

Publications of the
Office of the Hungarian
Cultural Counsellor in Cairo 2018–2019

Current Research of the
Hassan Fathy Survey Mission in Egypt

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Office of the Hungarian
Cultural Counsellor in Cairo

The content and layout of the present downloadable publication corresponds to that of the printed version.

Grammatical inconsistencies in the printed version have been corrected, additionally, in certain places the maps and drawings have also been corrected, these do not change the essence of the content of the given chapter.

Front cover:

Detail of the Mosque in New Gournia (Photo: Zsolt Vasáros, 2015)

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Benedek Zacher and Zita Zöllner



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Foreword

We proudly present the second edition of the yearbook of the Office of the Hungarian Cultural Counsellor in accordance with the Embassy of Hungary dedicated to the current research of the Hassan Fathy Survey Mission in Egypt. The recent edition is divided into two volumes: the first one presents the research efforts of 2016-2017, whilst the second one introduces the results of the years 2018-2019.

The Faculty of Architecture at the Budapest University of Technology and Economics, with the contribution of Hungarian architects and students of architecture, launched an expedition to Egypt from the spring of 2015 to make a complete documentation of Hassan Fathy's remaining architectural heritage. Hassan Fathy (1900-1989) was a role model for generations of architects, laying the foundations with his New Gournia experiment for community-based construction and design. His legacy drew attention not only to 20th century Islamic architecture and Hassan Fathy's special place in it correspondingly, but also highlighted his universal significance. Its relevance is further enhanced by the fact that Fathy's work is inevitable in various important fields such as close-to-nature, eco-friendly and sustainable architecture. He was an absolute pioneer of his era and even now, from the distance of 50-80 years, he provides with illuminating lessons.

During the early years, the objective of the Hassan Fathy Survey Mission, founded in 2015, was to document the rapidly deteriorating buildings designed by Fathy himself, primarily in Upper Egypt. A few years later, in 2018-2019 the Mission expanded its interest. Besides the new field activities in Alexandria, Fayyoun and around Cairo, the team initiated a collaboration with the Rare Books and Special Collections Library of the American University in Cairo. Owing to this prosperous cooperation, they now have access to an unparalleled archive of important original plans and notes, as well as pristine photos of the examined buildings. These important materials can be used to search for details and connections which, despite having a large corpus of publications, are virtually unknown.

Hassan Fathy's main scope of activity concerning the preservation of the historical architecture in combination with vernacular architecture is still as relevant as it was observed in the middle of the 20th century. Nowadays, the situation is more complex as we are facing demographic difficulties all around the world and the threat of climate change is escalating, jeopardizing the welfare of the entire planet. Understanding the issues of the Global South and supporting the region have become a global task of primary importance. Through the analysis of historical and contemporary examples, the main goal of the Hassan Fathy Survey Mission is to contribute to this project with its field activities and the dissemination of its results in academic circles. We do hope that with the publication of these two volumes we can support the achievement of their basic objectives.

Attila Szvétek-Palla
Cultural Counsellor

Acknowledgements

The Hassan Fathy Survey Mission was launched in 2015 by Prof. Zsolt Vasáros, based on his curiosity of the phenomenon that he had been observing in Luxor West Bank and New Gurna. Since then, more than 40 architects and students of architecture have participated in the fieldwork, and many more have been in connection with the project in other ways. As a result of this extraordinary experience, several complex university design projects, diploma projects, postgraduate studies and design competitions successful on the national level have been prepared by the participants. The on-site capturing and processing of the immense amount of data that provided the background for all these achievements wouldn't have been possible without the contribution and tireless work of the many participants.

The work of the Hassan Fathy Survey Mission has been greatly helped by quite a few institutions. The Faculty of Architecture of the Budapest University of Technology and Economics and the Department of Industrial and Agricultural Building Design have provided the institutional background for the research. The excavations in Thebes of the Department of Egyptology of the ELTE have inspired the project, too. The late Prof. László Kákosy and the late Prof. Ernő Gaál had an essential contribution to this. Our research has been aided by several advices and the insight of Dr. Gábor Schreiber, the leader of one of the Hungarian Excavations. We need to mention Balázs Tihanyi, Eszter Tóth and Zsuzsanna Végh egyptologists, members of the Hungarian Mission who have helped us in many ways. The Library of the Oriental Institute of the University of Chicago has kindly accepted us for research, for which we are very much grateful. We are especially thankful to director Dr. W. Raymond Johnson and epigrapher artist Krisztián Vértes for their help and the background provided by the Institution.

We owe our special gratitude to the Rare Books and Special Collections Library of the American University in Cairo, especially to Mr. Philip Croom for agreeing to an official cooperation with us, and Ms. Balsam Abdel Rahman and Ms. Ola Seif for their tireless help in navigating us through the archives, and in helping us get in touch with the owners of quite a few houses of interest.

We are grateful for the managers of the Pottery Factory in Garagous, Fawaz Sidhom, Hebeish Kamal (Riad), Isqag Youssef, Guirguis Youssef, Louis Ayad, Fabien Morcos, Matta Sidhom and Maurid Soliman for allowing us to enter and survey their workplace year after year. Accordingly, we thank Father Rafael Nashed, the priest of the church in Garagous and Ishaq Guindi, the director of the school in Garagous for enabling our work in their institutions. We are grateful to the principals and keepers of the Mosque in Mahamid for making our examinations possible, as well as for the monks of the Saint Tawadros Monastery in Deir el Mohareb. We also thank the Ministry of Education in Cairo for allowing the visit and examination of the school in Fares.

Last, but not least we owe our sincere gratitude to the residents of Old Gurna, New Gurna - especially to Mr. Abd el Rady and to the current residents of the former Abd el Rassoul house, as well as the families living in the "Omda's House" -, in al-Syul, in Taref and in New Taref, in Gezira and in Gabawi, in the whole West Bank, who welcomed us into their homes and made the core of our research possible.

Special thanks to Dr. Tarek Waly, who accepted our invitation to Budapest and participated in the jury of the Students' Competition, where he assessed the entries alongside Mr. László Mester de Parajd from Paris, and Dr. Péter Bach, Dr. Anthony Gall and Dr. Zoltán Schrammel from Budapest. They all contributed to the high quality and success of the competition greatly.

The Budapest University of Technology and Economics offered us support and encouragement by Dr. Csaba Molnár, Dean of the Faculty of Architecture 2014-2018; Prof. György Alföldi, Dean of the Faculty of Architecture 2018-; and Prof. János Józsa, Rector. We thank the tutors and colleagues of BUTE, who participated in consulting the students' design and research projects. We are thankful to Ms. Edit Kaszás Nándori and to Mr. Ákos Vasáros, who has helped immensely in managing the administrative background of our research.

We are especially grateful to the members of the Narmer Architecture Studio Budapest, who have provided a stable professional and infrastructural background in processing the collected data throughout the years, the contribution of Gábor Nagy and Klára Lovas are especially invaluable. We are thankful for the work of Glória Garaczi, who pieced this booklet together with great taste and patience.

Our on-site research would not have been possible without the constant help of Mr. Gamal Ahmed Tawfiq, whom we could rely on in all situations, from making contact with authorities and residents to managing our excursions. We have to thank the hospitality of Hotel Fayrouz, where we spent a considerable time during our fieldwork; especially to Susan Alexander and Khaled Senussi.

Last, but not least we thank to the participants of the fieldwork. In the season 2018: to Fruzsina Ács, Ákos Balog, Judit Bielik, Dóra Dávid, Péter Kaknics, Dóra Nagy, Júlia Pokol, Fruzsina Serfőző, Bendegúz Zacher and Zsolt Vasáros. In season 2019: to Dezső Hegyi, Andrea Kövesdi, Zita Zöllner, Fruzsina Serfőző, Simon Szabó, Gergely Sági and Zsolt Vasáros. The publishing of this booklet introducing our work was made possible by the Office of the Hungarian Cultural Councillor in Cairo, we are thankful for the help and collaboration of Ms. Mariann Fa and Mr. Attila Szvétek-Palla, and equally to the American University in Cairo for kindly hosting us.

The Authors



The atrium of a rural house in Gezira, Luxor West Bank. Photo: Zs. Vasáros, 2019.



The remains of the former entrance of the Cattle Market in New Gourna - currently preserved in a carpentry workshop. Photo: Zs. Vasáros, 2018.



Remains of residential buildings in New Gourna. Photo: Zs. Vasáros, 2018.



Street view in New Gourna. Photo: Zs. Vasáros, 2018.



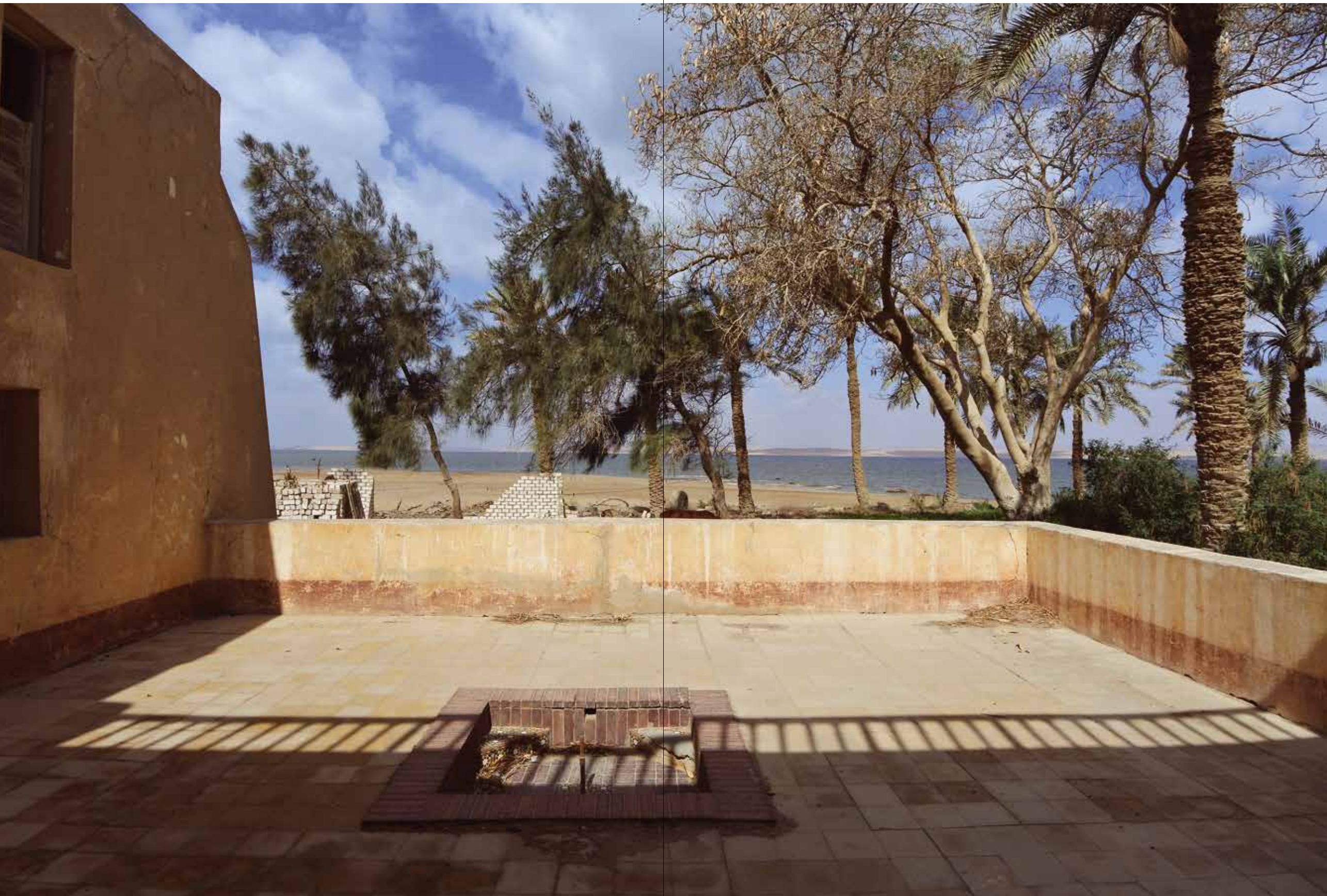


Entrances of residential buildings in Gezira, Luxor West Bank. Photo: Zs. Vasáros, 2019.



