



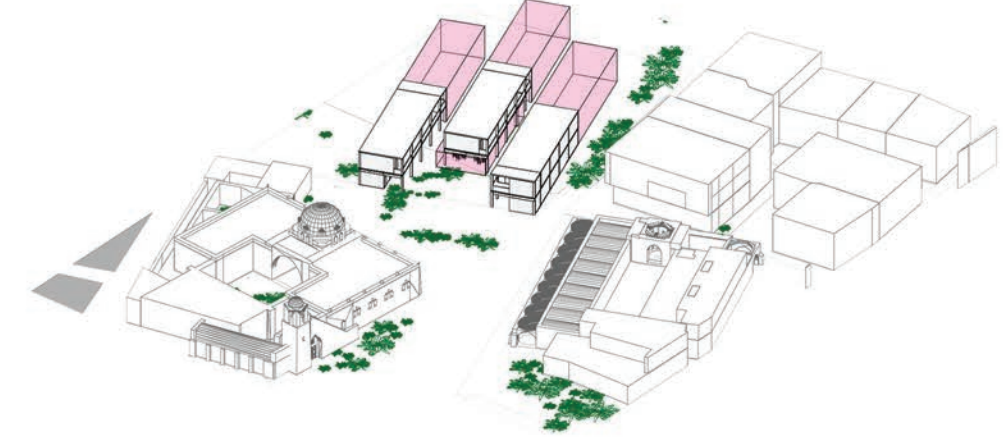
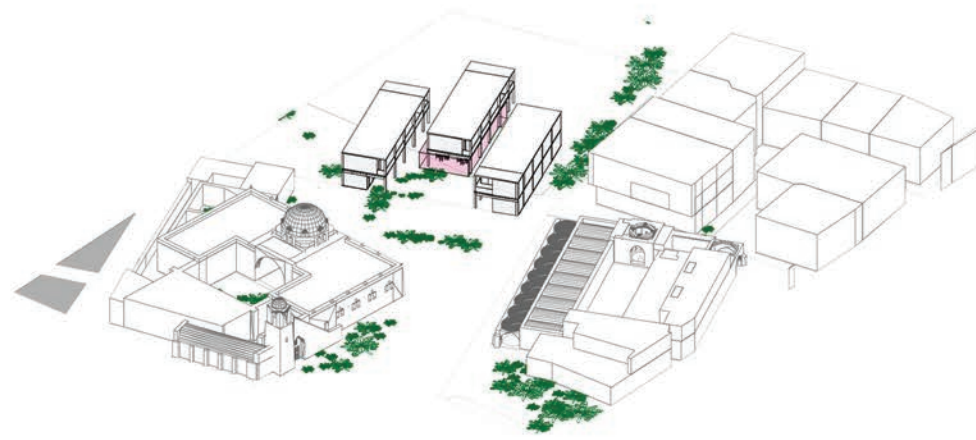
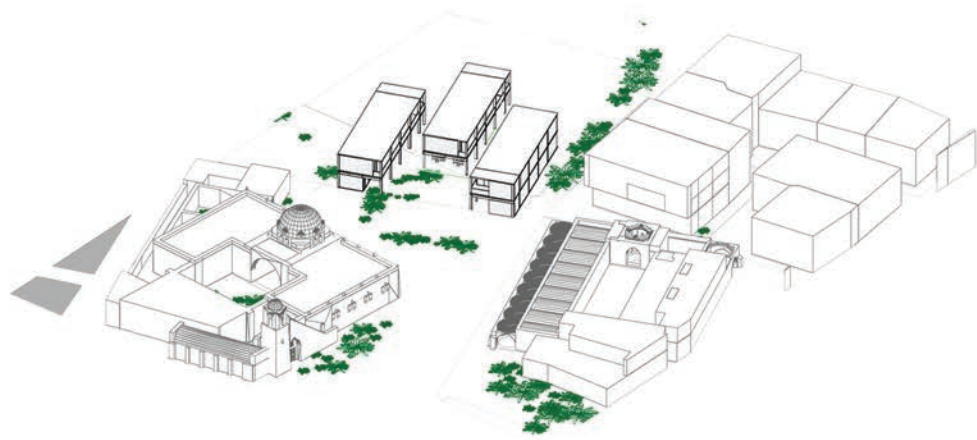
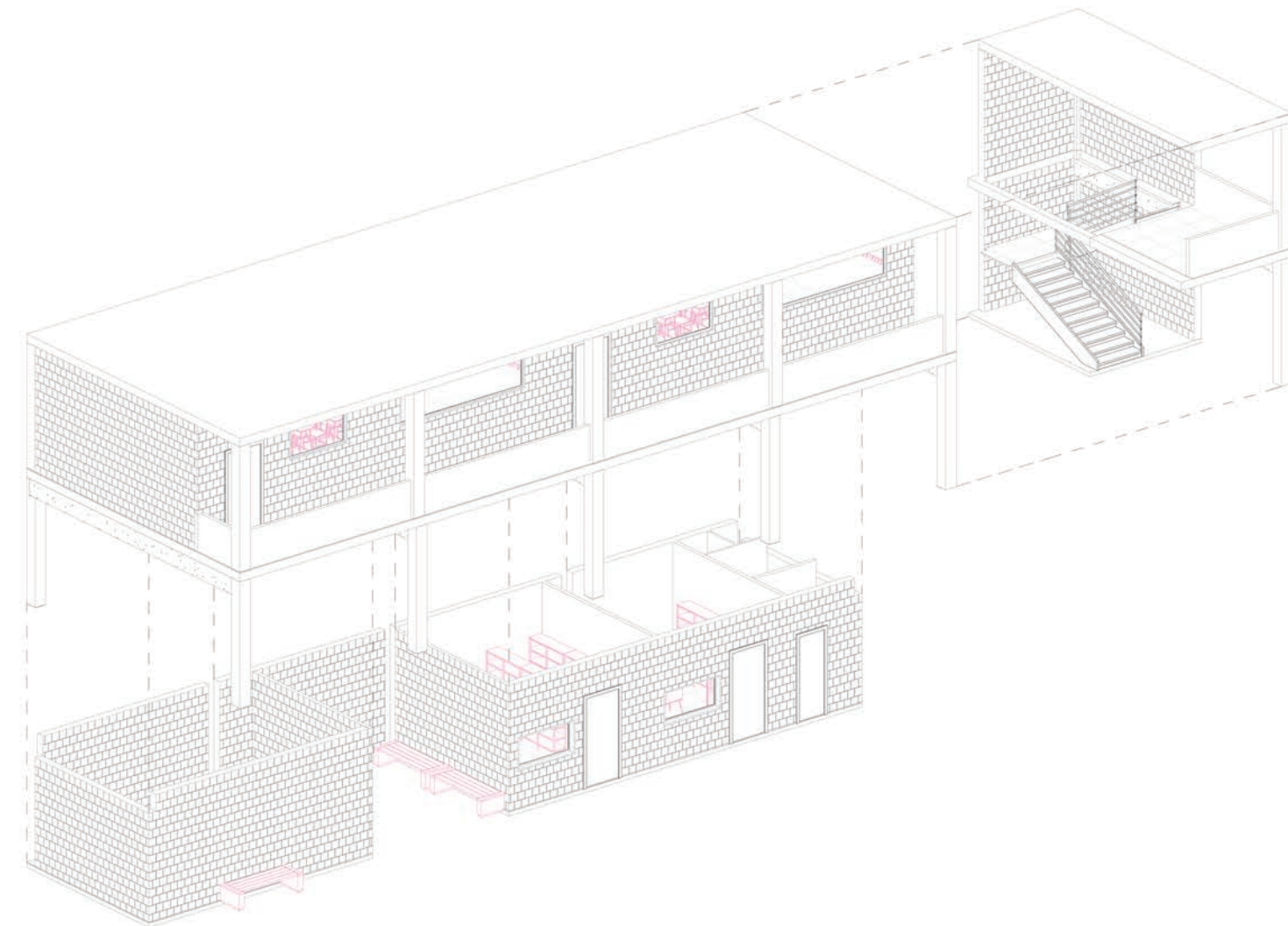
Source of the pictures: Dóra Dávid

