and materials alternate in a seemingly random fashion as a bookcase – a wide variety of items that create a familiar whole.

DESIGN: 2004 - 2010  
COMPLETION: 2010

ADDRESS: De Jonghestraat, Waalwijk, Netherlands

LOCATION: urban

CLIENT: Cofier Bouwontwikkeling t.b.v. Casade Waalwijk

BUILDING COSTS:

FUNCTIONS

- primary school
- child care
- medical center
- community center
- dwellings
- parking

GROSS BUILDING AREA: 20934 m<sup>2</sup>

HOUSING:

- Number of apartments: 60 apartments, 35 apartments or rooms for elderly with various degrees of care, 2 large shared apartments
- Typology: internal corridor

SCHOOL:

- Degree of education: primary, pre-school
- Number of classes: 15 primary school, 5 pre-school and toddlers
- Typology: double loaded corridor, hall

CONNECTION BETWEEN SCHOOL AND HOUSING: common spaces, common central circulation core

SHARING:

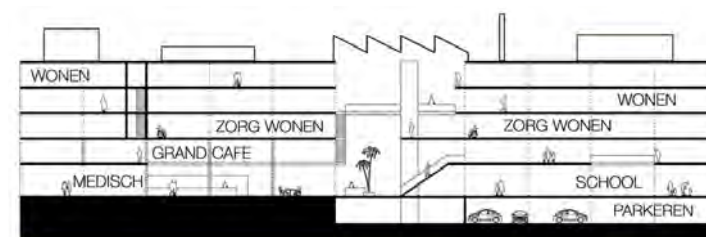
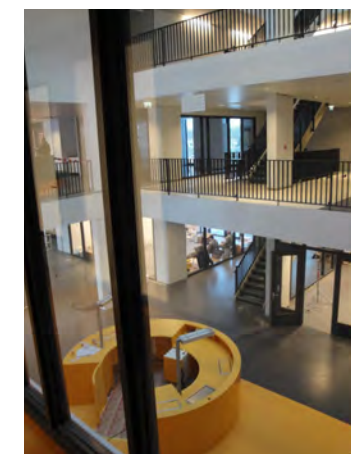
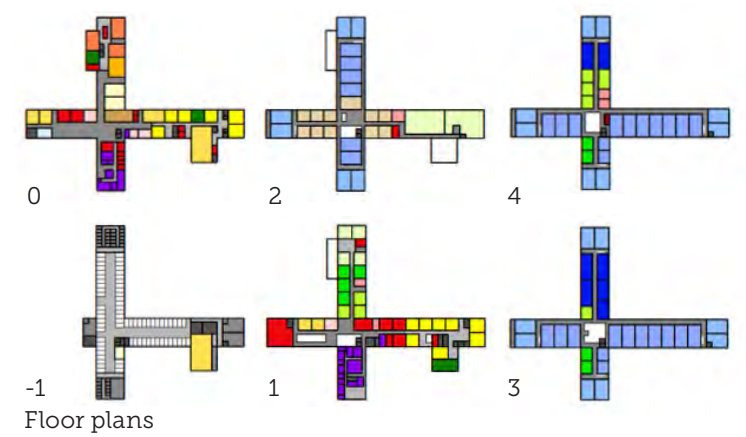
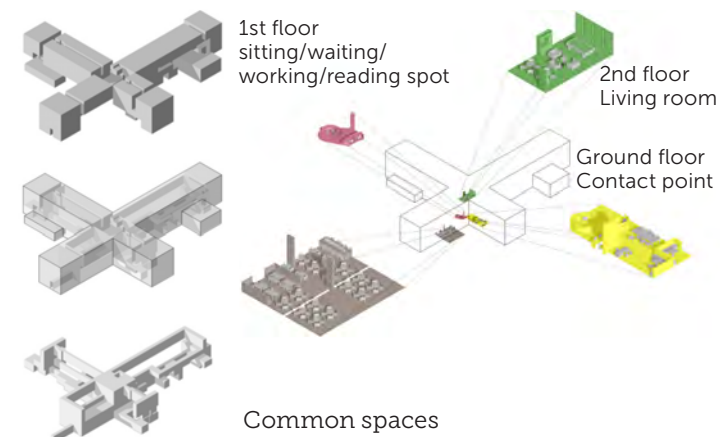
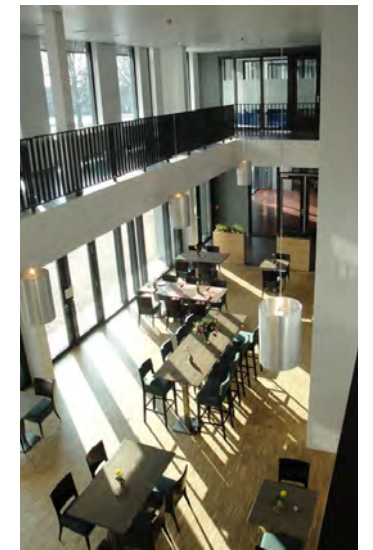
- lobby, cafeteria, common living room, reading room
- outdoor spaces
- gym

OUTDOOR SPACE:

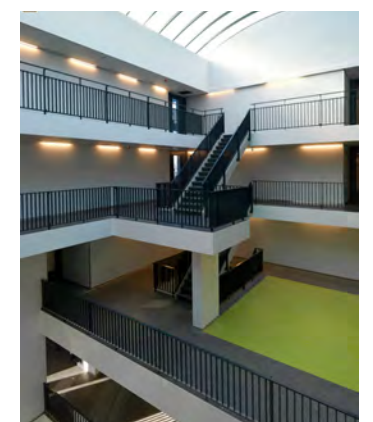
- playgrounds
- lawn

VERTICAL DIMENSION:

- visual connections between the common spaces around a four storey high central void with staircase
- galleries within the school itself



Longitudal section







# BREDE SCHOOL DE BOSCHKENS, GOIRLE

Architect: dat architecten

Broad school Boschkens is the only vertical element in a strip of new housing development between Goirle and Boschkens, two suburbs of Tilburg. It creates a sculptural landmark visible from different sight axes and highlights the position of the bicycle bridge connecting these two suburbs. The school has entrances on the ground floor, and is accessible also from a porch on the first floor. There are ramps and stairs connecting the porch with pedestrian routes from both sides.

The first two floors are occupied by school and community facilities, on the remaining/other two floors there are apartments offering panoramic views of the landscape. Despite its exposed position the semi-open yard creates a safe and introverted space to meet and play. There are also open spaces with different spatial qualities and different user modes – an open playground on the roof, covered porch, common playgrounds of different size on the ground floor level and small fenced off terraces adjacent to classes. The school interior is composed around a two-storey high central hall that works as a core. On the second floor, above the kindergarten, “school apartments” are planned. In case of downsizing of the school these classrooms can be transformed into apartments.

DESIGN: 2006 - 2010  
COMPLETION: 2010

ADDRESS: Waterput, Boschkens, Goirle, Netherlands

LOCATION: suburban

CLIENT: Leyakkers

#### FUNCTIONS

- primary school
- kindergarten
- neighbourhood center
- dwellings

GROSS BUILDING AREA: 5138 m<sup>2</sup>

#### SCHOOL:

- Type: brede school
- Degree of education: primary, pre-school
- Typology: double-loaded corridor and central hall

CONNECTION BETWEEN SCHOOL AND HOUSING: outdoor space

- SHARING:
- outdoor space
  - community rooms

- OUTDOOR SPACE:
- playground shared with residents, nearby public park

#### VERTICAL DIMENSION:

- visual links via central void inside the school
- outdoor terraces, playgrounds, system of ramps and covered terrace on different levels create an interconnected continuum

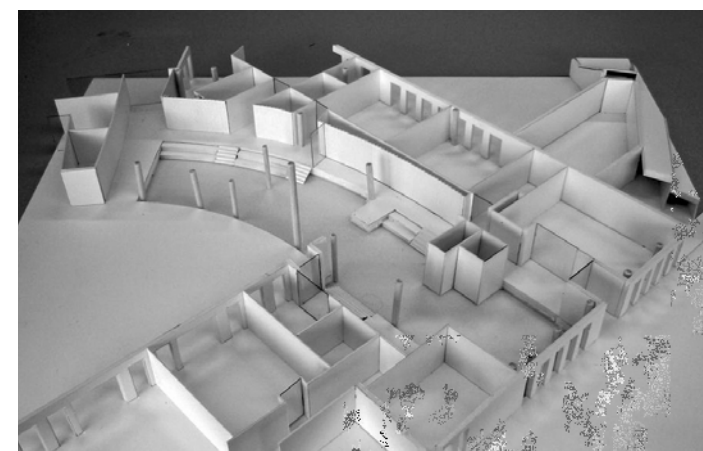
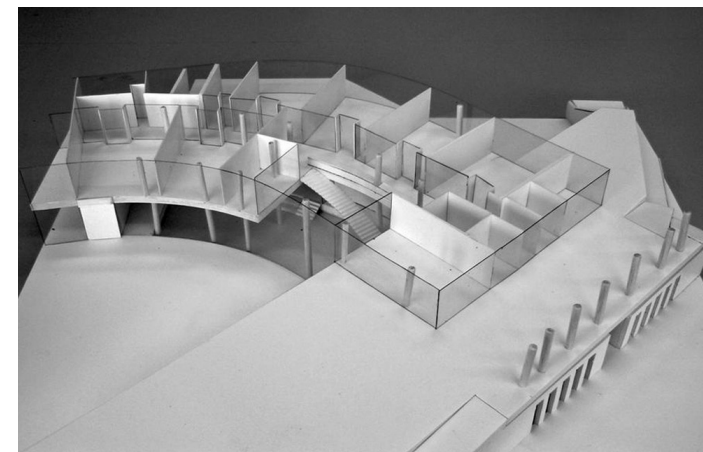
SPECIAL FEATURES: flexible school apartments



Section A-A



Section B-B







# MFC AND HOUSING OSDORP, AMSTERDAM

Architect: mecanoo architecten

The multifunctional center in Osdorp was built as the first of nine building complexes, all featuring broad streets and an auto-free square planned in the urban renewal project in the Remerswaalbuurt in Osdorp, a neighborhood situated on the periphery of Amsterdam. It includes a primary school, sports hall, pre-school playrooms, a children day care center, a community center, 51 apartments and 21 single family homes. The neighborhood shall be enhanced with high quality social housing situated within a network of pleasant and safe streets, squares, and a green public space for enjoyment and socializing.

Communal and social functions are located on the ground level of the complex. The entrances are oriented to the main street. The building slopes down from six levels to three on the northwest side to connect to a new housing complex. This side of the complex opens up to the green courtyard, which belongs to both residents and pupils. Situated in the four floors above the school there are 51 apartments, out of which 16 are designated for people with minor physical handicaps. The quieter, north side of the complex houses 21 single family homes. The main entrance of the primary school offers a clear view to a large courtyard in the back. A second entrance is located on the courtyard's elevated square.

In the school design, art plays indeed an important role. The facade elements situated between windows on the street side were created in cooperation with an artist, Elspeth Pikaar. She asked the pupils to write texts and make drawings which were then processed into large glass panels. The artwork shows the pupils' sense of connection with their school and neighborhood. The interior of the school is meticulously child-friendly and radiant glowing in a fresh green.

DESIGN: 2005 - 2007  
COMPLETION: 2009 - 2011

ADDRESS: Osdorperban 134,  
Amsterdam, Netherlands

LOCATION: urban

CLIENT: Ymere Ontwikkeling,  
Amsterdam; Amsterdamse Stichting  
voor Katholiek Onderwijs

## FUNCTIONS

- primary school
- children's day-care center
- sports facilities
- community hub
- dwellings

AREA:  
education: 4.000 m<sup>2</sup>

## HOUSING:

- Number of apartments: 51  
apartments, 21 solo family dwellings
- Typology: gallery access

## SCHOOL:

- Type: brede school
- Degree of education: primary

CONNECTION BETWEEN  
SCHOOL AND HOUSING:  
independent from each other

## SHARING:

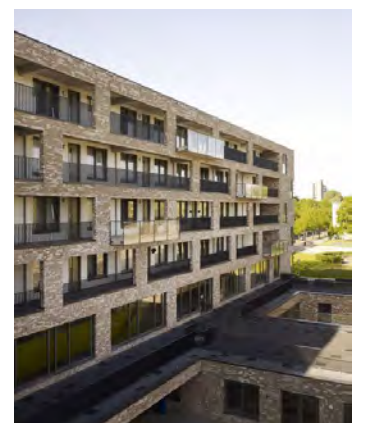
- outdoor playground
- terraces on the school roof
- sports hall

## OUTDOOR SPACE:

- playground shared with residents

## VERTICAL DIMENSION:

visual connection between two  
school floors via galleries



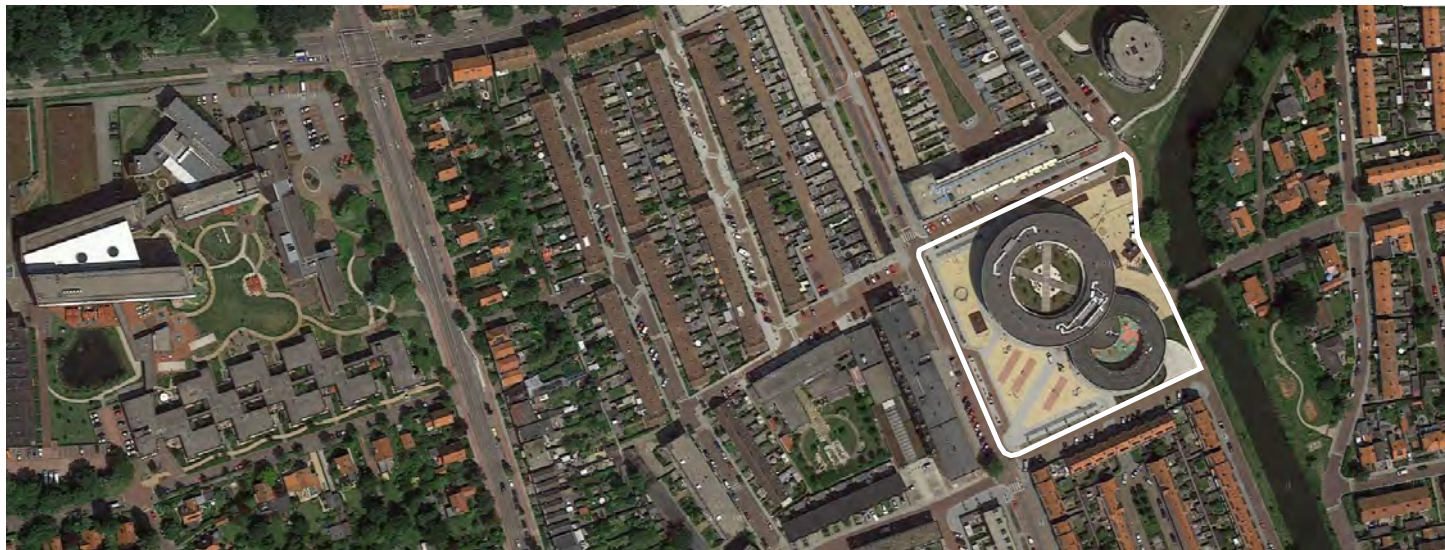
ARCHHELLO.COM. 'Mecanoo - Project - Multifunctional Centre And Housing Osdorp - Image-1'. Web. 5 Mar. 2015.

<<http://www.archello.com/en/project/multifunctional-centre-and-housing-osdorp/image-1>>

ARCHDAILY. 'Osdorp Multi-Functional School / Mecanoo'. N.p., 2011. Web. 5 Mar. 2015. <<http://www.archdaily.com/137217/osdorp-multi-functional-school-mecanoo/>>

MECANOO.NL. 'Osdorp Mixed-Use Centre And Housing'. Web. 5 Mar. 2015. <<http://www.mecanoo.nl/Projects/project/46/Osdorp-Mixed-use-Centre-and-Housing?t=6>>





# OPEN WIJK, VLISSINGEN

Architect: Architectenbureau Marlies Rohmer

The Open Wijk's building form is composed of two intersecting circles. The large ring is four floors high and houses three primary schools, organized around a large gym in the first two floors. The rest of this part of the building is occupied by 38 social rented apartments. In the middle of the circular block, there is a quiet common garden for the residents enclosed from the hustle and bustle on the schoolyard. In the small circle, the central position holds a patio which serves as an outdoor playground for toddlers, around which a kindergarden, extra care and a parent-child center, rooms for social work and meeting spaces are located. The small circle is only two storeys high with a garage for 50 cars and bicycle storages for residents and employees in the underground. The intersection of the two circles creates a core and a meeting place for the whole complex. A large arena-like auditorium, gallery, play spaces and the main entrance hall create a mixing chamber, where all the users can meet.

The diagonal position of the school on the estate cuts the surrounding outdoor space into portions with different size and character. The portion oriented to the street is larger and shared with the public as a play square, while the one oriented to the canal is smaller and intended for school use only. Between the play square and the street on the western side of the estate a kiss and ride zone was built. The entrance to the underground garage is on the eastern side in order to avoid interference with the busy school traffic especially in the morning.

The different schools were brought together applying the principle „working together apart“. To keep its own identity and organization each of the school has an own entrance and a staircase. Classrooms are accessible from an enlarged hallway with computer work stations.

Open Wijk is an example of a very effective space arrangement – all functions are brought together forming a very compact entity. Due to its circular form, supported by the butterfly-like facade design, it is definitely a landmark in the city landscape.

DESIGN: 2005  
COMPLETION: 2011

ADDRESS: Pablo Picassoplein,  
Vlissingen, Netherlands

LOCATION: urban

CLIENT: Municipality of Vlissingen,  
l'escaut woonservice i.s.m.  
PMB Marsaki bv

COSTS: € 12.888.000

FUNCTIONS:

- 3x primary school
- day care with 3 groups
- nursery school, after school care
- gym
- media library
- consultation office
- dwellings for seniors
- garage (50 places)

AREA: 11.000 m<sup>2</sup>

HOUSING

- Type: brede school
- Number of apartments: 8
- Typology: access gallery

SCHOOL:

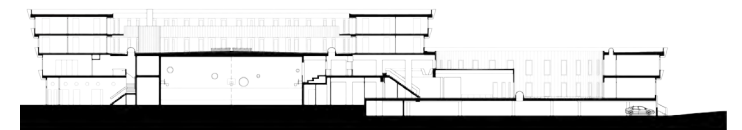
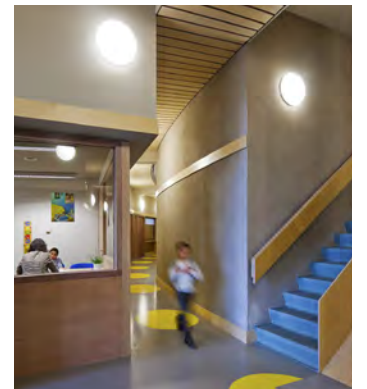
- Degree of education: primary, pre-school
- Number of classes: 26 primary school, 4 kindergarden groups
- Typology: clusters connected by a common central hall

INTERACTION BETWEEN SCHOOL AND HOUSING:  
own entrances, connection in ground floor, sharing common facilities and playground

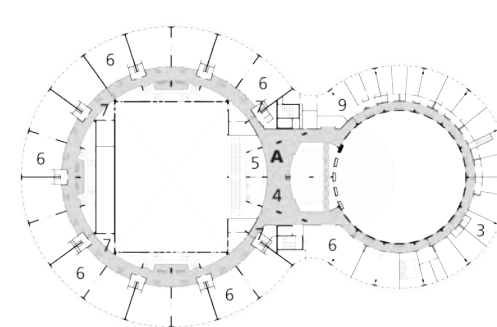
SHARING:  
outdoor space, staircase and lift

- OUTDOOR SPACE:
- playgrounds shared with the public
  - playgrounds for school use only
  - inner courtyard for toddlers
  - roof garden for the residents

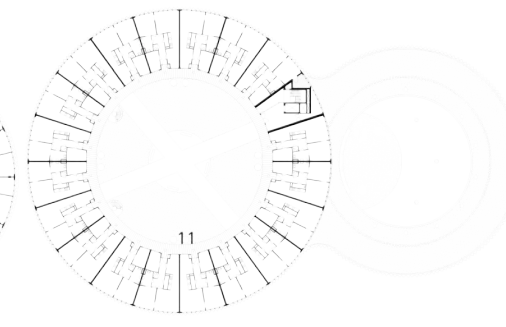
VERTICAL DIMENSION: the common hall is a vertical space minimal vertical connection within individual schools



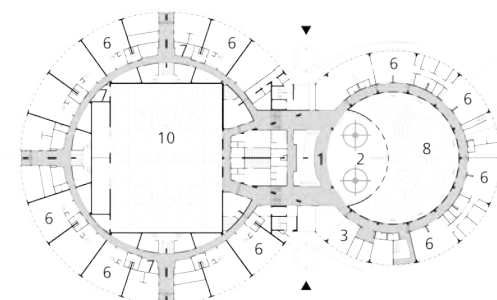
Longitudinal section



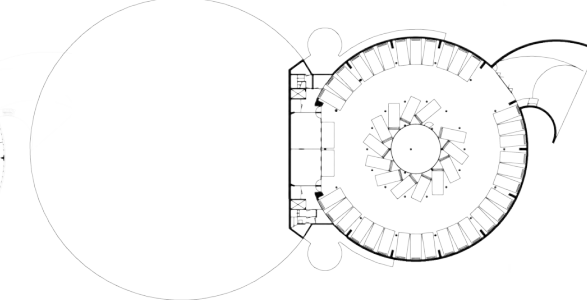
1st floor - brede school



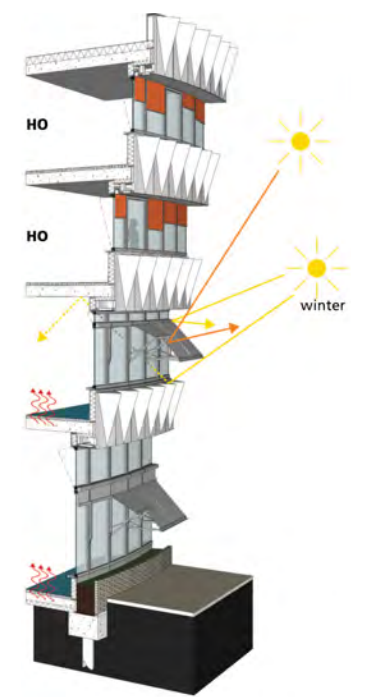
2nd and 3rd floor - dwellings



Ground floor - brede school



Underground - parking







# “SLINGETOUW”, WATERRIJK

Architect: Architectuurstudio Herman Hertzberger

Brede school “Slingentouw” is incorporated into a housing block in an urban development area in Eindhoven. The school building consists of two parts: a one storey plinth partially sunken into the terrain and a three-level high building.

The plinth is perforated by patios, each patio shared by two classrooms of equal size. Between rows of classrooms there are wide learning streets offering a multitude of activities – sunken areas, help desks, theater-like enclosed spaces, and small kitchens. Despite the width, the learning streets are well lit by strips of skylights. When the folding partitions of the classrooms are open one continuous learning landscape can be created. The roof of the flat plinth serves as a playground for the school children as well as for the residents of the neighborhood.

In the three-level-part of the brede school there is a neighborhood café open for public, auditorium, staircases, and a gym. In case of decrease of the pupils’ number, upper floors of this part of the brede school can be transformed into apartments.

DESIGN: 2007 - 2011  
COMPLETION: 2011

ADDRESS: Waterlinie, Eindhoven, Netherlands

LOCATION: suburban

CLIENT: SKPO Eindhoven

FUNCTIONS:

- primary school
- pre-school play group
- childcare
- gym
- neighborhood café

GROSS BUILDING AREA: 6.090 m<sup>2</sup>

HOUSING:

a part of school can be transformed into apartments

SCHOOL:

- Type: brede school
- Degree of education: primary
- Number of classes: 12
- Typology: atriums, open plan, central hall

CONNECTION BETWEEN SCHOOL AND HOUSING: via outdoor space

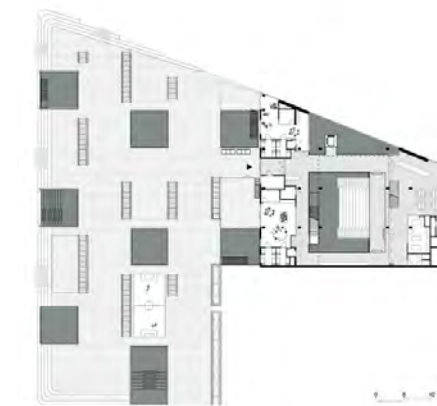
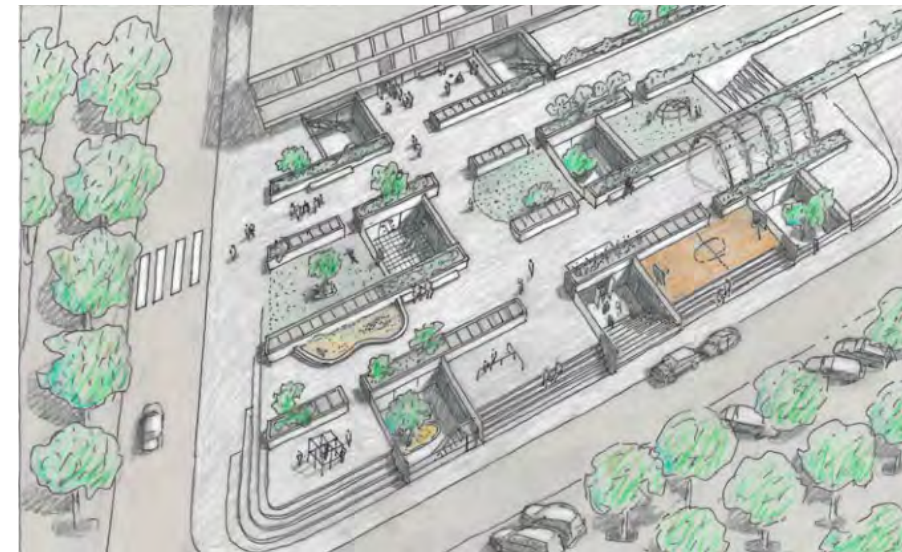
SHARING:

- outdoor playground
- terraces on the school roof
- neighborhood café

OUTDOOR SPACE: playgrounds and courtyards shared with residents

VERTICAL DIMENSION:

a part is strictly horizontal, in the other part visual connections are enabled by a two story high void



1st floor



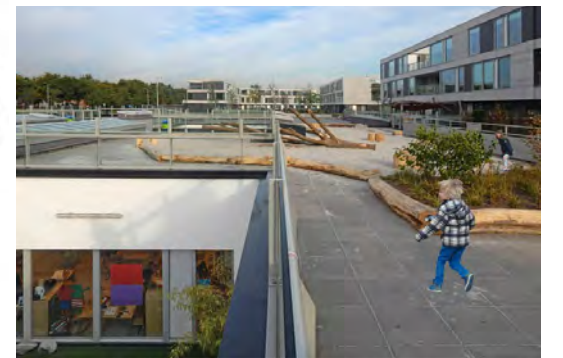
3rd floor



Ground floor



2nd floor



Model



Longitudal section





# BREDE SCHOOL ESSE ZOOM

Architect: Cita architecten

Brede school Esse Zoom was built in suburban area of Rotterdam to provide social functions for a new development area. The low rise complex accommodates two primary schools in separate building volumes on the quiet side of the estate, two organizations providing child day care for able-bodied as well as for handicapped children in the ground floor of the housing block.

The schools and childcare organizations are spatially connected through a common tract with the main entrance and kitchen, dining room, multifunctional rooms, a gym, and physiotherapy rooms. Each school or nursery has their own common spaces with diverse learning opportunities - large and small workplaces, open and closed, quiet and stimulating. However, these workplaces can be connected to or closed from the common track when the school is not in use.

The building volumes form four different semi-open yards and one enclosed inner yard. These are the entrance plaza, toddler square, outer workshop, courtyard, and a peaceful garden, each with their own atmosphere, function, and orientation to the sun adapted to the user group. For security reasons the yards are fenced off, except for the plaza in front of the main entrance. The visual connection is retained.

The gallery type dwellings on the upper floors are accessible from separate staircases and lifts from the street on the south east side of the complex.

DESIGN: 2008  
COMPLETION: 2010 - 2011

ADDRESS: Donge, Nieuwerkerk a/d IJssel

LOCATION: rural / suburban

CLIENT: Vestia, Estrade projecten

FUNCTIONS:

- 2 x primary school
- gym
- childcare
- After school care
- child care centre for the mentally handicapped
- physiotherapy
- dwellings

GROSS BUILDING AREA :  
brede school: 6.137 m<sup>2</sup>

HOUSING:  
Number of apartments: 52  
Typology: access gallery

SCHOOL:  
Type: brede school  
Degree of education: primary  
Number of classes: 16  
Typology: clusters connected via a system of common halls

CONNECTION BETWEEN SCHOOL AND HOUSING:  
independent from each other

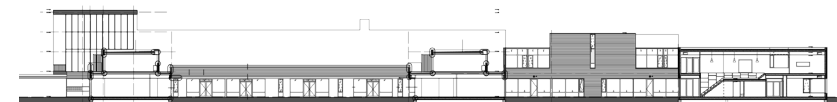
SHARING:  
• inner courtyard

OUTDOOR SPACE:  
various courtyards with playgrounds for different age groups:  
• entrance plaza  
• toddler square  
• outer workshop  
• inner courtyard  
• garden

VERTICAL DIMENSION:  
the school is rather horizontal



Cross-section - gym



Longitudinal section



1st floor



Ground floor

- Common rooms brede school
- Primary school
- Children day care „Humanitas“
- Gym
- Children day care „Gemiva“
- Dwellings
- Physiotherapie





# MFA NELSON MANDELA, GOUDA

Architect: Atelier PRO

The Nelson Mandela School in the heart of Gouda East used by 21 different user groups became a catalyst for the neighborhood. On only 6630 m<sup>2</sup> a variety of district-bound facilities have been efficiently concentrated: a primary school, a playgroup, a day care center, a gymnastics hall, a community service center, and a center for youth and family care. It provides also 16 social gallery type rental apartments with view to the schoolyard.

The building has a shape of letter Z and meticulously fits into the environment built in the post war period. It meanders through a garden-like urban environment with monumental trees near the canals, and by taking different directions it marks off various atmospheres.

The volume accommodating the apartments on the west side was designed as a height accent – in order to get optimal orientation of the housing units and refrain the rotation of an apartment building on the north.

„All program sections have been strategically divided over the volume. In the middle wing of the building, there are two higher spaces that provide a distinctive core to both the community service center and the school. Around these central spaces, user routes circle on various levels. Thanks to the stepped section of the middle wing, daylight can penetrate deeply into the rooms.” (atelier.pro.nl)

The flexible architectural layout and a well designed structure of the building, enable independent use of the different parts of the complex. The tenants can hire more or less space according to their actual needs. This strengthens the dynamics and usability of the building.

DESIGN: 2008-2011  
COMPLETION: 2011

ADDRESS:  
Wilsonplein 1, Gouda,  
Netherlands

LOCATION: urban

CLIENT: Woonpartners Middle  
Holland commissioned by the  
Municipality of Gouda

COSTS: € 7,850,000

#### FUNCTIONS

- primary school
- playgroups
- day care center
- gymnastics hall
- community service center
- center for youth and family care
- dwellings

AREA :  
education: 6.630 m<sup>2</sup>

#### HOUSING:

- Number of apartments: 16
- Typology: access gallery

#### SCHOOL:

- Type: brede school
- Degree of education: primary
- Number of classes: 11 primary school, 5 pre-school
- Typology: central hall, double-loaded corridor

CONNECTION BETWEEN  
SCHOOL AND HOUSING:  
independent from each other

#### SHARING:

- outdoor playground
- terraces on the school roof

#### OUTDOOR SPACE:

- playgrounds and terrace shared with residents

#### VERTICAL DIMENSION:

central core and galleries provide  
visual connections



1st floor



Ground floor







# BREDE SCHOOL DE PRENTER, VIANEN

Architect: SVP Architectuur en Stedenbouw

The Broad School Prenter in Vianen was an essential element of the Vijfheerenlanden quarter's revitalization plan. It replaced two outdated schools and was situated into the center of the residential superblock. Moreover, residential apartments were built above the school. The school occupies the whole ground floor; it creates a large plinth with one cut out patio. The classrooms have access to a terrace that can be used as an outdoor classroom. The gym, located on the second floor protects the large main entrance from rain and is directly accessible from the entrance lobby via a staircase.

The concept counts with a possible extension of the school in future, and so four classrooms are expected to be annexed to the gym.

Above the school two to four floors of apartments are built. The apartments have their own entrance on the west side, and all of them are accessible from open galleries oriented to a common courtyard on the roof of the school.