The immediate surroundings of Lulu'at al-Sahara, near Kerdasa, Cairo. Photo: Zs. Vasáros, 2019.



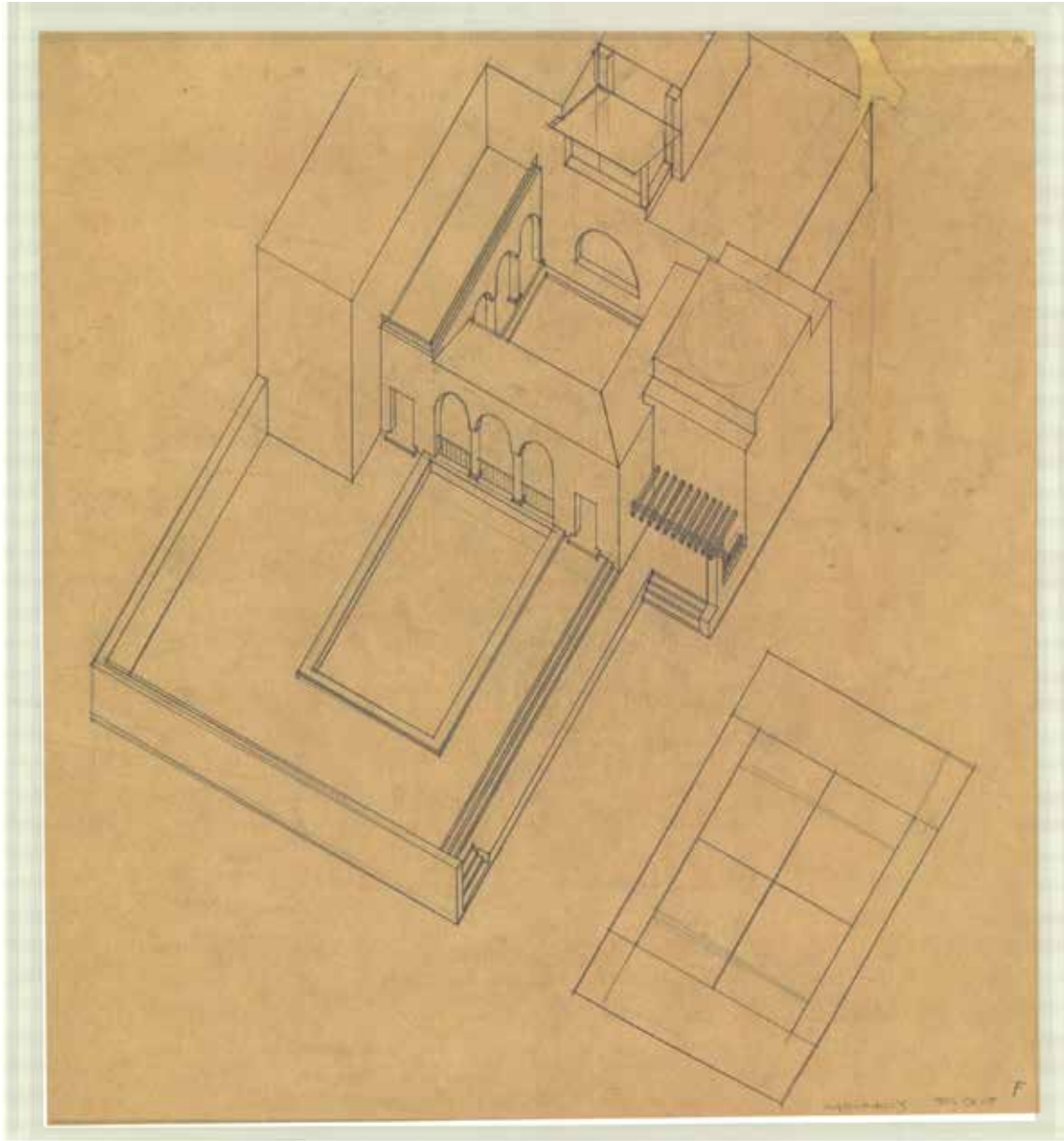


The terrace of the Villa Hamdi Seif al-Nasr in Fayyom. Photo: Zs. Vasáros, 2018.

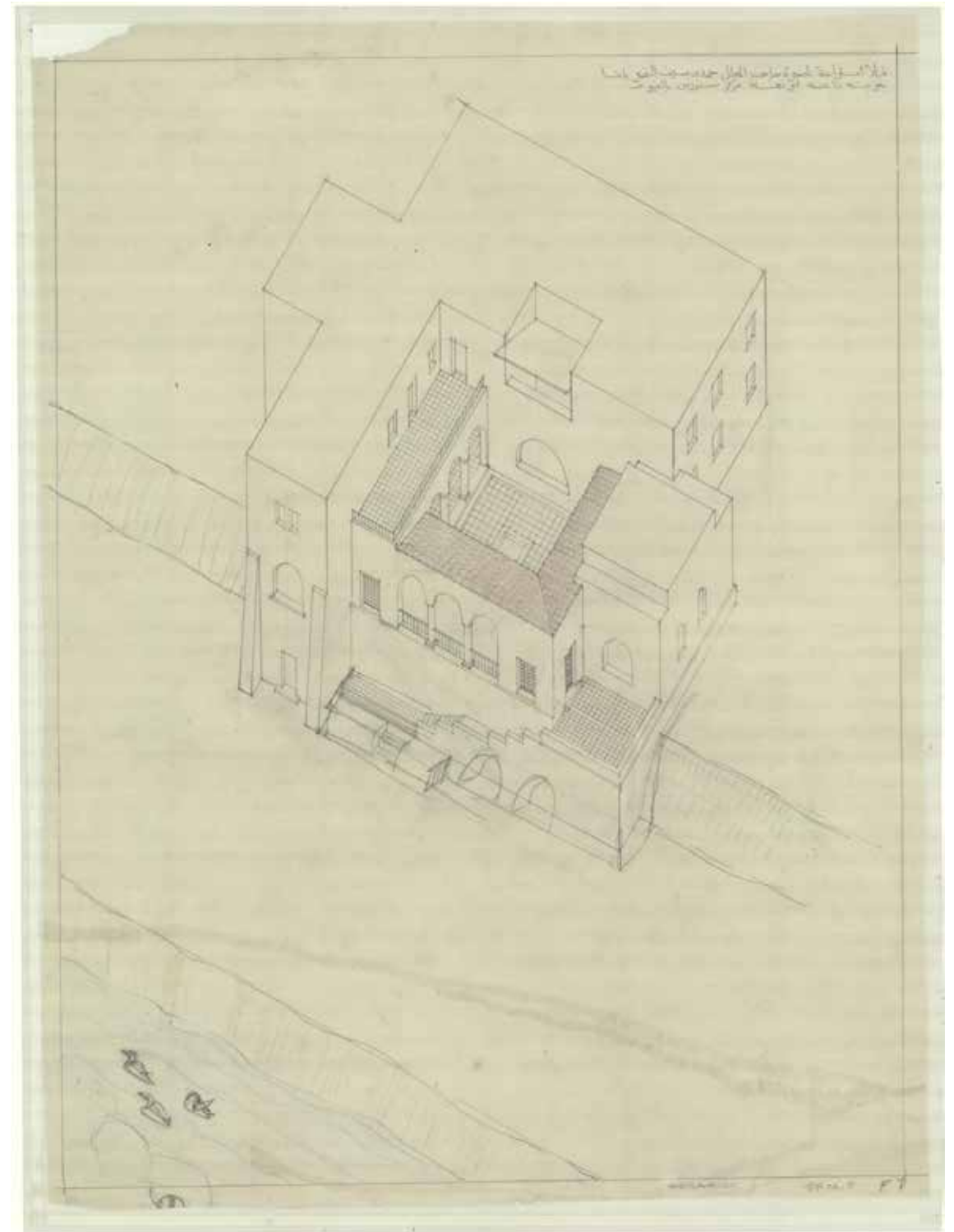


The house of Hamdi Seif al-Nasr in Fayyoun. Photo: Zs. Vasáros, 2019.





Alternative design proposal for the Hamdi Seif al-Nasr villa in Fayyoun. Source: RBSCl, AUC



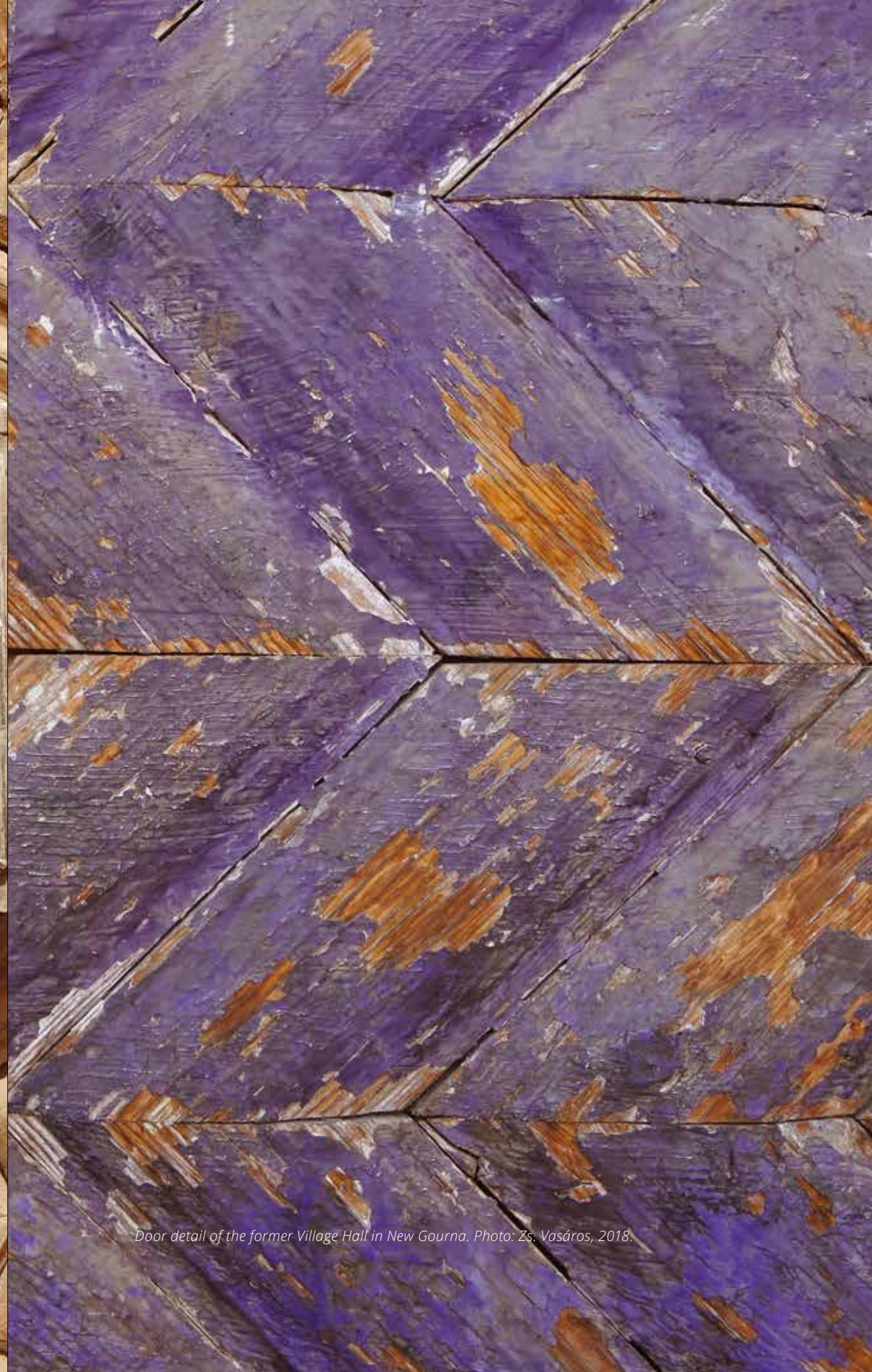
Alternative design proposal for the Hamdi Seif al-Nasr villa in Fayyoun. Source: RBSCl, AUC