## Local History

The village of New-Gourna (Luxor, West Bank) was based on the plans of Hassan Fathy commissioned by the Egyptian Department of Antiquities. The constructions were finished by 1945, when the inhabitants of Old-Gourna were relocated in New-Gourna.

One of Fathy's standpoint was to use local materials and technologies for the constructions to make them more cost-efficient. Thus, we can meet lots of examples of vernacular architecture on the territory. Fathy's goal was to connect traditional architecture with that of the artist's.

Though the place is rich in architectural forms, in certain respect it restricts the freedom of the designer. One of these restricting factors is the desert climate zone with its extremely low precipitation. It is the drought and the heat that characterizes the area, and we had to find efficient and economical solutions in architecture to meet these challenges.



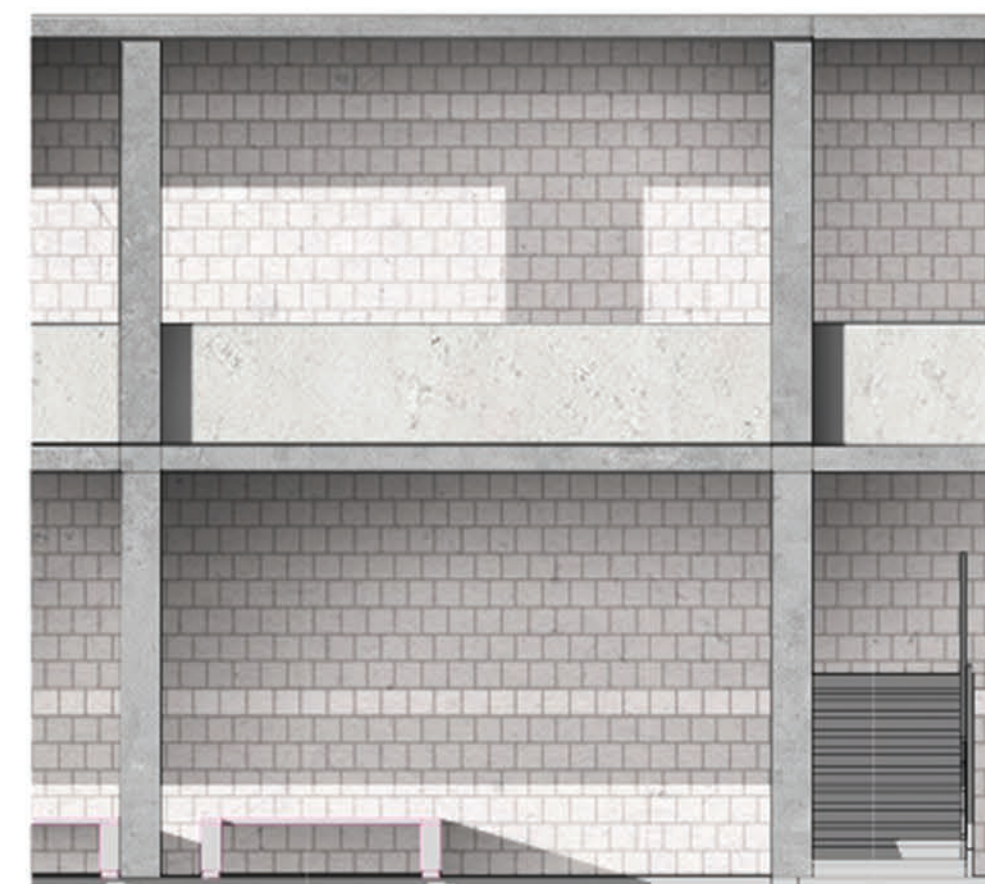
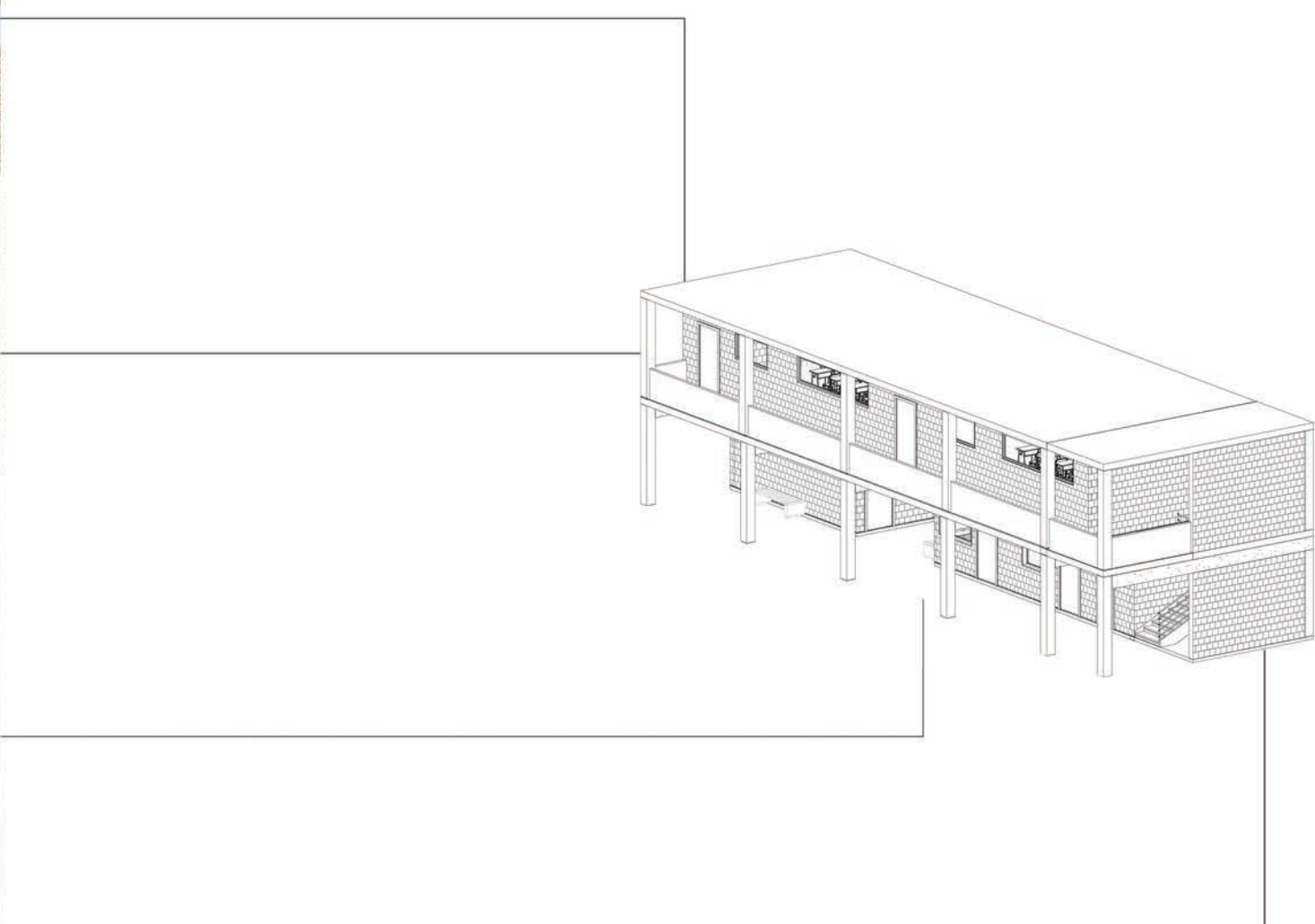
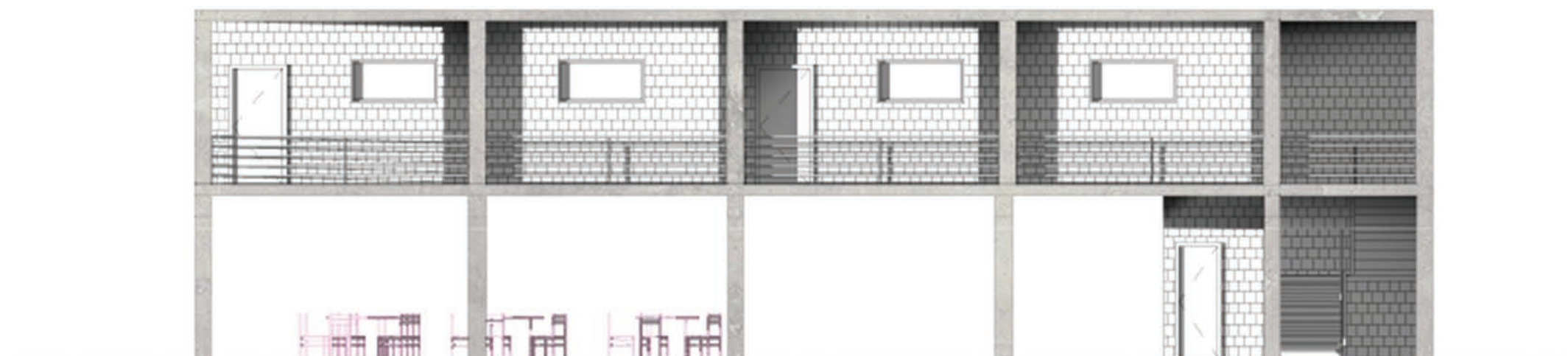
## the Concept

In Egypt we can detect a particular form of spontaneous architecture, which is due to the sudden population growth and the lack of dwelling space. This means that sooner or later all of the free standing land is used and gets built in.

For this reason we have tried to establish a module system which can be extended later, and no matter how they enlarge it, it can work properly among the environmental challenges. That is why the first step on our site plan was to create a north oriented grid, in which the size of the blocks was determined by the coordinates of a classroom.

We created a basic system of three blocks which in itself can provide room for 200 students.

With their placing and orientation we aimed at making the courtyards between the buildings as shady and protected as possible.