DESIGN: 2009 - 2012  
COMPLETION: 2012

ADDRESS:  
Vianen Vijfheerenlanden, Netherlands

LOCATION: urban

CLIENT: Lekstedewonen, Municipality of Vianen

BUILDING COSTS:  
€ 3.600.000 (MFA)  
€ 3.800.000 (dwellings)

#### FUNCTIONS

- primary school
- gym
- neighbourhood store
- after-school care, center for social and cultural work
- rooms for visual artists association
- pre-school playgroups
- dwellings

GROSS BUILDING AREA :  
3.055 m<sup>2</sup> brede school  
3.400 m<sup>2</sup> dwellings  
6.455 m<sup>2</sup>

#### HOUSING:

- Number of apartments: 36
- Typology: access gallery

#### SCHOOL:

- Type: brede school
- Degree of education: primary
- Number of classes: 8
- Typology: system of double loaded corridors

CONNECTION BETWEEN SCHOOL AND HOUSING: independent from each other

#### OUTDOOR SPACE:

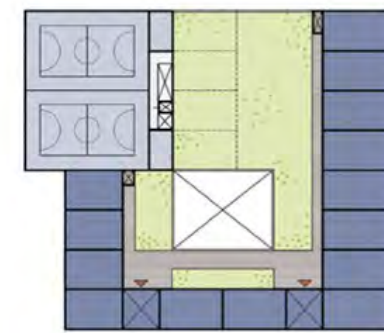
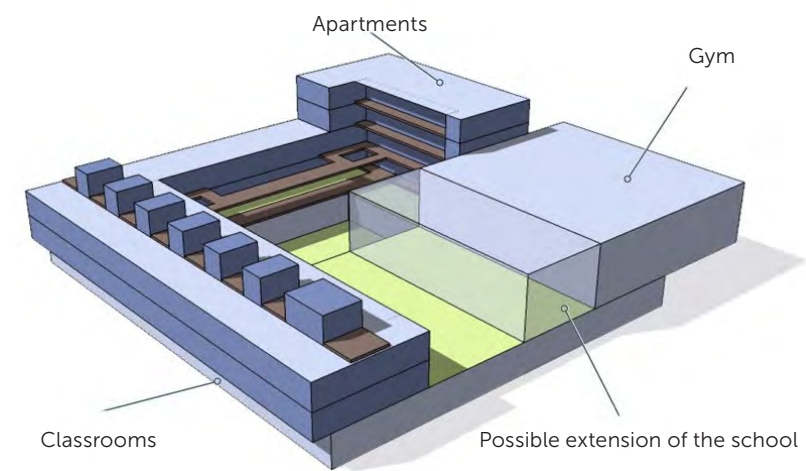
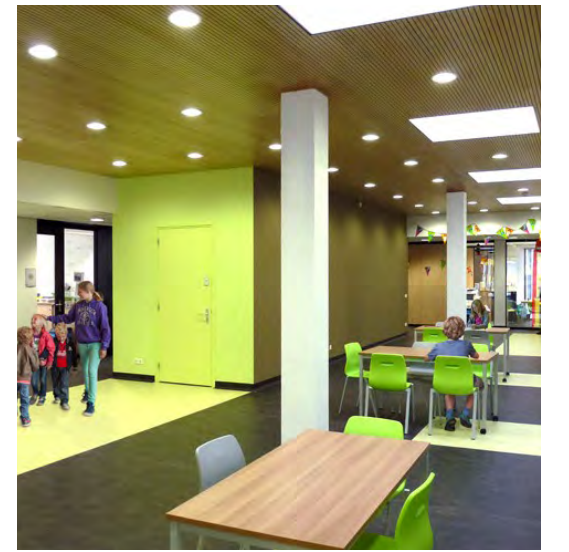
- inner courtyard
- outdoor classrooms
- public spaces within the super-block

#### VERTICAL DIMENSION:

the school is rather horizontal

#### SPECIAL FEATURES:

it is possible to add 4 more classrooms in future



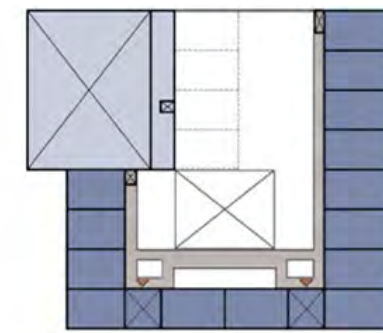
First floor



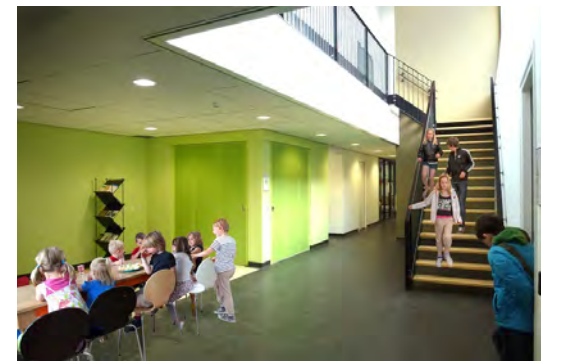
Third floor



Ground floor



Second floor







# NOORDWIJK BREDE SCHOOL

Architect: SVP Architectuur en Stedenbouw

Boechorst Brede school was built in the latest development area around Noordwijk between a large park and low-rise residential blocks. The volume is clearly distinguishable from the surrounding buildings even though the architects chose to use facade material matching the rest of the neighborhood. The height of the volume decreases towards the adjacent park.

Two different primary schools, a kindergarden, and a daycare facility are located on two floors around central community center. Schools retain their own identity, have own entrances and their floorplan layout is adjusted to the different needs and preferences.

The whole complex is built with respect to possible future changes. On the third floor six flexible school apartments are located. Now they are used by the schools as classrooms, later they shall be transformed into apartments. Therefore, for example, the toilets are smaller and directly attached to classrooms.

On the rest of the third floor and on the fourth floor there are 13 apartments. Due to the height differences of the different parts of the building, roof gardens and terraces are created, which are shared by the schools and the residents.

DESIGN: 2007 - 2012  
COMPLETION: 2012

ADDRESS: Jan de Ridderstraat 4,  
Noordwijk, Netherlands

LOCATION: suburban

CLIENT:  
municipality of Noordwijk

BUILDING COSTS: € 5,600,000

## FUNCTIONS

- 2 x primary schools
- after-school care
- kindergarden
- crèche
- community center
- dwellings

GROSS BUILDING AREA :  
4.213 m<sup>2</sup> brede school  
1.363 m<sup>2</sup> dwellings  
5.576 m<sup>2</sup>

## HOUSING:

- Number of apartments: 13 + 6 flexible school apartments
- Typology: access gallery, internal corridor

## SCHOOL:

- Type: brede school
- Degree of education: primary, pre-school, nursery
- Number of classes: 16 + 6 flexible school apartments
- Typology: clusters in a linear sequence, central halls

CONNECTION BETWEEN SCHOOL AND HOUSING:  
independent from each other

## SHARING:

- outdoor playground
- terraces on the school roof

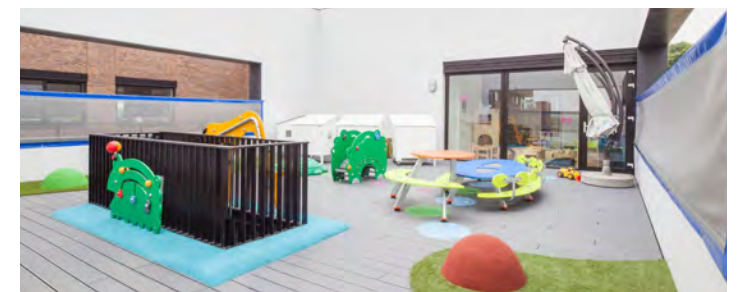
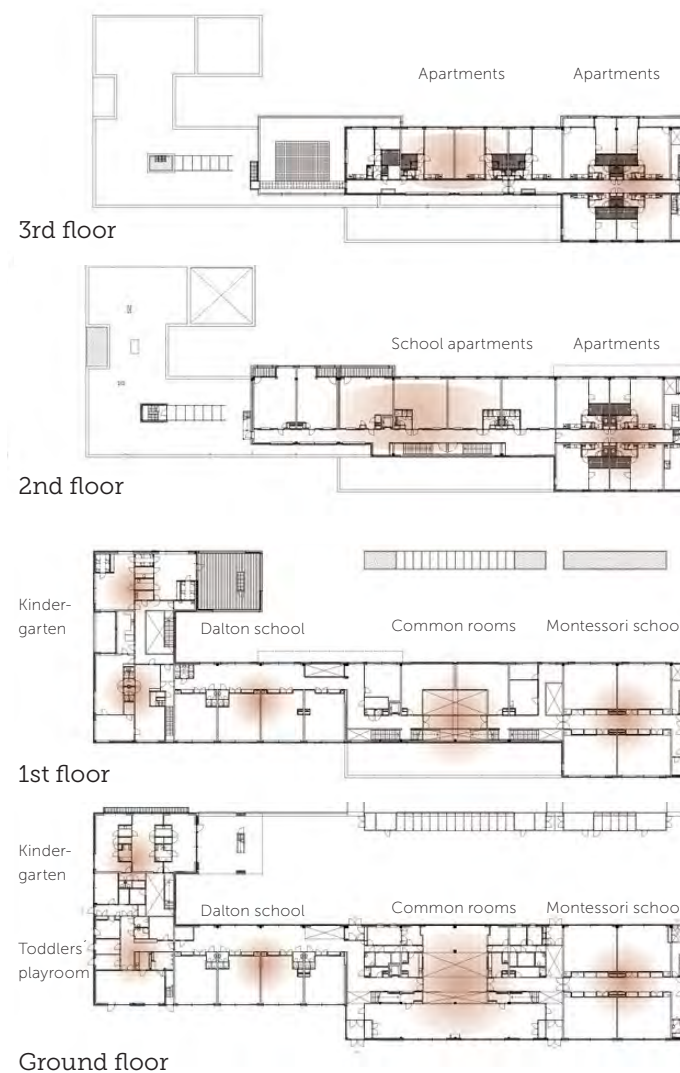
## OUTDOOR SPACE:

- playground shared with residents
- public park nearby

VERTICAL DIMENSION:  
visual connections via voids and interior windows

## SPECIAL FEATURES:

- flexible school apartments







# HUIS VAN DE HEUVEL, BREDA

Architect: Atelier PRO

The Multifunctional Community School Huis van de Heuvel in Breda is an exceptional example of transformation and extension of a sacral historical monument in a central location to a multifunctional educational and community center. The architects were commissioned to convert a Romanesque Revival church in Breda into the social and cultural center of the quarter. To fulfill this task the church was transformed, a new building was added and the church's annexes - the sacristy and the presbytery with a small hall - have been explicitly integrated into the design.

The church holds an important position in the scenery of the quarter since it functions as a hinge between the greenery and the central square. The architecture of the extension complements the existing block of buildings. Between them a courtyard is created, which has been partially covered with glass to create a connecting link between the buildings. At the same time it serves as a winter playground for the children.

Views and visibility lines play an important role in stimulating interaction between the various users of the center: an extensive socio-cultural center, a playgroup, and an after-school care center in the existing buildings and two primary schools, a gymnastics hall, a community worker, a homecare center, and a childcare center in the new building.

To accommodate all the functions and maintain contact between them, reversible interventions in the church interior were necessary.

DESIGN: 2006 - 2012  
COMPLETION: 2012

ADDRESS: Mgr. Nolensplein,  
Breda, Netherlands

LOCATION: suburban

CLIENT: Municipality of Breda

COSTS: € 8,000,000

## FUNCTIONS

- 2 x primary school
- playgroup
- after school care
- socio-cultural center
- gymnastics hall
- community worker office
- homecare center
- childcare center
- existing church

AREA :  
4.095 new construction  
2.615 renovation  
6.710 m<sup>2</sup>

## SCHOOL

- Type: brede school
- Degree of education: primary
- Number of classes: 18
- Typology:

## CONNECTION BETWEEN THE DIFFERENT FUNCTIONS:

- visual connections between spaces intended for the different user group
- joint use of facilities

## SHARING:

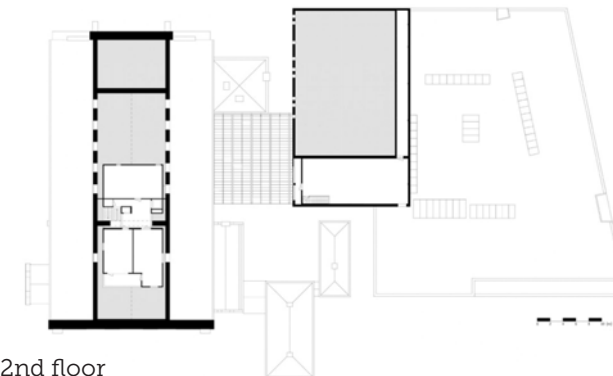
- gym
- outdoor spaces
- community center and multi-functional church nave

## OUTDOOR SPACE:

- covered playground
- adjacent public park

## VERTICAL DIMENSION:

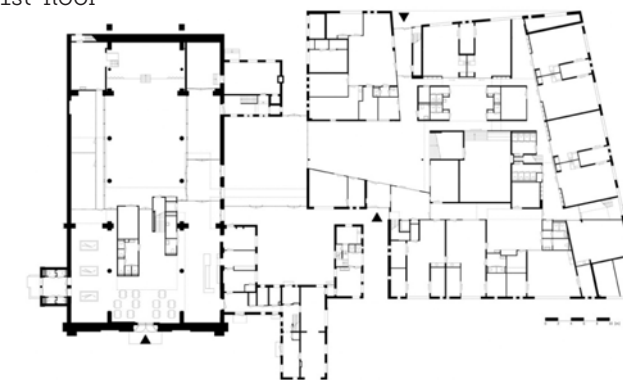
visual connections via voids and interior windows



2nd floor



1st floor



Ground floor



Axonometry



Section - church



Longitudinal section





# PRIMARY SCHOOL LOZEN

Architect: VBM architecten - lava architecten

In the village of Bocholt in Flanders the necessity to renovate the parochial hall and community center, and a need to replace the outdated school and kindergarten resulted in a joint building project by the municipality and the school board. A new nursery and primary school, a meeting house and rooms for community activities were built directly on the church square. The old parsonage and the school master's house, both listed buildings were renovated. New buildings were constructed close to the road as a buffer against traffic, and in order to create a playground and a play-park behind the church.

The architects decided for a fragmented composition to fit to the scale of the existing historical buildings. They aimed to create „a subtle play of volumes, gates, hedges and differences in level“ that would become between the public church square and the enclosed outdoor spaces for the educational institutions. The outdoor space is thus divided into several smaller yards, each with an own character.

The former church square was reduced in size but got a more articulated character. Providing space for markets, weddings, funeral processions, exhibition etc. it was upgraded to the new heart of the community life.

The new buildings provide space for childcare, primary education, social work, community meetings and are flexibly designed to enable a joint use of space (esp. gym and cafeteria).

The school was one of the pilot projects for passive school buildings.

DESIGN: 2007  
COMPLETION: 2011 - 2013

ADDRESS:  
Hamonterweg 136-138, 3950  
Bocholt, Flanders - Belgium

LOCATION: rural

CLIENT: Board of Mayor and Aldermen of Bocholt & Catholic Primary Education Lozen

FUNCTIONS:

- primary school
- kindergarten
- after-school care
- community centre
- sportshall
- refectory, cafeteria

AREA: 3.024m<sup>2</sup>

SCHOOLS:

- Type: brede school
- Degree of education: primary, pre-school
- Number of classes: 9 primary school, 3 kindergarten
- Typology: central hall

CONNECTION BETWEEN THE DIFFERENT FUNCTIONS:  
independent from each other

SHARING:

- outdoor spaces
- cafeteria, gym within community center

OUTDOOR SPACE:

- public playground
- small playgrounds and terraces adjacent to classes
- public churchyard for markets and processions

VERTICAL DIMENSION:

the core of the primary school is composed vertically as a system of indoor halls

SPECIAL FEATURES:

school is a passive house



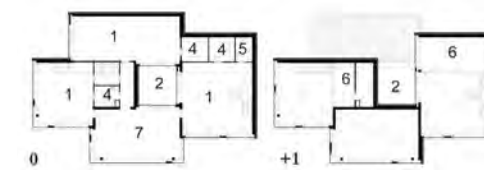
- 1 schoolmaster's house (listed)
- 2 new pre school
- 3 new primary school
- 4 vicariage (monument)
- 5 community centre
- 6 church
- 7 Hamonerweg
- 8 parking / churchyard
- 9 playground
- 10 playfield



Primary school - section A-A



Situation

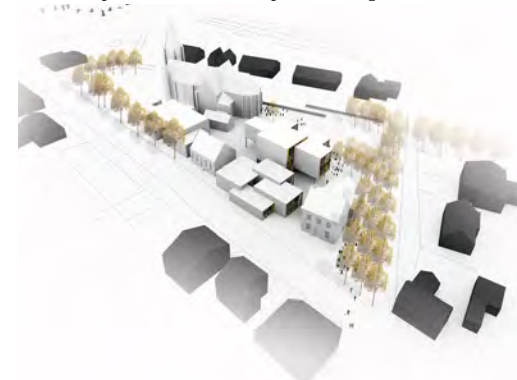


Pre-school facility - floor plans



Primary school facility - floor plans

- 1 classroom
- 2 courtyard
- 3 hall
- 4 storage space
- 5 sanitary facilities
- 6 mezzanine
- 7 indoor play hall
- 8 schoolhall
- 9 covered play area



Visualisation



LAV-A.EU. 'Lava'. Web. 5 Mar. 2015. <<http://www.lav-a.eu/project/0702boc>>  
SCHOLENBOWEN.BE. 'Primary School Lozen'. Web. 5 Mar. 2015.  
<<http://www.scholenbouwen.be/sites/default/files/pdf/projects/dbechoholtvbslozenen.pdf>>





# DE STAATJE, SAS VAN GENT

Architect: Atelier PRO

De Staatje is a multifunctional campus with a community center, brede school and a senior housing complex. It is situated on the border of ancient fortifications in the heart of Sas van Ghent. The form and the location of the buildings on the estate derived from the position of visibility lines, routes, paths, and composition axis. The multifunctional building cannot be surveyed at a single glance, due to the angular rotations, overhangs, and variety of surfaces. By contrast, the senior housing complex is a separate compact rectangular volume.

The multifunctional complex accommodates a library, several community rooms, a sports center, two primary schools, a childcare center, playgroup, and a municipal health service. The core of the complex is the so called Het Venster (the window) – a two storey high fluid but articulated hall to which most of the different functions are oriented. To maximize the use of the meeting place, a research concerning multiple use of the space was carried out. As a result, for example, the meeting room of the community center serves simultaneously as a reading room of the library.

The facade design resembles the traditional barns of Zeeland. The interior is light, white with colorful accents and wooden stairs. As the name Het Venster suggests, important feature of the interior are windows which allow an insight into the different rooms and connect them visually. From the central café one can see into the gym, from the classrooms into the central café, from the gallery on the second floor into the entrance hall, etc.

DESIGN: 2011 - 2013  
COMPLETION: 2013

ADDRESS: Canadalaan 2,  
Sas van Gent, Netherlands

LOCATION: rural / suburban

CLIENT:  
Woonged Zeeuws-Vlaanderen

COSTS: € 10.000.000,-

FUNCTIONS:  
• education  
• multifunctional public building  
• residential

AREA:  
4,000 m<sup>2</sup> educational facility  
4,000 m<sup>2</sup> housing  
1,000 m<sup>2</sup> other  
9,000 m<sup>2</sup>

HOUSING:  
• Number of apartments: 8  
• Typology: access gallery

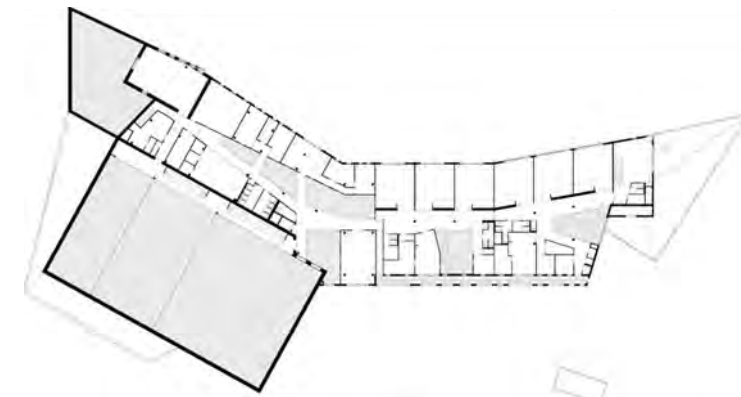
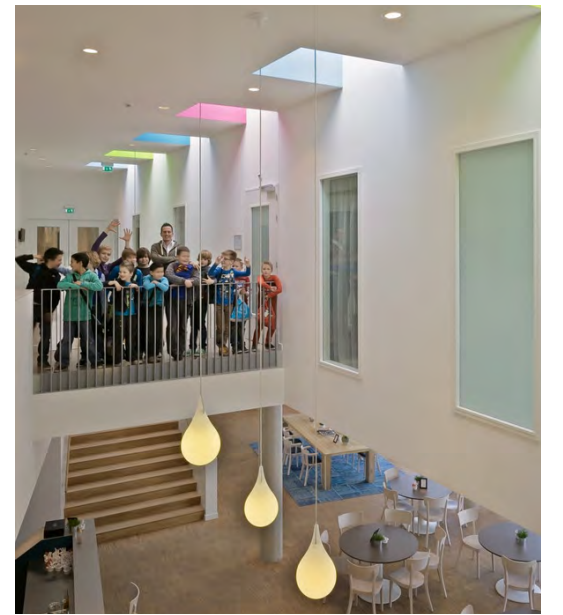
SCHOOL:  
• Type: brede school  
• Degree of education: primary  
• Number of classes: 5 kindergarden, 11 primary school  
• Typolgy: hall school

CONNECTION BETWEEN SCHOOL AND HOUSING:  
independent from each other

SHARING:  
• outdoor spaces  
• functions on the "main street" - café, community meeting room, library, meeting room, etc.  
• gym

OUTDOOR SPACE:  
• playgrounds

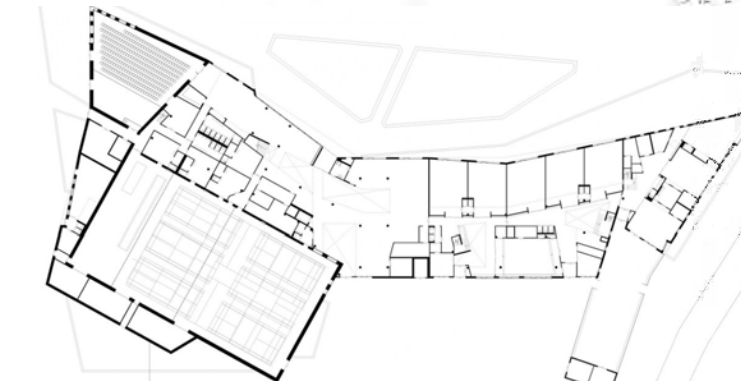
VERTICAL DIMENSION:  
upper floor of the school is visually conneted with the central hall via a system of galleries and interior windows



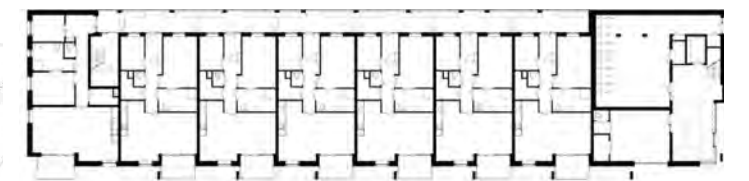
1st floor - brede school



1st floor - housing



Ground floor - brede school



Ground floor - housing



Longitudal section - brede school





De Staatje - photographs

## 2.5 VIENNESE CAMPUS MODELS

The City of Vienna has been pursuing a new way in the construction of educational institutions since 2009 with the project Vienna CAMPUS SCHOOL MODEL. As its basic characteristic, the model unites four educational institutions for children between the ages of 0 to 14 years old (Crèche, Kindergarten, Elementary and Middle school) under one single roof, aiming at using spatial and organizational synergies, and enabling a smoother transition between the different levels of education for children as well as for their parents.

In the process of ongoing improvement, this concept has recently been further developed into the so-called "CAMPUS PLUS" model. It integrates the after-school education as well, and breaks the large institution into smaller spatial and organizational units, called educational areas, or Bildungsbereiche (BiBer), where the children up to the age of ten learn, no longer strictly divided into classes, but rather across age groups from and with each other. Children are allowed to move freely in the whole BiBer, to visit other groups, and use the common spaces. An educational area usually caters to four regular primary school classes, two kindergarten groups, and one integrated class for children with special needs of either school or kindergarten age. One Campus Plus consist of four such educational areas - that is together at least 21 school classes and 12 kindergarten groups for about 750 children.

Considering the layout, all educational areas should be designed as open and transparent as possible in order to enable a better orientation and overview through visual links. On the other hand, cozy retreat spaces for resting or a temporary withdrawal should also be present. Emphasizing the idea of cooperation, rooms should be also connected visually and physically to promote the contact between the groups of various sizes. Additionally, the BiBer is enlarged with a common multifunctional space (sometimes referred to as a marketplace or MuFu) which should be available for additional needs and supply optional educational offers.

Campus Plus promotes an all-day-school model; therefore it also provides rooms for musical education, sports, creative workshops, therapy, and youth clubs. Moreover, by including other education providers and other partners who offer after-school care, the campus opens to the local community, since these should be also available for local residents.

Besides school campuses, the City of Vienna plans to introduce "MINI CAMPUSES" in the street-level areas of residential buildings. This model aims to offer a solution for often unused or underused ground floors of residential buildings especially in non-central residential areas, as well as solve the problem of the lack of school classes mainly in the growing new development areas.

The Mini Campus should consist of two BiBers (8 school classes and 4 kindergarten groups, together 390 children) and offer all-day education for children. This new model is an issue of further study, including the questions of the relationship between the school and the residents; the school, the residents, and outer public and the demand for outdoor space; and its sharing and partitioning. (Wien.gv.at. Campus plus)



### 3 LEARNING GOES BEYOND SCHOOL WALLS

In this chapter I present one rather radical example and one theoretical concept, both of which break the inveterate concepts and understanding of a school as a separate educational institution in a separate building. Instead they utilize the city resources for the sake of education and learning and thus challenge the role and position of school and learning in society. They show how the ideas about learning and education have an impact not only on teaching strategies and school building design, but also how they influence urban planning strategies and the philosophical notion of society as such.

#### 3.1 PHILADELPHIA'S PARKWAY PROGRAM

*"The whole city of Philadelphia is our campus. And Philadelphia is our curriculum. We study the city in the city. Our lives are inseparable from the city, just as the city is essentially its citizens; all of its citizens."*

*John Bremer,  
the founder of the program (qtd. in Wofford, Ross 59)*

The origin of the Philadelphia Parkway Project dates back to 1967 when the School District of Philadelphia wanted to offer a different experience of high school education. Reacting to the alarming dissatisfaction with educational institutions in the state and to the growing critique of the American schools, perceived as joyless places, the project became a prototype of a public school program. Instead of operating within boundaries of a school building, it utilized the plentiful resources of a city in the form of physical space, teaching staff from various institutions, and volunteer teaching staff (both individuals and institutions). (Hutchins 88) The classes in Parkway took place in sites around the city offered by agencies and institutions, such as museums, cultural centers, businesses or city agencies. The curriculum consisted firstly of courses in conventional subject matter areas taught by Parkway teachers, secondly of courses not usually available to high school students (offered by experts from external institutions directly in the institution's building), and thirdly of courses led by volunteers, who were monitored by Parkway staff. In order "to provide intellectual and interpersonal coherence to the program and to offer counseling and basic skill development to all students; Parkway offered a period each day called tutorial." (Wofford, Ross vii)

In 1972 the organizational structure of the school consisted of four units of approximately 200 students (chosen by lottery without any special admission criteria), 10 teachers, 10-12 interns, a Unit Head and an administrative assistant housed in four separate non-school locations around the city. Because the group size was kept small, the student-teacher relationships were encouraged to be casual and more intimate due to informality. Students were allowed to study in study groups, were given more choices in how to meet the curriculum requirements, and were supported to create their

own schedules. This experiment proved to be successful in creating an atmosphere of trust between students and teachers, and natural respect for authorities.

As an evaluation done in 1972 demonstrated, learning to deal with responsibility was a crucial point in the program. Students were able to accept the responsibility for themselves and for their units. The Parkway project forced students to make choices and live up to them instead of dropping out. "They felt responsible because their actions apparently spring more out of their own initiatives and less out of resistance to someone else's initiative." (Wofford, Ross 42)

The outcomes of the evaluation also hinted that, on one hand, the Parkway program was best suited to the exceptionally skilled and motivated children who wanted to embrace new experiences and were turned off by regular schooling. On the other hand, it proved to be helpful for students who could not abide regular school (for a variety of reasons from a lack of skills to being bullied for racial reasons) and sought escape. It was even for the extreme cases of rebellious children perceived as a real trouble by the school system due to disciplinary troubles, delinquency, or undiagnosed handicaps. For such students Parkway was the second (or even last) chance to alter their view of themselves and people around them; and it gave them the strength to move on. (Wofford, Ross 39, 44)

Nevertheless, the study showed that children, even though they declared that they loved Parkway, did not stay there for a very long time. Within two or three years most of them felt empowered to move either to a job, to college, or in search of some further experience.

Despite some of its problems and weaknesses regarding the difficulty of coordination of all the different parties, too high expectations from the teaching staff, and unclear evaluation of student progress and selection, the program showed an interesting alternative education strongly connected to life itself. (Wofford, Ross 43-73) The Philadelphia Parkway Program was a departure point for a number of alternative educational programs (Hutchins 89-91) and inspired the establishment of similar schools in other US states and in Australia under the name "School Without Walls". (School Without Walls of Washington, DC - Home & School Association)

#### 3.2 LEARNING CITY - HERMANN HERTZBERGER

In his book "Space and Learning," Hermann Hertzberger introduces his vision of a Learning City - a city that functions as a macro-school for its inhabitants and visitors of all ages. (235-253) In the vision he suggests how public space and the city with all its layers and complexity could become the subject, means, and the space of and for learning, so that finally we would get a city consisting of lively and richly varied public spaces which would invite us to interact and explore the city's layers and complex links of all kinds.

Similar to those who believe in the idea of education permanente (learning for life), Hertzberger also sees learning as an essential activity. According to him, this process is omnipresent in a healthy human life, and is as important as eating and drinking. It is not restricted to a school curriculum but elevated to a universal daily practice and means for continuous development for people, regardless of age.

Hertzberger turns the usual practice where children are expected to adapt to the criteria of adults on its head, proposing the opposite - the basis of the cityscape to be tailored to its young citizens. Children who invest all their energy and excitement to explore are in this concept taken "as a yardstick for public space". As Hertzberger states,

"There may be differences between young and old, big and small, but the 'world of the child' is the same world as that of adults. There is no clear age boundary between a child and an adult: they are the same animal, inseparable from each other and dependent upon one another. Children are not subject to metamorphosis the way a caterpillar changes into a butterfly. The adult is already present in the child and everything you acquire as a child will guide and pursue you as an adult. Nor is there a special measure for children, let alone a scale. Of course there are differences in size, but we all live in the same world and we have to climb the same stairs with the same risers." (235)

Children's needs are therefore representative of the needs of everyone else. "When learning goes beyond the mere process of adapting children to the world of adults and when all the things we experience passively and actively become a form of learning, the distinction between the children and adults in terms of the city is reduced to almost nil. Even so, children are more vulnerable, less able to see their way there and less able to stand up for their interests and needs." (236)

A Learning City is instructive and serves the development of its users by giving priority to learning. It is a macro school where all the knowledge as well as the past and present experience of its community is embedded. Simultaneously, it preserves memory, clarifies the present use and processes, and hints at its intended purpose or potential future. For a good orientation and possibility to explore the city, its layers, memories and links shall be articulated and legible. Learning and exploring lead to appropriation and connect things or spaces to one's own mental space. Therefore, one can become thoroughly familiar with the surroundings and make them part of one's own world. This brings certainty and gives control over the surroundings and over the place in the world.

A Learning City asks questions and gives answers. It means that the Learning City shall also give space to ambiguity and freedom of interpretation, and it should generate space for thought and (re)invention. This contrasts with the fearful craving for safety and certainty in urban areas typical for contemporary urban planning. A demand for quiet, orderly, and hermetically-defined neighborhood should not stand in the way of creating varied, playful and freely-interpretable surroundings. Instead of an obsession with greenery, architects and city planners should strive for creating a stimulating environment that "arouses our curiosity, draws us in a place where discoveries are to be made, that invites associations, stimulates thinking." (235)

Reacting to the problem of a lack of security in cities, Hertzberger points to alienation as being at the base of insecurity. Alienation and detachment, according to him, are a result of the increasing scale of modern cities. Due to the regulations, the higher and larger the buildings are, the wider the space in-between has to become. Therefore, as the public space gets larger, the social life gets sparser, and this results in alienation. (251) Learning City opposes alienation and invites interaction. In order to create a richer variety and tighter social links, architects and city and landscape planners have to invest energy into articulating spaces that trigger social interaction and support the act of learning (which again means becoming familiar with people, places, and actions, and including them into one's own domain). Moreover, people tend to take more care of the places they know and consider theirs.

Hertzberger likens a city to a huge brain that represents and embeds multi-branched networks of links between people and organizations in their complexity and intensity. A city possesses a collective memory and a unique personality, and its qualities can be strengthened over time. The Learning City reveals its layers, thereby generating space for thought. "It becomes what every school should be: an optimistic model of the world, whose occupants practice living together and try to get the grips with the whys and wherefores of everything around them. The school is a small world. The city is an enlarged version of that small world." (253)

## 4 MODELS OF COMMUNAL LIVING<sup>3</sup> IN VIENNA

The trend towards more self-determination and a desire for community has recently emerged also in the concept of communal living, and came as a response to increasing differentiation regarding the stages of life, the concept of work, or the significance of family relationships. There is a growing number of communal housing projects in European countries such as Germany, Scandinavia, the Netherlands, England, Scotland, and Switzerland, as well as in the USA, Japan, and Korea. For the sake of this thesis I will take a look at the situation in Vienna.