The Mosque in New Gurna from the West. Photo: Zs. Vasáros, 2019.



Door detail of Villa Hamdi Seif al-Nasr in Fayyoun. Photo: Zs. Vasáros, 2018.



Door detail of the former Village Hall in New Gurna. Photo: Zs. Vasáros, 2018.



Nasr al-Din mosque, Al Qasr, Dakhla, Photo: Zs. Vasáros, 2019.



The Minaret of the Mashhad al-Bahri (Shallal) Mosque near Aswan. Photo: B. Zacher, 2018.



Detail of the Market's ceiling in New Baris, Kharga. Photo: Zs. Vasáros, 2019.



Detail of a residential house in New Gourná. Photo: Zs. Vasáros, 2018.



Detail of a classroom in Fathy's school in Fares. Photo: Zs. Vasáros, 2019.



Façade in al-Qasr, Dakhla. Photo: Zs. Vasáros, 2019.



Door of a residential house in New Gourna. Photo: L. Veres, 2017.



Door of a residential house in New Gourna. Photo: Zs. Vasáros, 2018.



Window detail of a residential house in New Gourna. Photo: F. Serfőző, 2018.



Doors, windows and window-blinds in New Gourna. Photo: Zs. Vasáros, 2016.

Mission extended

- the Hassan Fathy Survey Mission: 2018-2019

The Mission's main objectives for the 2018-2019 period have not changed, however, the locations for surveys and field research and the goals which primarily involve university dissemination have expanded significantly; that is, our goals have changed in space and time.¹ Major project efforts are reported chronologically below, but not in a diary-entry format.

2018 - NEW OPPORTUNITIES FOR UNDERSTANDING THE EARLY WORKS

In 2018 we took significant steps to present Fathy's architectural achievements from a fresh perspective, which is our primary long-term goal.² We contacted the Digital Library of the American University in Cairo's Rare Books and Special Collections to gain insight into the rich Fathy collection of archival plans and photos.³ Most of the known publications use some of the designs and photos in the collections, but the abundance of the materials reviewed exceeded our expectations. In other words, the designs, sketches and photos which appear in the publications are drawn from a small pool of materials, often repeating themselves and representing the same "point of view." This may be because authors, even if they are familiar with the venues, are more influenced by earlier publications than by the interconnections observed on site. One of the basic goals of our mission has been to observe and document exactly what happened, then to compare the buildings with Fathy's plans and original ideas.⁴ This is probably the reason why, while studying the AUC -RBSCCL archives, we felt that many of the details in the collection are more important to us than the works of those academics who offer a less critical insight into Fathy's works. The archive holds thousands of drawings, plans, sketches, and notes as well as photos, which are invaluable treasures that serve as very important sources for achieving our goals. A visit to the collection led to the conclusion of a Cooperation Agreement, which we signed at the beginning of the following year.

¹ The field research of the Hassan Fathy Survey Mission in Egypt of the Budapest University of Technology and Economics, Faculty of Architecture was possible due to the contribution of sponsors: the Narmer Architecture Studio Budapest and the Department of Industrial and Agricultural Building Design.

The research is "Supported by the ÚNKP-18-4 New National Excellence Programs of the Ministry of Human Capacities", and is "Supported by the ÚNKP-19-4 New National Excellence Program of the Ministry for Innovation and Technology", and supported by the János Bolyai Research Scholarship of the Hungarian Academy of Sciences 2018-2021.

² The participants of the Mission in 2018 were: Dr. Zsolt Vasáros (architect, Field Director), Ms. Dóra Dávid (architect, Deputy Field Director), Ms. Fruzsina Ács, Ms. Judit Bielik, Ms. Dóra Nagy, Ms. Fruzsina Serfőző, Ms. Júlia Pokol, Mr. Ákos Balog, Mr. Péter Kaknics and Mr. Bendegúz Zacher (students of architecture).

³ I express my sincere gratitude to the Rare Books and Special Collections Library of the American University in Cairo, especially to Mr. Philip Croom for agreeing to an official cooperation with us, and Ms. Balsam Abdel Rahman and Ms. Ola Seif for their help.

⁴ About Fathy's oeuvre in general see DAMLUJI – BERTINI 2018; EL-WAKIL 2018; STEELE 1997; STEELE 1988; RICHARDS – SERAGELDIN – RASTDORFER 1985; SERAGELDIN 2007; HAMID 2010; also VASÁROS 2019.



Sites in Egypt visited by the Hassan Fathy Survey Mission in 2018-2019.

During our stay in Cairo we visited important buildings related to Fathy's early and late career. Built in 1971, a privately-owned villa in Sidi Krier (west of Alexandria) is an example of his late period, but it is also a reminder of the characteristic formal and structural features of the vernacular phase of his career.⁵ His design in the Fayyoun oasis in 1944 was a residence for Hamdi Seif al-Nasr; the complex was built with significant changes to the original design.⁶ The private house is run-down, and we were only to study it from the outside. We do not yet know what caused the significant discrepancies between the completed building and the plans, but the terrain shown on the plans also differs from the reality of today, as if the designer, Fathy, had not had reliable topographic data at the time. It is also possible, of course, that at the request of the owner, the volume of the building was reduced by about half purely for economic reasons. But these changes were not followed by plans by Fathy, at least not that we know of. We also do not know whether the house in its present form was built with Fathy's consent in 1944-45. It may be an exciting challenge for the coming seasons to provide full documentation of the house and compare it with the original plans. The importance of the Hamdi Seif al-Nasr villa is also worth highlighting because the design is just ahead of or was done almost at the same time as the New Gourna project, and barely a few years after the planned Hamed Said Studio, which was built in 1942 but and was later torn down.⁷ The scale and spatial luxury of the Fayyoun building exceeds, at least on the plan-level, the Hamed Said Studio, so we can reasonably consider it a turning point in Fathy's career.

SURVEYS AND STUDY VISITS IN UPPER EGYPT

New Gourna is fundamental to Fathy's oeuvre and providing documentation of it is perhaps one of the most valuable elements of our mission.⁸ In the previous volume we covered the anomalies about New Gourna and the controversy surrounding the seemingly well-documented and published project in more detail, so we will not discuss this now. It should be noted, however, that the prolonged realization of the survey, which lasted for years, is due both to the time and financial constraints of our mission and to the limited accessibility of the sites. While the public buildings were relatively easily accessible for survey and study purposes in the first seasons of 2015 and 2016, this was not the case for private homes. Owners are sometimes reluctant to grant access to their private homes, especially because of the lengthy study process; however, during our field research in New Gourna between 2015 and 2019 we were able to document almost all of the existing original houses and parts of houses which are important elements in understanding Fathy's works. It should be noted that in many cases the houses were partially or completely demolished after the documentation, so our results constitute the last credible survey of the buildings. In the spring of 2018, five roughly intact, that is, original homes were documented. They represent different types according to Fathy's master plan. At the same time, some of the Khan's south and southeast façades were made accessible, which allowed us to complete our 2015 surveys and since the plaster had been removed, we could study the method the wall structure and dome on the corner structure were built. We also refined surveys done in previous years on the so-called Omda's House and the Abd el-Rassoul House.

5 See in general STEELE 1988, 95-99; DAMLUJI – BERTINI 2018, 292-295; EL-WAKIL 2018, 317-322.

6 See EL-WAKIL 2018, 82-85; STEELE 1988, 56-59.

7 See RADWAN 2018, 114-117; STEELE 1988, 54-55.

8 See in general STEELE 1988, 63-75; BERTINI 2018, 194-211; DAMLUJI 2018, 219; also FATHY 1973.



The buildings of New Gourna recorded to be original by UNESCO in 2010.



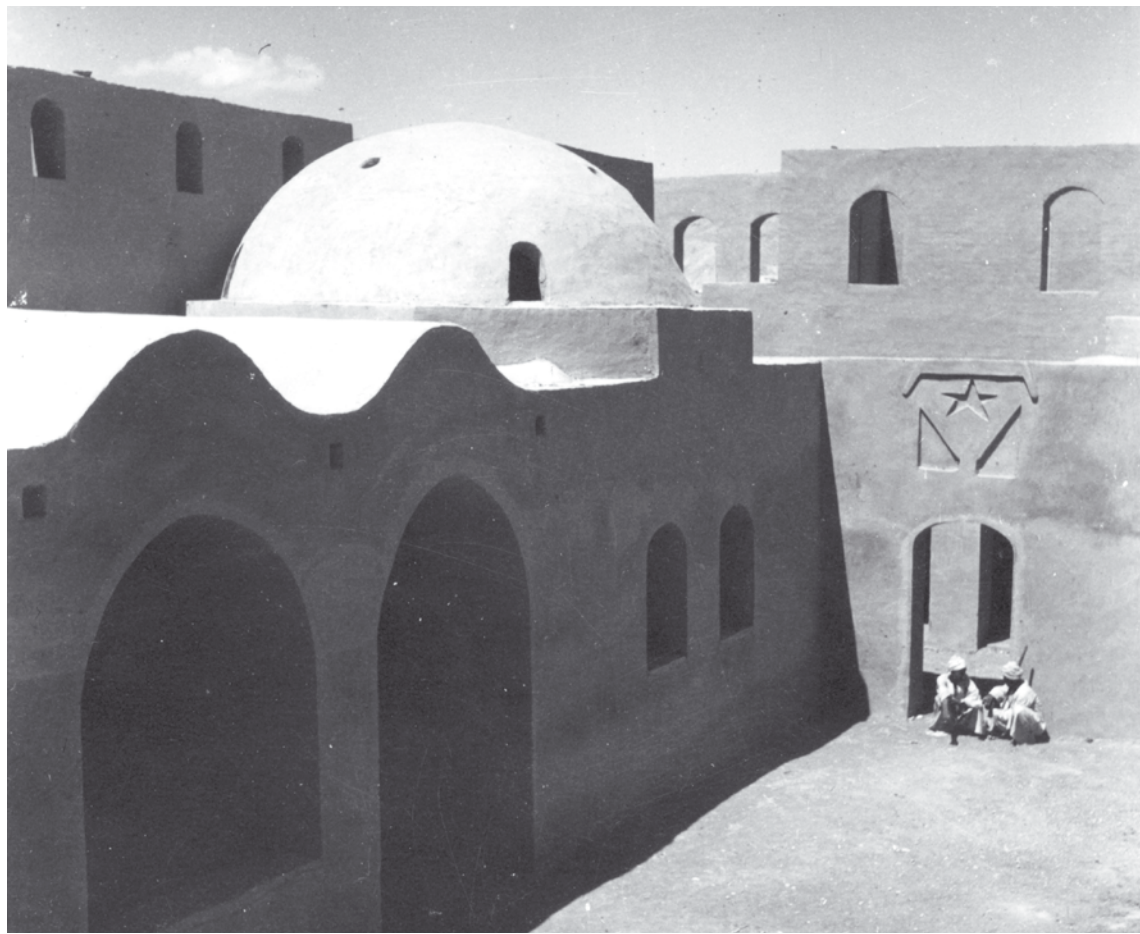
The buildings of New Gourna that were still existing in their original form (dark) or still had significant original or reconstructed/rebuilt parts (light) of the original buildings in 2019.