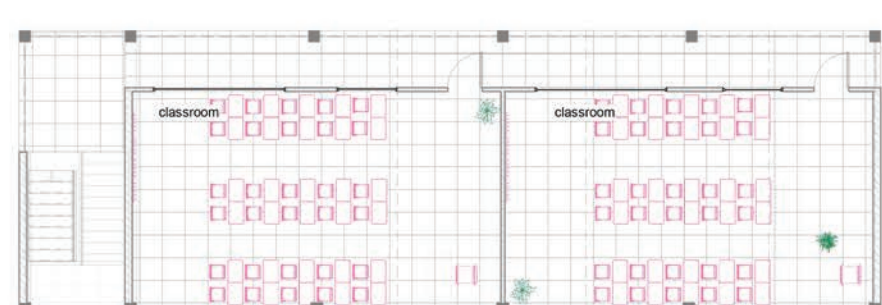
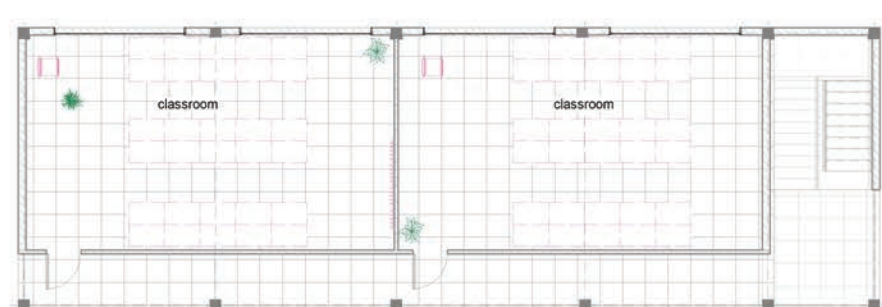
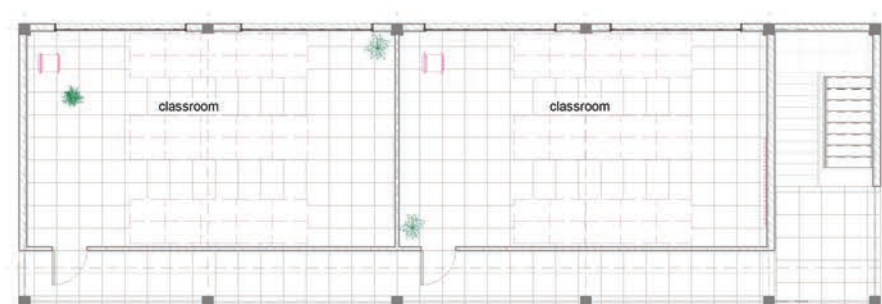
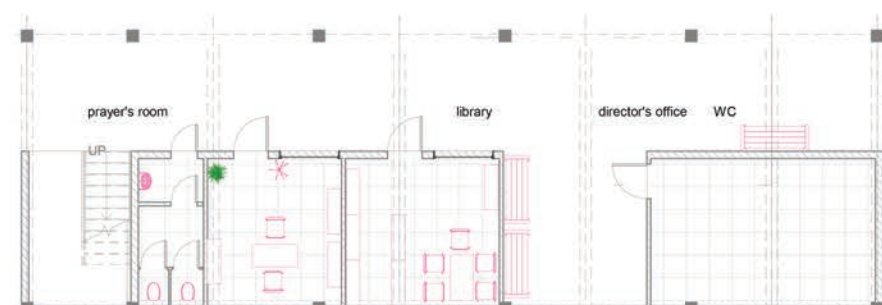
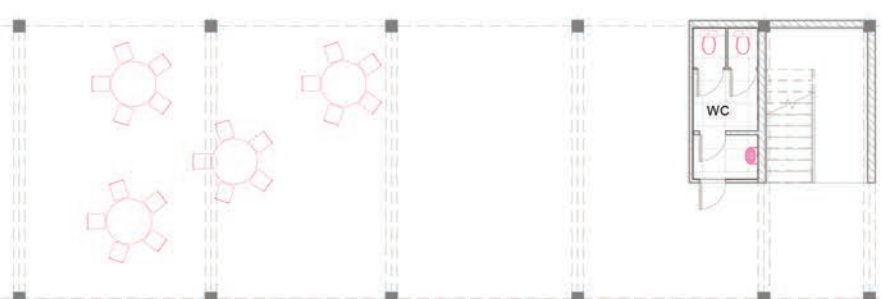
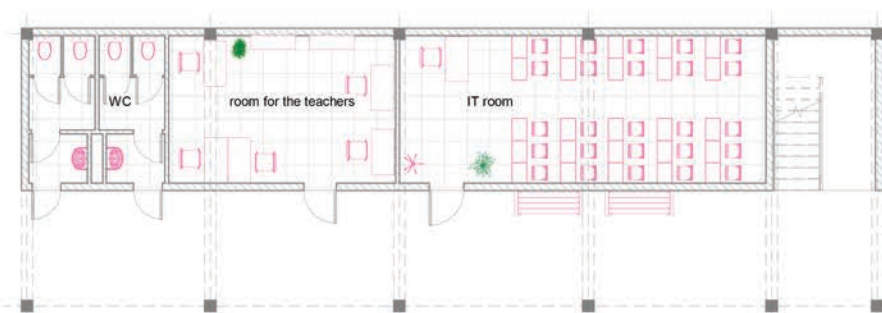