### 4.1 HISTORICAL OVERVIEW

Community was an integral part in Viennese subsidized housing projects since the 1920s. (Brandl, Gruber 10) After the collapse of the monarchy, the war refugees and poor inhabitants of Vienna took the acute lack of housing into their own hands and formed a revolutionary self-help movement, the so called "Vienna settler movement". Their massive demand for a self-determined life and housing in democratic communities at the time of the introduction of a universal, equal, and direct suffrage, contributed to the victory of the Social Democrats in 1919 elections. When Vienna became an independent province in 1922 and gained tax sovereignty, a new housing policy was implemented. Thus, as a consequence of the introduction of a progressive housing construction tax, ten thousands of council houses (Gemeindewohnungen) for the economically lowest strata of the population could be constructed despite the country's very severe economic conditions. The superblocks of the "Red Vienna" period incorporated communal aspects both in typological as well as in the underlying ideological ways. Communal facilities, such as meeting rooms, bath houses, kindergartens, educational workshops, laundry rooms, mother-and-child centers, health centers, sport halls, libraries, cooperative shops, etc. were part of all estates. However, these communal spaces were not only a compensation for the small social apartments (in 1923 the apartments had the area of 35 m<sup>2</sup> or 45m<sup>2</sup>, since 1925 they were enlarged up to

57m<sup>2</sup>), but actually represent an important step in the development of social housing. (Förster 2-12)

In the post-war period, participative and self-managed housing building cooperatives<sup>2</sup> emerged as a response to the large-scale and often industrially produced, property-developer projects. Later, during the political awakening of Austria in the 1970s and the 1980s an impressive variety of resident participation in planning of subsidized housing took place. Among them were for example residential projects by Ottokar Uhl 'Living with children', 'Wohnhof Ottakring', and the housing initiated by socially and religiously orientated group 'B.R.O.T.'

Pursuing the same idea of participation, in the 1990s, the Sargfabrik, was successfully carried out as one of the largest and most radical experiments within the framework of subsidized housing. It raised an enormous public attention and became a benchmark for further development of the housing strategy in Vienna. Co-planned by a group of residents, it organizes living by providing flexible dwelling units, and offers a wide choice of communal leisure facilities, all of which are also open to the public.

At the same time, theme-oriented housing estates such as the Autofreie Mustersiedlung or Frauen- Werk-Stadt appeared. The Autofreie Mustersiedlung was intended to be a car-free estate that instead of building garages invested the saved money to implementation of a comprehensive ecological concept and building common infrastructure such as greened roof-gardens, parking lots for bicycles, internet-café, meeting rooms, car-sharing system, a loading station for electric cars etc. Similarly, Frauen-Werk-Stadt offers family-friendly layouts and was planned exclusively by women architects and planners. (Förster 15 -18)

Inspired by the success of these projects, a further autonomous, bottom-up building cooperatives<sup>2</sup> emerged in the city. One successful recent example is the Wohnprojekt Wien in the former Nordbahnhof areal completed in 2013.

In 2009 the city of Vienna introduced the category of "social sustainability" to property-developer competitions (Bau-trägerwettbewerbe<sup>1</sup>), which together with the endeavor to stimulate affordable housing and forms of communal living, resulted in an increase of top-down projects. Representative examples can be found in the new development area around

1: Bau-trägerwettbewerbe

or property developers' competitions are based on free competition of developers for social housing subsidies. The procedure differs from architecture competitions, as the project applicants are the housing developers themselves, and, in addition to the architectural quality, economic and ecological qualities of the projects are judged equally within a complex score. (Förster 16)

2: Building cooperatives

are co-operative housing associations where individuals or families (the future inhabitants) plan and work together to construct a housing project according to their concept. In the mentioned cases the building cooperatives constructed projects for communal living.

3: Communal living

For the case of this thesis I will use the definition of „communal living" as stated by the Wiener Wohnbau Forschung in the study Models of Communal Living in Vienna – Survey of Demand and Perspectives (2014): It is "a dwelling form that provides rooms for communal usage in addition to private flats. This aspect allows neighborly relationships of varying intensity, thus providing direct ways of mutual support. Joint actions within such a group may well have positive effects on the surroundings and the neighborhood. Under certain conditions this concept may react better to demographic changes than "individual" housing." (Brandl, Freya, and Ernst Gruber 11)

the Central Railway Station (see Wohn\_zimmer, So.Vie.So.). (Brandl, Gruber 116)

A unique situation for adepts of communal living occurred in the planning of the Aspern Urban Lakeside, in the 22nd district of Vienna. Right after the masterplan was fixed, building cooperatives were sought to build apartment houses, and build communities to pioneer and enrich the newly developing neighborhood. (Temel 6)

### 4.2 BUILDING COOPERATIVES IN ASPERN

The case of building cooperatives in the Aspern Urban Lakeside show the direction for future development of the communal living within the framework of Viennese social housing. It was the first time when building cooperatives were already suggested in the masterplan and were given a systematic attention from the start.

First, professionals (associations, architects or project coordinators) who already had some experience in the field of cooperative housing were offered a chance to start a new building cooperative and eventually implement/carry out a project in Aspern. They then recruited members of the planning team and potential tenants. According to interests and preferences, they formed seven groups and developed their programs. In an application procedure, which took place in 2011/12, five of the seven groups were chosen to materialize their concepts: LiSA with an accent on solidarity, socially engaged Seestern Aspern, Pegasus with pragmatic approach, ecologically motivated JAspern, and spiritually driven B.R.O.T Aspern. The groups – now the building cooperatives – were given their individual portions of the plot but together they had to negotiate the building typologies, adjust their programs and cooperate on the design of the common spaces within the frame given by masterplan regulations.

Each of the cooperatives made their own choices about architecture and design, maintenance, governance, legal forms and ownership. An evaluation of the building cooperatives in Aspern, carried out by Robert Temel, mentions that although very different decision making processes were used in the groups, they all involved relatively many people with diverse perspectives on the various phases of the development process. Markedly more time was spent on the planning than is usual in the property-developer competitions. Though, this resulted in more mature projects which are able to embrace more manifold ideas. As a result, apartment floor plans as well as the common spaces are tailored to the needs and tastes of the dwellers. Similarly, the common spaces are extensive, varied, and independently usable, and supply the demands of inhabitants more accurately than communal living facilities designed by developers. Participative approach and negotiations of many people allowed the creation of a finely meshed public space, and,

moreover, was able to satisfy the requirements of the master plan for a compartmentalized and articulated block structure. The final outcome is a comprehensible urban block divided into several very heterogeneous parts that still meet the objectives for density.

### 4.3 EXAMPLES

On the following pages there are some of the mentioned projects described in detail.

page	title	year	initiator
68-69	Sargfabrik	1986 - 1996	Residents
70-71	[ro*sa] Donaustadt	2003 - 2009	Coordinator
72-73	Wohnhof Orasteig	2005 - 2009	Developer
74-75	So.Vie.So.	2009 - 2013	Developer
76-77	Wohnprojekt Wien	2010 - 2013	Residents
78-79	Wohn_Zimmer	2009 - 2014	Developer
80-81	B.R.O.T. Aspern	2010 - 2014	Coordinator
82-83	JAspern	2012 - 2014	Coordinator





# SARGFABRIK

Architect: BKK-2 Architektur

At the outset of one of the most interesting cooperative building projects in Vienna, there was a group of engaged people unsatisfied with the situation on Vienna's realty market and with a strong craving for an open and self-defined community housing. Starting in mid-1980s, the initiators founded a housing association and prepared a vision for a "village in the city". In their vision, the project would cater for co-planned dwelling units suitable for singles and families, disregarding their background and age, and, moreover, would enable integration of disabled and disadvantaged people, invite and welcome spontaneous/self-imposed sharing, and operate as a center for social life in the neighborhood in an ecologically friendly way. Until now, the housing association was able to build three co-housing projects on and around the former coffin factory estate. The Sargfabrik developed from a successful social experiment into a pulsating urban space with an advanced culture politics popular in and outside of Vienna.

The first Sargfabrik consists of duplex apartment modules in the size of 45m<sup>2</sup>, spatially defined only by a staircase and a vertical installation shaft. These can be easily fitted and joined together to form larger dwellings. The meander-like building forms small yards, terraces, and plazas with intimate character resembling a medieval city ambience. Access to the apartments on upper floors is via interconnected galleries and bridges that weave together around and through the buildings, and mouth into a variety of semi-private outdoor terraces and balconies.

The house flourishes with activities of all kinds (birthday parties, an annual ball, concerts, etc.) due to a great engagement and voluntary initiative of individual members.

DESIGN: 1986 - 1994  
COMPLETION: 1996

ADDRESS:  
1140, Goldschlagstraße 169

ESTATE OWNER, INVESTOR,  
OPERATOR AND LESSOR:  
Verein für integrative Lebensgestaltung (VIL)

PROJECT INITIATOR:  
self organized cooperative building group - VIL

SIZE:  
Estate area: 4711 m<sup>2</sup>  
Built up area: 2747 m<sup>2</sup>  
Total useful area: 7922 m<sup>2</sup>

OWNERSHIP / LEGAL FORM:  
• subsidiarized residential home owned by VIL association  
• users of the apartments are members of VIL, important decisions are made at plenary sessions twice a year  
• managed by voluntary board

INCEPTION:  
a bottom-up association of people sharing a similar dream

PROFILE:  
living - culture - integration  
village in the city

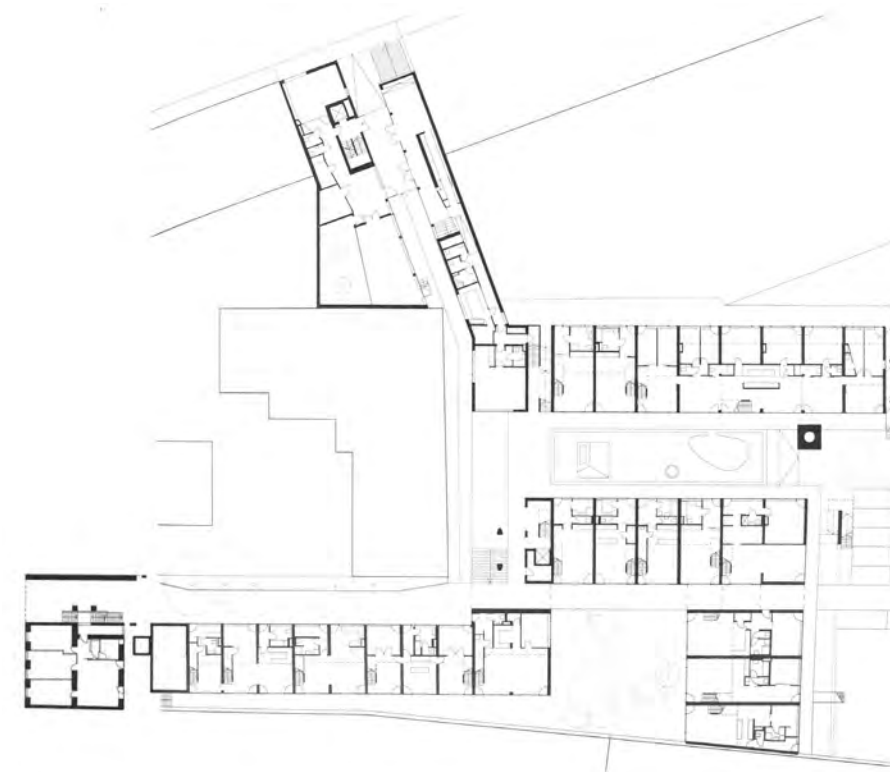
TARGET GROUP:  
• people of all generations and origins  
• integrated are people with special needs and from disadvantaged groups

PROGRAM:  
HOUSING:  
• 112 Apartments  
• shared apartment supervised by Vienna Youth and Family Office  
• a few apartments and a shared apartment for short-term temporary rent in emergency cases

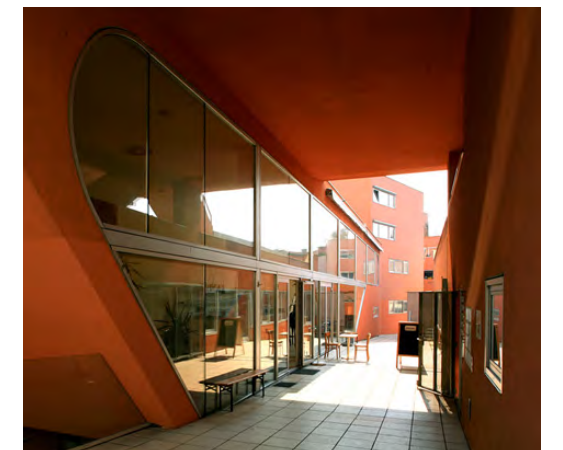
COMMON SPACES:  
• bath house  
• restaurant and café  
• kindergarden  
• seminar and event rooms  
• roof garden  
• library

SPECIAL FEATURES:  
won several architectural and sustainability prizes

BRANDL, FREYA, AND ERNST GRUBER. Gemeinschaftliches Wohnen In Wien, Bedarf Und Ausblick. Wien: Magistrat Abteilung 50, 2014: 67, 107-108. Web. <[http://www.wohnbauforschung.at/Downloads/Projektbericht\\_Gemeinschaftliches%20Wohnen.pdf](http://www.wohnbauforschung.at/Downloads/Projektbericht_Gemeinschaftliches%20Wohnen.pdf)>  
SARGFABRIK.AT. 'Die Sargfabrik - Das Projekt'. Web. 5 Mar. 2015. <<http://www.sargfabrik.at/>>  
ZOLLER, DORIS. 'Räumliche Übergänge'. Wohnen +. Ulrike Wietzorrek. 1st ed. Basel: Birkhäuser, 2014: 178 - 183. Print.



Ground floor







# [RO\*SA] DONAUSTADT

Architect: KÖB & POLLAK Architektur

In 2003, the architect Sabine Pollak introduced her idea of establishing a co-housing project for women. Inspired by an older project designed by and for women, called Frauen-Werk-Stadt, she, however, enforced to design the new building in a participative process. She won attention of a number of other women, with whom she started an association, and, after a lengthy process of searching for an available estate and a financial support, finally was able to carry out the project in cooperation with a property developer. Being a subject of shared funding, one third of the apartments was rented by the public housing service (Wohnservis Wien) and the tenants who got the apartments this way did not have to become members of the association.

The women's co-housing project differs from the regular ones in the preference of the women's point of view in planning, as well in a legal administration, since the rental agreement is signed by a woman. Men as partners are welcome, but legally the apartment is to be assigned to the woman.

Specific care was given to the design of the common spaces, mainly the central three meter wide corridor, which is the main circulatory and communication axis, occasionally used for exhibitions and serving as an apartment enlargement, e.g. as a playground for kids. Despite its length it does not become dull - it gets sunlight from two sides and from above.

Aiming at creation of a "village community" the apartment house offers a stimulating living environment for all generations and gives even women in difficult situations an adequate dwelling and a supporting fellowship.

The [ro\*sa] association currently operates three housing projects in Vienna.

DESIGN: 2003 - 2008  
COMPLETION: 2009

ADDRESS:  
1220, Anton-Sattler-Gasse 100

PROPERTY DEVELOPER:  
Wohnbauvereinigung für Privatangestellte GPA-WBV

PROJECT INITIATOR:  
Verein "Frauenwohnprojekt [ro\*sa]"

SIZE:  
Total useful area: 4.852 m<sup>2</sup>

OWNERSHIP / LEGAL FORM:  
rental apartments with purchase option after 10 years

INCEPTION:  
the architect Sabine Pollak proposed a project and sought interested people

TARGET GROUP:  
Women of all ages: inklusive single mothers, seniors, women with low income, singles, with a partner

PROFILE:  
Elimination of discrimination against women in the allocation of apartments and design of housing estates

PROGRAM:  
HOUSING:  
40 apartments (30m<sup>2</sup>- 120m<sup>2</sup>) including a shared apartment

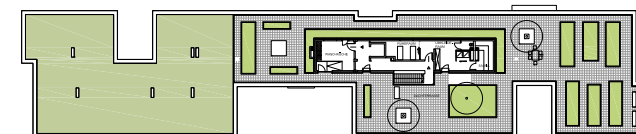
COMMON SPACES:  

- community room with common kitchen and a terrace
- roof terrace with allotments
- sauna
- laundry and bike storage
- workshop
- common garden ,playground
- office of the association

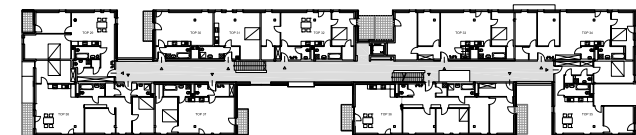
OTHER:  

- garage for 40 cars

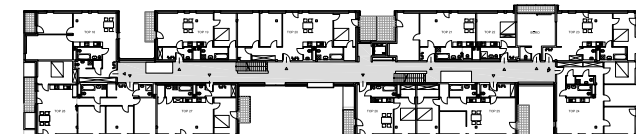
SPECIAL FEATURES:  
rental agreement is signed exclusively by women



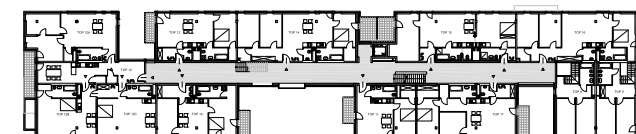
4th floor



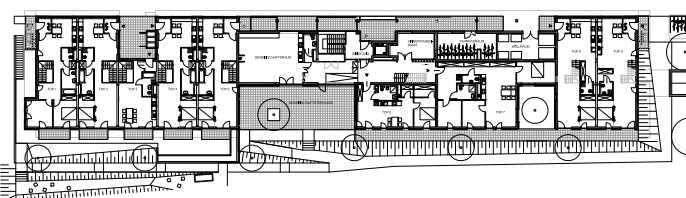
3rd floor



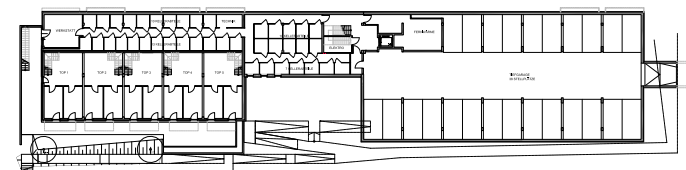
2nd floor



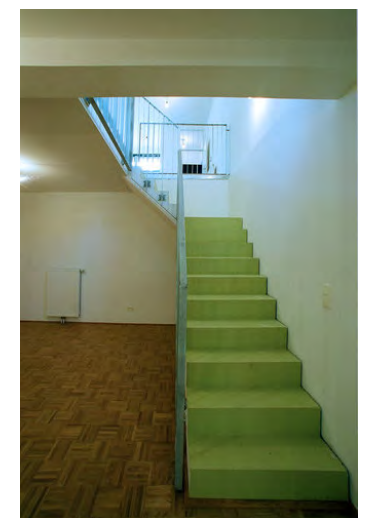
1st floor



Ground floor



Underground floor



FRAUENWOHNPROJEKT.ORG. 'Wohnungstypen Und Gemeinschaftseinrichtungen'. Web. 5 Mar. 2015. <<http://www.frauenwohnprojekt.org/>>  
NEXTROOM.AT. 'Frauenwohnprojekt [Ro\*Sa] Donaustadt, Koeb & Pollak - Wien (A) - 2009'. Web. 5 Mar. 2015.  
<<http://www.nextroom.at/building.php?id=33374>>





# WOHNHOF ORASTEIG

Architect: PPAG architects

The Orasteig housing project was situated on the outskirts of Vienna, on the edge of undeveloped land along the Marchfeldkanal. At the beginning Orasteig aimed to offer an urban-like and denser alternative to single family housing, yet allowing for variance and self-identification by the residents. To increase its social relevance, community spaces for initially not defined use were planned, and some extra money was invested into evolution and stimulation of the residents' community. As soon as the tenancy agreement had been signed, a residents' committee and statutes of participation were established. This investment paid off as the residents tend to identify themselves extremely well with their environment and take significantly more care of it.

Importing single-family quality to a compact settlement structure is here represented by many decentralized entrances which shorten the way from home to outdoor space, offer several possibilities of access the apartments, and blur the relatively huge scale of the horseshoe shaped block. The interior entrance walkways are naturally lit and face as many directions as possible.

Looking at the interior design of Orasteig, many of the 30 – 130 m<sup>2</sup> sized apartments have a markedly unique appearance, regarding the layouts, orientation and color code. The architects mention that unlike in the mass produced housing which is perceived as customized, the simple fact of variability resulted in residents' mutual invitations to visit each other's dwellings, and, simultaneously, helped to boost communication within the residential community. Of course, the offer of community rooms and shared spaces such as allotments, playgrounds and an outdoor cinema contribute to stimulate the community relationships as well.

DESIGN: 2005 - 2009  
COMPLETION: 2009

ADDRESS:  
1210, Edi-Finger-Straße 1-3

PROPERTY DEVELOPER:  
EGW-Heimstätte & Heimat Österreich

PROJECT INITIATOR:  
property developer

SIZE :  
Estate area: 13.383 m<sup>2</sup>  
Total living area: 14.585 m<sup>2</sup>

OWNERSHIP / LEGAL FORM:  
rental apartments, partially with purchase option after 10 years

TARGET GROUP:  
people of all ages interested in the offer

INCEPTION:  
Building developer won a competition in 2005 promising community housing

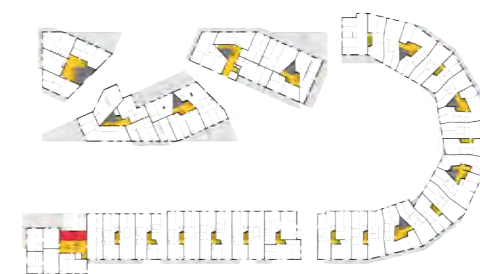
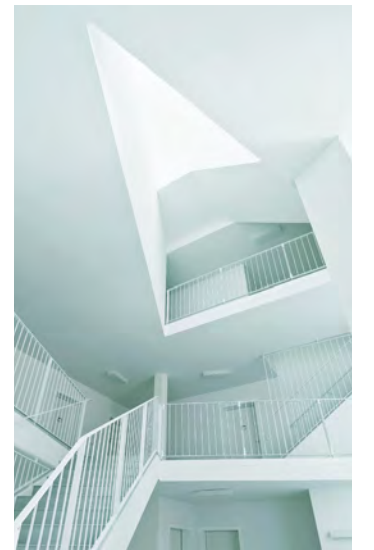
PROFILE:  
• housing forms alternative to a single family house, multitude, greenery,  
• self-managed residents' community

PROGRAM:  
HOUSING:  
169 apartment units

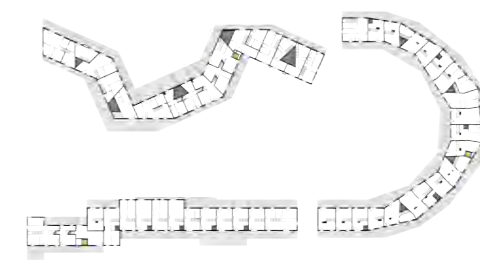
COMMON INTERIOR SPACES:  
• sauna and relaxation room  
• event hall 120m<sup>2</sup>  
• common kitchen  
• two group rooms 2 x 18m<sup>2</sup>  
• small hall 51m<sup>2</sup>

COMMON EXTERIOR SPACES:  
• sauna and relaxation room

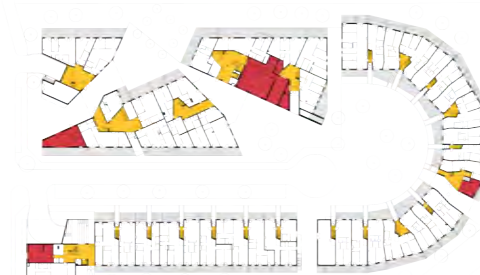
SPECIAL FEATURES:  
color code



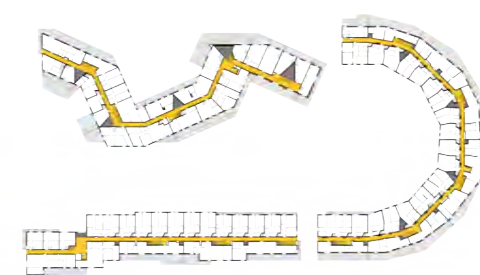
1st floor



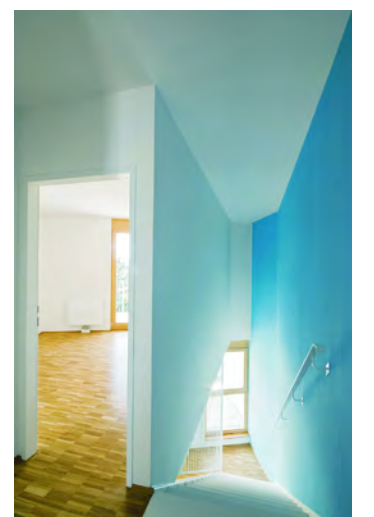
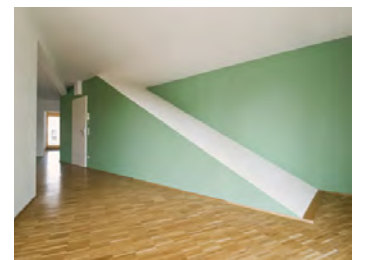
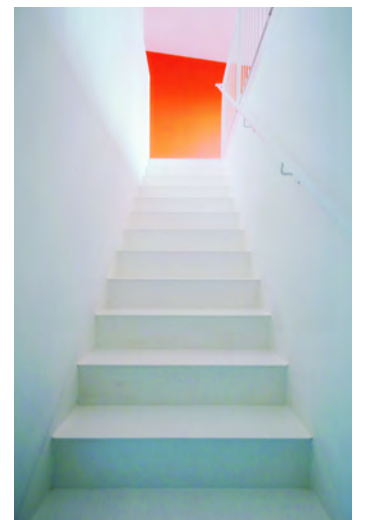
3rd floor



Ground floor



2nd floor



ECOLA-AWARD.EU. 'Wohnhof Orasteig Wien | ECOLA'. Web. 5 Mar. 2015. <<http://www.ecola-award.eu/en/project/nb/wohnhof-orasteig-wien>>  
PPAG ARCHITECTS. 'Wohnhof Orasteig - PPAG Architects'. Web. 5 Mar. 2015. <<http://www.ppag.at/projects/wohnhof-orasteig/>>  
ZIEGEL.AT. 'Dr. Robert Korab: Wohnhof Orasteig'. Web. 5 Mar. 2015. <<http://www.ziegel.at/de/newsdetails/54>>





# SO.VIE.SO

Architect: s & s Architekten

So.Vie.So, a project by s&s architekten, won a competition in 2009. Its uniqueness was that it understood community building as a part of their social sustainability strategy. Tenants could participate in co-planning their apartments and take part in decision making processes regarding the use and appropriation of common spaces, whereas the basic outline was already designed for the competition. Common space organization follows a two-grade concept. There are small common rooms (aprox 30m2) on every floor intended for additional residential use like baby-sitting, playing, media, learning. Besides these there are large communal spaces tailored for larger audience in the ground floor, in cellar and in the top floors. Exterior space also provides space for communal activity - apart from the garden and terraces on the ground and on the roof, there are also balconies attached to the access gallery for meeting of neighbors and gardening.

The structural design of the building enables a wide variety of different apartment layouts due to the load bearing outer walls supplemented by a row of columns in the middle. In the cross direction, the floorplan is divided into one meter wide modules. The residents could decide how many modules they want and choose one of the layouts given in an apartment catalogue. The length of balconies, position of windows, and the basic elements of interior design were adjusted to needs and financial capacity of the tenants. Of course, the later one entered the process, the smaller was the possible design flexibility.

The willingness to participate on the community building was secured in the rental agreement. In a moderated process, the future tenants cooperated on creation of the self-organization structure and helped to determine the use of the common spaces. It is assumed that this process strengthened the relationships between the future neighbors and gave hope/assured that they will be able to share and help each other in case of need.

DESIGN: 2009 - 2013  
COMPLETION: 2013

ADDRESS: 1100, Hackergasse 4 /  
Antonie Alt Gasse 6

PROPERTY DEVELOPER:  
BWS Gemeinnützige allgemeine  
Bau-, Wohn- und Siedlungs-  
genossenschaft

PROJECT INITIATOR:  
property developer

SIZE:  
Construction gross area 3.595 m<sup>2</sup>  
Gross floor area : 14.035 m<sup>2</sup>  
Total living area: 10.885 m<sup>2</sup>

OWNERSHIP / LEGAL FORM:  
rental apartments

INCEPTION:  
Building developer won a  
competition in 2009 promising  
participative planning during the  
project development

TARGET GROUP:  
economically weaker strata of  
population - students, young  
families, single parents, large  
families, seniors

PROFILE:  
Living in solidarity

PROGRAM:  
HOUSING:  
124 subsidized rental apartments  
with purchase option in the size  
from 50 m<sup>2</sup> to 121 m<sup>2</sup> (2 - 5  
rooms per apartment)

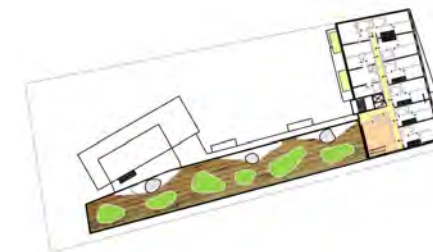
COMMON SPACES INTERIOR:  

- youth club room
- children playroom
- studio / meeting room
- bike storage and workshop
- swap exchange market
- common room
- kitchen with club space
- common living room
- event hall

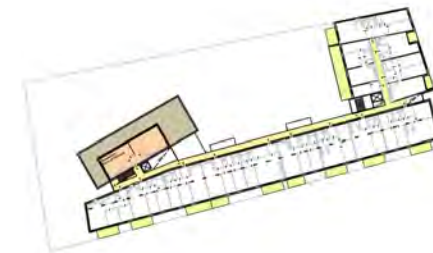
COMMON SPACES EXTERIOR:  

- garden terrace
- terraces
- roof terrace with allotments
- balconies for appropriation by inhabitants

SPECIAL FEATURES  
passive house standard



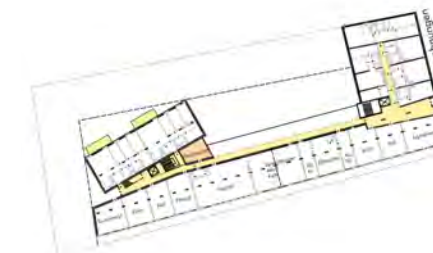
8th floor



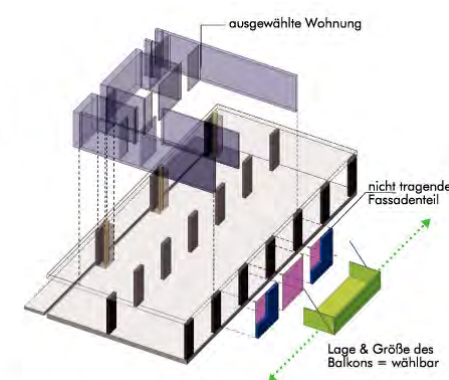
7th floor



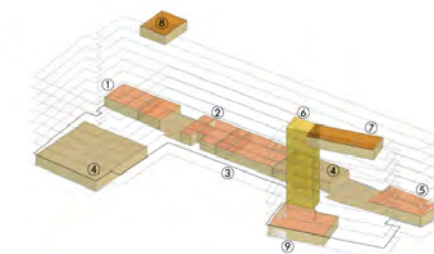
3rd floor



Ground floor



Construction scheme



Scheme - common rooms

- Small common rooms adjacent to apartments
- Medium-sized common rooms adjacent to roof terraces
- Large common rooms orientated to the inner courtyard
- Bike storage and workshop

- 1 Youth club room
- 2 Playroom for kids and laundry
- 3 Studio / Meeting room
- 4 Bike storage and workshop
- 5 Swap exchange market
- 6 Community room
- 7 Kitchen and clubroom
- 8 Living room
- 9 Event hall







# WOHNPROJEKT WIEN

Architect: einszueins architektur

This co-housing project has been initiated by a self-organized group of enthusiastic people who shared a dream to “live together in the city in a sustainable, collaborative and open-minded way”. The architects and the project coordinator R. Korab searched for an appropriate and available building site and a potential investor. They won the attention of the non-profit property developer, Schwarzatal, that planned to take part in a competition at the site of the former “Nordbahnhofgelände” in the 2nd district of Vienna, and were offered to share a plot with an inter-cultural housing project.

The future tenants formed an association and together with the architects co-shaped the generous and flexible common spaces as well as their own apartments. The structure of the house allowed to adapt the apartment sizes, windows and balconies according to the needs of the residents. One of the challenges was to achieve “high individualization inside the frames of community” that would be also visible from the architecture. Therefore, while the communal spaces offer the possibility for exchange and communication, the individual apartments are seen rather as spaces for retreat.

Shortly before the opening the association bought the house from the developer. In general, each resident had to pay certain equity and a monthly user charge which included 1 Eur/m2 per month used for communal activities organized by the association. Apart from that, every adult member committed to do 11 hours of communal work each month. An internal solidarity fund made it possible for six people to join the project without contributing their own equity.