Buildings surveyed by the Mission in New Gourna: 1. Mosque (2015-19), 2. Theatre (2015-16, 2019), 3. Khan (2015-19), 4. Fathy's Field House (2015-17, 2019), 5. Abd el-Rassoul House (2016-17), 6. Cattle Market (2015, 2017-18), 7. Village Hall (2017-18), 8. Village Fountain (2017); Houses: 9. Type F (2016-17), 10. Type A (2016), 11. Type G (2017-18), 12. Type H (2016-17), 13. Type I (2017-18), 14. Type J (2017-18), 15. Type K (2018), 16-17. Type D (2018), 18. Type E (2017-18), 19. Type L (2017), 20. Type B (2018), 21. Type M (2017-18)



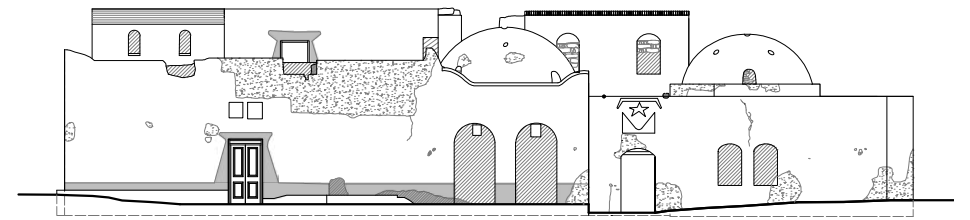
Masterplan version of New Gurna. Source: RBSCl, AUC



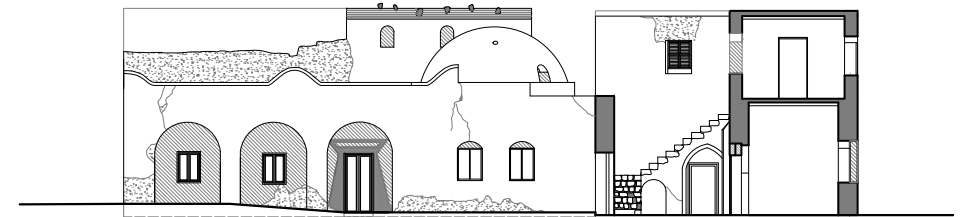
The façade of the Abd el-Rassoul House captured not long after construction. Source: RBSC, AUC



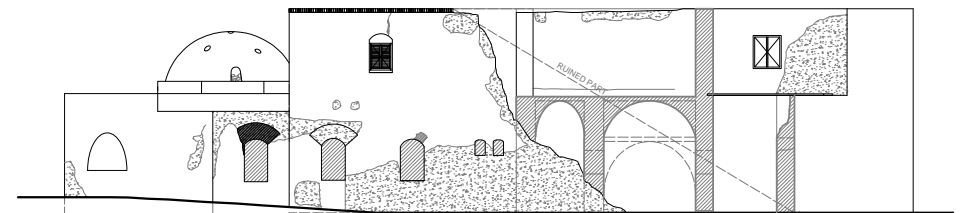
The façade of the Abd el-Rassoul House. Photo: Zs. Vasáros, 2019.



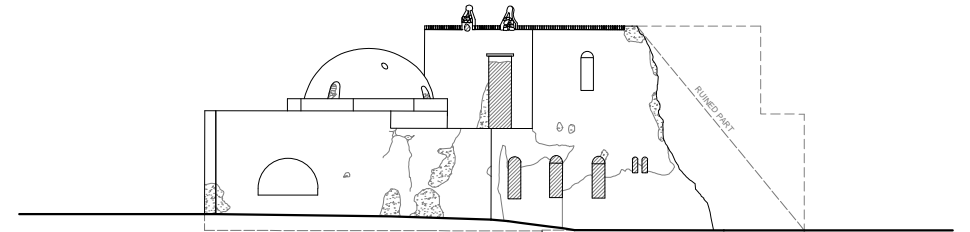
Southern façade



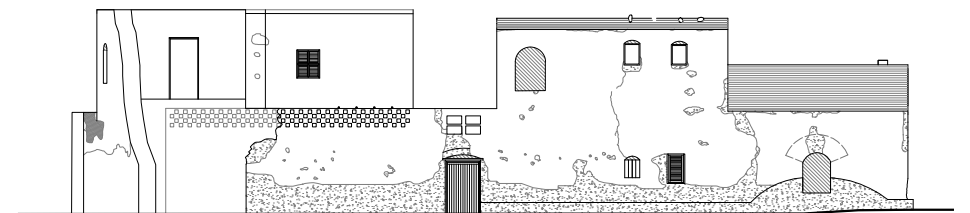
Eastern façade



Northern façade



North-Eastern façade



Western façade

0 2 5 10m

Façades of the Abd el-Rassoul House, based on data captured by the Mission in 2015-2017. Drawings by F. Tibai, L. Veres

Dóra Kalász, one of the participants in the January 2017 fieldwork, completed her BSc thesis on the Cattle Market site in 2018, proposing a craft school for the largely vacant marketplace in her plan. Details of this interesting design proposal are presented in the previous volume. Another important result of the 2018 season related to New Gourná is the preparation of a design competition for architecture students at the Budapest University of Technology and Economics (BUTE) regarding one of the vacant sites. According to Fathy's masterplan, the site would have accommodated a residential building, but it has been left empty, and today auxiliary buildings take its place. We proposed an elementary school to be built next to the mosque and across the Khan; the autumn 2018 student design competition yielded 10 design proposals. Working in teams, Hungarian students (mostly participants in the spring 2018 fieldwork) created plans together with other Hungarian and foreign, mainly Middle Eastern students. We also invited Mr. Tarek Waly, who worked with Fathy on the unrealized late Nile Festival Village project in the 1970s and who coordinated the restoration of the Stoppelaère House in Luxor, to sit on the jury panel. Mr. Waly is currently working on the renovation plans of the Khan in New Gourná. In this volume, we present some of the most interesting suggestions, representing a theoretical possibility for the further development of New Gourná.



Residential houses in Mahamid. Photo: Zs. Vasáros 2018.

We took an important study trip to Aswan, as well as to some of Fathy's more important locations in Upper Egypt. About halfway between Luxor and Edfu is Mahamid, where we documented a village mosque in 2016-2017 which dates back to the Middle Ages. We included this building primarily for its simplicity and rarity. Unfortunately, the mosques in Upper Egypt, which inspired Fathy, have now mostly been destroyed. The one in Mahamid is a rare exception. We cannot confirm that Fathy visited the site, but the rural architectural heritage of the village is nevertheless remarkable. We returned to the Fatimid Cemetery in Aswan, which we had studied in the previous seasons.⁹

⁹ See SPEISER et al., 2013; also BJÖRNESJÖ – SPEISER 2014.



The mosque and its minaret in Mahamid. Photo by Zs. Vasáros, 2018.

We also visited the remains of the Mashhad al-Bahri (Shallal) Mosque, accessible by boat from Philae.¹⁰ The remaining skeleton of the minaret is an important example of early Islamic architecture. In Aswan, especially on the western side in the so-called Gharb al-Aswan, we were able to study one of Fathy's most important sources of inspiration: the structural and formal design of the so-called Nubian vaults. The complexes constructed around the courtyard(s) feature characteristic parabolic arched spaces, which today still serve primarily as buildings one would find on a farmstead or agricultural/animal husbandry farm. For the most part, they are used as storage facilities and dwellings for animals. However, as has been thoroughly documented in the secondary literature, Fathy eventually created the dominant motif of his architectural style from this structure and form.



Nubian vaults in Gharb al-Aswan. Photo by Zs. Vasáros, 2018.

¹⁰ See BLOOM 1984; also O'KANE 2016, 25.



*Students of architecture are studying the remains of the Mashhad al-Bahri (Shallal) mosque.
Photo: B. Zacher, 2018.*



Interior of the St. Tawadros Monastery, Deir el Moharreb. Photo: Zs. Vasáros, 2018.

We also visited several sites related to the project in the area around Luxor. At Luxor West Bank, we visited Deir el-Moharreb, a fascinating dome system which we had studied earlier.¹¹ An important goal for the future is to fully document the early Coptic monastery church and to study the structural and architectural relationships of the domed spaces, which were constructed in multiple stages.

We also explored the church space in Deir el-Tod, which could also offer exciting opportunities in the future. As we do every year, we returned to Garagous in 2018, where we had previously conducted surveys and documentation at two locations. The so-called Ceramics Manufacture and the Cultural and Health Centre plans were made by Fathy in the 1950s, but due to his conflict with the Jesuit community, the buildings were eventually constructed differently.



Interior of the Coptic Church in el-Tod. Photo: Zs. Vasáros, 2018.



Interior of the Ceramics Manufacture, Garagous. Photo: Zs. Vasáros, 2018.

¹¹ See LECUYOT 2019, 18-20.

This season, we refined our previous surveys regarding the Ceramics Manufacture, where the two workshop buildings display Fathy's vision in its most authentic form, although the layout is different from that of the plans. We partially assessed the so-called tower buildings and adjoining outbuildings, but their "originality" (that is, the extent to which they are based on Fathy's plans) is still questionable. Unfortunately, we could not enter them. In the case of the Cultural Center, we only know Fathy's site plan, and the outcome is only barely reminiscent of that layout. We therefore considered it important to document this ensemble thoroughly, as it is a little-known or modestly documented part of Fathy's oeuvre. We were able to survey parts of the school, the church and the nursery school, but we did not have access to other rooms this season.¹²

Related to the project, we repeatedly visited the newly built parts of Gourná, which have continuously provided space for the displaced population of Old Gourná since the 1990s.¹³ This area is north of the West Bank, essentially northwest of Taref. The first unit is called Syul, the next Taref and the last, built after the year 2000 with its distinctive domes is called Gabawi. This area is not only interesting to us as the finishing touch of the Old Gourná-New Gourná relationship, but also from a contemporary architectural point of view, as the typically row-house designs were built at different times, according to different parameters and were given fundamentally different characters, therefore offered different opportunities to their new residents. It was interesting to study how each type of building became extendable and how the edifices which were to be demolished served as building material for new houses. Dóra Dávid studies this phenomenon, which is a familiar subject in the international secondary literature.