re: school / Serfűző Fruzsina, Zöllner Zita/ Vasáros Zsolt DLA





re:school



floor plans 1:200



site plan 1:20000

### Function

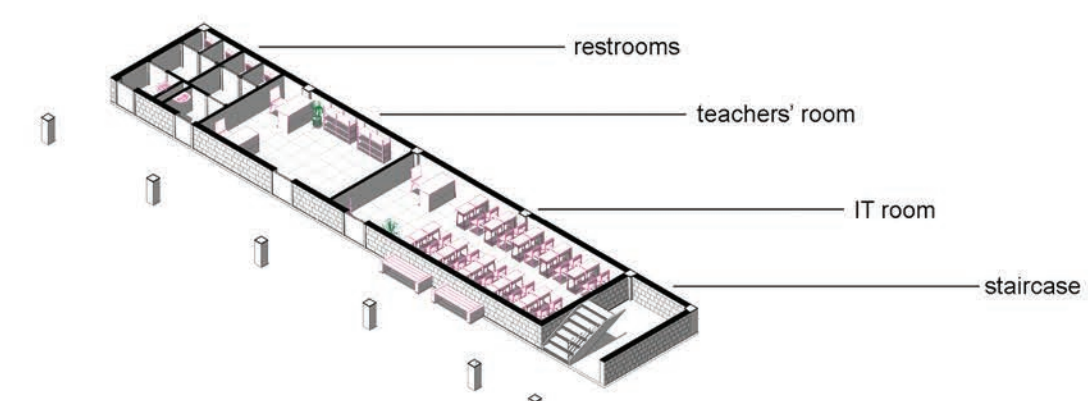
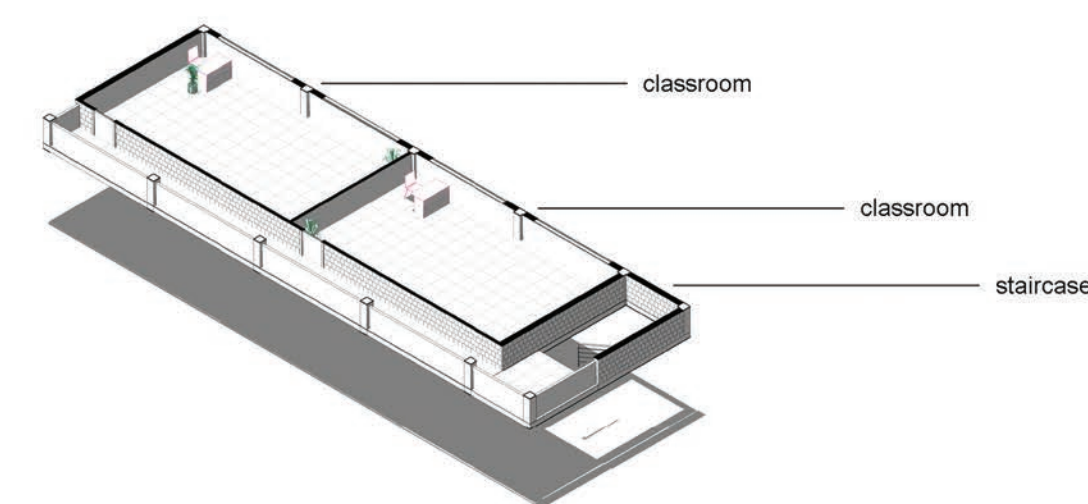
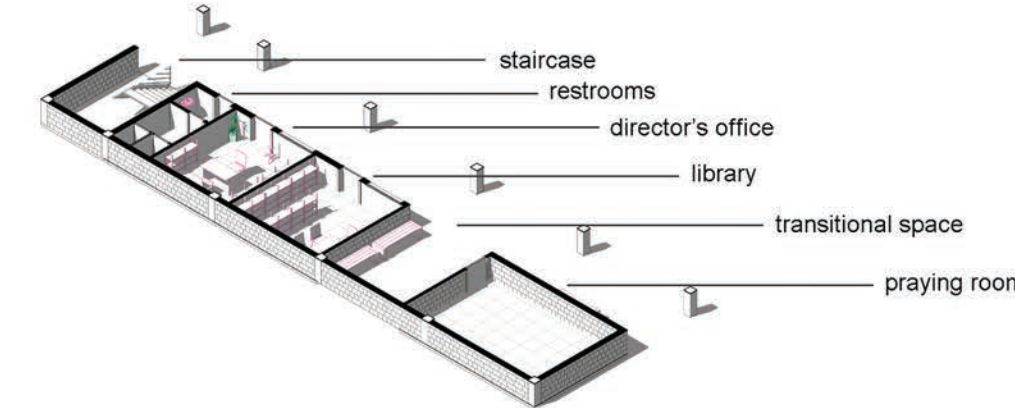
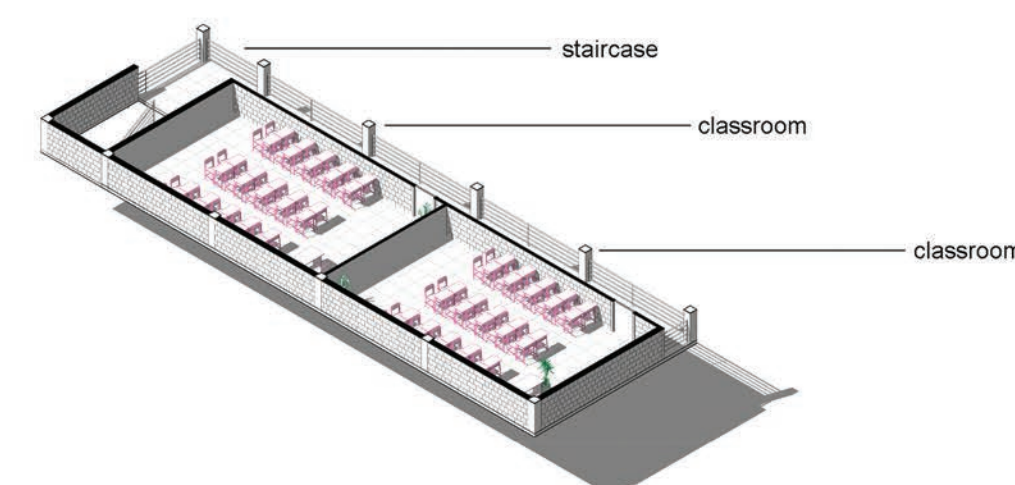
We placed three modules on the territory. Their common feature is that the classrooms are upstairs while the rooms for administration are downstairs. This way those who enter the building first get into a filtering or buffer zone, since they have to pass the staff room and the principal's room.



section 1:200

### Material structure

Our buildings have pillar frameworks, they give the frame of the possible expansion as well. The ferro-concrete pillars have a 30x30 cm cross-section, and they support a 20 cm ferro-concrete ceiling. Because of the sandy ground the foundations of the pillars and walls rest on plate sheets, so that the building can sink evenly. We would like the walling to be made with specially dimensioned 25x25x20 cm white desert sandstone bricks. This material is widely used in the area and is extracted not far from our site.



functions

>RE:SCHOOL< / >SERFŐZŐ ESZTER FRUZSINA, ZÖLNNER ZITA< / >TIBAI FRIDA, VASÁROS ZSOLT DLA<





re:school



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# Abstract

re:school – reuse, rethink, remake

Due to the rapid demographic growth in the past few years, Egypt has become one of the most populous countries in Africa. Its population is estimated at around a hundred million. However, the building industry cannot keep up with such a pace. The lack of dwelling space is a constant problem. The building industry is trying to find quick solutions, but the desert climate with its dry weather and low precipitation, and the lack of water represents such challenges which are hard to handle.

Our task is to design a school for New Gourna (Luxor West Bank), which is really a topical issue in Egypt nowadays. As the design brief mentions, on average nearly 1200 children attend a school, which is much more than an ordinary school building could handle. We are aware of the fact that a new building will not solve these urgent problems, but it can help in developing a new type of a school building, show a different approach, initiate new ideas, start to tread new paths.

The Egyptian school system is barely known in Europe. When we start thinking about it, such commonplaces come to our mind as excessive heat, overcrowded rooms, deep religious beliefs. However, in some

aspects it is surprisingly similar to ours. The special circumstances must be handled carefully, taking into consideration the possible financial and material resources.

Our main goal is to design a school for New Gourna, which concept is based on our experiences in Luxor, with the Hassan Fathy Survey Mission. We would like to benefit from the fact that only one of us participated in the mission and has first-hand experience of the place and circumstances. Thus we have the opportunity to approach the project from two different viewpoints, such as material usage, climate and so on.

To start the designing process, we have drawn up some basic principles to serve as handrails for us. These will give the frame of our plans. These principles among others include the detectable spontaneous architecture of the area. We would like our final building to be sustainable, flexible, in other words convertible according to different needs. We would like to create correspondence and harmony between our design of simple geometry and mass forms, and the local architectural tradition keeping in mind the given resources of the area.



## Local history

Our school building has been designed for New-Gourna in Egypt, in the north of the African continent. The plot we were given lies in the centre of it, right next to the mosque, the Khan and the theatre. New-Gourna is a district of Luxor, the building of which was based on the plans of Hassan Fathy commissioned by the Egyptian Department of Antiquities. The constructions were finished by 1945, when the inhabitants of Old-Gourna were relocated in New-Gourna, this way putting an end to the more and more frequent looting of tombs.