The ambition of the project exceeds its physical walls in form of activities of the members. Having expressed their interest in contributing and enriching the life of the neighborhood right from the start, they organize events of various kinds, also open to public, and operate a café in the ground floor which significantly enlivens the area.

DESIGN: 2010 - 2013  
COMPLETION: 2013

ADDRESS:  
1020, Krakauerstrasse 19

PROPERTY DEVELOPER:  
Schwarzatal, Gemeinnützige Wohnungs- und Siedlungsanlagen GmbH

PROJECT INITIATOR:  
self organized by building cooperative Wohnprojekt Wien – Verein für nachhaltiges Leben (VIL)

SIZE :  
Gross floor area: 5.300 m<sup>2</sup>  
Total living area: 3.252 m<sup>2</sup>  
Common spaces: 695 m<sup>2</sup>

OWNERSHIP / LEGAL FORM:  
subsidiarized residential home owned by VIL

TARGET GROUP:  
people of all generations, from diverse cultures, working in different fields sharing a similar dream and ready to contribute to its fulfillment

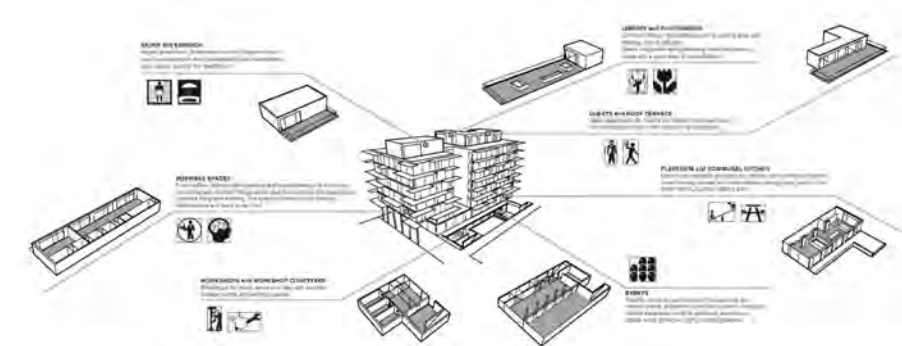
PROFILE:  
• “wohnen mit alles!”  
• incubator for sustainable urban living  
• individuality within a community

INCEPTION:  
a bottom-up association of people sharing a similar dream

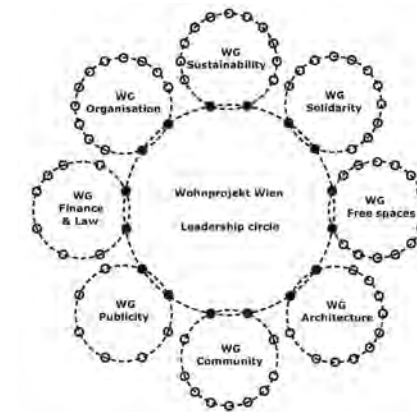
PROGRAM:  
HOUSING:  
39 co-planned apartment units

COMMON SPACES:  
• sauna with sundeck  
• bibliothek with roofgarden  
• guest rooms with roof terraces  
• children’s playroom  
• common kitchen  
• event hall  
• workshop with courtyard  
• bicycle garage (3 bikes pro flat)  
• private allotments in the common courtyard

SPECIAL FEATURES  
won the Klimaaktiv award 2014  
solidarity fund  
self-organized car sharing  
artists in residence



Common spaces



Leadership circle



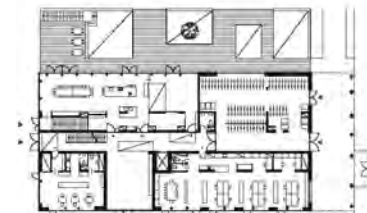
Construction schemes



Top floor



Typical floor



Ground floor



Underground floor



EINSZUEINS. 'Wohnprojekt Wien'. Web. 5 Mar. 2015. <<http://www.einszueins.at/project/wohnprojekt-wien/>>  
WOHNPROJEKT-WIEN.AT. 'Verein Für Nachhaltiges Leben'. Web. 5 Mar. 2015. <<http://www.wohnprojekt-wien.at/>>  
LEEB, FRANZISKA. 'Intercultural Housing, Vienna - Achieving More Together'. Architektur aktuell 2014: 104 - 115. Print.  
RASTL - KIRCHER, ROBERTA, AND MICHAELA MOSER. 'Wohnprojekt Wien - Keimzelle Für Nachhaltiges Urbanes Leben'. zoll + 2012: 20-23 Print.





# WOHN\_ZIMMER SONNWEENDVIERTEL

Architect: Riepl Kaufmann Bammer Architektur; Klaus Kada; studiovlay & L. Streeruwitz

The central idea of the Wohn\_zimmer estate in Sonnwendviertel is to create a lively homey atmosphere within a huge urban block using a metaphor of home, which is exported into the urban block. And so by enlarging a television we get a home cinema, by enlarging a bathroom a swimming pool with wellness area. Living room is here the central courtyard offering a large table for feasts, large fireplace for barbecues, a marketplace, playground, and so on. It is also the place where all paths meet.

One of the biggest challenges of the project was to break the large areas into more intimate and more comprehensible ones. As an outcome of work by three different studios, the southern block row was broken into three buildings and the rest of the block is divided by caesuras. On the other hand, despite its diversity, the block will function as one inter-connected ensemble. To achieve this, the architects added one more layer - a web-like pathway consisting of paths and bridges connecting the common spaces on the ground level and on the third and fourth floor.

Compared to the regular size of subsidized apartments in Vienna, the area of the apartments here was reduced by 10% in favor of the common spaces. To enhance the mix of activities micro offices, a co-working space, various rental rooms, and retail spaces were added.

The use of the common spaces is defined by the architects and the building developer. For example, the swimming pool in the underground is planned to be open to the public for a fee. Other common rooms are available for the tenants via a complex information, maintenance and on-line booking system. To minimize the conflict potential there is a concierge responsible for the management of the whole block.

DESIGN: 2009  
COMPLETION: 2014

ADDRESS:  
1100, Alfred-Adler-Strasse,  
Antonie-Alt-Gasse, Vally-Weigl-Gasse

PROPERTY DEVELOPER AND  
INITIATOR: win4wien

TARGET GROUP:  
• all generations, all occupations,  
all nationalities  
• apartments for people with  
special needs, for former home-  
less people supervised by a social  
organisation

INCEPTION:  
building developer won a com-  
petition proposing generous  
amount of common space

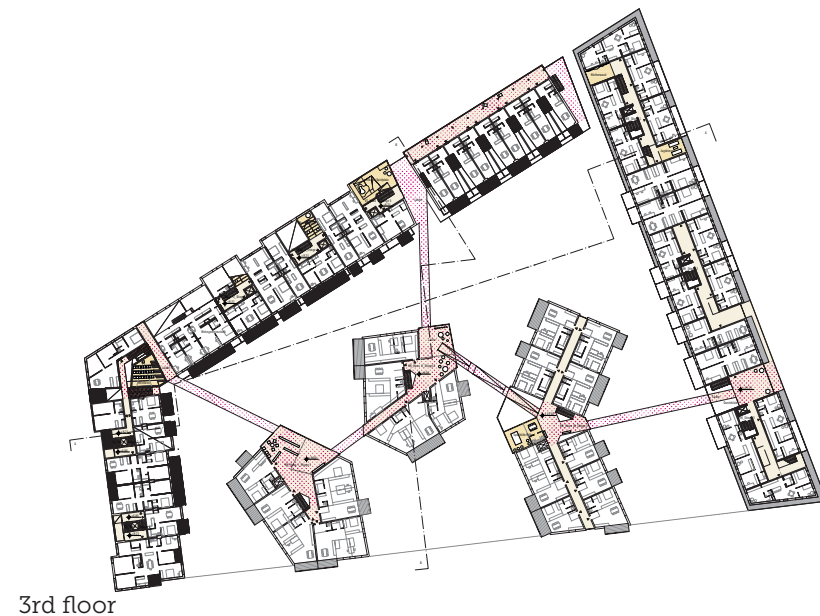
PROFILE:  
living room in a city,

PROGRAM:  
HOUSING:  
• 436 apartments in total, incl.:  
• aprox. 320 subsidized rental

apartments with purchase option  
• 50 extra subsidized rental  
apartments with purchase option  
• aprox. 50 subsidized owner-  
occupied apartments  
• aprox. 16 subsidized home  
spots (for people with special  
needs, supervised apartments)

COMMON SPACES:  
• swimming pool with wellness  
• common kitchen and bar  
• library, study  
• house cinema  
• youth club room  
• music rehearsal room  
• marketplace  
• children's playroom  
• girls room  
• game niche for children  
• hunting room  
• workshops / studios  
• bike workshop  
• billiard room  
• entree with concierge service

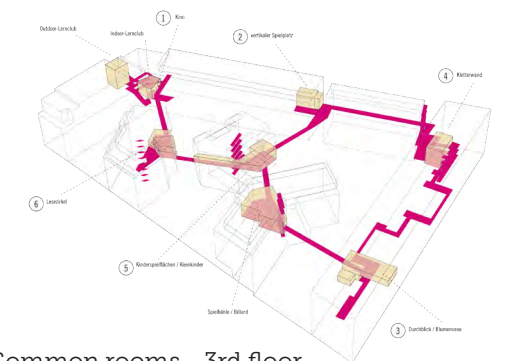
OTHER:  
• micro offices, coworking space  
• various rental rooms  
• retail spaces  
• parking lots (340 cars)



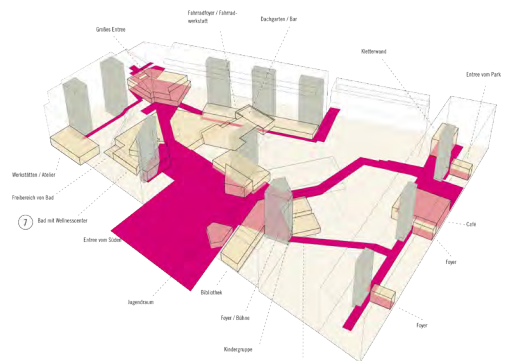
3rd floor



Ground floor



Common rooms - 3rd floor



Common rooms - ground floor

AFAZEL, NEDA. Projekt In Sonnwendviertel - Bilder Und Daten Für Diplomarbeit. 2014. E-mail.  
BRANDL, FREYA, AND ERNST GRUBER. Gemeinschaftliches Wohnen In Wien, Bedarf Und Ausblick. Wien: Magistrat Abteilung 50, 2014: 47 - 49. Web. <[http://www.wohnbauauforschung.at/Downloads/Projektbericht\\_Gemeinschaftliches%20Wohnen.pdf](http://www.wohnbauauforschung.at/Downloads/Projektbericht_Gemeinschaftliches%20Wohnen.pdf)>  
WIN4WIEN.AT. 'Sonnwendviertel Projektbeschreibung'. Web. 5 Mar. 2015. <[http://www.win4wien.at/projekte/sonnwendviertel\\_1Projekt.aspx](http://www.win4wien.at/projekte/sonnwendviertel_1Projekt.aspx)>  
WOHN\_ZIMMER Sonnwendviertel. 'Wohn\_Zimmer Sonnwendviertel'. Web. 5 Mar. 2015. <<http://wohnzimmer.wien>>





# B.R.O.T. ASPERN

Architect: Architekt Dipl. Ing. Franz Kuzmich

The B.R.O.T. Aspern is already the third building cooperative group project organized by the B.R.O.T association in Vienna. The leading actors, including the architect and project coordinator, have over 20 years of experience in this field which they could capitalize in the group member recruitment. Atmosphere of trust particularly in setting an elaborate financial and organizational frame allowed them to construct the building without a property developer.

The project aims at creating a community of spiritually oriented people (no matter what religion) willing to support each other reciprocally in their needs especially in taking care for children and helping the elderly. It also serves as a temporary dwelling for people who are in difficult situations and want to find their way into an independent life. There are five such guest apartments in the building. By integrating people with difficulties, "the association deliberately rejects and tries to overcome the model of carers [sic] and persons to be cared for typically found in specialized institutions" (Schattovits 1). Instead, all services and mutual help are rendered by the members themselves through the specific way they live their everyday lives.

To instigate the mutual support of the inhabitants, it was important to keep the size of the building manageable, attract group members in different life situations, with different capabilities, and offer the residents common meeting spaces to extend their lives out of the private apartment and to share it with their neighbors.

Legally, the project is a residential home. The inhabitants do not acquire ownership or customary rights of a tenant but each of them signs a contract entitling him/her to use one place in the home.

BROT-ASPERN.AT. 'Presstext'. Web. 5 Mar. 2015. <<http://www.brot-aspern.at/downloads/20120804%20Presstext%20.txt>>

BROT-VERBAND.AT. 'Verband Der Gemeinschaft B.R.O.T.'. Web. 5 Mar. 2015. <<http://www.brot-verband.at/>>

SCHATTOVITS, HELMUTH. 'Idea And Realisation Of The B.R.O.T. Community Concept'. brot-verband.at. N.p., 2010. Web. 5 Mar. 2015.

<[http://www.brot-verband.at/pdf/BROT\\_IdeeuEnt-eng.pdf](http://www.brot-verband.at/pdf/BROT_IdeeuEnt-eng.pdf)>

TEMEL, ROBERT. Baugemeinschaften In Der Wiener Seestadt Aspern. Wien: Magistratabteilung 50, 2012: 39-40, 69-71. Web. 5 Mar. 2015.

<[http://www.wohnbauforschung.at/Downloads/LF\\_Baugemeinschaften\\_Asperrn.pdf](http://www.wohnbauforschung.at/Downloads/LF_Baugemeinschaften_Asperrn.pdf)>

DESIGN: 2010 - 2013

COMPLETION: 2014

ADDRESS:

1220, Hannah Arendt Platz 9

OWNER, FOUNDER AND OPERATOR: non-profit association Gemeinnütziger Verein Gemeinschaft B.R.O.T.- Aspern

PROJECT INITIATOR:

Gemeinnütziger Verein Gemeinschaft B.R.O.T.

SIZE :

Gross floor area: 5.300 m<sup>2</sup>

Total living area: 3.252 m<sup>2</sup>

Common spaces 27 %

OWNERSHIP / LEGAL FORM:

residential home

TARGET GROUP:

- spiritually oriented people of all generations willing to live in a mutually helping community
- people in difficult situations who want to find their way into an independent life

PROFILE:

Praying, talking to each other, being open, sharing (Beten, Reden, Offensein, Teilen)

INCEPTION:

the impulse came from the Aspern authorities who sought possible cooperative building project initiators

PROGRAM:

HOUSING:

- 41 apartment units
- start-apartments for people in difficult situations
- guest apartment

COMMON SPACES:

- gym
- community room
- meditation room
- room for foodcooperative
- skybox
- therapy rooms and sauna
- musik room
- garderoben
- workshops
- play room for children
- roof garden



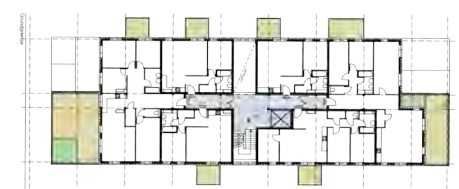
3rd floor



6th floor



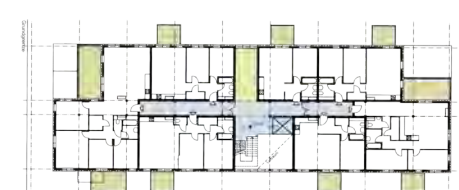
2nd floor



5th floor



1st floor



4th floor



Ground floor

- Common rooms
- Circulation space
- Balcony
- Greenery
- Terrace





# JASPERN

Architect: pos architekten

JAspern is one of the cooperative building projects in Aspern. The cooperative was initiated by an architectural studio, specializing in the field of ecological and sustainable building, through which the further members were recruited. Unlike in the other building cooperatives in Aspern, the focus of the process here was rather on individual responsibility of the residents than on forming a community. The participation regarded the individual apartments, their position within the building, share and use of the common space, and sustainability and mobility aspects. In this case, moreover, the residents are also the investors who carry the risk of their investment. Therefore the common spaces are smaller than by the neighbors but still attractive: apart from the classics - bike storages and workshop - there is a penthouse salon for relaxation with terrace, urban garden on the rooftop and a cultural and culinary program in the ground floor. The master plan prescribed on this spot also a shop and offices.

Due to the specific position in the north-eastern corner of the plot and the desired energetic criteria, the building volume, facade, load bearing structure and basic layout had to be defined by the architect. The residents than participated in adapting their individual apartment layouts. The flexibility is ensured via load bearing outer walls, communication core and a system of columns between them. Most of the group members opted for rather large apartment units (3 - 5 rooms), nevertheless, also smaller apartments were added to supplement the mix of apartments to fit the usual Viennese subsidized housing scheme. These apartments (about one third of all) were then offered for purchase via the Wohnservis Wien.

DESIGN: 2012 - 2014  
COMPLETION: 2014

ADDRESS:  
1220, Maria-Tusch-Straße /  
Hannah-Arendt-Platz

PROPERTY DEVELOPER:  
no developer

PROJECT INITIATOR:  
pos architekten

SIZE :  
Common spaces: 280m<sup>2</sup>

OWNERSHIP / LEGAL FORM:  
owner occupied apartments,  
estate share in private ownership,  
common spaces owned by  
Association JAspern GbR

TARGET GROUP:  
people interested in the ecological  
concept ready to purchase an  
apartment  
(mostly families with children)

PROFILE:  
• ecology: passive house , alternativ  
mobility, urban gardening  
• cultural and culinary program

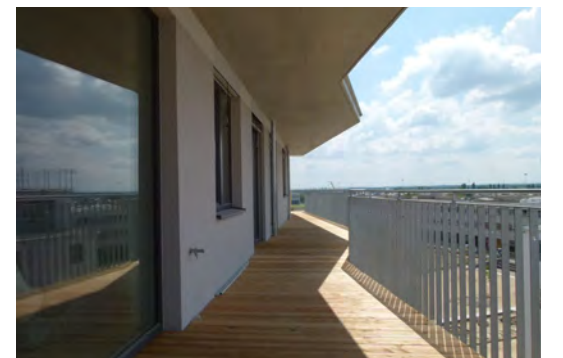
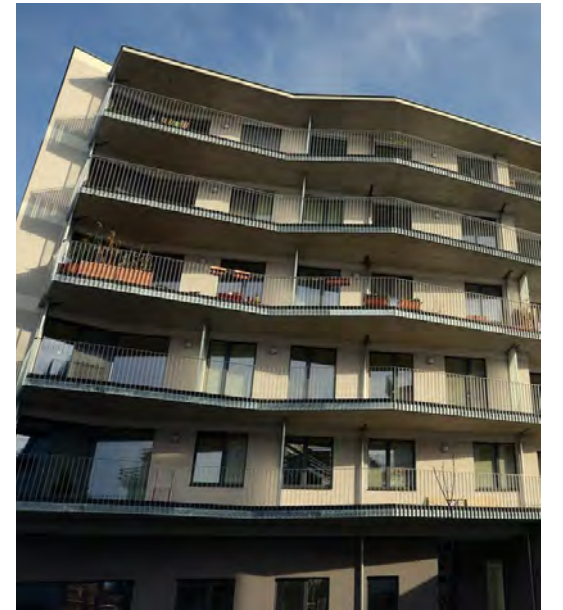
INCEPTION:  
the impulse came from the  
Aspern authorities who sought  
for possible cooperative building  
project initiators

PROGRAM:  
HOUSING:  
28 apartment units

COMMON SPACES:  
• Salon JAspern - community  
cooking and dinning area  
• roof saloon - relaxation  
• roof terrace  
• bike storage  
• workshop

OTHER:  
• retail space  
• offices

SPECIAL FEATURES:  
won golden medal klima:aktiv  
prize 2014



Typical floor - housing

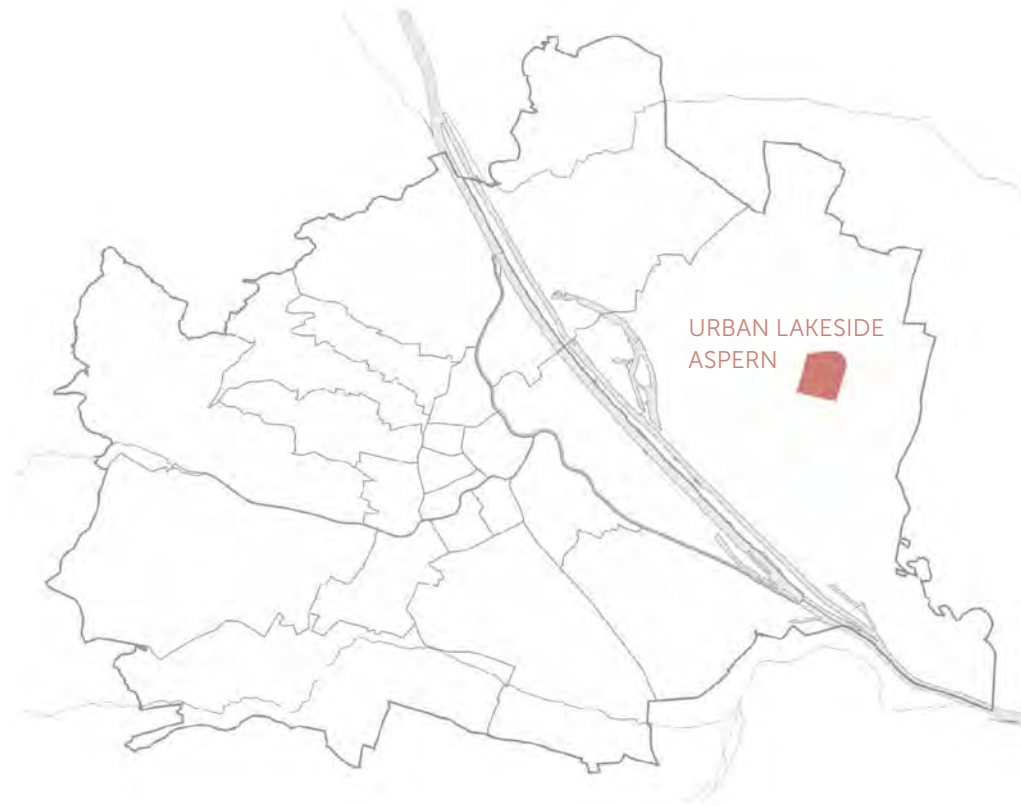
TEMEL, ROBERT. Baugemeinschaften In Der Wiener Seestadt Aspern. Wien: Magistratabteilung 50, 2012: 34-35, 62-63. Web. 5 Mar. 2015. <[http://www.wohnbauforschung.at/Downloads/LF\\_Baugemeinschaften\\_Asperrn.pdf](http://www.wohnbauforschung.at/Downloads/LF_Baugemeinschaften_Asperrn.pdf)>  
JASPERN.AT. 'Die Idee Jaspersn'. Web. 5 Mar. 2015. <<http://www.jaspersn.at/idee/>>  
POS-ARCHITECTURE.COM. 'Jaspersn, Generalplanung Für Eine Baugruppe In Der Seestadt Aspern, Wien'. Web. 5 Mar. 2015. <<http://www.pos-architecture.com/>>



5 DESIGN PROJECT



5.1 SITE: ASPERN URBAN LAKESIDE



Aspern - Vienna's Urban Lakeside is currently one of the largest urban development projects in Europe. Situated to the north-east of Vienna in the 22nd municipal district on a site of former airfield, it is well connected to rail stations, airports and city centres of Vienna and Bratislava.

In the heart of the area there is an artificial five-hectare lake and a similarly sized lakeside park. The developers promise to reserve almost a half of the whole site for high quality public open spaces.

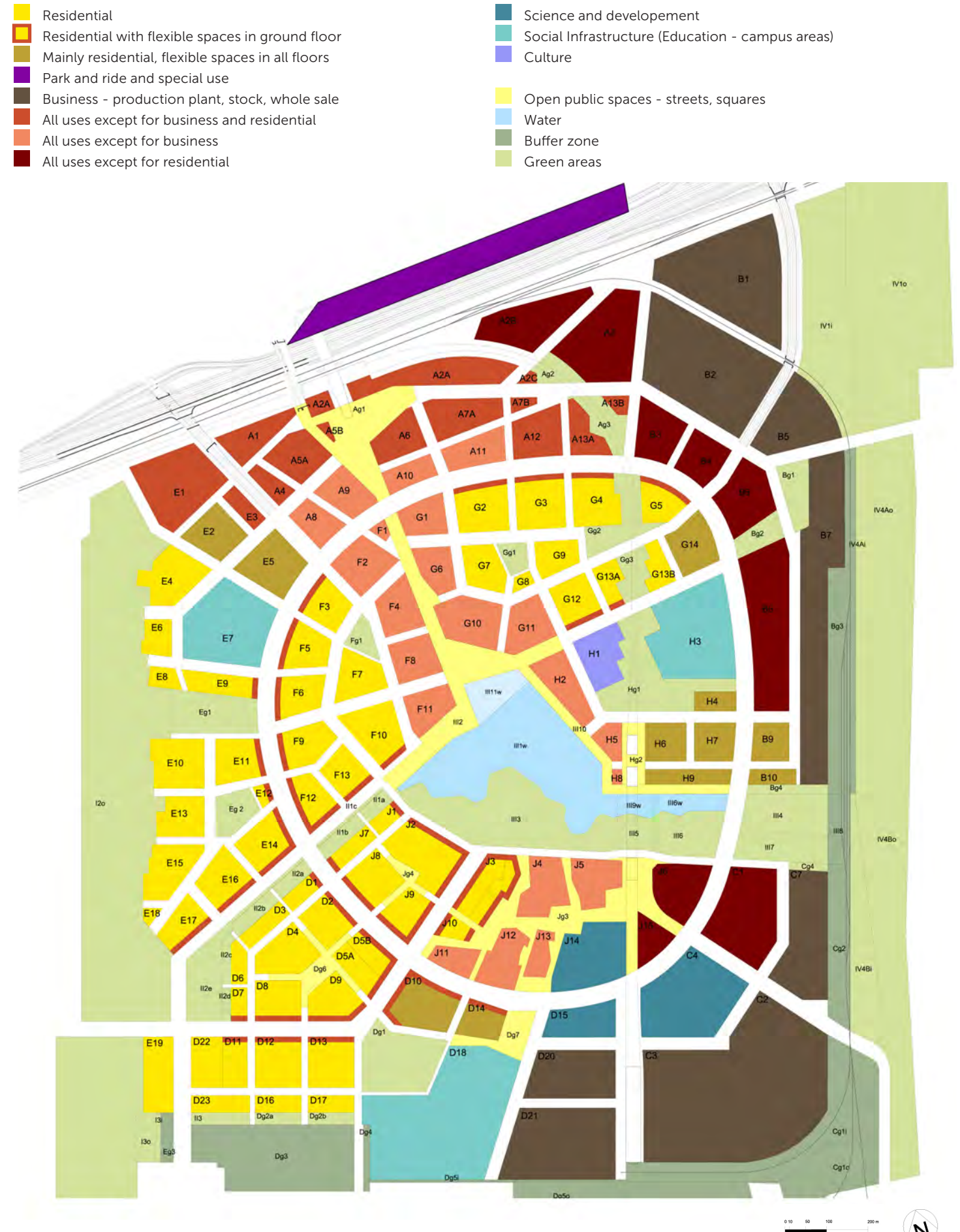
On an area of 240 hectares more than 20,000 people will be accommodated and 20,000 workplaces created. Construction is planned in three phases. The first shall be completed in 2016, the second in 2022. Southern part of the area is to become a business hub. Administrative office towers, innovation and research facilities are planned north to the General Motors industrial plant.

Aspern Urban Lakeside is planned as a city of short distances with emphasis on conscious traffic deceleration. Principally, it favours walking and cycling. These forms of mobility will be promoted by implementation of mobility projects such as bicycle and bike trailer hire system, cycle parking and repair facilities, carsharing pool and a special delivery service available for the Lakesiders. These activities will be financed by a mobility fund raised by savings made on garage construction.

Less space is given over to parked vehicles than in other parts of Vienna. Most of the parking spaces are planned in communal neighborhood garages, and most of the street level parking will be short-stay. Mobility is guaranteed by connections to a mix of fast, public transport options (the U2 metro line, tram, local, regional and intercity train services and buses).

The masterplan was prepared by Tovatt Architects & Planners and N+ Objektmanagement who won the invited competition. Urban Lakeside is organized around main elements: the ring road which is the main traffic artery, boulevards, a major shopping street connecting a metro station with the lake and other axes that determine the visual readability and identity of space. Buildings are mostly organized into traditional small-scale housing blocks. The residential blocks form groups, that share a small centrally located park. The urban structure and density is basically inspired by the traditional urban tissue of Vienna. Instead of a mall-type development, shops and other local amenities will be located within walking or cycling distance concentrated on a central shopping street.

The housing at the Aspern Urban lakeside shall cater for a wide variety of urban dwelling forms. Besides flats with flexible layouts, all with an own outdoor space, the planners decided to set aside some space for for community housing projects. Currently on the plot D13 there are five different autonomous and creative owner/user partnerships constructing a total of 179 flats plus space for a diverse array of other uses (offices, community canteen, family-run guesthouse, etc.) The co-housing initiatives increase attractiveness of the area giving its future residents the advantage of designing their own living space according to their own needs and resources not in an isolated single-family home, but by deliberately opting to build in an urban context together with others who have made similar work and lifestyle choices. (For more information see Seestern Aspern, JAspern.) To encourage neighbor relationships also in non-community housing areas, residents are supposed to have a say in a design of open spaces especially around the residential places.



Masterplan -functional diagram



## 5.2 CONCEPT STATEMENT

### 5.2.1 NETWORKS OF LEARNING AREAS DISPERSED IN THE CITY

The presented thesis offers an alternative model for the organization of learning landscape in Aspern that by introducing networks of small schools to the existing plan provides a richer variety of educational institutions.

The actual masterplan of the Urban Lakeside Aspern proposes three large campuses which are to serve the pre-school, primary and secondary, education needs of the children living in the area. The opening of the campus in the south part of Aspern is scheduled for september 2015. However, since the construction of the further two campuses is planned for the second and third building phase, a network of differently sized schools could be implemented instead.

I argue that small school units are a better solution for contemporary emerging residential areas in two ways – as being more flexible to adapt to changes and current situation and as being able to incorporate other than traditional teaching strategies.

Admittedly, advantages of a large campus are in the concentration of the different forms of school and after-school activities on one place and the potential to enable a smoother transition from one level of education to another for the child. On the other hand, the relatively large scale of such a complex brings further disadvantages. Due to the size of the complex, changes, innovations, and adjustments in teaching methods, organization, and use of space become more difficult, whereas, a small institution can react to changes more flexibly. Similarly, inclusion of children with special needs can be better realized in a small institution than in a large one. In case the number of pupils decreases, the whole mini-school or its part can be transformed to serve other forms of education or other purposes (e.g. office, co-working space, shops, senior club or alternative dwelling forms).

Although a small school cannot afford expensive equipment for all kinds of activities as a large campus can, but given greater autonomy, a small school can specialize in some sort of activity and have excellent equipment for the specialization and share it with other members of the learning network. Being small, it can also make use of city resources, especially parks, and public spaces.

Since the current trend in Austria/Western Europe is the all-day school model, the school becomes a “second home” for the pupils, especially in the first ten years of their school attendance. Since the school building accommodates besides educational institutions and also other social services, the children spend a significant part of their lives in institutional care, closed off in, maybe well-equipped, but still very limited space. The roots of the development towards the all-day school are multilayered and definitely cannot be overcome by architectural means only. Nevertheless, even when keeping the all-day schooling model, it is possible to create a more diverse and more organic learning experience for the children by including relatives, different professionals as non-teachers into learning process, by utilizing city resources, and/or by sharing spaces and resources with other mini-schools, other organizations, and residents. All these can

bring more variability and plurality into education.

Moreover, due to the small number of pupils the school within the all-day school model can carry the educational tasks also outside the school building. Moving between the venues can become an integral part of education. It might not be only a gym or cafeteria where pupils are taken during the day; schools can develop partnerships with other institutions or businesses, which could provide additional offers to the curriculum. Similarly to the Philadelphia’s Parkway Program, pupils can learn handicrafts from a local carpenter who offers three-hour workshops once in two weeks; or can experience feeding animals that live in the public park with a professional caretaker.

Although seeing the above mentioned advantages of small schools, it is nevertheless still helpful to organize them into clusters which share spatial resources and management staff. According to my model it should be possible to go from one mini-school to the other without having to cross a heavy traffic road. Each school within the cluster can have its own specific character and rooms equipped according to their educational focus. Schools within one cluster can be of equal or different sizes and besides the pre-school and primary school can include also other forms of education (e.g. language schools, additional vocational training centers, public studies, libraries, or reading rooms). Teachers should work in small teams within one school but shall regularly meet with other teachers within the network for exchange of experiences further training. To prevent burn out of the pedagogical staff migration between the different schools within the network shall be possible.

Competing for new residents, diversity and a high quality of education can become a further attractor of the Urban Lakeside Aspern. Moreover, placing educational facilities on the ground floor areas dispersed in the city makes learning more visible and more appealing. Utilizing of public spaces (parks, gardens, squares) for educational purposes and encouragement of pedestrian movement between learning venues increases the natural social control over the neighborhood and makes the neighborhoods livelier.