House in al-Syul. Photo: Zs. Vasáros, 2018.

¹² See SIDHOM 2018; HAMID 2010, 136-139; STEELE 1988, 79.

¹³ See in general about Old Gourná VAN DER SPEK 2011; SIMPSON 2003.

2019 - TIME FOR INTERPRETATION

The Cooperation Agreement between the AUC Rare Books and Special Collections Digital Library and the Hassan Fathy Survey Mission of the Faculty of Architecture at BUTE was prepared in 2018 and was signed at the beginning of February 2019. According to the agreement, we can use materials in the collection for research on related publications, but the surveys, photographs and their primary evaluation during our mission will be deposited in the Cairo collection. During the on-site research in January and March 2019 we obtained valuable digitized materials which support our research, and we consulted experts on the collection, Ms. Balsam Abdel Rahman and Ms. Ola Seif.

At the beginning of February 2019, we visited the Fares School and conducted surveys and photo documentation.¹⁴ The visit was preceded by a lengthy licensing process, given that the school has been closed for years, which is partly the reason why its condition has deteriorated.¹⁵ The series of plans found in the RBSC, AUC date back to 1956, presumably the school was built after this, at a time when Fathy may have already left the country. In many respects, the Fares School is a model. This is one of Fathy's sophisticated layouts and spatial arrangements in a school that has survived to this day, which is why it was important for us to study. At the same time, the school's architectural plans which would reflect reality are not available in the AUC collection or in published materials, therefore obtaining permission to study the building was crucial for us. Furthermore, the AUC archive plans show several versions, including "vernacular" solutions perfected by Fathy, and also reinforced concrete constructions. Thus, the processing and evaluation of the surveys and their comparison with the remaining plans and Fathy's other school plans offer exciting research opportunities.

¹⁴ See the original plans in RBSC: Hassan Fathy Collection 56.01.; about the school see STEELE 1988, 84-85; STEELE 1997, 96., 104-108; DAMLUJI 2018a, 41-43.

¹⁵ I would like to express here my sincere thanks to the representatives of the Ministry of Education in Cairo for the support to realise the visit and the survey in Fares.



School in Fares. Photo: Zs. Vasáros, 2018.

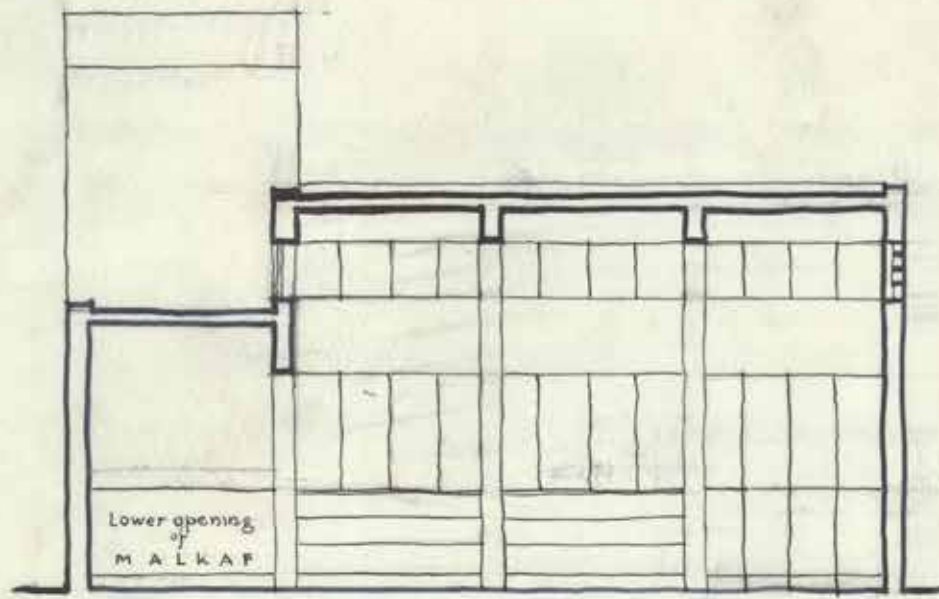


School in Fares. Photo: Zs. Vasáros, 2018.

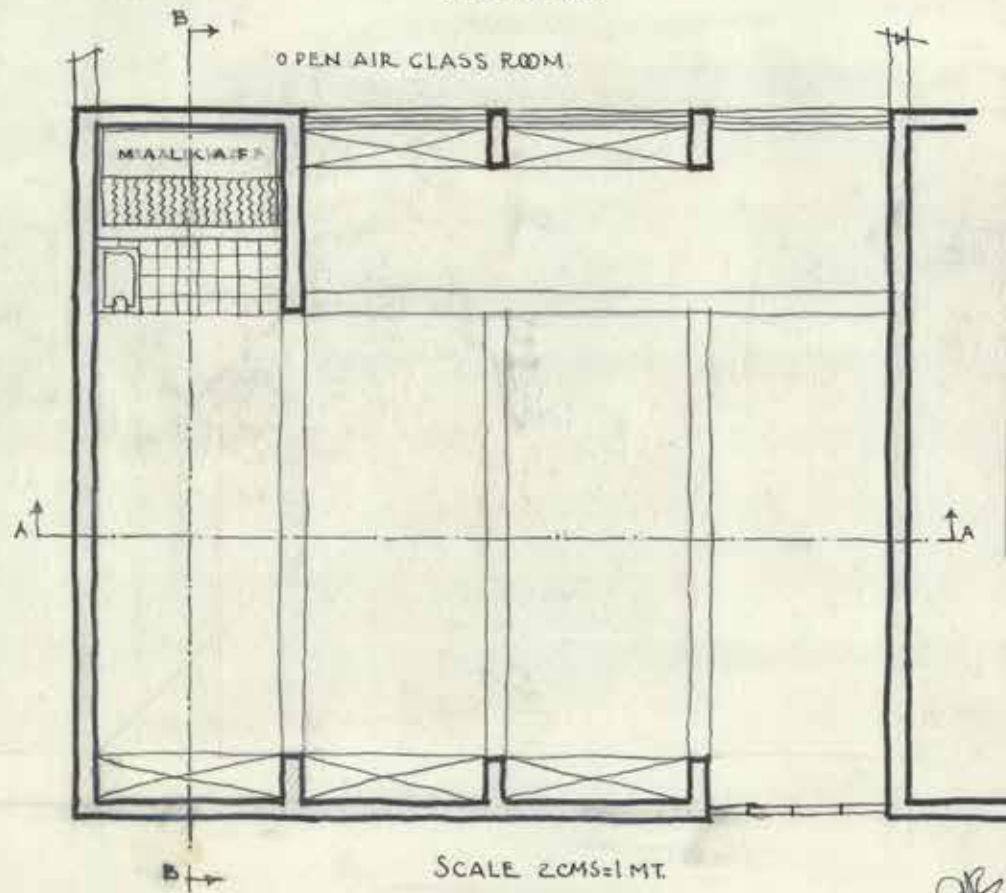


Interior of a classroom in Fares. Photo: Zs. Vasáros, 2018.

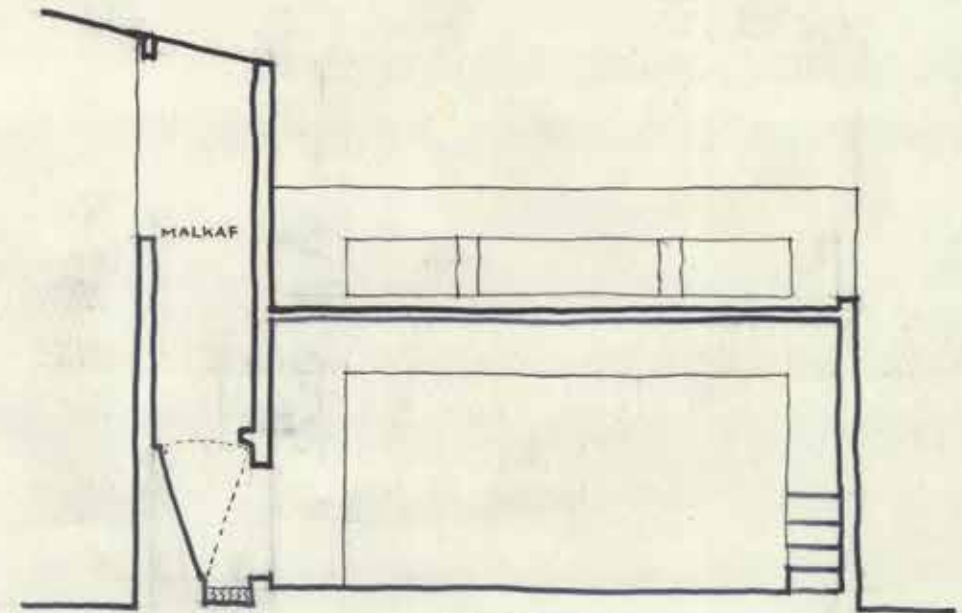
ALTERNATIVE FOR CLASS ROOM FARES SCHOOL TYPE, IN R.C. & RED BRICK



SECTION AA



SCALE 20MS=1MT



SECTION BB

Alternative proposal for the primary school in Fares: the structure is reinforced concrete and burnt brick.
Source: RBSC, AUC



The village Lulu'at al-Sahara near Kerdasa, Cairo. Photos: Zs. Vasáros, 2019.

In March 2019, we revisited the Hamdi Seif al-Nasr House in Fayyoun and had an opportunity to visit the Andreoli Villa.¹⁶ However, the most important site we visited was a village called Lulu'at al-Sahara, in Giza, near Kerdasa, which was built in 1950, commissioned by a certain Hafez Afifi.¹⁷ The architect was Fathy, and the design and execution were essentially parallel to the failure of the New Gourna project. Lulu'at al-Sahara is not nearly as large as New Gourna or later New Baris, but here the original ideas seem to have been realized. The residential buildings resemble those of Gourna, the mosque looks like the mosques surveyed by Fathy in Nubia, and the buildings still fulfil their function as residential housing estates. This is quite rare in Fathy's early work, and we plan to study it in the future.

We returned to Garagous, where the team conducted further surveys at both locations. In the Ceramics Manufacture area, we could prepare the documentation of the so-called Hostel building, and we were able to survey newer building units by the Cultural Centre. The Priest's House (probably based on Fathy's design and guidelines), details of the hospital wing featuring Fathy's style and certain parts of the school were documented. Thus, apart from some private rooms, the architectural survey is now complete.