One of Fathy's standpoint was to use local materials and technologies for the constructions to make them more cost-efficient. Thus, we can meet lots of examples of vernacular architecture on the territory. Fathy's goal was to connect traditional architecture with that of the artist's. One of his most successful buildings is the mosque. Throughout the planning process we were keeping in mind these traditional values, attempted to identify with the philosophy of creating an experimental dwelling place, and tried to maintain a dialogue with them.

Though the place is rich in architectural forms, in certain respect it restricts the freedom of the designer. One of these restricting factors is the desert climate zone with its extremely low precipitation. It is the drought and the heat that characterizes the area, and we had to find efficient and economical solutions in architecture to meet these challenges.





## Inspiration

As we mentioned it earlier, our inspiration is not a public or an educational institution, but a social housing program implemented by the Elemental architecture studio. The call word of the project is "a half house builds a whole community", which is an important element of our plan.

In the 1970s a professor, John F.C. Turner elaborated an idea which is based on that people can build for themselves. Turner thinks that housing should be seen as an on-going project.

The Elemental Architecture Studio, led by Alejandro Aravena, designed a new master plan, the Villa Verde Housing Residential Park for Constitucion, Chile in 2010 after a 8.8 earthquake. The concept of the project is based on autonom participation. The studio designed a minimum residential unit according to the requirements of Chile, which makes up half of the building, allowing them to expand the rest. The other half of the building is the venue for creating your own needs, thus providing a solution to changing needs, increasing space requirements, while giving the residential park a unique image. The method works, although the feedback is not always positive.

Although based on literature references and other researches we have not found an example of using this concept in public buildings, afterall we still think that the idea can be adapted to other situations where a major issue is the need of continuous expansion, therefore our concept builds on this idea.



## Concept

(We tried to benefit from two different designer perspectives deriving from the fact that only one of us participated in the "Hassan Fathy Mission" in Luxor)

In Egypt we can detect a particular form of spontaneous architecture, which is due to the sudden population growth and the lack of dwelling space. This means that sooner or later all of the free standing land is used and gets built in. Our concept is trying to give guidelines for future buildings that cannot be restricted or monitored but may be they can be kept within certain limits with the help of contours and borderlines.

For this reason we have tried to establish a module system which can be extended later, and no matter how they enlarge it, it can work properly among the environmental challenges. That is why the first step on our site plan was to create a north oriented grid, in which the size of the blocks was determined by the coordinates of a classroom. We placed our buildings in this net keeping in mind the possibility of later expansion, which means that the two storey building blocks can be placed in any way on this site. From these elements we created a basic system of three

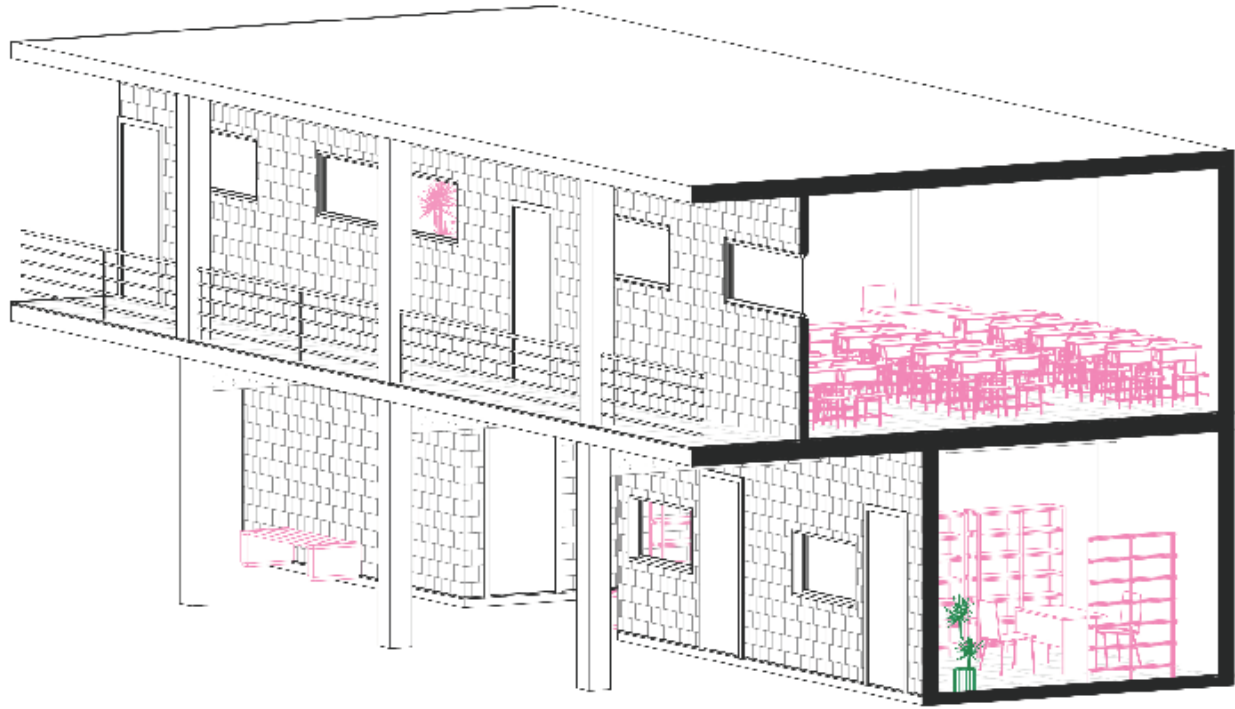
blocks which in itself can provide room for 200 students.

With their placing and orientation we aimed at making the courtyards between the buildings as shady and protected as possible.