- Mini-schools that create networks of learning spaces
- Minicampus (see the chapter “Viennese Campus Models”)
- Campus plus (see the chapter “Viennese Campus Models”)
- Currently planned campus areas - in this vision these were replaced by networks of mini-schools and minicampuses; these marked plots can be therefore used for housing
- Building spot - subject matter of the design part of the thesis



Masterplan - buildings for education - concept statement

0 10 50 200 m





## 5.2.2 CONNECTION WITH HOUSING

The specificity of my project is that I combine school institutions with residential units within one building complex. The educational institutions on the ground floors of residential buildings create an effective use to the street level floors, enable neighborhoods with optimal urban density and reduce construction costs. Besides these pragmatic reasons, I searched for further potential benefits the combination of a residential and educational building could bring, asking following questions:

“How can residents profit from dwelling “above a school”?”

“How can pupils and teachers profit from having a number of dwellings above their school?”

How can both stakeholders cooperate in using the outdoor space and turn it into a flourishing common space?”

“How can both the residents and the educational institution contribute to creation of a more lively, receptive, and cooperative urban environment?”

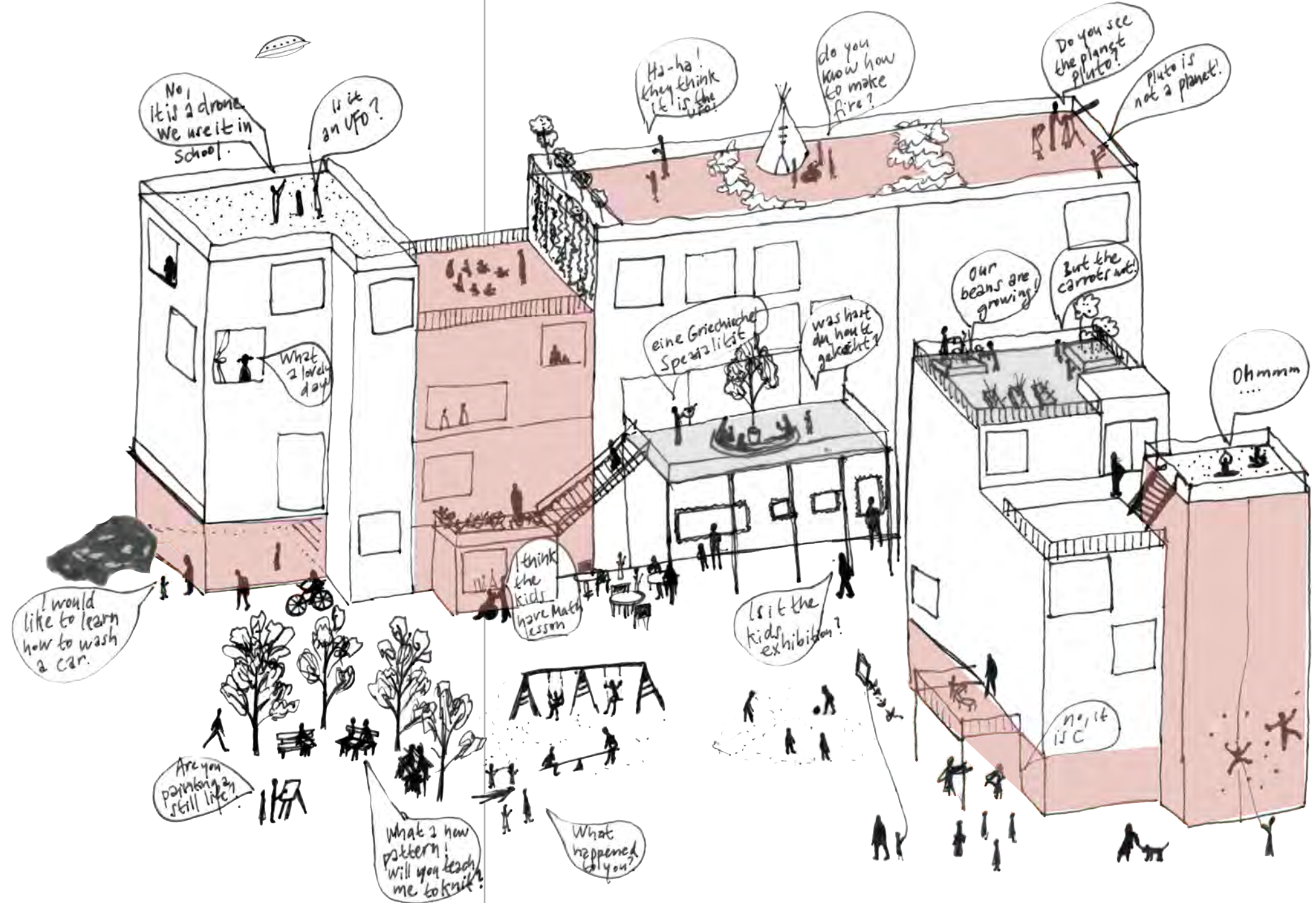
Residential and education facilities in general need quite different building typologies, and preferences of their users might significantly differ from each other. For example, while the residents may demand quiet and orderly surroundings, the school creates noise and mess. Therefore, in order to enhance synergies and suppress the possible negatives, it was necessary to define a “common zone” that would serve as a communication platform for both stakeholders. Also it is inevitable to keep the size of both, the residential building and the school, manageable so that the users have a chance to know each other and an atmosphere of trust could be cultivated.

The common spaces have the potential to become a natural communication platform between the stakeholders. They can create a spill-over area between the individual dwellings and the actual classrooms of the school. By the means of sharing, these relatively expensive resources can be optimally used during the whole day – in the school-time by the pupils, in the afternoons by the residents.

Moreover, well equipped facilities attract people with similar interests and so enable a natural exchange of experiences and skills between the users. In practical terms it can mean that a resident who builds a large scale aircraft model attracts the attention of a group of children who would like to build their own model of a rocket and he could help them to make it happen. Likewise, watching a neighbor’s rock band rehearsing in the music room can inspire some pupils to start to play musical instrument they might not have known before.

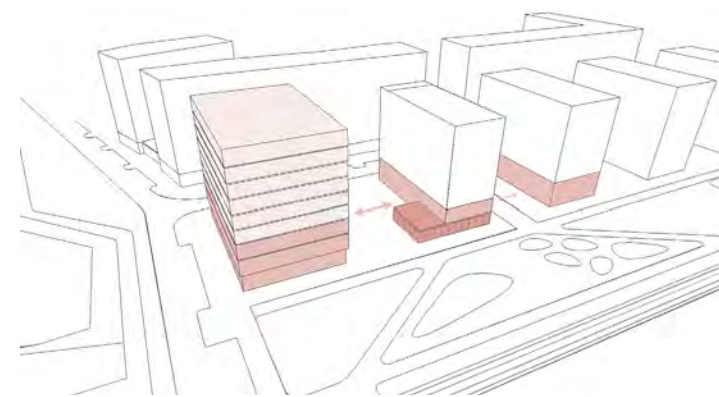
Following the development of building cooperatives in Aspern and observing the popularity of similar housing projects in Vienna, I decided to combine a mini-school with the specific residential form of co-housing. People who would opt for living in such a project shall make a conscious decision to become an active part of community. Consequently, they would be expected to participate in the decision-making process and use the common spaces.

Active partaking in the self-governing community and sharing of common spaces can potentially contribute to closer relationships between the residents themselves, trigger the community life and encourage learning from each other.

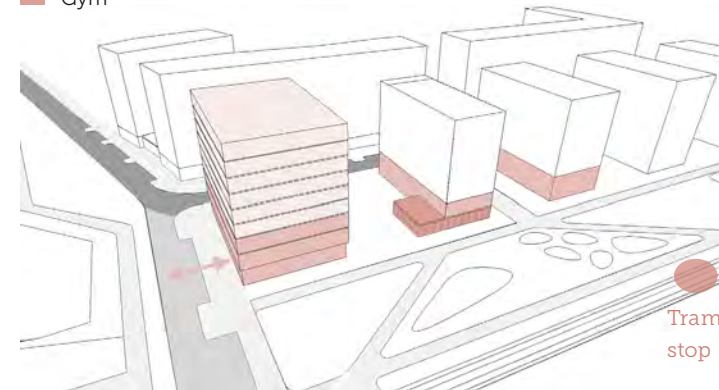




### 5.3 BASIC DESIGN DECISIONS



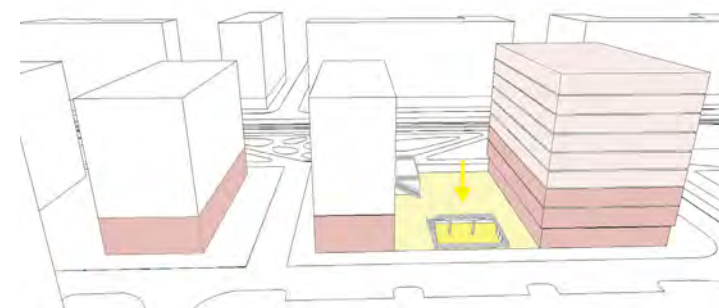
■ Educational facility  
■ Gym



■ Road for traffic  
■ Pedestrian paths  
■ Drop on - drop off zone



■ Public park  
■ Lake  
■ Semi-private yard  
■ Designed building



■ Semi-private yard  
■ Sunken workshop yard

#### CLUSTER

There are three mini-schools in the cluster sharing one gym and semi-private yards located between them. The access from one building to another is possible without crossing a car-traffic road.

#### TRAFFIC

From three sides are the buildings surrounded by car-free spaces. A safe kiss-and-ride zone is planned in front of the main entrance to the building.

#### OUTDOOR SPACE

An emblematic location near to the central lake and adjacent to a public park was chosen for the project. The building is surrounded by public and semi-private spaces each having a different character: On the east side there is the central lake with adjacent green spaces. On the north side is a public park with a small lake and playgrounds and the west side is occupied by a semi-private space shared by two point blocks.

#### SHAPING THE SEMI-PRIVATE YARD

This semi-private yard is directly accessible from the school and becomes therefore its main playground. In order to get sunlight into the workshop in the underground and to set apart the playground from the street a sunken workshop yard was created.

#### BUILDING SIZE

The size of the plot and regulations given in the master-plan determined the building typology. It had to be a point-block with maximum nine floors above the street level.

#### ROOF TERRACES

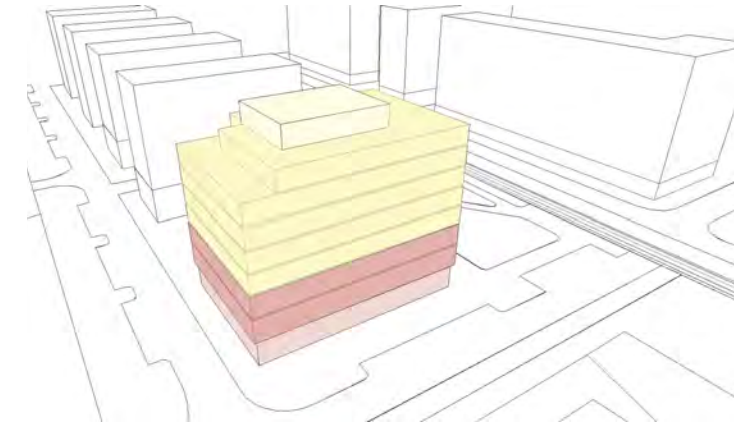
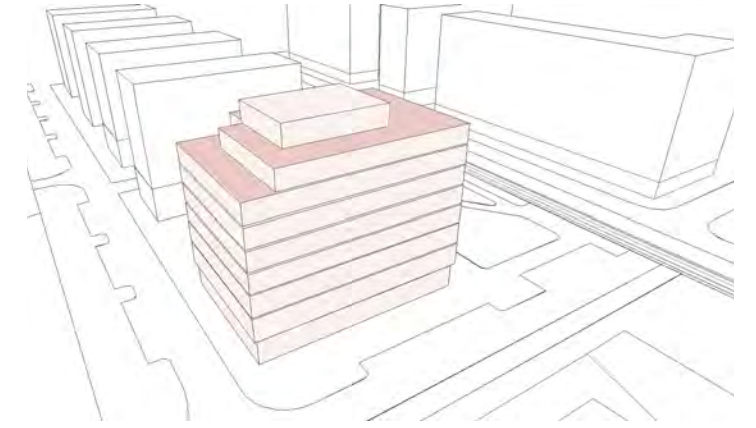
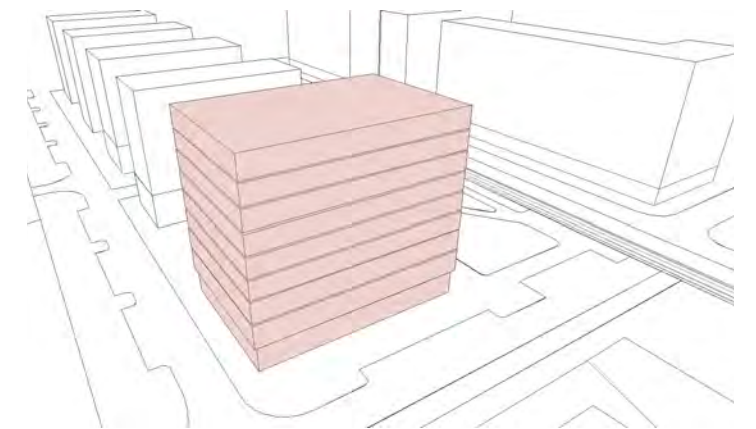
The top floors had to be terraced in order to enable sunlight to reach the neighboring buildings.

#### LOCALIZATION OF THE DIFFERENT FUNCTIONS

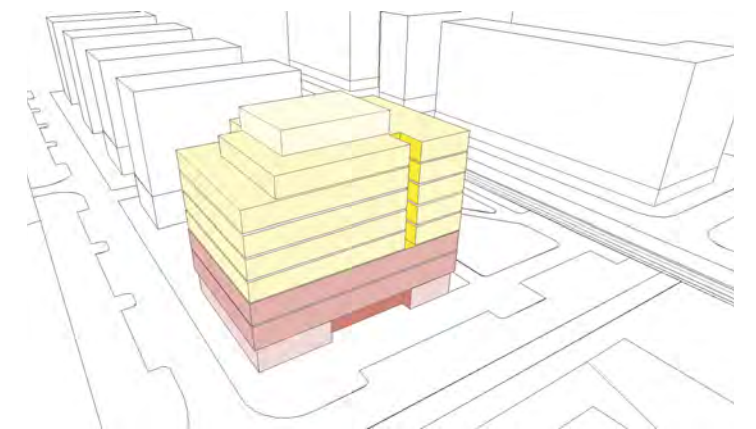
The ground floor is occupied by functions common to the educational facility and the dwellings, the first and second floors are mainly dedicated to the school. Above them, there are five floors of housing. On the top floor there is a wellness area intended mainly for the residents but open for use by the school as well. The building has one underground floor where technical rooms, storages and common spaces are situated.

#### SHAPING THE BUILDING

In order to enable cross ventilation of the dwellings and bring natural light into the central corridor, two slits were cut into the building structure. In one of them there are common terraces, in the other a climbing wall is placed. A rectangular block structure was cut out of the ground floor to enlarge and emphasize the entrance area.



■ Education  
■ Shared area  
■ Housing  
■ Shared area





## 5.4 COMMON ZONE

There is a zone of common spaces shared by the residents and users of the educational institution. It includes

### IN THE GROUND FLOOR:

- a cafeteria, designed to serve mainly the school but in the time, when it is not occupied by the pupils, it will be open for the public as a café,
- a central staircase with library which can serve as an auditorium,
- a multifunctional room that can either be closed for a separate use, open to the auditorium to create an aula, or when the folding glass façade is open to the public park, it can create a stage for outdoor concerts or a spatial continuum for annual celebrations, feasts, or flea markets;

### IN THE FIRST FLOOR:

- a common kitchen with a dining room and a terrace accessible from the semiprivate yard, which can be booked by the residents for feasts and parties and used by the school to learn how to cook and bake,
- indoor gardens for the production of herbs and edible crops, and as educational aid for children to learn about plants and gardening,
- a common art studio overlooking the cafeteria for creative artistic work,

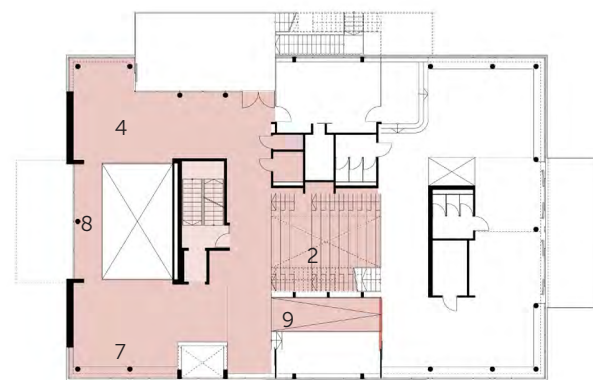
### IN THE UNDERGROUND LEVEL:

- a table tennis room,
- an acoustically isolated music rehearsal room,
- a workshop with adjacent storage and one additional room that can for example serve as special workshop, dark-room for photo production, or as a room for a 3D printer,
- a workshop yard accessible from the workshop as well as from the semi-private school yard and from the cellar of the neighbor building.

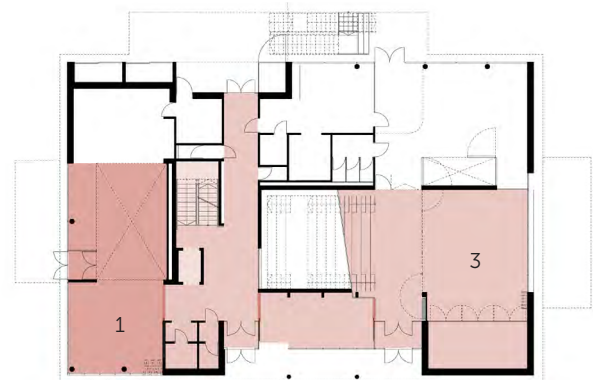
Access to the gym in the neighbor building is possible through a covered path in the underground or from the common semi-private courtyard.

The common spaces can be closed off the classroom areas by sliding partitions and be used independently from the school. Their use will be a subject to negotiation among the users and coordinated via an internal online booking system. In urgent or conflict cases an employee of the school or the cafeteria will be responsible to decide.

- Cafeteria accessible by the public
- Common area shared by the school and the residents
- Staircase and lift shared by the school and the residents



1st floor



Ground floor



-1st floor

## 5.4.1 ELEMENTS OF THE COMMON ZONE



1 CAFETERIA



2 LIBRARY

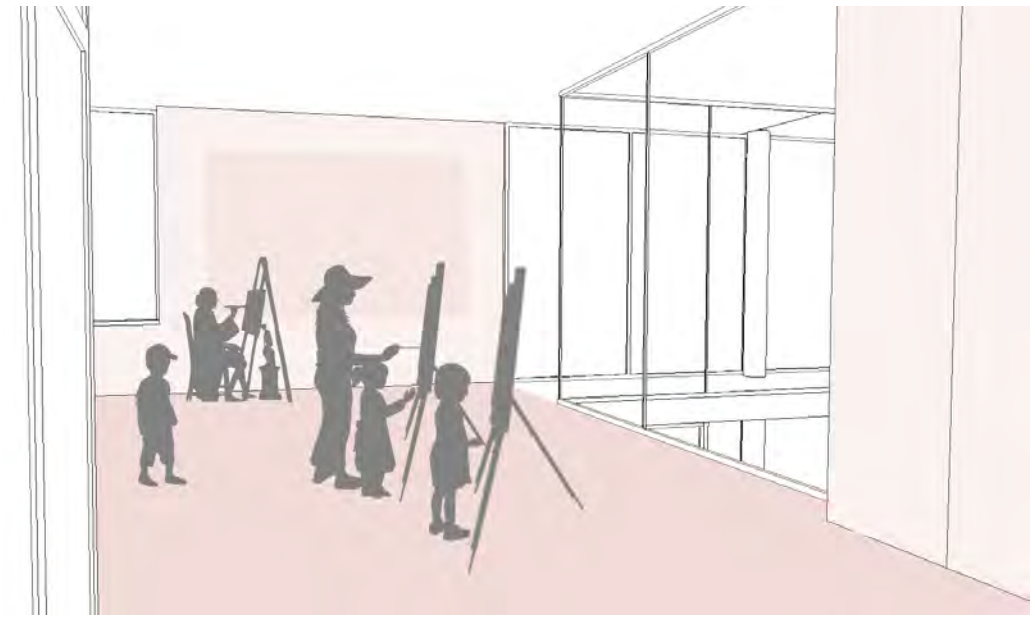


3 AUDITORIUM





4 COMMON KITCHEN



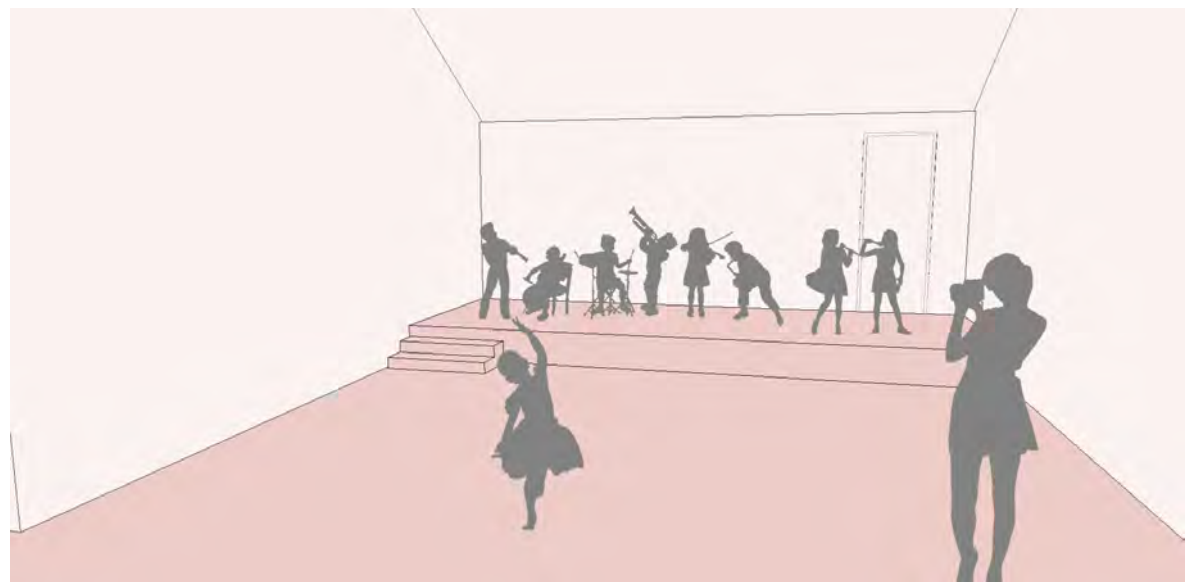
7 COMMON ART STUDIO



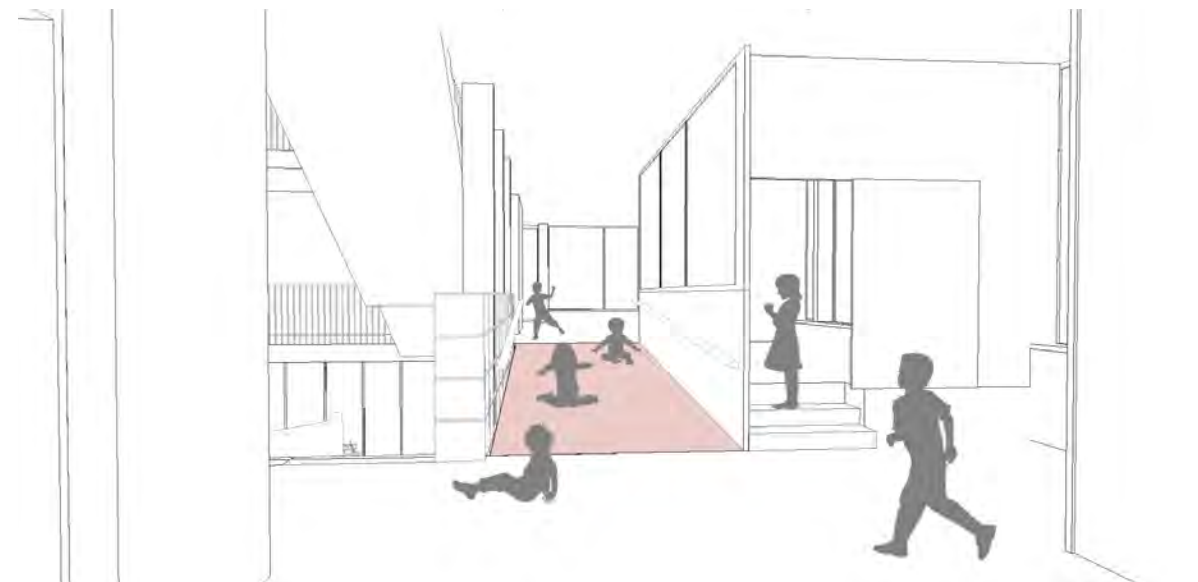
5 WORKSHOP YARD



8 INDOOR HERB GARDEN



6 MUSIC ROOM



9 RAMP



## 5.5 LEARNING AREA

The school caters for education of children in the age of 0 – 10. Locating three levels of education, a crèche, a kindergarten and a school under one roof, aims to enable a smoother transition between the three levels of education. The children do not have to spend the whole ten years in this single school but can switch between educational facilities within the network.

Learning takes place in two different kinds of spaces within the building: in the learning areas and in the common spaces. The learning areas are designed as a fluid landscape offering different spaces for different learning situations such as instruction, teamwork, individual work, presentation, reading, playing. Their flexibility is ensured by a system of folding panels that can divide the space according to the learning situation. Drawings on the following pages present the spatial elements that constitute the landscape of learning areas.

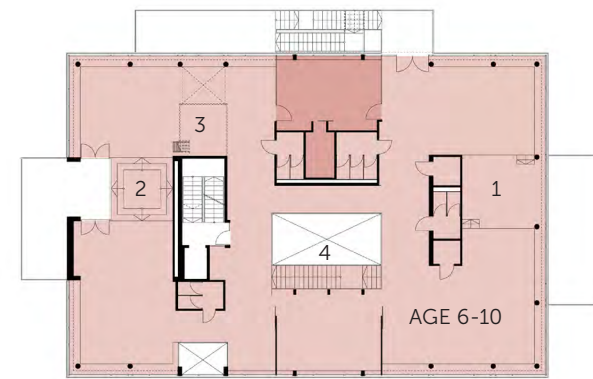
The learning areas spread through all three school levels. The learning area in the ground floor with the direct access to the outdoor playground is designed for the smallest children. The learning area on the first floor serves for education of children in the kindergarten age and the second floor is intended for the children in the age of approximately 6 – 10.

The common spaces will be used by all groups as the natural meeting spaces for all users.

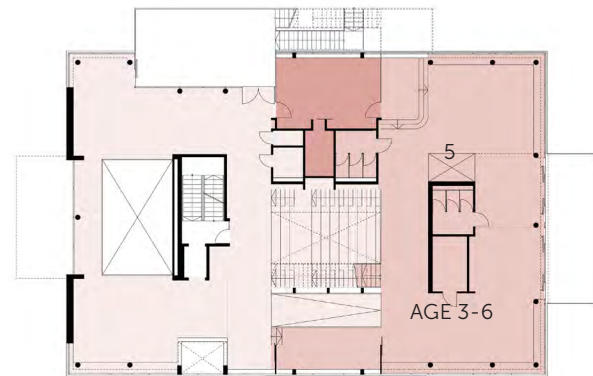
For the teachers and the pedagogical staff there are the team offices and storages in every school floor. For acoustic reasons they are separated from the learning areas by glass partitions.

Sanitary rooms are not placed on one spot but rather smaller units are dispersed around the floor plan. They are accessible directly from the learning areas. There are two emergency staircases available for the school. One is an outdoor staircase and the second one is shared with the dwellings. For fire safety reasons cloakrooms are designed for each floor.

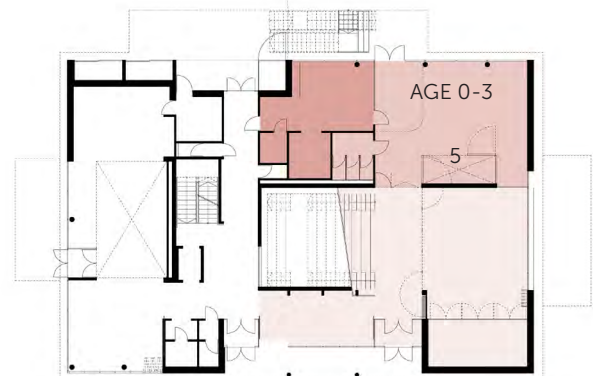
Each learning area has a direct access to some outdoor space: either a terrace, which can serve as an outdoor classroom, or directly the semi-private yard.