¹⁶ The participants of the Mission in 2019 were: Dr. Zolt Vasáros (Architect, Field Director), Ms. Zita Zöllner, Ms. Andrea Kövesdi, Ms. Fruzsina Serfőző (Students of Architecture), Dr. Dezső Hegyi (Architect), Mr. Gergely Sági (Architect, Doctoral Student), and Mr. Simon Szabó (Student of Architecture).

¹⁷ I express here my thanks to Ms. Balsam Abdel Rahman and to Mr. Ahmad al-Bindari for their help to find the site. For the buildings see STEELE 1988, 75-77.

During the season, doctoral student Gergely Sági examined the current structure of New Gourna as a case study and summarized its architectural-urban implications. This is only a snapshot, as the rate of construction and rebuilding in the area is very fast, and the volume of change has been significant in recent years. New Gourna seems to be a good site for mapping the installation of buildings and the number of levels based on available photos. This is not intended to show the decay of New Gourna, but rather an understanding of what is happening in Egypt today, primarily as a result of demographic change. Gergely Sági analysed the current buildings of the village and compared them to one of Fathy's late works, the Dar al-Islam project in New Mexico, USA. The study was published in the Yearbook of the Doctoral School of Architecture of BUTE in 2019.¹⁸

Unfortunately, the mosque in New Gourna was in such bad condition that it had to be closed. The carpets were removed from the lounges, which provided an opportunity to observe and document the floor coverings accurately and to assess details that previously had been covered. Dezső Hegyi PhD, an expert in structural engineering, and his students, Ms. Andrea Kövesdi and Mr. Simon Szabó made important static-structural observations on the Mosque, the Khan, Fathy's own house and the Theatre; his findings have been published in a collection of studies compiled by students in the fall of 2019.¹⁹



The atrium of a residential house in Gezira, Luxor West Bank. Photo: Zs. Vasáros, 2019.

At Luxor West Bank, in Gezira we documented a residential building constructed presumably at the beginning of the 20th century. The house was made of mudbricks, palm beams and branches, like the buildings of Old Gourna. Also, the floor plan of the building was strikingly regular, and its spaces bore a remarkable resemblance to most of the buildings Fathy designed in New Gourna, especially the patio, the L-shaped staircase and the additional spaces. One could easily have the impression that Fathy used this building as reference for the New Gourna buildings that were designed to replace the Old Gourna ones, and its various permutations represented the different types.

¹⁸ See SÁGI 2019.

¹⁹ See <https://tdk.bme.hu/EPK/DownloadPaper/A-Hassan-Fathyfele-boltozatok>



Al Qasr, Dakhla. Photo: Zs. Vasáros, 2019.



Interior of Nasr al-Din mosque, Al Qasr, Dakhla. Photo: Zs. Vasáros, 2019.



Nasr al-Din mosque, Al Qasr, Dakhla. Photo: Zs. Vasáros, 2019.



Nasr al-Din mosque, Al Qasr, Dakhla. Photo: Zs. Vasáros, 2019.

Mainly because of the location and multiple expansions, the Old Gournia buildings may be seen as only partial references for the New Gournia residential buildings. More precise analogies can be found in the simpler buildings which were presumably built during one phase in the neighbourhood. We are planning further surveys in this area.

We revisited New Baris in the Kharga Oasis and examined some important sites from the perspective of the study of Fathy's architectural ideas. Fathy visited the remaining domes and vaulted tombs of Bagawat Cemetery.²⁰ In connection with New Baris he specifically mentions to the features of the ancient architecture of the oases which can be observed in the Qasr. Fathy primarily refers to the narrow, winding, sometimes covered streets, which are occasionally found in the New Baris plans. Old Baris has almost completely disappeared, similarly to Kharga, where the Qasr has practically vanished, however in Dakhla it has remained largely intact.²¹ Walking through the area and, as much as possible, looking with Fathy's eyes, one can notice the spatial architectural solutions which he used not only when designing New Baris, but also in several of his other designs.



Plot of the former house of Alaa al-Din Mustafa, master builder of Hassan Fathy. Remains of the original house are to be seen under the porch. Photo: Zs. Vasáros, 2019.

We visited Mahamid again, not just because of the mosque, but also because in 1981, Fathy designed a house here for Mahamid for Alaa al-din Mustafa, a Nubian-born master builder. Fathy worked with Alaa al-din Mustapha many times, and he invited him to the Dar al-Islam project in New Mexico, USA, too. The house has not been identified in publications so far, but after some investigation, the remains of the house were discovered with the help of relatives. Unfortunately, only a small part survived, but it has been documented.²²

Contemporary architectural research into the dissemination of mission work launched in 2018 continued. We selected the basic types of buildings constructed in the 1990s and after 2000 in Taref and Syul and made surveys. Not all types have been documented

²⁰ See in general FAKHRY 1951; CIPRIANO 2008.

²¹ See in general DABAICH 2011.

²² For the original plans in RBSCL, Hassan Fathy Collection 81.02. About the master builder see DAMLUJI 2018, 330-337.

yet, but we already have the most important ones. Rich photographic documentation will also help to further understand the processes concerning the ways in which the buildings were used (or not used) and the ways in which they were remodelled and added to. We will examine good examples which came into being in an openly ad-hoc way. This process was analysed by Dóra Dávid during the 2019–2020 thematic year of the Doctoral School of Architecture; this volume contains her reports on the ongoing research.

Each autumn, we are announcing two types of competition briefs for the Students' Competition of BUTE: a scholarly thesis and an art-based project focusing on design. In the autumn of 2019, a "hybrid" brief was announced to the students, which called for the elaboration of a design project based on academic grounds about a case study in Cairo. The researchers revised and analysed a number of intervention proposals concerning the informal neighbourhoods, and elaborated a proposal connecting them with a certain progressive framework. A summary of the thesis and some figures by Annamária Olt and Sarolta Nardai, the Authors, are also published in this volume.²³

Due to its popularity, the school program proposed for the New Gournia site selected in the autumn semester of 2018 student design contest continued in the spring semester of 2019. More plans were designed for the site in the framework of projects for Diploma Projects and the Comprehensive Design subject. In addition to the school, an international research building could also be designed.

In the spring of 2019, we launched the Middle East Design Studio at the BUTE Faculty of Architecture. The locations of the design tasks are in Luxor, Cairo and Aleppo. This volume contains a selection of the designs for Luxor, and the results of the Cairo program will be presented in the next volume. In Cairo, we proposed the design of the Max Herz Research Institute to commemorate the renowned architect, Max Herz Pasha/ Herz Miksa (1856-1919), who was born in the Austro-Hungarian Monarchy. The site is located next to the Citadel, opposite the Al-Rifa'i Mosque and the Mosque-Madrassa of Sultan Hassan, in the restoration of which Max Herz Pasha played an outstanding role in the late 19th century.²⁴

This volume introduces Andrea Kövesdi's design for the Comprehensive Design Studio; she worked on the plans for two semesters and designed the "research base" topic of the subject. The unique feature of the design is that although the principles of construction are not entirely in line with Fathy's original ideas, the plan still corresponds to his main features. The building's scale, articulation, elaboration of details and harmony of form are exemplary. The natural ventilation of the building was thoroughly considered, and the designer also conducted on-site studies of the relevant elements of traditional architecture. Zsolt Bogáthy chose the same subject and his first-semester Comprehensive Design project is published in the volume. He chose a different approach and did not follow Fathy's masterplan. Designed with a regular stamp-like contour, the building is placed slightly withdrawn from the property line, thus allowing more space for the Mosque and the Khan. Both the interior structure and the façades are rigorously designed, with the atrium and the dining room evoking aspects of local design and traditional architectural patterns. A further strength of the design is the space-saving construction of new edifices in the area, which makes the composition extendable in a scheduled manner.

²³ For all entries, see DÁVID – TERBE – SÁGI – VASÁROS 2020.

²⁴ In general about Max Herz see ORMOS 2009.

Several diploma projects have been prepared for the site, two of which are presented here. Anna Lukács designed the school, and partly incorporates Fathy's masterplan in the construction of new edifices in the area, while also adapting to climatic conditions. This creates the east-west axis, which open with the smallest possible surface facing the sun. Most openings face north and south with exciting layered façades, and the western side is enriched with covered-open spaces. Our Egyptian student, Raslan Mohamed designed a research base for his diploma project; his design is both contemporary and traditional. The implementation does not follow Fathy's plan but considers the neighbouring Mosque and one of the Khan's major design axes. This roughly corresponds to the direction perpendicular to the prevailing winds, which is a particularly important feature of the plan. The construction of new edifices in the area partly follows traditional structural patterns, resulting in a combination of proportionate courtyards and functional structuring. Raslan's design is based on extensive calculations, consideration, many smart architectural solutions, and it tastefully evokes Fathy's style.

In this volume – similarly to the previous one – we are presenting the short reflections of the participants. The interpretation and description of the objects, sites is not timely yet; the primary experience of personal observation and presence is much more important for the examiner. This is how the experience might turn to a useful knowledge later, which shapes the architectural thought process.

SUMMARY

The Hassan Fathy Survey Mission has been researching Fathy's oeuvre for the ninth time in five years. The 2018-2019 period has been crucial to the research endeavor. First, thanks to the AUC RBSCL, we have had access to an unparalleled archive of important plans and notes, as well as photos. We can use this material to search for details and connections which are virtually unknown, despite the large body of publications. In other words, based on the efforts we have undertaken to complete our fieldwork, questions arise which we can answer by using the material in the collection. The mission's scope in terms of time periods and spaces studied has expanded. The data on the remaining Fathy buildings in Upper Egypt has been recorded because we have surveyed the Fares School and concluded the documentation of the New Gourná residential buildings and the Garagous projects. New Baris, the Stoppelaëre House and the public buildings of New Gourná were surveyed and documented by the Mission between 2015 and 2017.²⁵

Fathy's early or, rather, his early vernacular oeuvre is by no means confined to Upper Egypt, and his first works of this kind were built in or near Cairo. They are still being examined, and concrete steps have been taken to document them, for instance in the Fayyout and Lulu'at al-Sahara. We successfully accessed important antecedents to, and authoritative resources on Fathy's architectural work. In addition to the first, still rudimentary summary of the findings, perhaps the most important result is the dissemination of data in the setting of tertiary education. Firstly, the design competition announced to the undergraduate students and the resulting design projects have been successful. Secondly, research projects at the undergraduate and postgraduate levels appear to be making significant progress, including for instance a critical analysis

²⁵ See DÁVID – VASÁROS 2020.