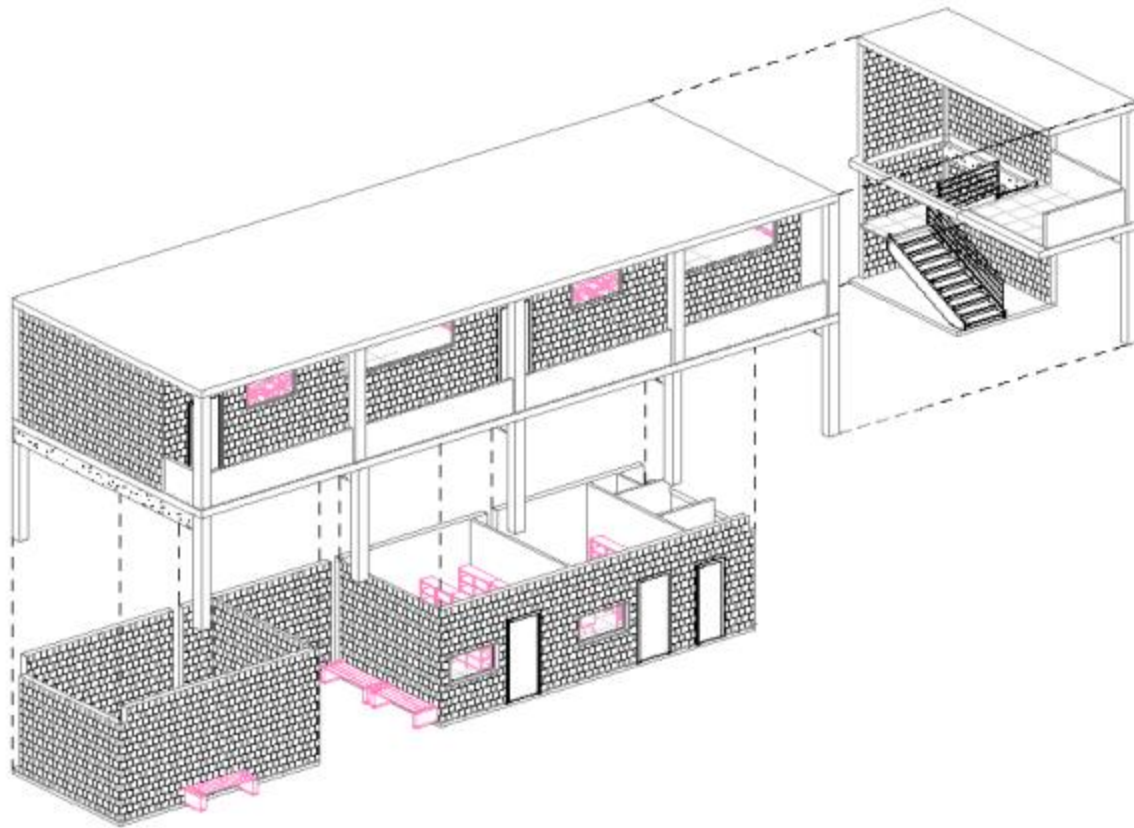
In order to reflect the local architecture we applied simple geometry and mass formation, which uses material and the local resources effectively and economically. We wanted to transfer the philosophy of convertibility and enlargement to smaller details as well, such as the classrooms. In the case of larger classes two rooms can be combined, this way increasing the holding capacity to 60 students. All wall surfaces can be used for teaching purposes since they have a stripe covered with blackboard paint.

We also wanted to apply and rethink the elements of Arabic architecture. Thus, we built in some wall fountains which with appropriate ventilation can make the air cooler.











## Function

We placed three modules on the territory. Their common feature is that the classrooms are upstairs while the rooms for administration are downstairs. This way those who enter the building first get into a filtering or buffer zone, since they have to pass the staff room and the principal's room.

Each building has a hallway unit for getting about, which can be used for communicating with the rooms of future buildings as well, so there is no need to build new ones. Furthermore, positioning the classrooms on the top allows for having archways and shady areas on the ground floor, which ease the heat during the afternoon playtime and rest. Another common feature of the buildings is the opening of the northern side and the perforation on the southern side, which ensures good ventilation, and also the application of side corridors.

Going from north to south, on the ground floor of the first building we can find the staff room, the IT room and the lavatories. The ground floor of the second building is left empty and serves as a shaded area connecting the two courtyards with tables and benches for those who want to have their lunch at school. It should be mentioned here that the cafeteria, that is having lunch at school is not part of the programme.

This empty space can later be developed into an educational space. The most southern building offers an alternative to the case when the hallway cannot be placed on the southern side. In this case the openings are also on the northern side and it is only the perforations (bricks taken out from the wall) on the southern side which provide the free airflow. At the base of this building we can find a room for worship for everyday prayers and a transitional space in front of it for immersion, this way enhancing the sacrality of this area. On the other side of the transitional area is the library which also functions as a silent study room for several students. The principal's room is the last in the row.

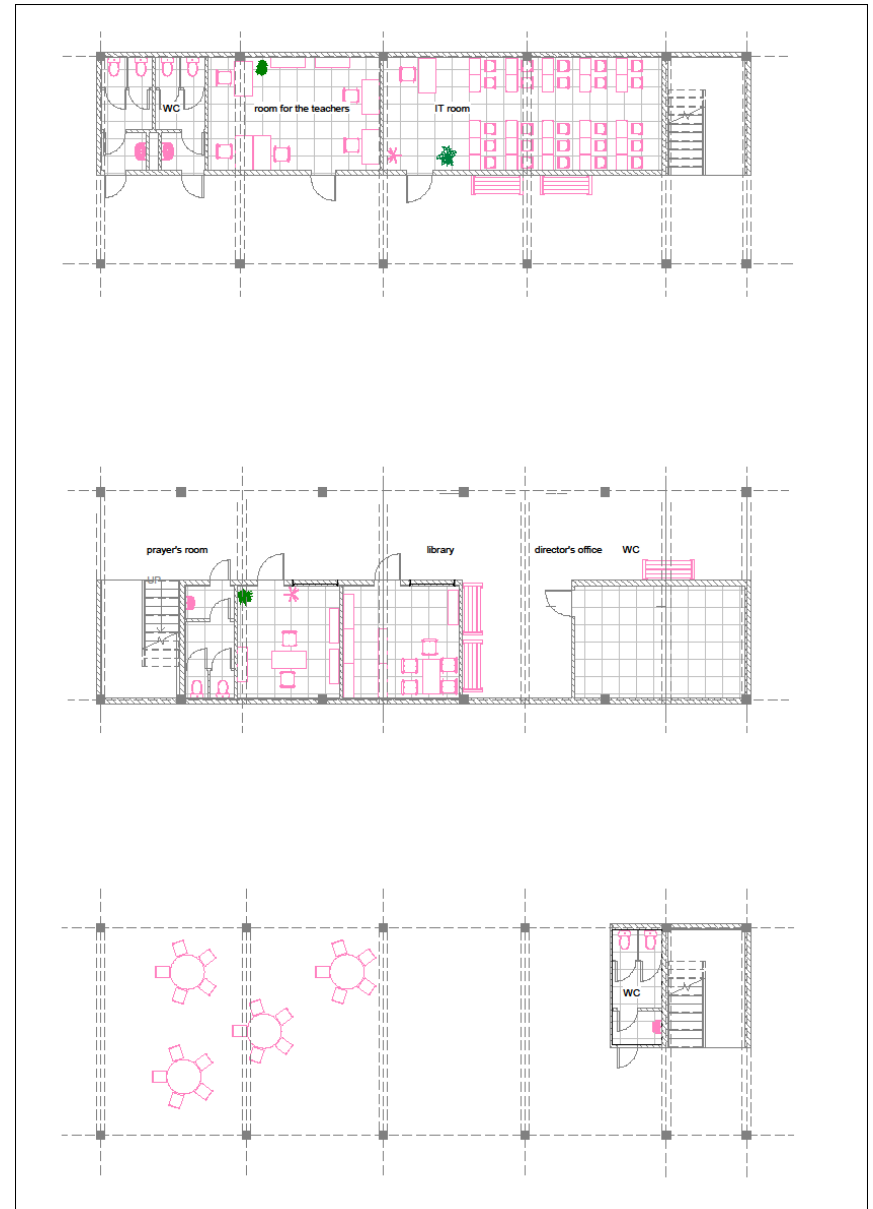
When positioning the buildings we wanted the school building to be accessible from the direction of the mosque, and by pushing the middle building a bit further, we created a main square between the school and the mosque.