2nd floor



1st floor



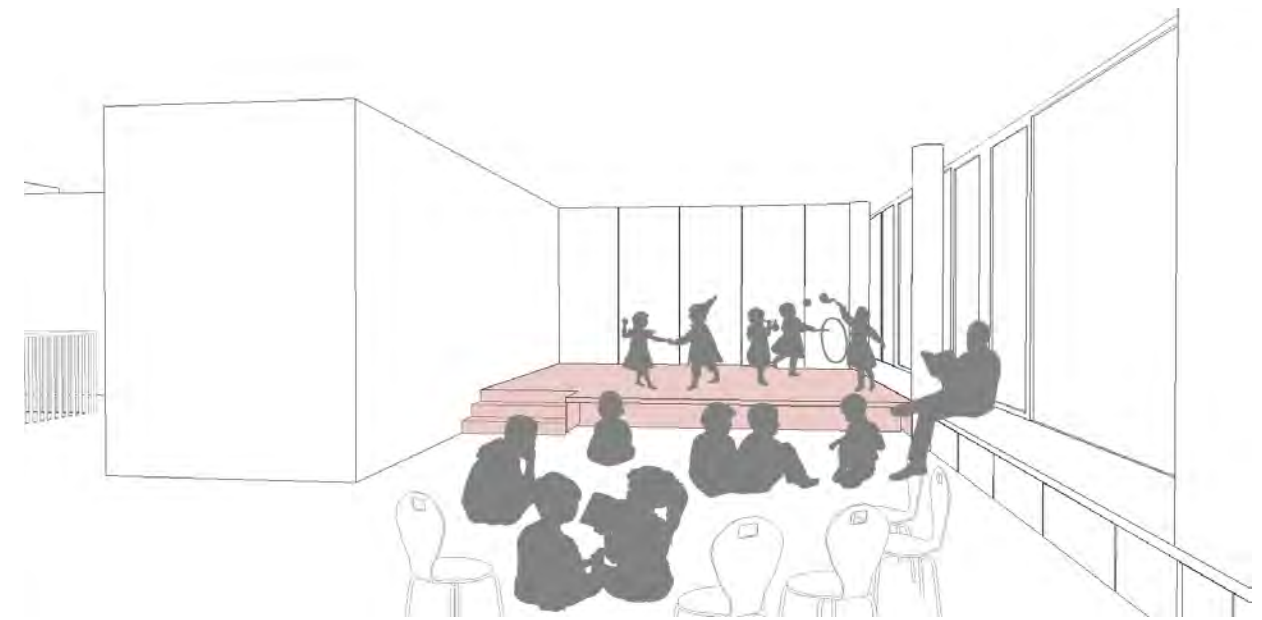
Ground floor



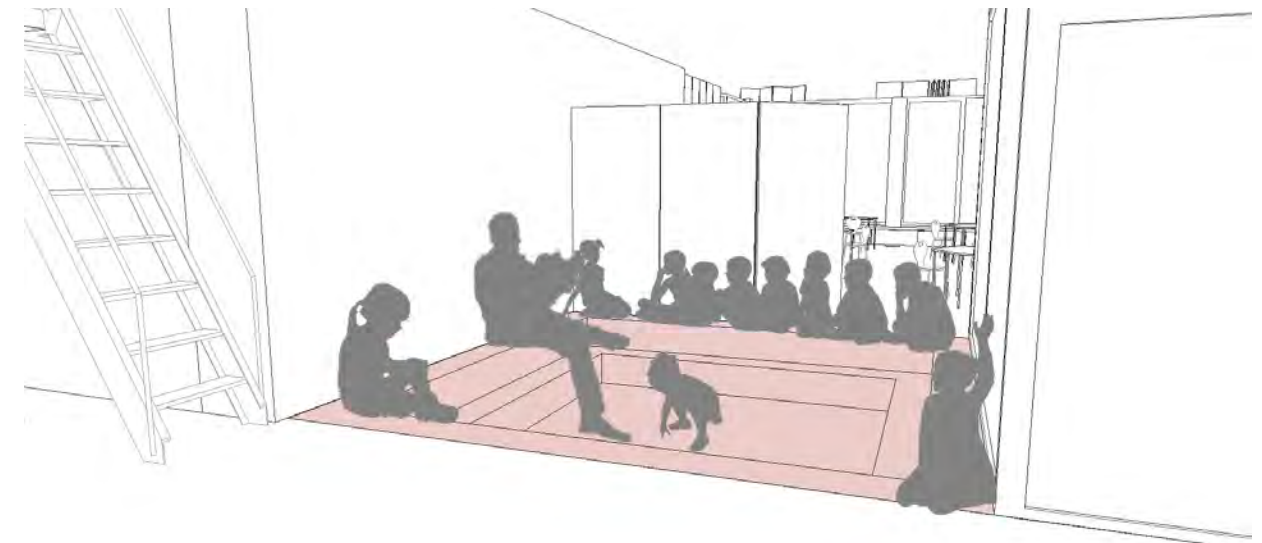
-1st floor

- Office for the pedagogical team
- Learning areas - used exclusively by the school
- Common area - additional learning spaces

## 5.5.1 ELEMENTS OF THE LEARNING AREA



1 STAGE

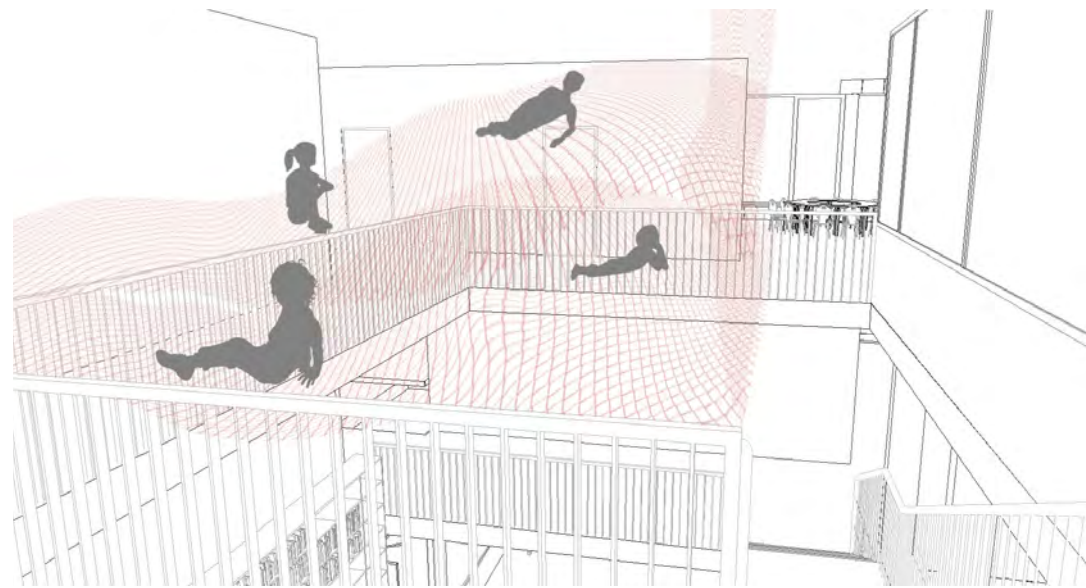


2 SUNKEN AREA

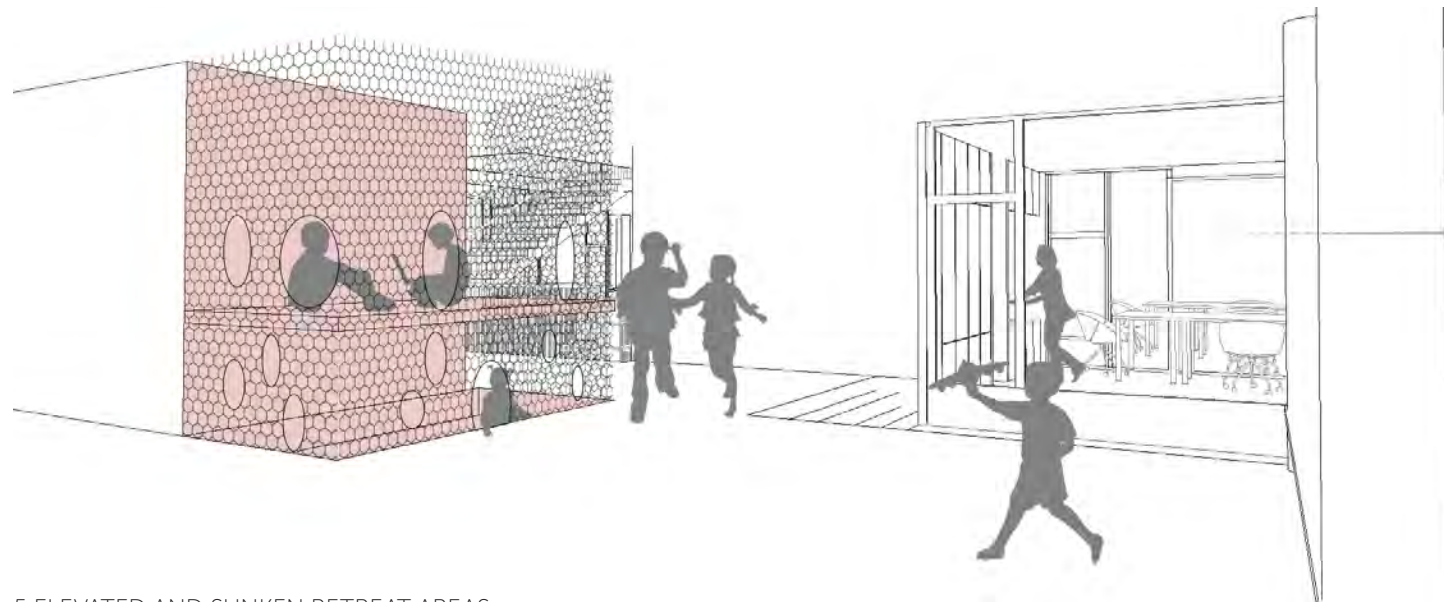


3 ELEVATED PLATFORM

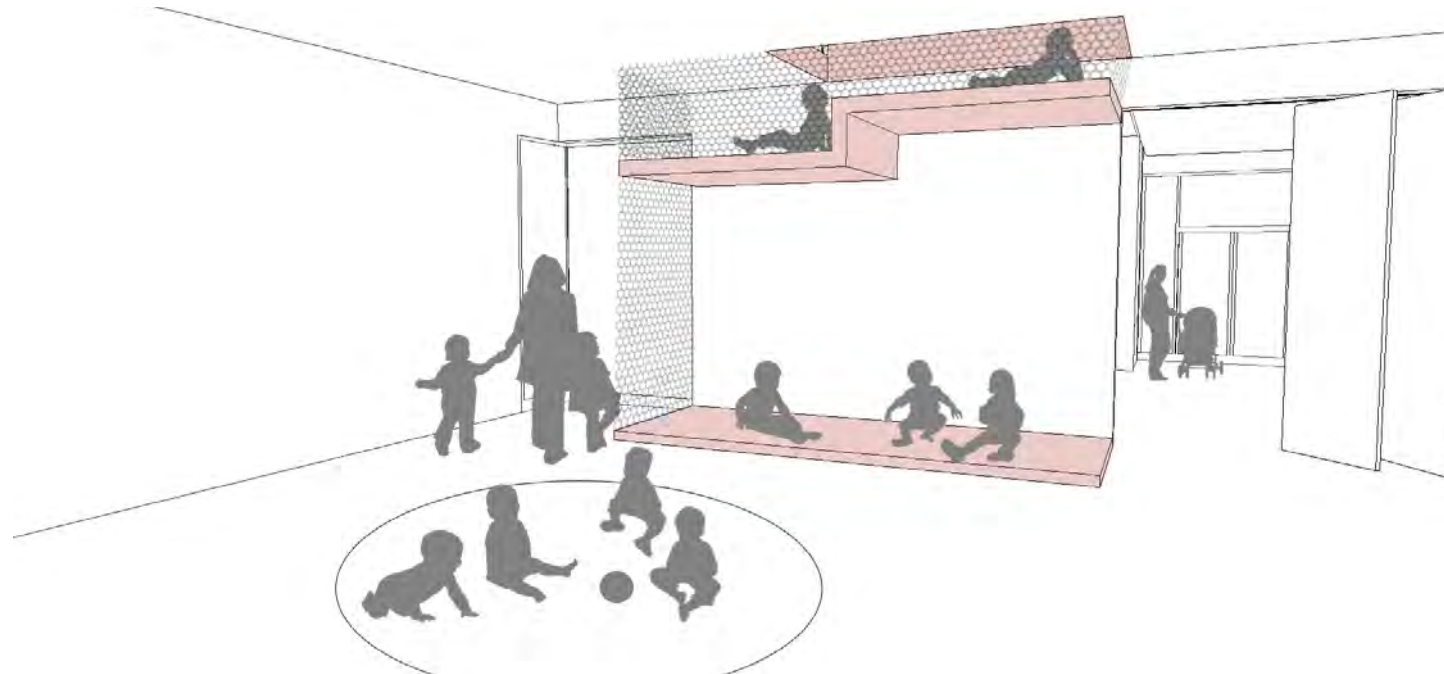




4 CLIMBING NET

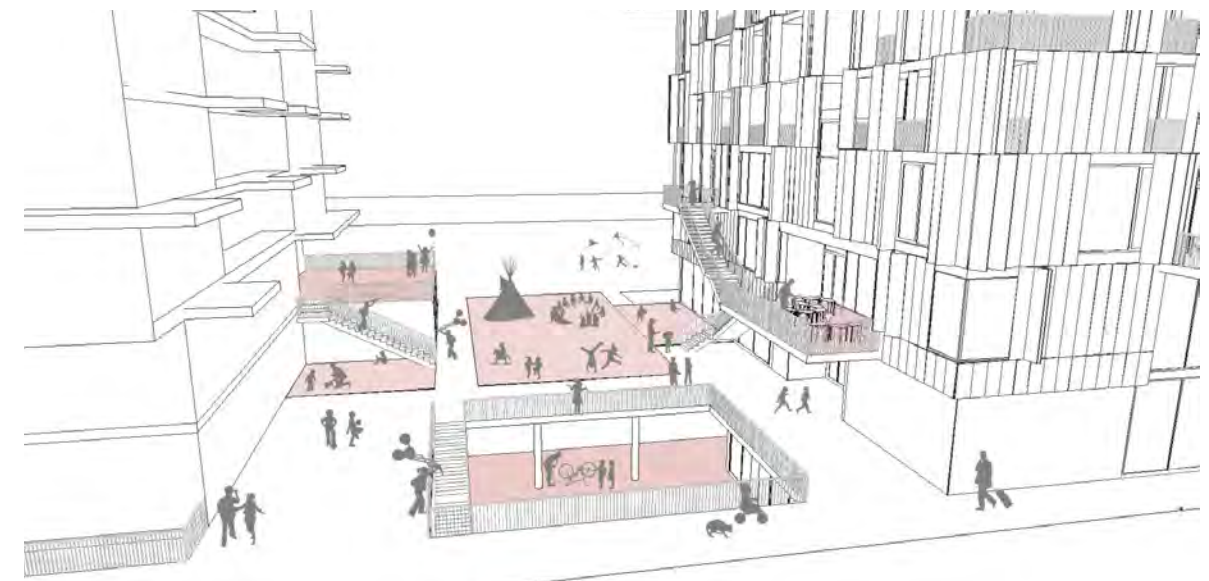


5 ELEVATED AND SUNKEN RETREAT AREAS



5.6 OUTDOOR SPACE

5.6.1 ELEMENTS OF THE OUTDOOR SPACE



TERRACES AND YARDS AT VARIOUS LEVELS



OUTDOOR STAGE



OUTDOOR CINEMA



5.7 COMMON SPACES ADJACENT TO HOUSING

5.7.1 CAESURES IN THE FAÇADE

COMMON LOGGIAS

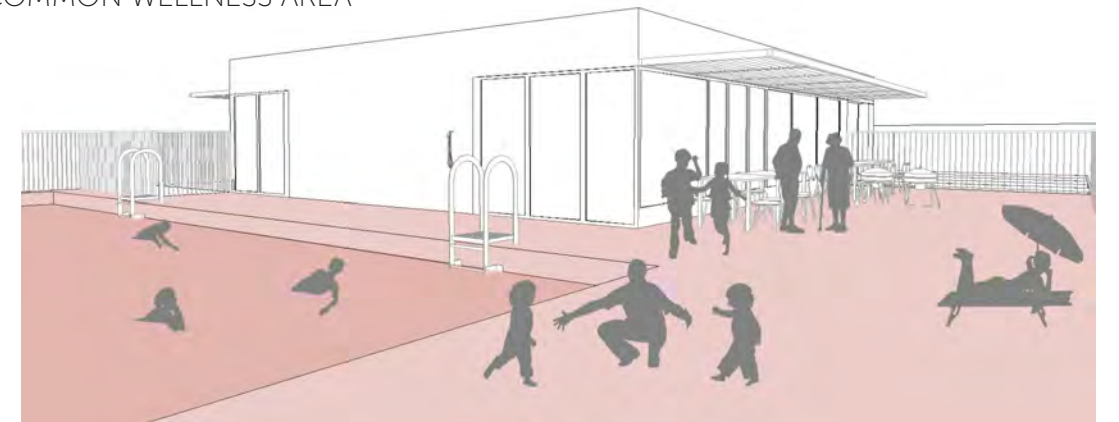


CLIMBING WALL



5.7.2 ELEMENTS OF THE COMMON WELLNESS AREA

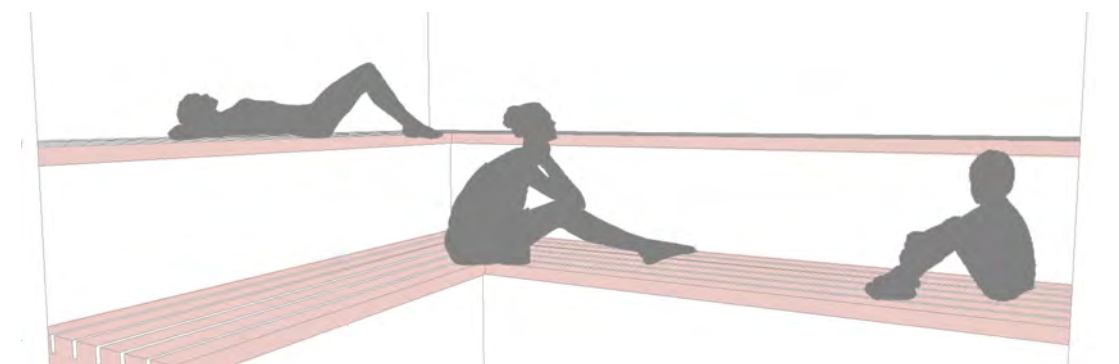
SWIMMING POOL



FIREPLACE ROOM



SAUNA



ROOFTOP GARDEN

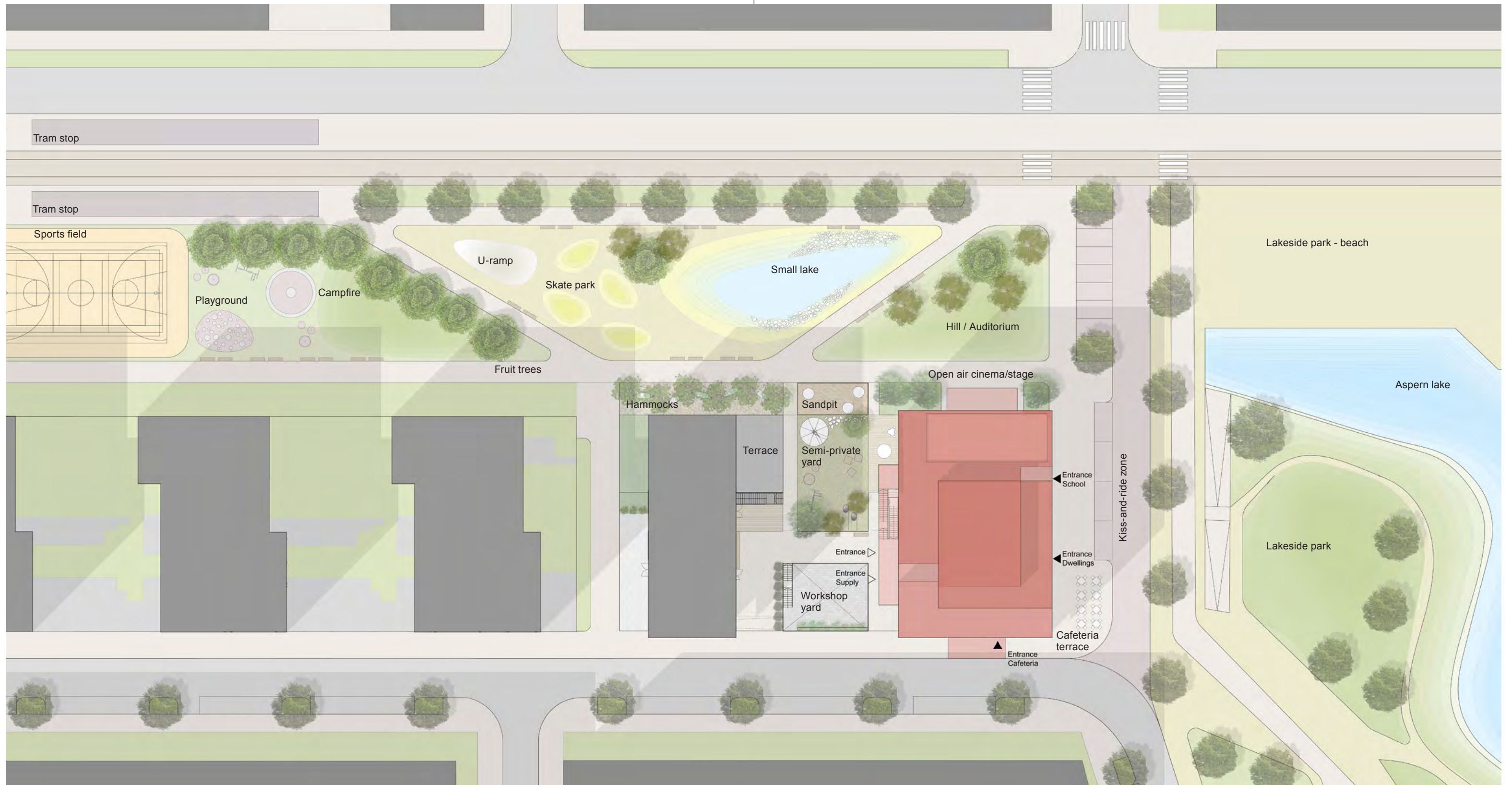
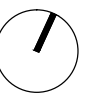




5.8 PROJECT OVERVIEW

5.8.1 SITE PLAN

- Subject of the design
- Buildings
- Tram stop
- Traffic road
- Pedestrian path
- Tram line
- Kiss-and-ride zone
- Playground
- Sports playground
- Lawn
- Sandpit
- Lake





5.8.2 FLOOR PLAN: -1ST FLOOR



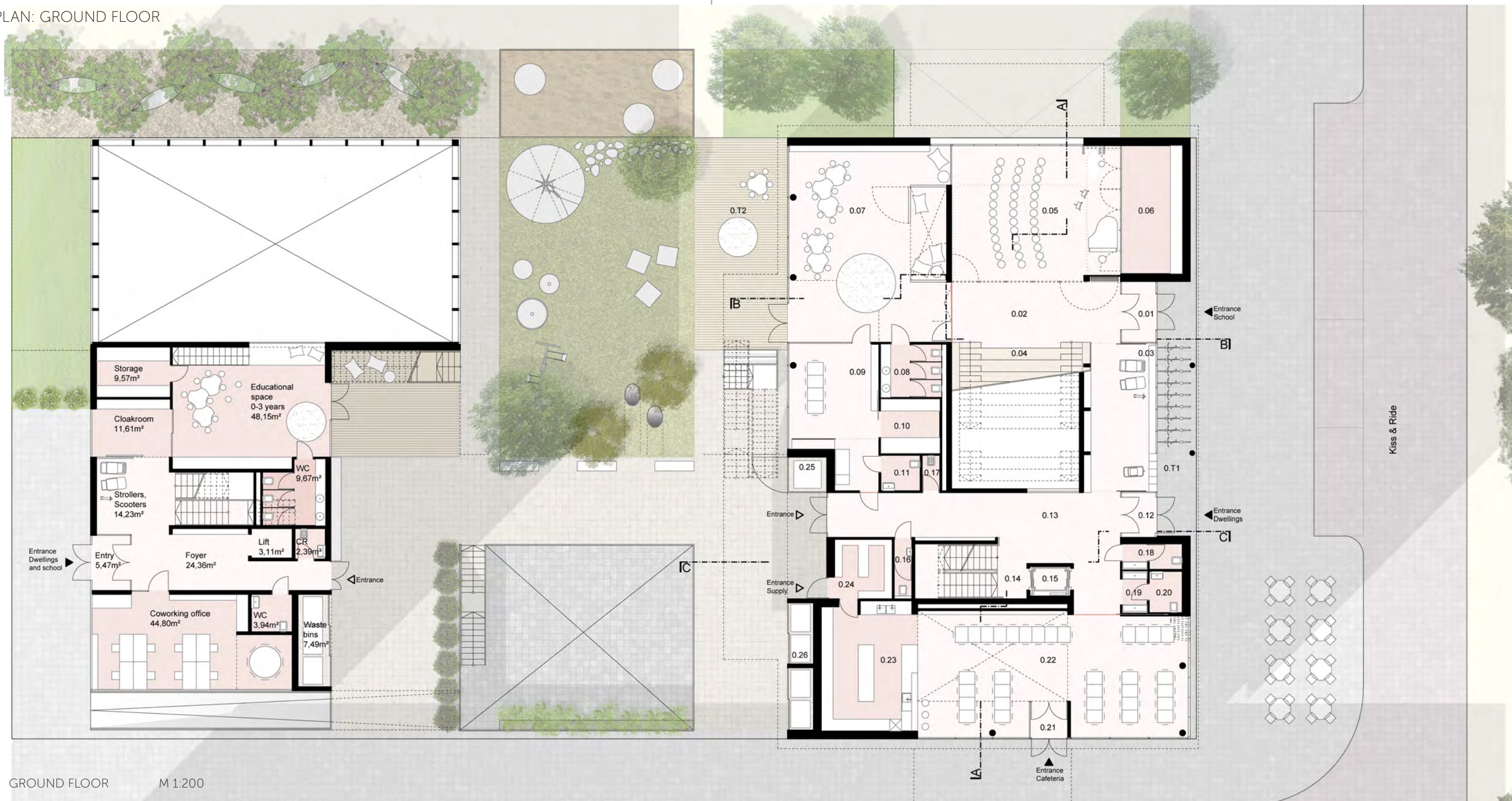
-1ST FLOOR M 1:200

- Common spaces - shared by the residents and the school
- Storages - housing

-1.01	Corridor	28,35 m <sup>2</sup>	-1.09	Storage – workshop	9,72 m <sup>2</sup>
-1.02	Rehearsal room (acoustic)	47,29 m <sup>2</sup>	-1.10	Specialised hobby room	14,46 m <sup>2</sup>
-1.03	Storage – rehearsal room	11,20 m <sup>2</sup>	-1.11	Storage	7,22 m <sup>2</sup>
-1.04	Entry / Table tennis	49,56 m <sup>2</sup>	-1.12	Technical room	22,60 m <sup>2</sup>
-1.05	Cleaner’s store room	8,97 m <sup>2</sup>	-1.13	Storage – school	50,69 m <sup>2</sup>
-1.06	WC men / boys	3,43 m <sup>2</sup>	-1.14	Private storages	150,46 m <sup>2</sup>
-1.07	WC women	3,96 m <sup>2</sup>	-1.15	Bike storage	81,06 m <sup>2</sup>
-1.08	Common workshop	97,28 m <sup>2</sup>			



5.8.3 FLOOR PLAN: GROUND FLOOR



GROUND FLOOR M 1:200

0.01	Entry - school	5,38 m <sup>2</sup>	0.11	WC Team (barrier free)	3,60 m <sup>2</sup>	0.21	Entry Cafeteria	3,41 m <sup>2</sup>
0.02	Foyer - school	26,69 m <sup>2</sup>	0.12	Entry - dwellings	3,94 m <sup>2</sup>	0.22	Cafeteria	83,23 m <sup>2</sup>
0.03	Cloakroom, strollers and scooters	26,17 m <sup>2</sup>	0.13	Foyer - dwellings	46,79 m <sup>2</sup>	0.23	Warming kitchen	31,97 m <sup>2</sup>
0.04	Staircase + Aula + Mediathek	51,33 m <sup>2</sup>	0.14	Staircase	15,87 m <sup>2</sup>	0.24	Food storage	9,16 m <sup>2</sup>
0.05	Multipurpose room	59,00 m <sup>2</sup>	0.15	Lift	3,11 m <sup>2</sup>	0.25	Waste bins	3,42 m <sup>2</sup>
0.06	Storage for multipurpose room	20,10 m <sup>2</sup>	0.16	WC - kitchen staff	2,59 m <sup>2</sup>	0.26	Waste bins	7,81 m <sup>2</sup>
0.07	Educational space for 0-3 years	81,29 m <sup>2</sup>	0.17	Cleaner's room	1,62 m <sup>2</sup>	0.T1	Entrance, bicycle racks	21,72 m <sup>2</sup>
0.08	WC for kids	8,37 m <sup>2</sup>	0.18	WC Men	3,89 m <sup>2</sup>	0.T2	Terrace	51,27 m <sup>2</sup>
0.09	Meeting room for the team / First aid room	29,33 m <sup>2</sup>	0.19	Washroom	2,77 m <sup>2</sup>			
0.10	Storage	8,25 m <sup>2</sup>	0.20	WC Women (barrier free)	3,53 m <sup>2</sup>			

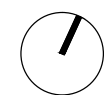




5.8.4 FLOOR PLAN: 1ST FLOOR

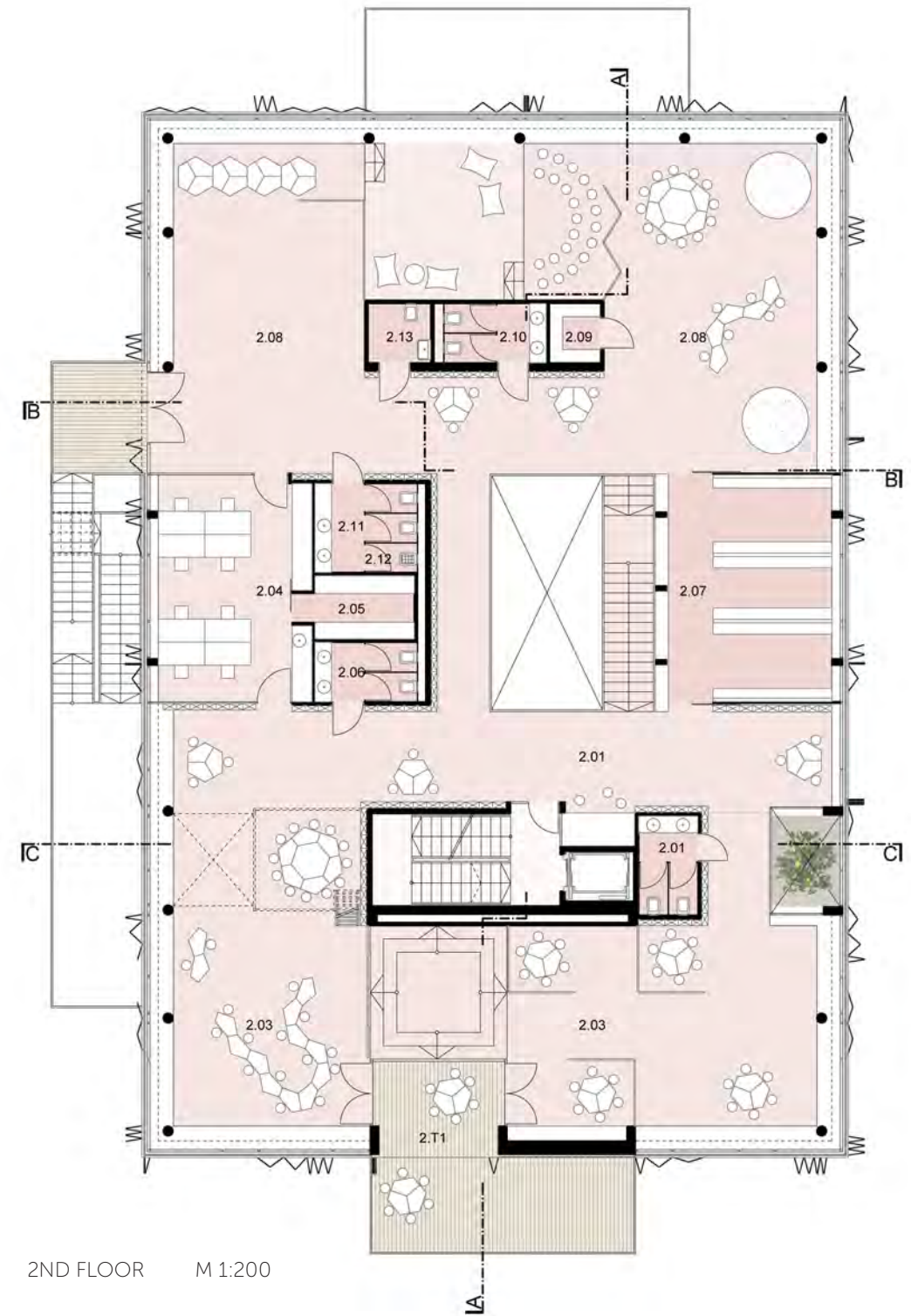


1ST FLOOR M 1:200



1.01	Gallery	57,30 m <sup>2</sup>	1.10	Educational space 4-6 years	195,03 m <sup>2</sup>
1.02	Glass house	7,38 m <sup>2</sup>	1.11	Storage	8,34 m <sup>2</sup>
1.03	Common atelier	53,90 m <sup>2</sup>	1.12	WC Girls	7,88 m <sup>2</sup>
1.04	Herb garden	13,54 m <sup>2</sup>	1.13	Team Office	31,15 m <sup>2</sup>
1.05	Common kitchen and dining room	53,17 m <sup>2</sup>	1.14	Storage	6,26 m <sup>2</sup>
1.06	Cleaner's room	2,01 m <sup>2</sup>	1.15	WC Boys	8,37 m <sup>2</sup>
1.07	WC Team (barrier free)	4,00 m <sup>2</sup>	1.16	Staircase	10,80 m <sup>2</sup>
1.08	Cloakroom	18,86 m <sup>2</sup>	1.T1	Terrace	46,57 m <sup>2</sup>
1.09	Ramp 6%	15,54 m <sup>2</sup>	1.T2	Terrace	32,03 m <sup>2</sup>

5.8.5 FLOOR PLAN: 2ND FLOOR



2ND FLOOR M 1:200

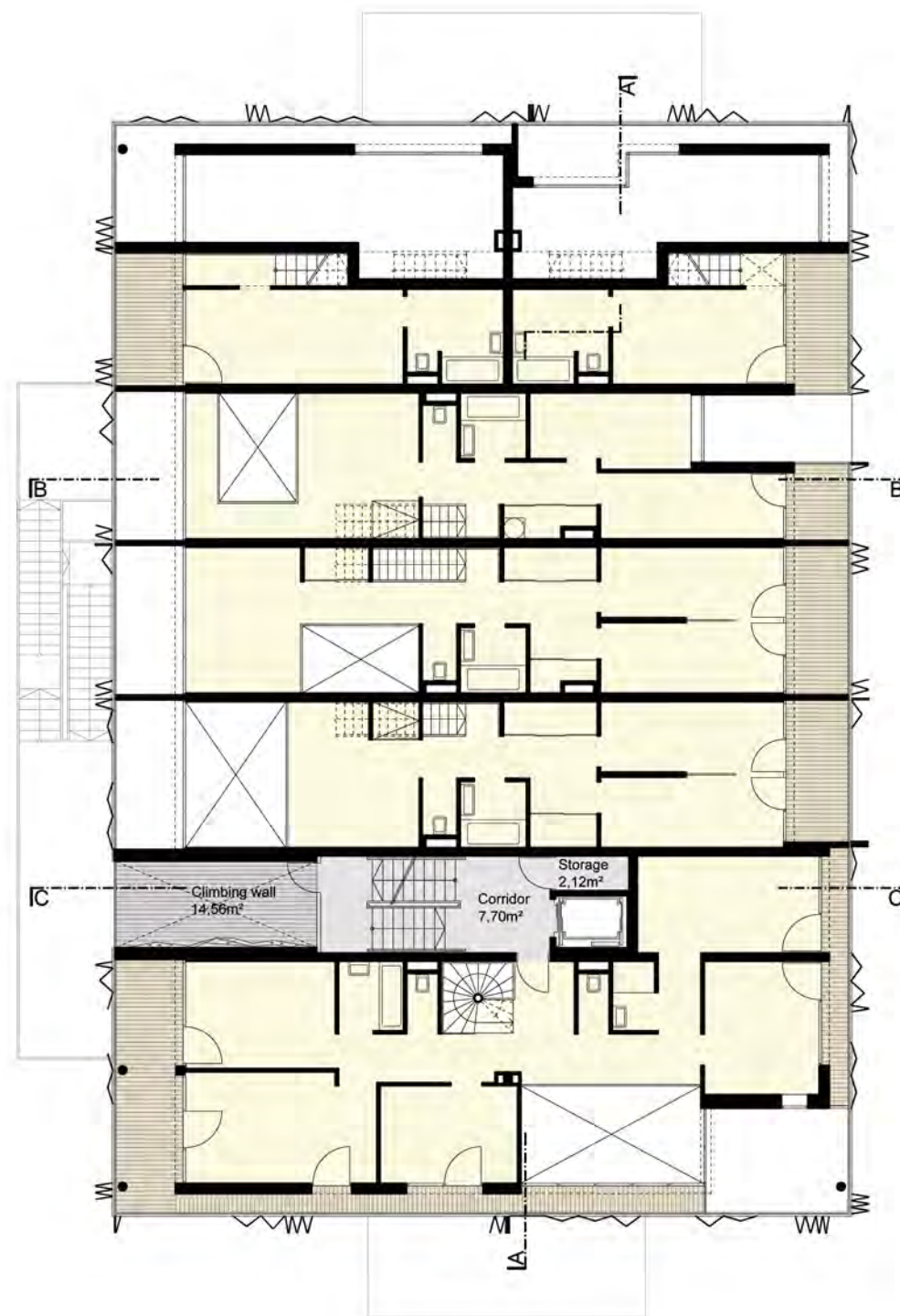
2.01	Gallery	56,00 m <sup>2</sup>	2.11	WC girls	6,93 m <sup>2</sup>
2.02	WC girls	5,40 m <sup>2</sup>	2.12	Cleaner's room	1,44 m <sup>2</sup>
2.03	Educational space 6 -10 years	172,96 m <sup>2</sup>	2.13	WC Team (barrier free)	3,41 m <sup>2</sup>
2.04	Team Office	31,09 m <sup>2</sup>	2.T1	Terrace	34,59 m <sup>2</sup>
2.05	Storage	6,36 m <sup>2</sup>			
2.06	WC boys	5,58 m <sup>2</sup>			
2.07	Cloakroom	36,62 m <sup>2</sup>			
2.08	Educational space 6 -10 years	189,94 m <sup>2</sup>			
2.09	Storage	2,79 m <sup>2</sup>			
2.10	WC boys	5,58 m <sup>2</sup>			



5.8.6 FLOOR PLAN: 3RD - 5TH FLOOR



3RD FLOOR M 1:200



4TH FLOOR M 1:200



5TH FLOOR M 1:200

HOUSING

The presented design offers a wide variety of apartment units: one level apartments, split-level apartments, duplexes, one large shared apartment, two-room, three-room, four-room apartments, and flexible housing units that can be either rented separately or added to one of the adjacent dwellings. One guest apartment designated for a teacher in residence program is located on the 8th floor.