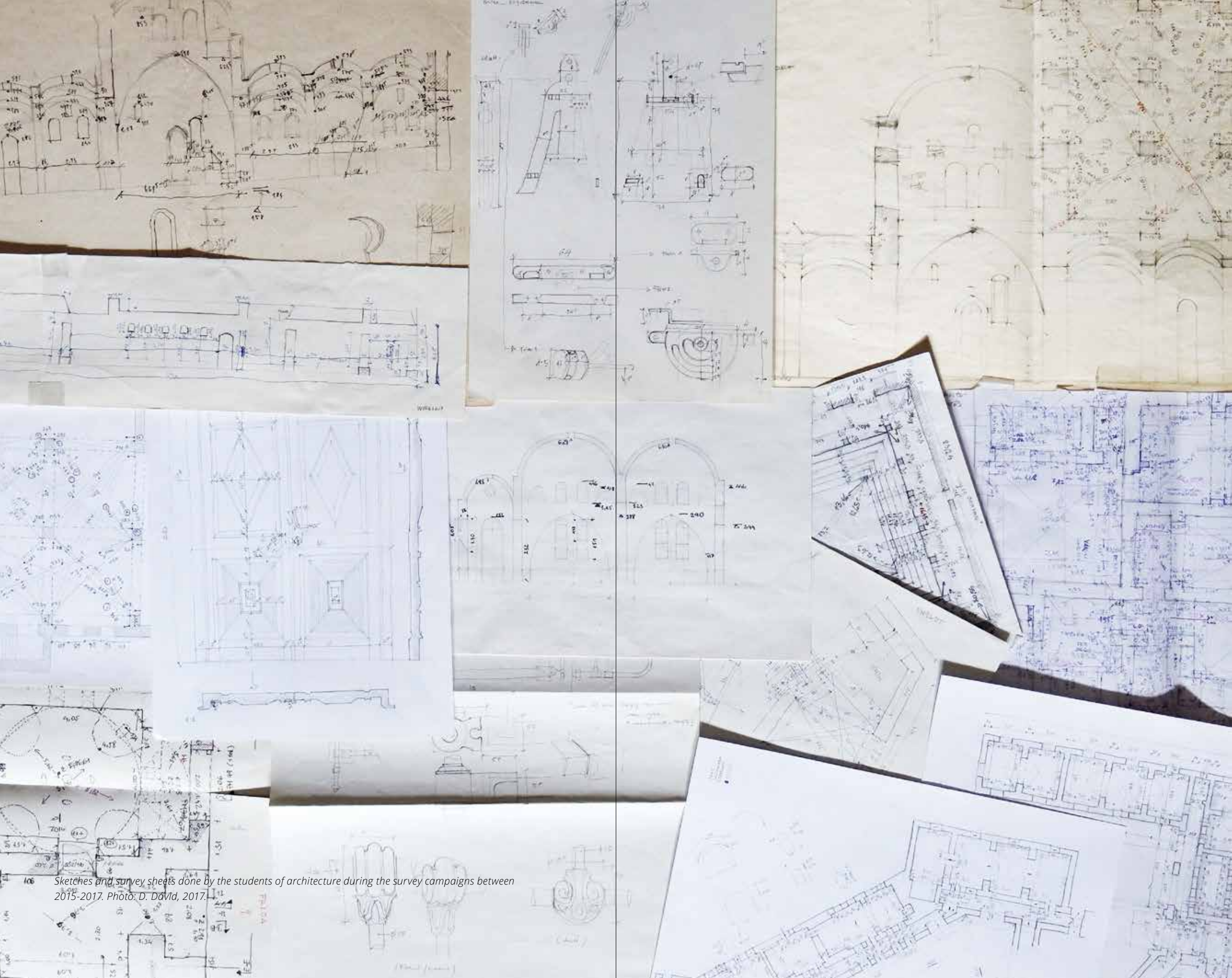
of Fathy's oeuvre, a reconstructive analysis of certain sub-problems, and even the study of contemporary architectural and urban issues.

Further documentation will certainly be possible and necessary for several seasons. According to our plans, a monograph will be written on individual objects or groups of buildings. This will enable the publication of detailed data and comparisons with the original archival materials in a focused and substantial volume. It may then be necessary to revisit certain phases of the oeuvre or even to reassess Fathy's entire career. Meanwhile, we must not forget about contemporary processes, including not only the advancement of informal architecture but also the unique renaissance of Fathy's approaches to architecture. The use of a kind of "fathyism" is clearly detectable throughout Egypt, i.e. his trademark use of mashrabiya built using brick, Nubian vaults and dome structures. In general, the uses to which these architectural solutions are put are dissimilar from Fathy's proportional and unmistakable architecture, but they add interesting daubs of colour to architecture in Egypt, especially in areas outside the major cities.

The research mission on Fathy's oeuvre surpassed its original purpose. The concepts of design-based research and research-based design, as well as the character of the curriculum for designing architects are frequently discussed questions in scientific circles and forums. Therefore, fieldwork proves to be desirable and effective, as documentation always yields primary results which were previously unknown, not up to date, or not detailed enough. At the same time a fieldwork like ours allows us to observe many phenomena in Egypt which we might not notice otherwise. Today, Fathy's original focus on understanding and preserving historical architecture in combination with vernacular architecture is still as relevant as in the 1940s.²⁶ Now, the situation is exacerbated by demographics and the forecasted decline of the Nile, as well as by the unpredictable consequences of climate change. The review and publication of Fathy's oeuvre²⁷ may not answer these questions, but deeper knowledge of his work may help us understand the processes better. It can help with the analysis of historical and contemporary examples and with the understanding of their essential elements. Nowadays, understanding the issues of the Global South and supporting the region have become a global task. If the Hassan Fathy Survey Mission, with its field activities and its university-level dissemination and research potential can contribute to this at an international level, we will have achieved our primary goal. We will continue our work in 2020.

²⁶ In general see FREY 2010.

²⁷ See DIENER et al., 2015; SÉJOURNÉ 2012, 91-110; ANGÉLIL – MALTERRE-BARTHES 2016; SIMS 2014.



Sketches and survey sheets done by the students of architecture during the survey campaigns between 2015-2017. Photo: D. David, 2017.



Cupola of the Stoppelaëre House in Luxor West Bank. Photo: Zs. Vasáros, 2016.

RESIDENTIAL HOUSES IN NEW GOURNA

The origins and context of Hassan Fathy's architecture

Bendegúz Zacher

Hassan Fathy's answers to contemporary needs and architectural problems, especially in his projects in Upper Egypt were based on using already known spatial structures and forms which he reinterpreted in his design process. This attitude is clearly visible in his family houses in an urban setting. His use of mass and space fits perfectly into Islamic architecture with elements like (including but not limited to) a courtyard as the centre of the house; simple rectangular forms in the floor plans; and small openings on the exterior façade. All of these elements have been used for a long time. It is easy to speak about an archetypal Arabic house since these main gestures are based on the way of living and the climatic conditions.

In contrast, forms and the way Fathy interprets them are not so easy to fit into this continuity. His main source of inspiration is Nubia, which includes the southern part of Upper Egypt.

Fathy himself made drawings and surveys there. This region grabbed the attention of the world in 1933, when the dam at Aswan was heightened by 9 meters causing the destruction of 35000 buildings in the newly flooded area. The habitants of the houses moved out a year before and rebuilt their villages somewhere else. As Fathy put it:

"This happened because the Nubians, being remotely situated and living in isolated villages, had always depended on their own resources to build their homes. (...) they managed it mainly because they had retained a technique for roofing in mud brick, using vaults and domes which had been passed down to them from their forefathers, the Ancient Egyptians." (See *EL-HAKIM 1999, iv-vi. Introduction by Prof. Hassan Fathy to the book.*)

This description by Fathy mentions two main motifs which appear in the plans and the construction on New Gourna. The organisation of work which is using the people who will later become locals as the workforce and an architectonic element, the vault.

Among the different types of vaults Fathy used the Nubian vault is exceptional. It can be built out of bricks without external support. For people living in Egypt however, it is known in a different context than the one Fathy used them for; Nubian vaults cover the warehouses for example behind the Ramesseum in Luxor and the Coptic necropolis of El Bagawat. These buildings were not from his time, and their function is agricultural or religion related. The same contradiction is created by the use of cupolas in residential spaces. These architectural elements had most often been used over sacral spaces; most of the mosques, or, for example the Fatimid cemetery in Aswan, which is even mentioned by Fathy himself as a reference.

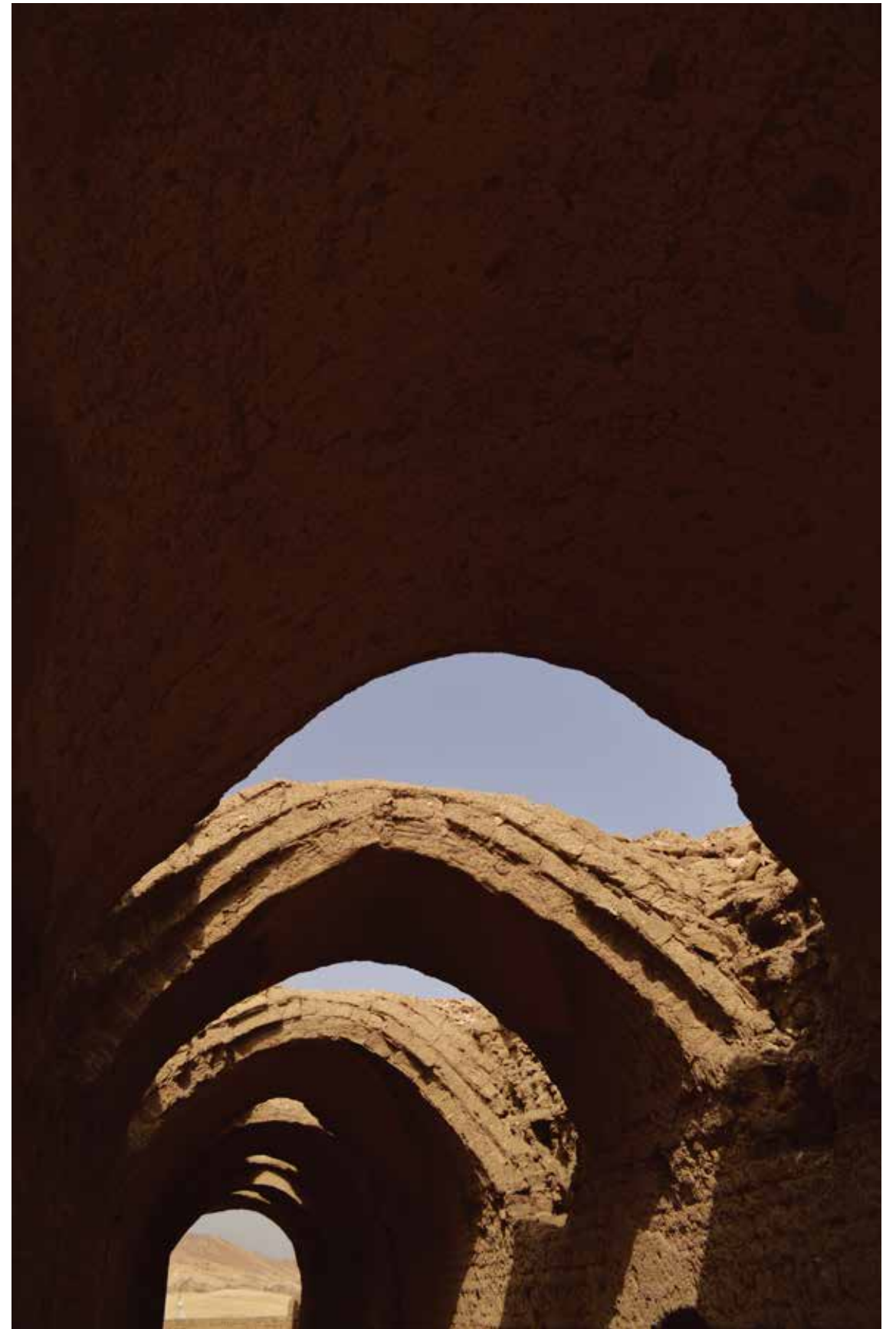
Thus, there was a local tradition of construction, which, according to Fathy, was the key to revitalise the life on the Egyptian countryside. There was also the architectural toolset which originates from the tradition, but without the continuity of the tradition it can be misunderstood or even be the source of contradictions.