We also examined the possibilities of later improvements. For this we made phase diagrams showing the perspectives in 5 or 10 years. Another thing we looked at was what happens when a building is misplaced, does not fit in with the system. We assessed the risks of it and made several suggestions. The most important for the functions is to be

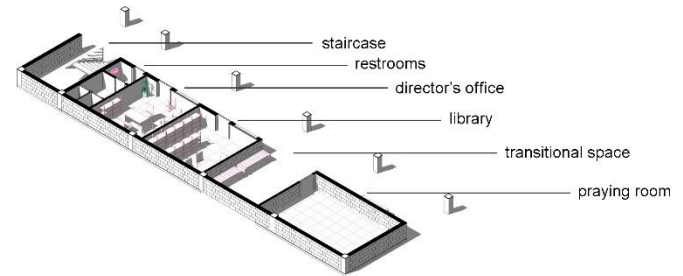
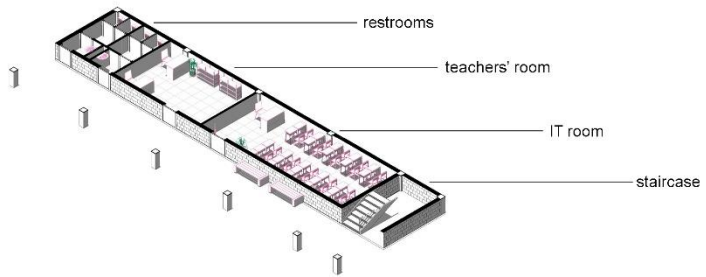
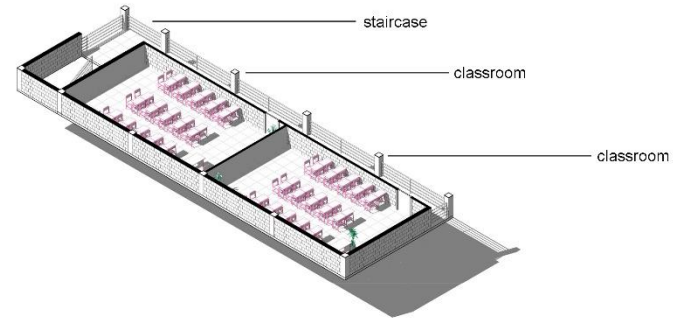
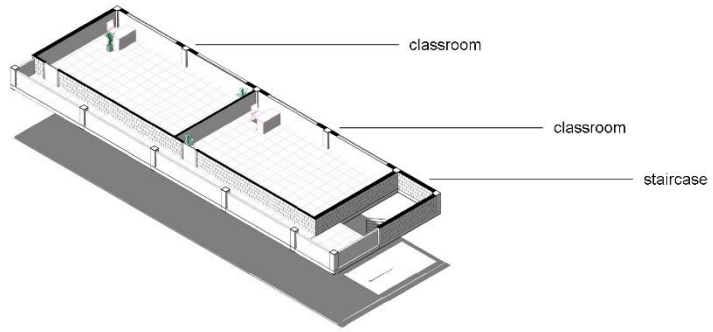


susceptible to varying them freely according to the needs of the users.

Since improvements are usually not made horizontally, we left the roofs flat, giving chance to vertical expansion with the appropriate orientation. Of course, we would encourage first the maximum use of the given land and only later the vertical expansion.









## Material structure

In our use of materials we tried to take advantage of the opportunities given by the area, and pair them up with the cheapest possible solutions in implementation, so that they will be easy to vary later, or unbuild and reuse in other buildings.

Our buildings have pillar frameworks, they give the frame of the possible expansion as well. The ferro-concrete pillars have a 30x30 cm cross-section, and they support a 20 cm ferro-concrete ceiling. Because of the sandy ground the foundations of the pillars and walls rest on plate sheets, so that the building can sink evenly.

We would like the walling to be made with specially dimensioned 25x25x20 cm white desert sandstone bricks. This material is widely used in the area and is extracted not far from our site.

The openings on the northern sides are the multiple size of these bricks. As for the enclosed spaces, we were careful about having openings the size of at least one eighth of the ground area. This way each space gets the necessary illumination from the northern side. In the case of the classrooms it means a 7-square-metre glazed surface.



//materials



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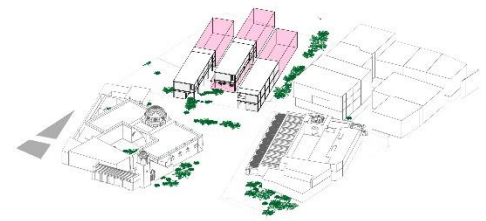
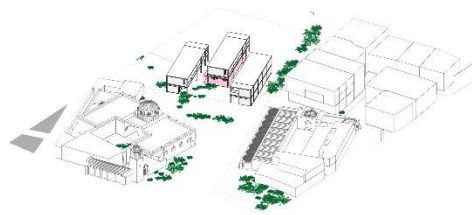
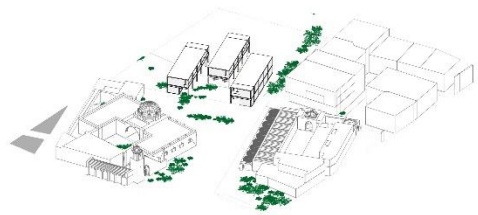
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