The top floor is occupied by a wellness area with an outdoor swimming pool, a sauna, a fireplace room and roof terraces. These common spaces are intended mainly for the residents but under mutually approved conditions will be also accessible for pupils, pedagogical staff, and guests.

The basic layout of the apartments presented in this publication could be adapted according to the needs of the individual tenants.

- Flexible apartment units
- Apartments
- Terraces
- Common area

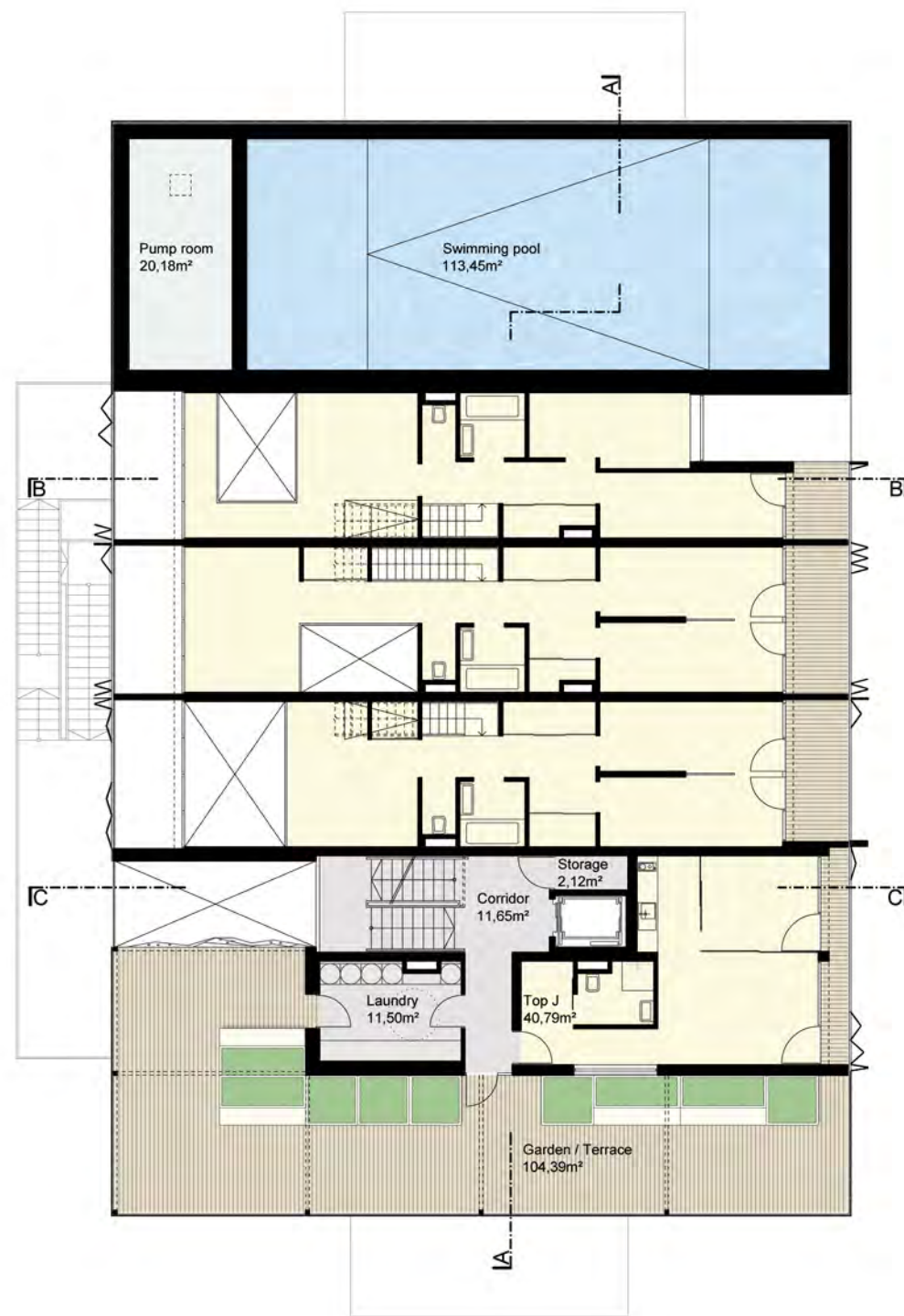




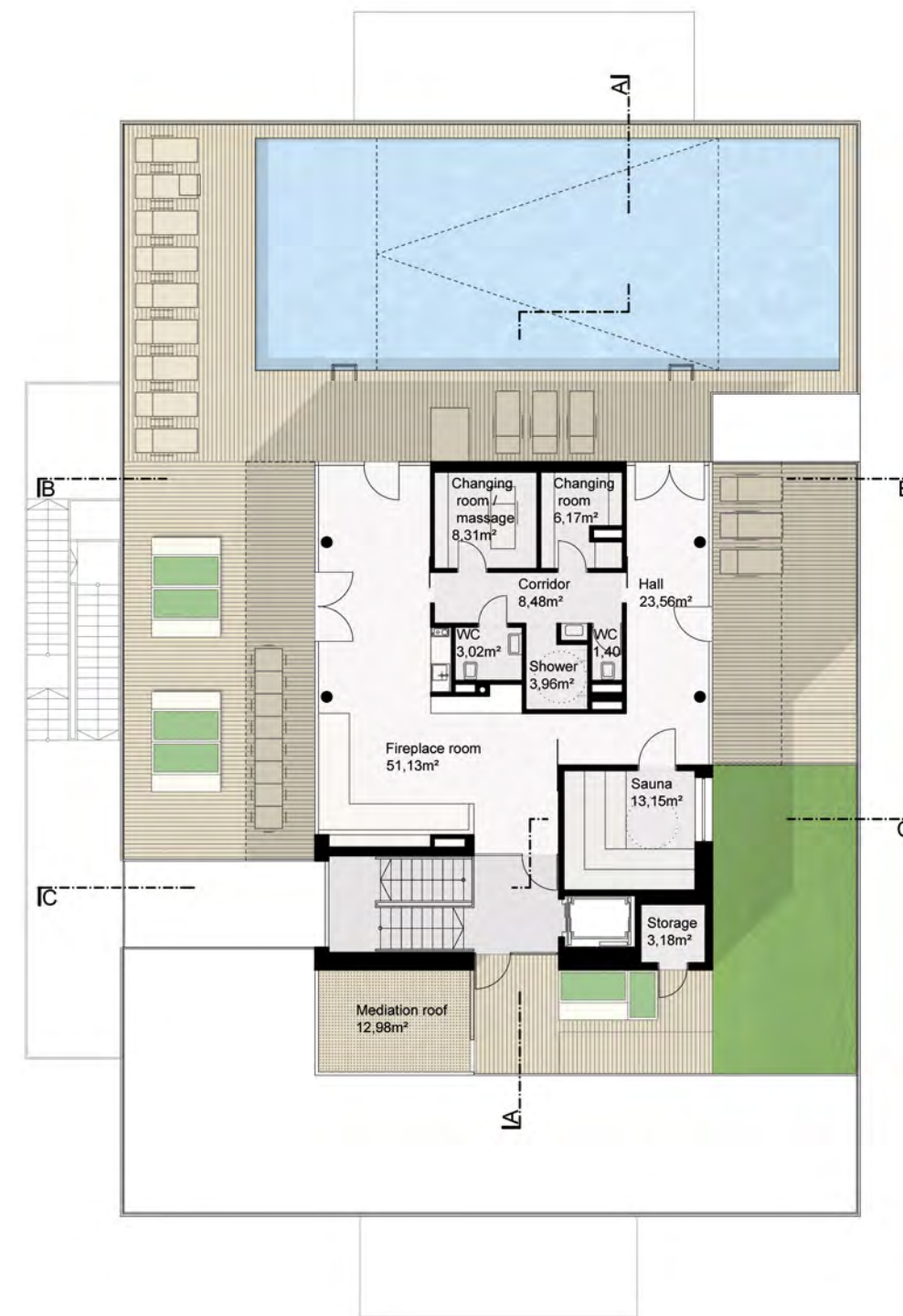
5.8.7 FLOOR PLAN: 6TH - 8TH FLOOR



6TH FLOOR M 1:200



7TH FLOOR M 1:200



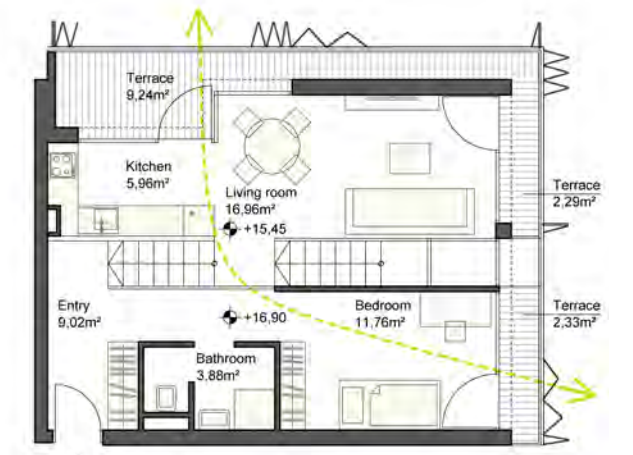
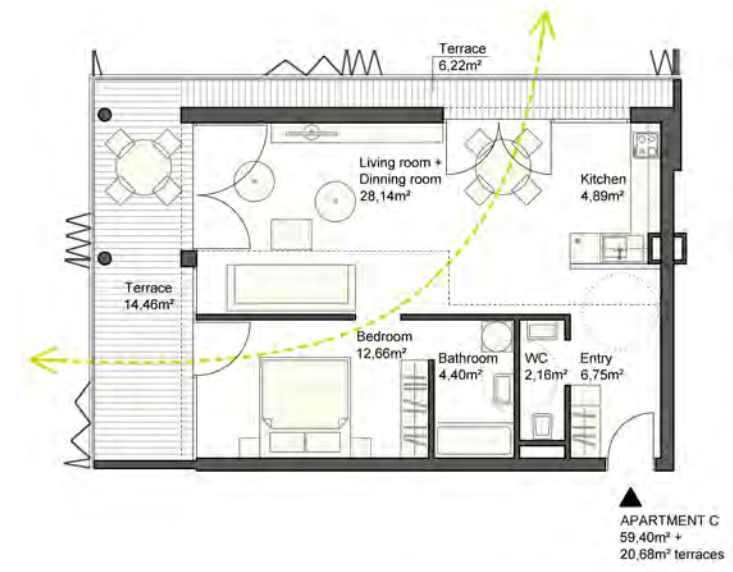
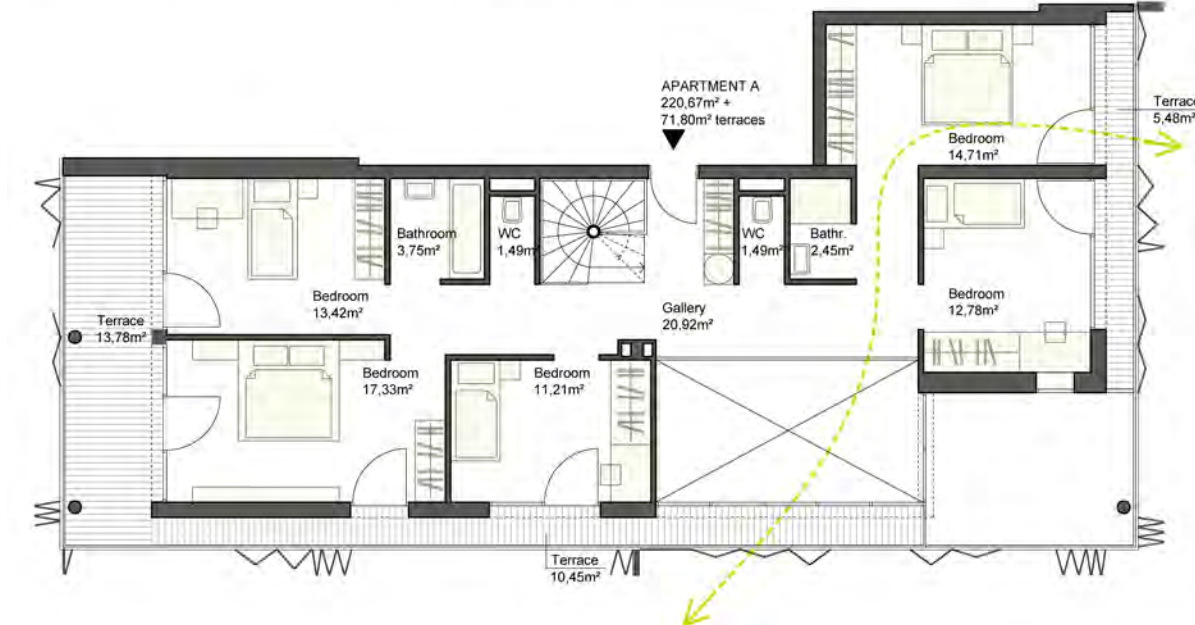
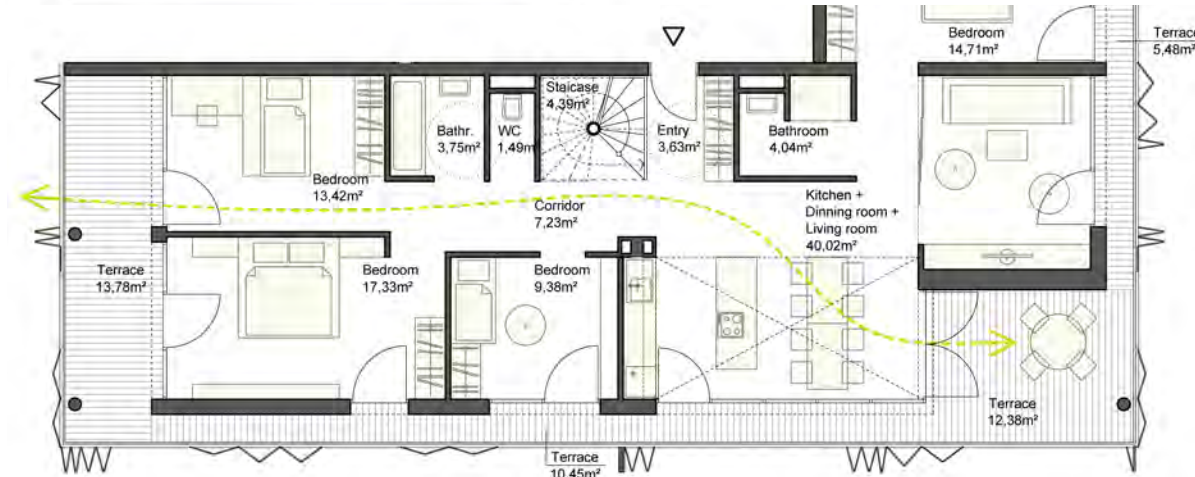
8TH FLOOR M 1:200

- Flexible apartment units
- Apartments
- Terraces
- Common area
- Allotments
- Swimming pool



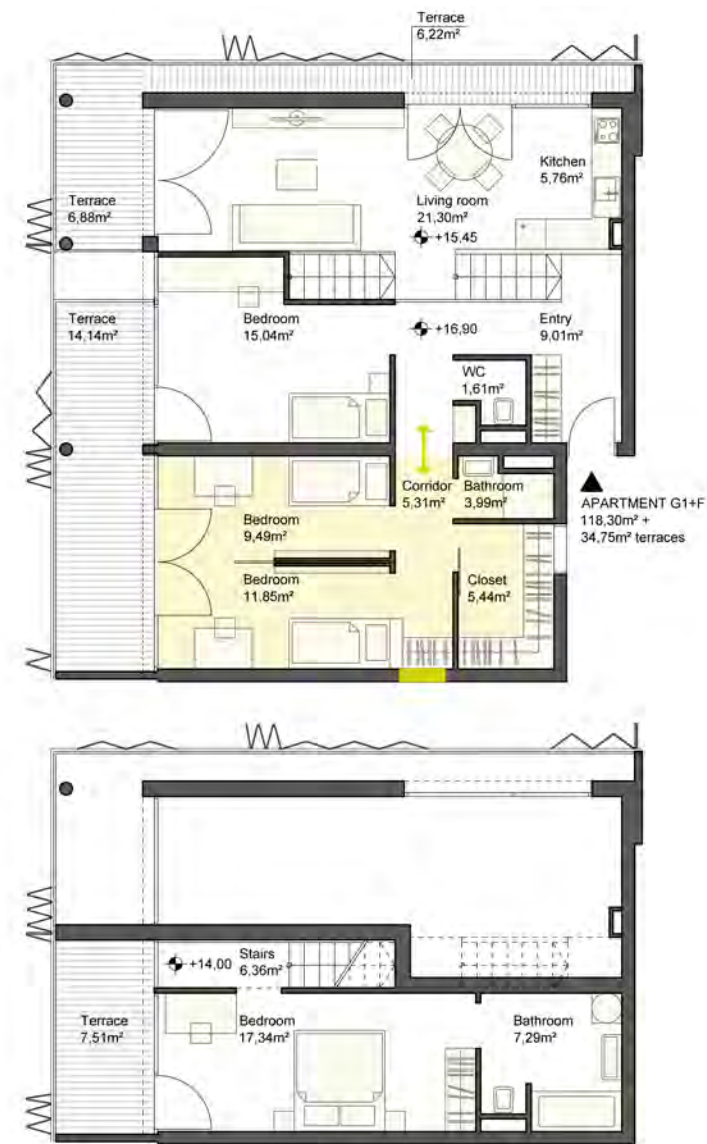


5.8.8 APARTMENT TYPES

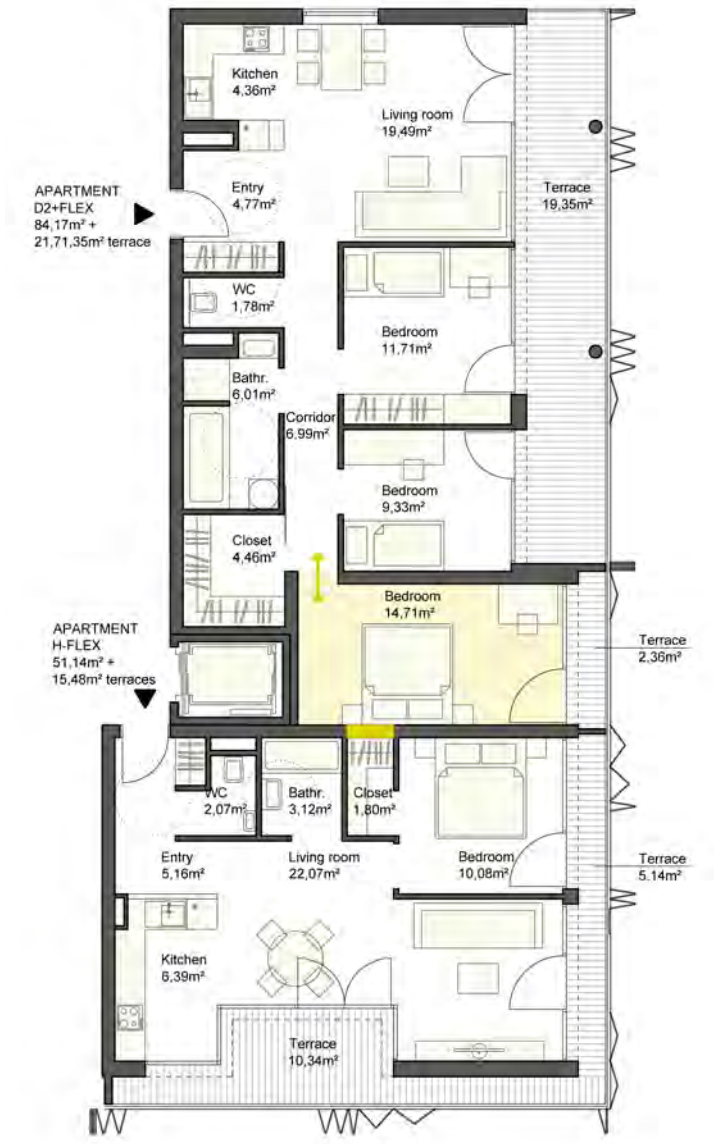
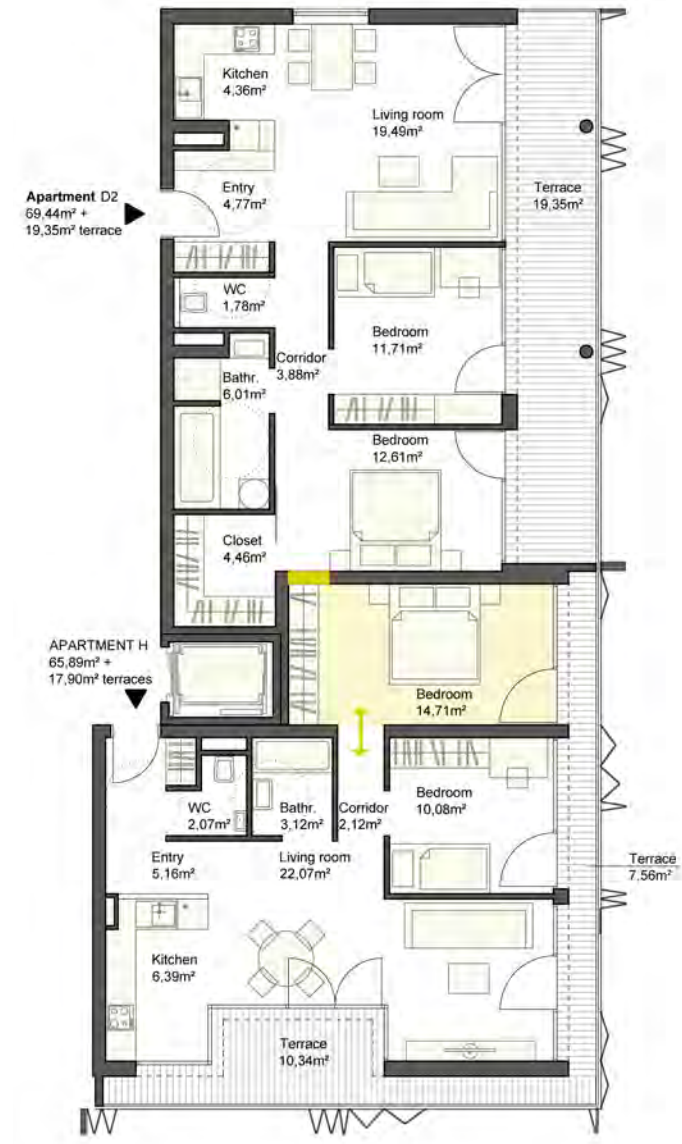
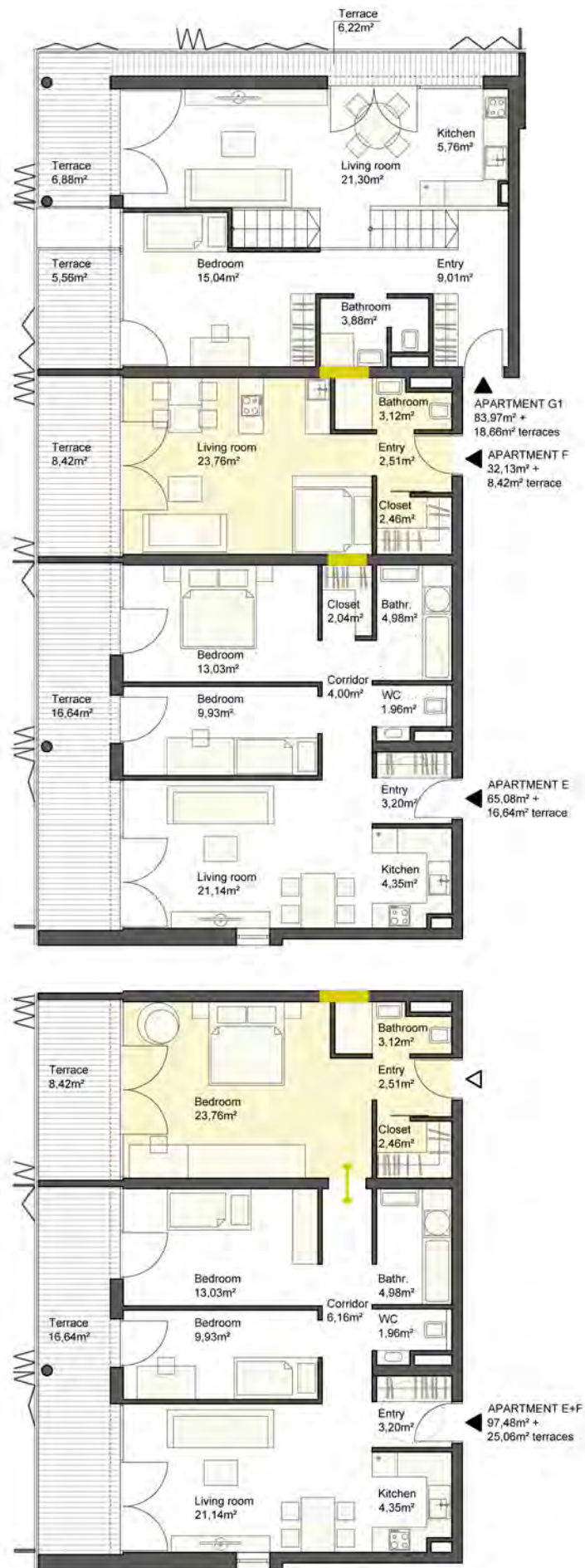




5.8.9 FLEXIBILITY OF APARTMENTS



Flexible apartment units









5.8.11 SECTION B-B





5.8.12 SECTION C-C



SECTION C-C M 1:200



FAÇADE

As the project offers a wide variety of different uses and typologies, it was a challenge to give it a comprehensible façade. To give the building a homogenous envelope a system of folding elements was introduced. They serve as shutters and create a visibility filter between the public and private domain.







SOUTH-WEST ELEVATION M 1:200



NORTH-WEST ELEVATION M 1:200











## 5.9 EVALUATION STATISTICS

### EDUCATIONAL FACILITY

Age of the pupils:.....0 - 10 years  
 Number of pupils:.....max. 170  
 Number of groups  
 • Toddlers (0-3 years).....1 group (20 children)\*  
 Kindergarten (3-6 years).....2 groups (2 x 25 children)  
 • School (6-10 years).....4 groups (4 x 25 children)  
 • Number of teachers.....min. 14

Usable area of:  
 • learning areas and spaces used exclusively by the educational facility.....1022 m<sup>2</sup>  
 • common zone adjacent to school (2/3 share of the area).....346 m<sup>2</sup>  
 • common zone adjacent to housing (1/3 share of the area).... 46 m<sup>2</sup>  
 • traffic area and other use.....128 m<sup>2</sup>  
 Total.....1542 m<sup>2</sup>

Outdoor space:  
 • school terraces.....123 m<sup>2</sup>  
 • semi-private yard\*\*.....839 m<sup>2</sup>  
 • roof terraces (1/3 share of the area).....96 m<sup>2</sup>  
 Total.....1058 m<sup>2</sup>

### HOUSING

Number of apartments:  
 • 1 room-apartment:.....1  
 • 2 room-apartment:.....7  
 • 3 room-apartment:.....8  
 • 4 room-apartment:.....6  
 • shared apartment:.....1 (9 rooms)  
 Total.....23

Usable area of:  
 • private apartments and spaces exclusively for housing purposes (incl. corridors).....1943 m<sup>2</sup>  
 • common zone adjacent to housing (2/3 share of the area)..... 92 m<sup>2</sup>  
 • common zone adjacent to school (1/3 share of the area).....173 m<sup>2</sup>  
 Total.....2207 m<sup>2</sup>

Outdoor space:  
 (excl. private terraces in the residential area)  
 • roof terraces (2/3 share of the area).....192,08 m<sup>2</sup>  
 Total.....192,08 m<sup>2</sup>

\* In case children with special needs are included, the number of teachers will increase and the number of children pro group might be altered.

CAFETERIA  
 Usable area of:  
 • cafeteria (accessible by the public), incl. the warming kitchen, toilets, etc. ....140 m<sup>2</sup>  
 Total.....140 m<sup>2</sup>

TOTAL USABLE AREA..... 3890 m<sup>2</sup>

BUILT-UP AREA.....580 m<sup>2</sup>

TOTAL OUTDOOR AREA\*\*  
 (excl. private terraces in the residential area).....1250 m<sup>2</sup>

### COMPARISON WITH THE MINICAMPUS

In terms of the program and spatial requirements, the presented project is largely inspired by the Viennese Campus plus model and the Minicampus. The number of pupils and the size of the learning area basically correspond with the size of one BiBer in the Campus plus model. (see the section Viennese Campus models).

MINICAMPUS\*\*\*  
 Gross building area of:  
 Modul 1 - gym.....396,0 m<sup>2</sup>  
 Modul 2 - BiBer 1.....1572,2 m<sup>2</sup>  
 Modul 3 - BiBer 2.....1572,2 m<sup>2</sup>  
 Modul 4 - Area for toddlers.....392,0 m<sup>2</sup>  
 Other.....120,0 m<sup>2</sup>  
 Total.....4052,4 m<sup>2</sup>

\*\* The semi-private yard is shared with the other mini-school on the estate.

\*\*\* as suggested in the presentation by Mischek-Lainer

## 6 CONCLUSION

In this thesis I developed an alternative for the learning landscape in the Urban Lakeside Aspern. After introducing a model of a network of learning spaces I designed a prototype of a hybrid typology building. In my design project I combined a small educational institution with a co-housing apartment building, while these two share common spaces. By studying relevant literature, built and unbuilt examples presented in the theoretical part of the thesis, and designing an own prototype I recognized some strengths, weaknesses, opportunities and threats of the implementation of a network of small schools into the residential neighborhood and combining residential and educational functions in one building.

### STRENGTHS

- The model allows an attractive use of the ground floor and subsequently increases the quality of the neighborhood.
- It proposes an effective way of sharing spatial and material resources by both the school and the residents.
- It makes education a vital and visible part of city life. The appeal and accessibility of education can thus be increased. This could be especially encouraging for students who dropped out to continue their education and for adults to keep learning.
- The proposed model fosters movement and active use of public and semi-public space.
- Movement and partaking in public life encourages social contacts. This could result in more natural control over the common space and facilities.
- The presence of a facility used on a daily basis increases the natural social control in the otherwise residential area.

### WEAKNESSES AND THREATS

- The project requires high level of engagement in initial negotiation, governing and further appropriation from all involved parties.
- The concept places demands on the supervision duty of underage children by the pedagogical staff.

### CHALLENGES

- It is a design challenge to enable the appropriate communication of the learning spaces with the street level. Even a brief glimpse at the existing kindergartens that occupy ground floors in Vienna shows their reluctance to communicate with the street. Their windows are very often covered with translucent foil or some kind of solid filter in order to provide more intimate environment inside and protect children and the pedagogical staff from being seen. It is therefore desirable to let group rooms or spaces for concentrated work face semi-private outer spaces (e.g. the garden or inner courtyard). Rooms for social encounters, food consumption and movement are more suitable to face the street.
- A huge challenge is to provide safe space for children and yet at the same not to fence off the whole area but allow it to stay open.
- The process of the initial negotiation and management of the different stakeholders might be challenging.

I see my project as an attempt to bring an innovative approach in the field of school design in residential areas. Its potential implementation after recognizing its strengths, weaknesses, and challenges, should be subject to further research by urban planners, educational specialists, and social scientists.



## 7 BIBLIOGRAPHY

- AFAZEL, NEDA. Projekt In Sonneweniertel - Bilder Und Daten Für Diplomarbeit. 2014. E-mail.
- AHH.NL. 'De Eilanden Primary School'. Web. 5 Mar. 2015. <[http://www.ahh.nl/index\\_en.html](http://www.ahh.nl/index_en.html)>
- AHH.NL. 'Neighbourhood Centre, "Slingentouw" Waterrijk, Eindhoven, The Netherlands'. Web. 5 Mar. 2015. <[http://www.ahh.nl/index\\_en.html](http://www.ahh.nl/index_en.html)>
- AHH.NL. 'Schalkwijk Extended School, Haarlem, The Netherlands'. Web. 5 Mar. 2015. <[http://www.ahh.nl/index\\_en.html](http://www.ahh.nl/index_en.html)>
- ARCHDAILY. 'Osdorp Multi-Functional School / Mecanoo'. N.p., 2011. Web. 5 Mar. 2015. <<http://www.archdaily.com/137217/osdorp-multi-functional-school-mecanoo/>>
- ARCHELLO.COM. 'Mecanoo - Project - Multifunctional Centre And Housing Osdorp - Image-1'. Web. 5 Mar. 2015. <<http://www.archello.com/en/project/multifunctional-centre-and-housing-osdorp/image-1>>
- ARCHITECTUREGUIDE.NL. 'Community School De Matrix, Marlies Rohmer, Hardenberg'. Web. 5 Mar. 2015. <[http://www.architectureguide.nl/project/list\\_projects\\_of\\_architect/arc\\_id/1924/prj\\_id/2093](http://www.architectureguide.nl/project/list_projects_of_architect/arc_id/1924/prj_id/2093)>
- ARCHITECTUURHAARLEM.NL. 'Brede School Meerwijk'. Web. 5 Mar. 2015. <<http://www.architectuurhaarlem.nl/node/1040>>
- ARCHITECTUUR LOKAAL. 'Kulturhus De Brede Blik Giesbeek'. Web. 5 Mar. 2015. <<http://arch-lokaal.nl/wp-content/uploads/2012/02/GiesbeekKulturhus-De-Brede-Blik.pdf>>
- ARCH-LOKAAL.NL. 'Slimme School Het Meesterwerk Almere'. Web. 5 Mar. 2015. <<http://arch-lokaal.nl/wp-content/uploads/2012/02/AlmereSlimme-school-Het-Meesterwerk.pdf>>
- ATELIER PRO. 'Lorentz School'. Web. 5 Mar. 2015. <<http://www.atelierpro.nl/en/projects/50/3>>
- ATELIER PRO. 'Multifunctional Community School De Statie, Sas Van Gent'. Web. 5 Mar. 2015. <<http://www.atelierpro.nl/en/projects/13/4#VRC4yfnF-9U>>
- ATELIER PRO. 'Multifunctional Community School Huis Van De Heuvel'. Web. 5 Mar. 2015. <[http://www.atelierpro.nl/en/projects/8/multifunctional\\_school\\_huis\\_vande\\_heuvel](http://www.atelierpro.nl/en/projects/8/multifunctional_school_huis_vande_heuvel)>
- ATELIER PRO. 'Multifunctional Community School Zuiderkwartier'. Web. 5 Mar. 2015. <<http://www.atelierpro.nl/en/projects/27/13>>
- ATELIER PRO. 'Nelson Mandela School and Houses'. Web. 5 Mar. 2015. <<http://www.atelierpro.nl/en/projects/6/1#VRC3ivnF-9U>>
- ATELIER PRO. 'Vensterschool'. atelier PRO. Web. 5 Mar. 2015. <[http://www.atelierpro.nl/en/projects/94/vensterschool#VPRdb\\_nF-9U](http://www.atelierpro.nl/en/projects/94/vensterschool#VPRdb_nF-9U)>
- BNA GEBOUW VAN HET JAAR 2012. 'MFA Brede School Esse Zoom Met 52 Woningen'. Web. 5 Mar. 2015. <[http://gebouwwanhetjaar.nl/prijvraag/preview.php?prijsvraag\\_name=prijsvraag17&id=2525](http://gebouwwanhetjaar.nl/prijvraag/preview.php?prijsvraag_name=prijsvraag17&id=2525)>
- BRANDL, FREYA, AND ERNST GRUBER. Gemeinschaftliches Wohnen In Wien, Bedarf Und Ausblick. Vienna: Magistratabteilung 50, 2014. Web. 3 Mar. 2015.
- BROEKHUIZEN, DOLF. 'Build educational centres, not schools'. Contemporary Dutch School Architecture. Ton Verstegen and Dolf Broekhuizen. 1st ed. Rotterdam: NAI, 2008: 16 - 73. Print.
- BROT-ASPERN.AT. 'Presstext'. Web. 5 Mar. 2015. <<http://www.brot-aspern.at/downloads/20120804%20Presstext%20.txt>>
- BROT-VERBAND.AT. 'Verband Der Gemeinschaft B.R.O.T.'. Web. 5 Mar. 2015. <<http://www.brot-verband.at/>>
- BUHREN, CLAUS G. Community Education. Munster: Waxmann, 1997:7 - 34. Print.
- CITA.NL. 'Brede School Met Woningen Esse Zoom'. Web. 5 Mar. 2015. <<http://cita.nl/images/pdf/Mfa-Essezooom.pdf>>
- CITA.NL. 'Multifunctioneel Centrum Nesselände'. Web. 5 Mar. 2015. <<http://cita.nl/images/pdf/Mfa-Nesselände.pdf>>
- DATARCHITECTEN.NL. 'Balade, Waalwijk, 2004'. Web. 5 Mar. 2015. <<http://www.datarchitecten.nl/#/projecten/balade/>>
- DATARCHITECTEN.NL. 'Boschkens, Goirle, 2006'. Web. 5 Mar. 2015. <<http://www.datarchitecten.nl/#/projecten/boschkens/>>
- DATARCHITECTEN.NL. 'Pannenhoeft, Kaatsheuvel, 2003'. Web. 5 Mar. 2015. <<http://www.datarchitecten.nl/#/projecten/pannenhoeft/>>
- DUDEK, MARK. Architecture Of Schools. Oxford: Architectural Press, 2000. Print.
- ECOLA-AWARD.EU. 'Wohnhof Orasteig Wien | ECOLA'. Web. 5 Mar. 2015. <<http://www.ecola-award.eu/en/project/nb/wohnhof-orasteig-wien>>
- EINSZUEINS. 'Wohnprojekt Wien'. Web. 5 Mar. 2015. <<http://www.einszueins.at/project/wohnprojekt-wien/>>
- FÖRSTER, WOLFGANG. '80 years of social housing in Vienna'. Wien. gv.at. N.p., N.d. Web. 3 Mar. 2015.
- FRAUENWOHNPROJEKT.ORG. 'Wohnungstypen Und Gemeinschaftseinrichtungen'. Web. 5 Mar. 2015. <<http://www.frauenwohnprojekt.org/>>
- GEZONDESCHOLEN.EU. 'Brede School De Matrix'. Web. 5 Mar. 2015. <[http://www.gezondeschole.nl/sites/default/files/marlies\\_rohmer\\_-\\_brede\\_school\\_de\\_matrix\\_hardenberg.pdf](http://www.gezondeschole.nl/sites/default/files/marlies_rohmer_-_brede_school_de_matrix_hardenberg.pdf)>
- GIEDION, SIEGFRIED. Walter Gropius. Stuttgart: Hatje, 1954. Print.
- GROENENDIJK, PAUL. 'The School As Community And Neighborhood Centre'. Contemporary Dutch School Architecture. Ton Verstegen and Dolf Broekhuizen. 1st ed. Rotterdam: NAI, 2008: 186-241. Print.
- HAAS, DIRK. Leitlinien Für Leistungsfähige Schulbauten In Deutschland. Berlin: BDA, 2013. Print.
- HEGGER, MANFRED, WOLFGANG POHL, AND STEPHAN REISS-SCHMIDT. Vitale Architektur. Braunschweig: F. Vieweg, 1988. Print.
- HERTZBERGER, HERMAN. Space And Learning. Rotterdam: 010 Publishers, 2008. Print.
- HEVO.NL. 'Brede School Boechorst Noordwijk'. Web. 5 Mar. 2015. <<http://www.hevo.nl/nl/referenties/referenties.aspx?itemID=72>>
- HEVO.NL. 'Brede School Meerwijk Haarlem'. Web. 5 Mar. 2015. <<http://www.hevo.nl/nl/referenties/referenties.aspx?itemID=23>>
- HM.NL. 'BICKERSHOEK AMSTERDAM'. Web. 5 Mar. 2015. <<http://www.hm.nl/projecten/wonen-/bickershoek-amsterdam.aspx>>
- HUTCHINS, ROBERT C. 'School Options In Philadelphia: Their Present And Future'. Educational Leadership 1974.11 (2015): 88-91. Web. 25 Feb. 2015. <[http://www.ascd.org/ASCD/pdf/journals/ed\\_lead/el\\_197411\\_hutchins.pdf](http://www.ascd.org/ASCD/pdf/journals/ed_lead/el_197411_hutchins.pdf)>
- ILLICH, IVAN. Deschooling Society. New York: Harper & Row, 1971. Web.18. March 2015.
- IMHÄUSER, KARL-HEINZ. Schulen Planen Und Bauen. Berlin: Jovis, 2012. Print.
- JASPERN.AT. 'Die Idee Jaspers'. Web. 5 Mar. 2015. <<http://www.jaspers.at/idee/>>
- JEFFS, TONY. Henry Morris. Nottingham: Educational Heretics Press, 1998. Print.
- JOCHER, THOMAS. Raumpilot Grundlagen. Stuttgart; Zürich: Krämer, 2010. Print.
- KÄHLER, GERT. 'Schule - Stadt - Öffentlichkeit'. Schulen in Deutschland . Neubau und Revitalisierung. Wüstenrot Stiftung. 1st ed. Stuttgart + Zürich: Krämer, 2004: 230 - 245. Print.
- LARZBOUWKUNST.NL. 'Spilcentrum'. Web. 5 Mar. 2015. <<http://larzbouwkunst.nl/spilcentrum-eindhoven.html>>
- LAV-A.EU. 'Lava'. Web. 5 Mar. 2015. <<http://www.lav-a.eu/project/0702boc>>
- LEDERER, ARNO. Raumpilot Lernen. Stuttgart ; Zürich: Krämer, 2010. Print.
- LEEB, FRANZISKA. 'Intercultural Housing, Vienna - Achieving More Together'. Architektur aktuell 2014: 104 - 115. Print.
- MECANOO.NL. 'Osdorp Mixed-Use Centre And Housing'. Web. 5 Mar. 2015. <<http://www.mecanoo.nl/Projects/project/46/Osdorp-Mixed-use-Centre-and-Housing?t=6>>
- MEYER-BOHE, WALTER. Zentren. Stuttgart: Koch, 1981. Print.
- MISCHEK-LAINER, MICHAELA. 'Der Minicampus'. 2014. Presentation.
- NAI. 'Netherlands Architecture Institute - Item - 'Het Karregat' Community Center In Eindhoven'. Web. 27 Feb. 2015.
- NEXTRROOM.AT. 'Frauenwohnprojekt [Ro\*Sa] Donaustadt, Koeb & Pol-lak - Wien (A) - 2009'. Web. 5 Mar. 2015. <<http://www.nextroom.at/building.php?id=33374>>
- NIERMEIJER, JOOST. Information About The Projects Open Wijk And Brede School De Matrix For A Thesis. 2014. E-mail.
- OECD. Designing For Education: Compendium Of Exemplary Educational Facilities 2011. OECD Publishing, 2011: 163-165. Print.
- POS-ARCHITECTURE.COM. 'Jaspers, Generalplanung Für Eine Baugruppe In Der Seestadt Aspern, Wien'. Web. 5 Mar. 2015. <<http://www.pos-architecture.com/>>
- PPAG ARCHITECTS. 'Wohnhof Orasteig - PPAG Architects'. Web. 5 Mar. 2015. <<http://www.ppag.at/projects/wohnhof-orasteig/>>
- RASTL - KIRCHER, ROBERTA, AND MICHAELA MOSER. 'Wohnprojekt Wien - Keimzelle Für Nachhaltiges Urbanes Leben'. zoll + 2012: 20-23 Print.
- ROHMER.NL. 'Community School The Matrix'. Web. 5 Mar. 2015. <<http://www.rohmer.nl/en/project/brede-school-de-matrix/>>
- ROHMER.NL. 'Open Wijk School De Combinatie'. Web. 5 Mar. 2015. <<http://www.rohmer.nl/en/project/open-wijk-school-de-combinatie/>>
- SARGFABRIK.AT. 'Die Sargfabrik - Das Projekt'. Web. 5 Mar. 2015. <<http://www.sargfabrik.at/>>
- SCHATTOVITS, HELMUTH. 'Idea And Realisation Of The B.R.O.T. Community Concept'. brot-verband.at. N.p., 2010. Web. 5 Mar. 2015. <[http://www.brot-verband.at/pdf/BROT\\_IdeeuEnt-eng.pdf](http://www.brot-verband.at/pdf/BROT_IdeeuEnt-eng.pdf)>
- SCHATTOVITS, HELMUT. 'The B.R.O.T. - Hernals community - A realistic model'. brot-verband. N.p., 2009. Web. 28 Feb. 2015.
- SCHÄTZKE, ANDREAS, ILZE MUELLER, AND MEIKE SCHULTZ. Deutsche Architekten In Grossbritannien: Planen Und Bauen Im Exil 1933-1945 = German Architects In Great Britain : Planning and Building In Exile 1933-1945. Stuttgart/London: Axel Menges, 2013. Print.



SCHOLENBOUWEN.BE. 'De Eilanden' Montessori School Amsterdam Herman Hertzberger'. Web. 5 Mar. 2015. <<http://www.scholenbouwen.be/sites/default/files/pdf/projects/amsterdam-ms-deeilandeneng.pdf>>

SCHOLENBOUWEN.BE. 'Primary School Lozen'. Web. 5 Mar. 2015. <<http://www.scholenbouwen.be/sites/default/files/pdf/projects/dbebo-choltvbslozenen.pdf>>

SCHOOL WITHOUT WALLS OF WASHINGTON, DC - Home & School Association. 'Our History'. Web. 18 Mar. 2015. <<http://www.sw-whs.org/about-us/our-history/>>

SMITH, MARK K., AND TONY JEFFS. 'Henry Morris, Village Colleges And Community Schools'. the informal education homepage, 1998. Web. 25 Feb. 2015. <<http://infed.org/mobi/henry-morris-village-colleges-and-community-schools/>>

SMITH, MARK K. 'Community Schools And Community Schooling'. the encyclopaedia of informal education, 1996, 2010. Web. 25 Feb. 2015. <<http://infed.org/mobi/community-schools-and-community-schooling/>>

SMITH, MARK K. 'Viewing Impington - Henry Morris And The Idea Of The Village College'. the informal education homepage, 1997, 2007. Web. 25 Feb. 2015. <<http://infed.org/mobi/viewing-impington-henry-morris-and-the-idea-of-the-village-college/>>

SOVIESO.AT. 'So.Vie.So - Mitbestimmt > Sonnwendviertel Solidarisch'. Web. 5 Mar. 2015. <<http://www.sovieso.at/>>

STROOM.NL. 1 'United We'. N.p., N.d. Web. 25 Feb. 2015. <[http://www.stroom.nl/activiteiten/tentoonstelling.php?t\\_id=4256084](http://www.stroom.nl/activiteiten/tentoonstelling.php?t_id=4256084)>

STROOM.NL. 2 'United We: Frank van Klingeren'. N.p., N.d. Web. 25 Feb. 2015. <[http://www.stroom.nl/paginas/pagina.php?pa\\_id=5693565](http://www.stroom.nl/paginas/pagina.php?pa_id=5693565)>

SVP-SVP.NL. 'SVP Architectuur En Stedenbouw - Almere Slimme School'. Web. 5 Mar. 2015. <<http://www.svp-svp.nl/index.php/almere-slimmeschool#.U8P7ZPmSx8E>>

SVP-SVP.NL. 'SVP Architectuur En Stedenbouw - Noordwijk Brede School'. Web. 5 Mar. 2015. <<http://www.svp-svp.nl/index.php/noordwijk-brede-school#.U8UD5fmSx8E>>

SVP-SVP.NL. 'SVP Architectuur En Stedenbouw - Vianen Brede School De Prenter'. Web. 5 Mar. 2015. <<http://www.svp-svp.nl/index.php/vianen-brede-school-de-prenter#.VPiJo3yG8rU>>

TEMEL, ROBERT. Baugemeinschaften In Der Wiener Seestadt Aspern. Wien: Magistratsabteilung 50, 2012. Web. 25 Feb. 2015. <[http://www.wohnbauforschung.at/Downloads/LF\\_Baugemeinschaften\\_Aspen.pdf](http://www.wohnbauforschung.at/Downloads/LF_Baugemeinschaften_Aspen.pdf)>

VAN VELSEN, JOB. 'Brede School: All-Day Community School'. N.p., N.d. Web. 25 Feb. 2015. <[http://www.eunec.eu/sites/www.eunec.eu/files/event/attachments/all-day\\_community\\_school\\_netherlands.pdf](http://www.eunec.eu/sites/www.eunec.eu/files/event/attachments/all-day_community_school_netherlands.pdf)>

VERSTEGEN, TON. 'A tradition of change'. Contemporary Dutch School Architecture. Ton Verstegen and Dolf Broekhuizen. 1st ed. Rotterdam: NAI, 2008: 8 - 15. Print.

WIEN.GV.AT. "'Campus Plus" Für Gemeinsame Kindergärten Und Schulen'. Web. 25 Feb. 2015. <<http://www.wien.gv.at/bildung-forschung/campus-neu.html>>

WIETZORREK, ULRIKE. Wohnen+. Basel: Birkhäuser, 2014. 178 - 183. Print.

WIN4WIEN.AT. 'Sonnwendviertel Projektbeschreibung'. Web. 5 Mar. 2015. <[http://www.win4wien.at/projekte/sonnwendviertel\\_1Projekt.aspx](http://www.win4wien.at/projekte/sonnwendviertel_1Projekt.aspx)>

WOFFORD, JOAN, AND JOANNE ROSS. 'Philadelphia's Parkway Program: An Evaluation'. Eric.ed.gov. N.p., 1973. Web. 25 Feb. 2015. <<http://eric.ed.gov/?id=ED075534>>

WOHNPROJEKT-WIEN.AT. 'Verein Für Nachhaltiges Leben'. Web. 5 Mar. 2015. <<http://www.wohnprojekt-wien.at/>>

WOHN\_ZIMMER Sonnwendviertel. 'Wohn\_Zimmer Sonnwendviertel'. Web. 5 Mar. 2015. <<http://wohnzimmer.wien>>

ZIEGEL.AT. 'Dr. Robert Korab: Wohnhof Orasteig'. Web. 5 Mar. 2015. <<http://www.ziegel.at/de/newsdetails/54>>

ZOLLER, DORIS. 'Räumliche Übergänge'. Wohnen +. Ulrike Wietzorrek. 1st ed. Basel: Birkhäuser, 2014: 178 - 183. Print.

## 8 ILLUSTRATION CREDITS

### 2.2.1 IMPINGTON VILLAGE COLLEGE

Photos: from the book - Giedion, Siegfried. *Walter Gropius*. Stuttgart: Hatje, 1954: 130. Print.

Floor plan: from the book - Schätzke, Andreas, Ilze Mueller, and Meike Schultz. *Deutsche Architekten in Grossbritannien: Planen Und Bauen Im Exil 1933-1945 = German Architects in Great Britain : Planning and Building in Exile 1933-1945*. Stuttgart/London: Axel Menges, 2013:90. Print.

### 2.3 MULTIFUNCTIONAL CENTRES IN THE NETHERLANDS

Painting: *The Battle between Carnival and Lent* by Jan van Brueghel from the book - Hegger, Manfred, Wolfgang Pohl, and Stephan Reiss-Schmidt. Vitale Architektur. Braunschweig: F. Vieweg, 1988.: 98 Print.

Photo: from the book - Hegger, Manfred, Wolfgang Pohl, and Stephan Reiss-Schmidt. *Vitale Architektur*. Braunschweig: F. Vieweg, 1988.: 100 Print.

### 2.3.1 HET KARREGAT

Photos:

1,3 are from the book - Meyer-Bohe, Walter. *Zentren*.

Stuttgart: Koch, 1981: 98, 101. Print.

2 <http://www.archined.nl/nieuws/2013/juni/frank-van-klingeren-en-de-actuele-roep-om-collectiviteit/> (5 Mar. 2015)

Drawings: from the book - Meyer-Bohe, Walter. *Zentren*. Stuttgart: Koch, 1981: 99. Print.

### 2.4 CURRENT CONCEPTS IN THE NETHERLANDS

#### 2.4.2 EXAMPLES

##### SPT VENSTERSCHOOL, GRONINGEN

Map: <https://www.google.com> (5 Mar. 2015)

Graphics and photos: [http://www.atelierpro.nl/en/projects/94/vensterschool#.VPRdb\\_nF-9U](http://www.atelierpro.nl/en/projects/94/vensterschool#.VPRdb_nF-9U) (5 Mar. 2015)

##### DE EILANDEN, AMSTERDAM

Map: <http://www.bing.com/maps/> (5 Mar. 2015)

Graphics:

2nd floor: <http://www.hm.nl/projecten/wonen-/bickershoek-amsterdam.aspx>

the rest: <http://www.scholenbouwen.be/sites/default/files/pdf/projects/amsterdam-ms-de-eilandeneng.pdf> (5 Mar. 2015)

Photos: <http://www.scholenbouwen.be/sites/default/files/pdf/projects/amsterdam-ms-de-eilandeneng.pdf> (5 Mar. 2015)

##### KULTURHUS DE BREDE BLIK, GIESBEEK

Map: <http://www.bing.com/maps/> (5 Mar. 2015)

Graphics: from the book - Groenendijk, Paul. 'The School As Community And Neighborhood Centre'. *Contemporary Dutch School Architecture*. Ton Verstegen and Dolf Broekhuizen. 1st ed. Rotterdam: NAI, 2008: 206-209. Print.

Photos: . <http://arch-lokaal.nl/wp-content/uploads/2012/02/GiesbeekKulturhus-De-Brede-Blik.pdf> (5 Mar. 2015)

##### HET MEESTERWERK, ALMERE

Map: <https://www.google.com> (5 Mar. 2015)

Graphics and photos: <http://www.svp-svp.nl/index.php/almere-slimme-school#.VRCw2PnF-9U> (5 Mar. 2015)

##### NESSELANDE BROAD SCHOOL, ROTTERDAM

Map: <http://www.bing.com/maps/> (5 Mar. 2015)

Graphics and photos: <http://cita.nl/images/pdf/Mfa-Nesselande.pdf> (5 Mar. 2015)

##### PANNENHOEF, KAATSHEUVEL

Map: <http://www.bing.com/maps/>

Graphics and photos: <http://www.dataarchitecten.nl/#/projecten/pannenhoef/> (5 Mar. 2015)

##### DE MATRIX, HARDENBERG

Map: <http://www.bing.com/maps/> (5 Mar. 2015)

Graphics and photos: [http://www.gezondescholen.eu/sites/default/files/marlies\\_rohmer\\_-\\_brede\\_school\\_de\\_matrix\\_hardenberg.pdf](http://www.gezondescholen.eu/sites/default/files/marlies_rohmer_-_brede_school_de_matrix_hardenberg.pdf) (5 Mar. 2015)

##### BREDE SCHOOL SCHALKWIJK, HAARLEM

Map: <http://www.bing.com/maps/> (5 Mar. 2015)

Graphics and photos: [http://www.ahh.nl/index\\_en.html](http://www.ahh.nl/index_en.html) (5 Mar. 2015)

##### LORENTZ SCHOOL, LEIDEN

Map: <https://www.google.com> (5 Mar. 2015)

Graphics: from the book - OECD. *Designing For Education: Compendium Of Exemplary Educational Facilities 2011*. OECD Publishing, 2011: 163-165. Print.

Scheme and photos: <http://www.atelierpro.nl/en/projects/50/3> (5 Mar. 2015)

##### MFS ZUIDERKWARTIER, TILBURG

Map: <http://www.bing.com/maps/> (5 Mar. 2015)

Graphics and photos: <http://www.atelierpro.nl/en/projects/27/13> (5 Mar. 2015)

##### BALADE, WAALWIJK

Map: <http://www.bing.com/maps/> (5 Mar. 2015)

Graphics and photos: <http://www.dataarchitecten.nl/#/projecten/balade/> (5 Mar. 2015)

##### BREDE SCHOOL DE BOSCHKENS, GOIRLE

Map: <http://www.bing.com/maps/> (5 Mar. 2015)

Graphics and photos: <http://www.dataarchitecten.nl/#/projecten/boschkens/> (5 Mar. 2015)

##### MFC AND HOUSING OSDORP, AMSTERDAM

Map: <http://www.bing.com/maps/> (5 Mar. 2015)

Photos: <http://www.mecanoo.nl/Projects/project/46/Osdorp-Mixed-use-Centre-and-Housing?t=6> (5 Mar. 2015)

##### OPEN WIJK, VLISSINGEN

Map: <https://www.google.com> (5 Mar. 2015)

Graphics: courtesy Architectenbureau Marlies Rohmer

Photos: facade section: courtesy Architectenbureau Marlies Rohmer

the rest: <http://www.rohmer.nl/en/project/open-wijk-school-de-combinatie/> (5 Mar. 2015)

##### SLINGENTOUW, WATERRIJK

Map: <http://www.bing.com/maps/> (5 Mar. 2015)

Graphics: [http://www.ahh.nl/index\\_en.html](http://www.ahh.nl/index_en.html) (5 Mar. 2015)

Photos: model: <http://larzbouwkunst.nl/spilcentrum-eindhoven.html> (5 Mar. 2015)

the rest: [http://www.ahh.nl/index\\_en.html](http://www.ahh.nl/index_en.html) (5 Mar. 2015)



#### BREDE SCHOOL ESSE ZOOM

Map: <http://www.bing.com/maps/> (5 Mar. 2015)

Graphics and photos: <http://cita.nl/images/pdf/Mfa-Essezoom.pdf> (5 Mar. 2015)

#### MFA NELSON MANDELA, GOUDA

Map: <http://www.bing.com/maps/> (5 Mar. 2015)

Graphics and photos: <http://www.atelierpro.nl/en/projects/6/1#.VRC3ivnF-9U> (5 Mar. 2015)

#### BREDE SCHOOL DE PRENETER, VIANEN

Map: <https://www.google.com> (5 Mar. 2015), own collage

Graphics and photos: <http://www.svp-svp.nl/index.php/vianen-brede-school-de-prenter#.VPiJo3yG8rU> (5 Mar. 2015)

#### NOORDWIJK BREDE SCHOOL, NOORDWIJK

Map: <http://www.bing.com/maps/> (5 Mar. 2015)

Graphics and photos: <http://www.svp-svp.nl/index.php/noordwijk-brede-school#.U8UD5fmSx8E> (5 Mar. 2015)

#### HUIS VAN DE HEUVEL, BREDA

Map: <http://www.bing.com/maps/> (5 Mar. 2015)

Graphics: [http://www.atelierpro.nl/en/projects/8/multifunctional\\_school\\_huis\\_vande\\_heuvel#.VRC4QvnF-9U](http://www.atelierpro.nl/en/projects/8/multifunctional_school_huis_vande_heuvel#.VRC4QvnF-9U) (5 Mar. 2015)

Photos: [http://www.atelierpro.nl/en/projects/8/multifunctional\\_school\\_huis\\_vande\\_heuvel#.VRC4QvnF-9U](http://www.atelierpro.nl/en/projects/8/multifunctional_school_huis_vande_heuvel#.VRC4QvnF-9U) (5 Mar. 2015)

#### PRIMARY SCHOOL LOZEN

Map: <http://www.bing.com/maps/> (5 Mar. 2015)

Graphics: <http://www.scholenbouwen.be/sites/default/files/pdf/projects/dbebocholtvbslozenen.pdf> (5 Mar. 2015)

Photos: <http://www.lav-a.eu/project/0702boc> (5 Mar. 2015)

#### DE STAATJE, SAS VAN GENT

Map: <https://www.google.com> (5 Mar. 2015)

Graphics: <http://www.atelierpro.nl/en/projects/13/4#.VRC4yfnF-9U> (5 Mar. 2015)

Photos: <http://www.atelierpro.nl/en/projects/13/4#.VRC4yfnF-9U> (5 Mar. 2015)

#### 4 CURRENT CONCEPTS IN THE NETHERLANDS

##### 4.2 EXAMPLES

###### SARGFABRIK

Map: <https://www.google.com> (5 Mar. 2015)

Graphics: from the book - ZOLLER, DORIS. 'Räumliche Übergänge'. *Wohnen +*. Ulrike Wietzorrek. 1st ed. Basel: Birkhäuser, 2014: 178 - 183. Print. (5 Mar. 2015)

Photos:

1 <http://www.wienweb.at/pictures/pict35/big/wg35579.jpg> (5 Mar. 2015)

2 [http://www.e-flux.com/wp-content/uploads/2013/04/170c5\\_april12\\_austrianculturalforum\\_img.jpg?b8c429](http://www.e-flux.com/wp-content/uploads/2013/04/170c5_april12_austrianculturalforum_img.jpg?b8c429) (5 Mar. 2015)

3 [https://c2.staticflickr.com/2/1299/534483805\\_3bd8528897.jpg](https://c2.staticflickr.com/2/1299/534483805_3bd8528897.jpg) (5 Mar. 2015)

###### [RO\*SA] DONAUSTADT

Map: <https://www.google.com> (5 Mar. 2015)

Graphics: KÖB & POLLAK Architektur <http://www.frauenwohnprojekt.org/wohnungstypen-und-gemeinschaftseinrichtungen> (5 Mar. 2015)

Photos:

1 [http://www.openhouse-wien.at/files/images/gebaeude/Frauenwohnprojekt/Frauenwohnprojekt%5Brosa%5D1-\(c\)DagmarFischer-OHW14.jpg](http://www.openhouse-wien.at/files/images/gebaeude/Frauenwohnprojekt/Frauenwohnprojekt%5Brosa%5D1-(c)DagmarFischer-OHW14.jpg) (5 Mar. 2015)

2 [http://www.openhouse-wien.at/files/images/gebaeude/Frauenwohnprojekt/Frauenwohnprojekt%5Brosa%5D2-\(c\)DagmarFischer-OHW14.jpg](http://www.openhouse-wien.at/files/images/gebaeude/Frauenwohnprojekt/Frauenwohnprojekt%5Brosa%5D2-(c)DagmarFischer-OHW14.jpg) (5 Mar. 2015)

3,4 <http://www.nextroom.at/building.php?id=33374> (5 Mar. 2015)

###### WOHNHOF ORASTEIG

Map: <https://www.google.com> (5 Mar. 2015)

Graphics and photos: ppag architects <http://www.ppag.at/projects/wohnhof-orasteig/> (5 Mar. 2015)

###### SO.VIE.SO. SONNWENDVIERTEL

Map: <http://www.detail.de/uploads/pics/Hauptbahnhof-Wien-170.jpg> (5 Mar. 2015)

Graphics and visualisations: s&s Architekten <http://www.sovieso.at/projekt/downloads.php> (5 Mar. 2015)

Photos: s&s Architekten <http://www.ss-plus.at/index4.html>

###### WOHNPROJEKT WIEN

Map: <https://www.google.com> (5 Mar. 2015), own collage

Graphics:

construction schemes: courtesy einzueins Architektur - <http://www.einszueins.at/project/wohnprojekt-wien/>

the rest: courtesy einzueins Architektur - <http://www.archello.com/en/project/co-housing-vienna>

Photos: @Herta Hurnaus, courtesy einzueins Architektur

###### WOHN\_ZIMMER SONNWENDVIERTEL

Map: <http://www.detail.de/uploads/pics/Hauptbahnhof-Wien-170.jpg> (5 Mar. 2015)

Graphics and visualisations: competition booklet, courtesy studiovlay & Lina Streeruwitz

Photos: courtesy studiovlay & Lina Streeruwitz

###### B.R.O.T. ASPERN

Map: <https://www.google.com> (5 Mar. 2015)

Graphics: [http://www.brot-aspern.at/downloads/20120418\\_plakat01\\_kuzmich.pdf](http://www.brot-aspern.at/downloads/20120418_plakat01_kuzmich.pdf) (5 Mar. 2015)

[http://www.brot-aspern.at/downloads/20120418\\_plakat02\\_kuzmich.pdf](http://www.brot-aspern.at/downloads/20120418_plakat02_kuzmich.pdf) (5 Mar. 2015)

Visualisations: <http://www.brot-aspern.at/unserhaus.php> (5 Mar. 2015)

###### JASPERN

Map: <https://www.google.com> (5 Mar. 2015)

Graphics and photos: <http://www.pos-architecture.com/architektur/wohnbau/projekt/detail/data/baugruppe-aspern/> (5 Mar. 2015)

Visualisation: [http://www.jaspern.at/wp-content/uploads/2013/04/pos-architekten-JAS-rend\\_OLN-20130325\\_M.jpg](http://www.jaspern.at/wp-content/uploads/2013/04/pos-architekten-JAS-rend_OLN-20130325_M.jpg)

#### 5 DESIGN PROJECT

##### 5.1 SITE: ASPERN URBAN LAKESIDE

Masterplan - functional diagram: courtesy Wien 3420 Aspern development AG

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