Fatimid cemetery of Aswan. Photo: Zs. Vasáros, 2017.



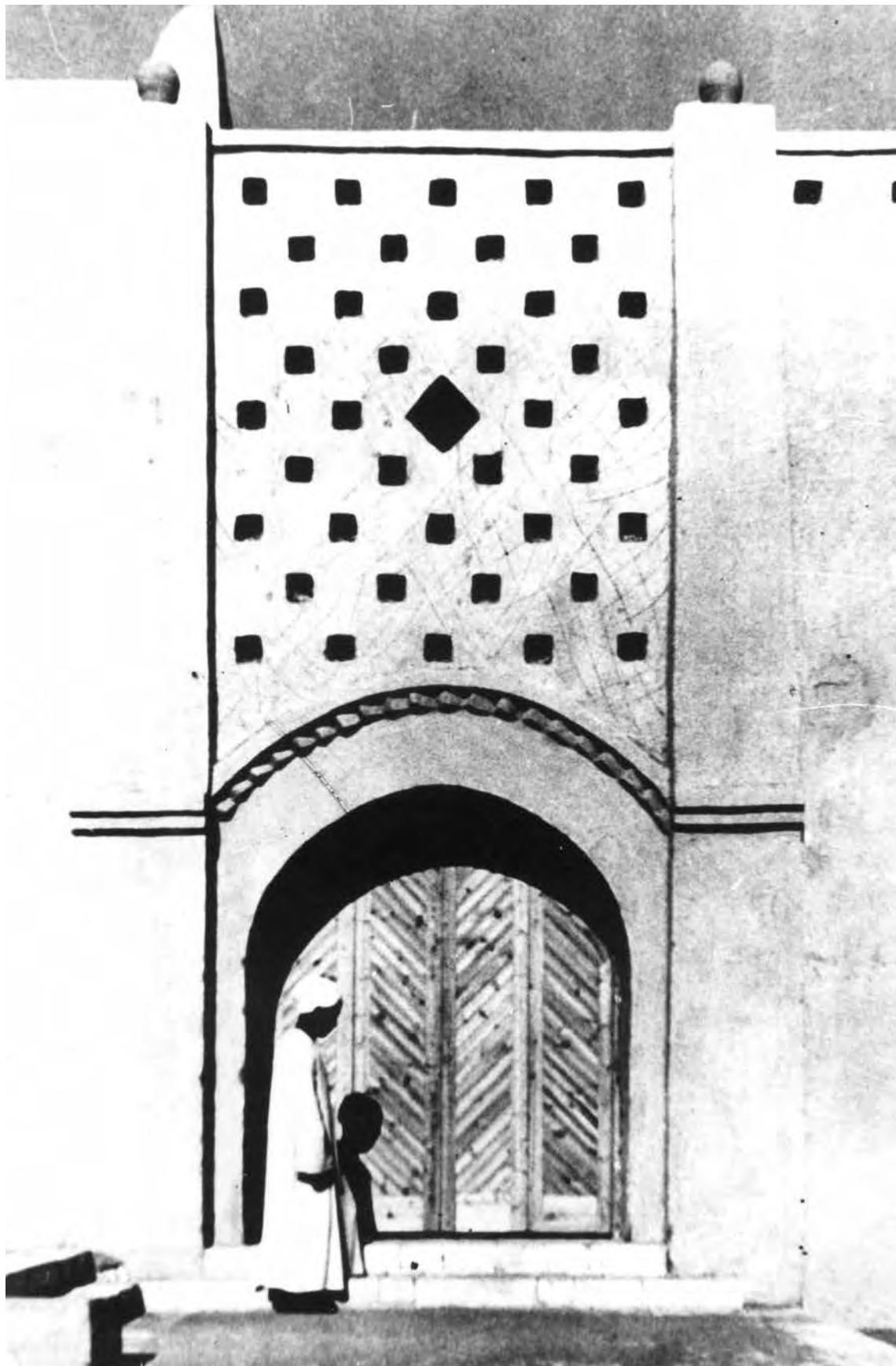
A cupola from the Fatimid cemetery of Aswan. Photo: Zs. Vasáros, 2017.



The vaults of the Ramesseum in Luxor West Bank. Photo: G. Sági, 2019.



The storages around the Mortuary Temple of Ramesses II. (Ramesseum) in Luxor West Bank from above. Photo: B. Tihanyi, 2012.



The entrance of the Theatre in New Gournah. Source: RBSCL, AUC

Dwellings of New Gournah: utopian plan for the forgotten countryside

Péter Kaknics

When creating the masterplan of New Gournah Hassan Fathy took on the task of also creating the space for an existing community. Fathy's greatest merit concerning such a complex issue raising architectural, economical and sociological questions was to base all the decisions upon the community itself. He attempted to get acquainted with the life and the habits of the people of Gournah through his researches to dissolve the conflict between the planned solutions and age-long practices and customs.

The significance of his dwellings is in the attitude with which he endeavoured to create a living-space to which the simple country man's way of life fits. In the compact and introverted blocks of New Gournah, the interior spaces are grouped around a courtyard, an enclosed outdoor space that as a consequence becomes a peculiar core of the house. This place is the scene of family life and work and therefore public spaces open directly to this patio. Separating the private areas, bedrooms are placed upstairs for comfort and climatic reasons but in every case, a staircase connects with the space of the courtyard. Using such a relation of indoor and outdoor spaces Hassan Fathy reproduced the archetype of the Egyptian courtyard house which served a pattern for several sketches and later on for the exact plans of many unique and a few standardized units as well. All of these bear the specific characteristics and motifs of the Arabic house like wind-shields and mashrabiyyas which Hassan Fathy applied consciously due to the climatic and materialistic restrictions of the area.

The approach towards the traditional design and set of tools is even more salient in the city-scale setup of the housing units. Fathy intended to give his buildings the appearance of having grown out of the landscape just like the trees of the district have. For this reason, he tried to avoid the use of any regular systems or a gridiron layout in the structure of the new town because it would have necessarily led to the uniformity of the elements. The everyday life of a small and closed community cannot be determined by the systemizing practice of European cities because its way of life has never been based on a regularity of those; the order of the Arabic city needs to result from the tranquility of the natural diversity.¹ Therefore, several sketches were made to achieve the appearance of the age-long Arabic cities, always paying attention to the appropriate positioning of the houses providing utility and sufficient amount of sunlight, but mainly to preserve individuality in the cityscape.

Walking among the remaining houses of the town the calm rhythm is still perceptible, it originates from the vivid tissue of urban spaces and housing units and smoothly flows from the surrounding fields through the urban spaces and semi-private squares to the private world of closed courtyards and rooms. One of the values the masterplan represents is the wisdom with which Hassan Fathy managed the project

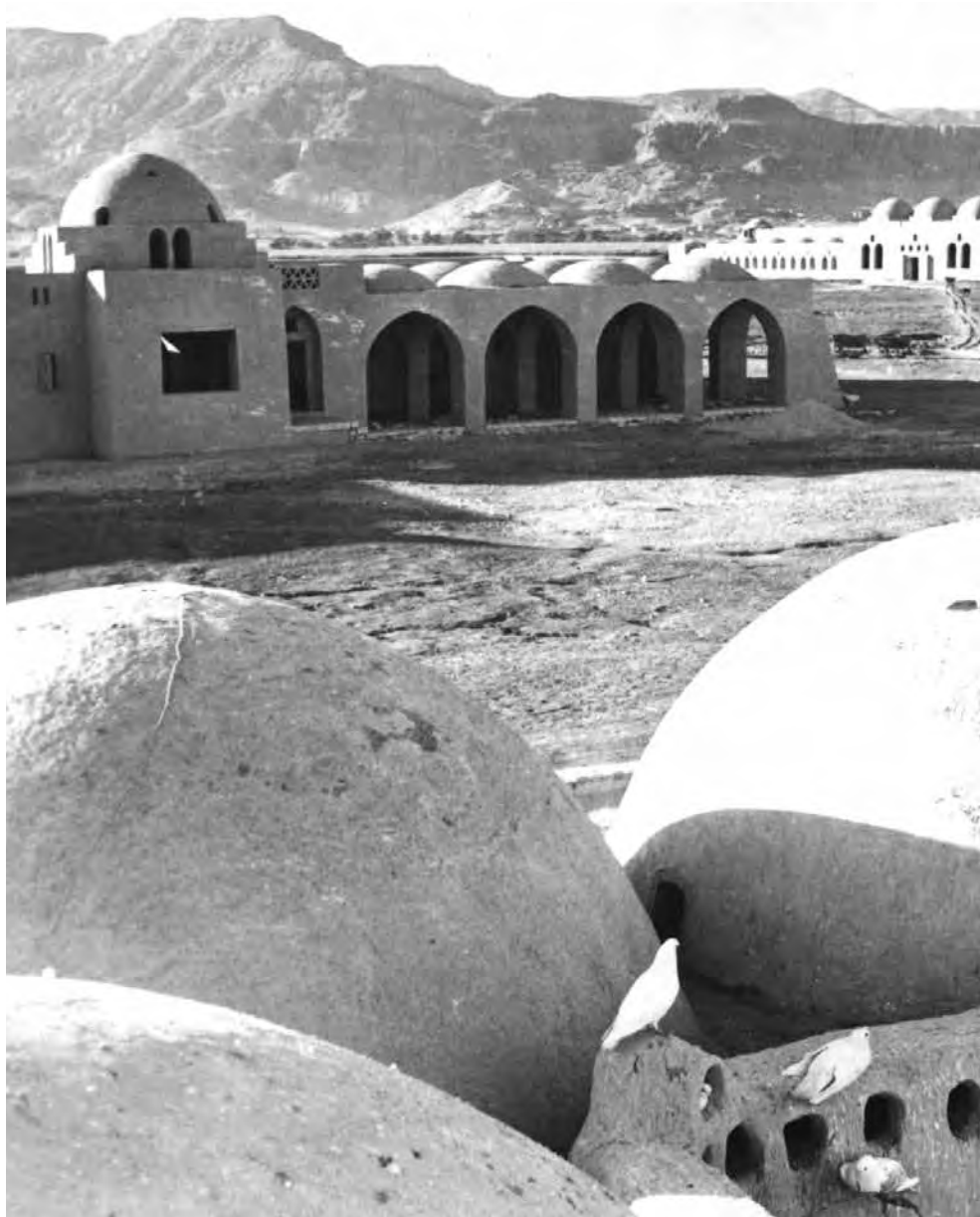
¹ The principles of design are described by the architect himself. See in: FATHY 1973.

after seeing the conditions of the Egyptian countryside. His architectural proposal exceeds the European, utopian visions from the first half of the 20th century and he attempts to find a solution based on the community.

“If possible I wanted to bridge the gulf that separates folk architecture from architect’s architecture. I wanted to provide some solid and visible link between these two architectures in the shape of features, common to both, in which the villagers could find a familiar point of reference from which to enlarge their understanding of the new, and which the architect could use to test his own work’s truth to the people and the place.”²

(Hassan Fathy about the plan of New Gourná)

² See FATHY 1969.

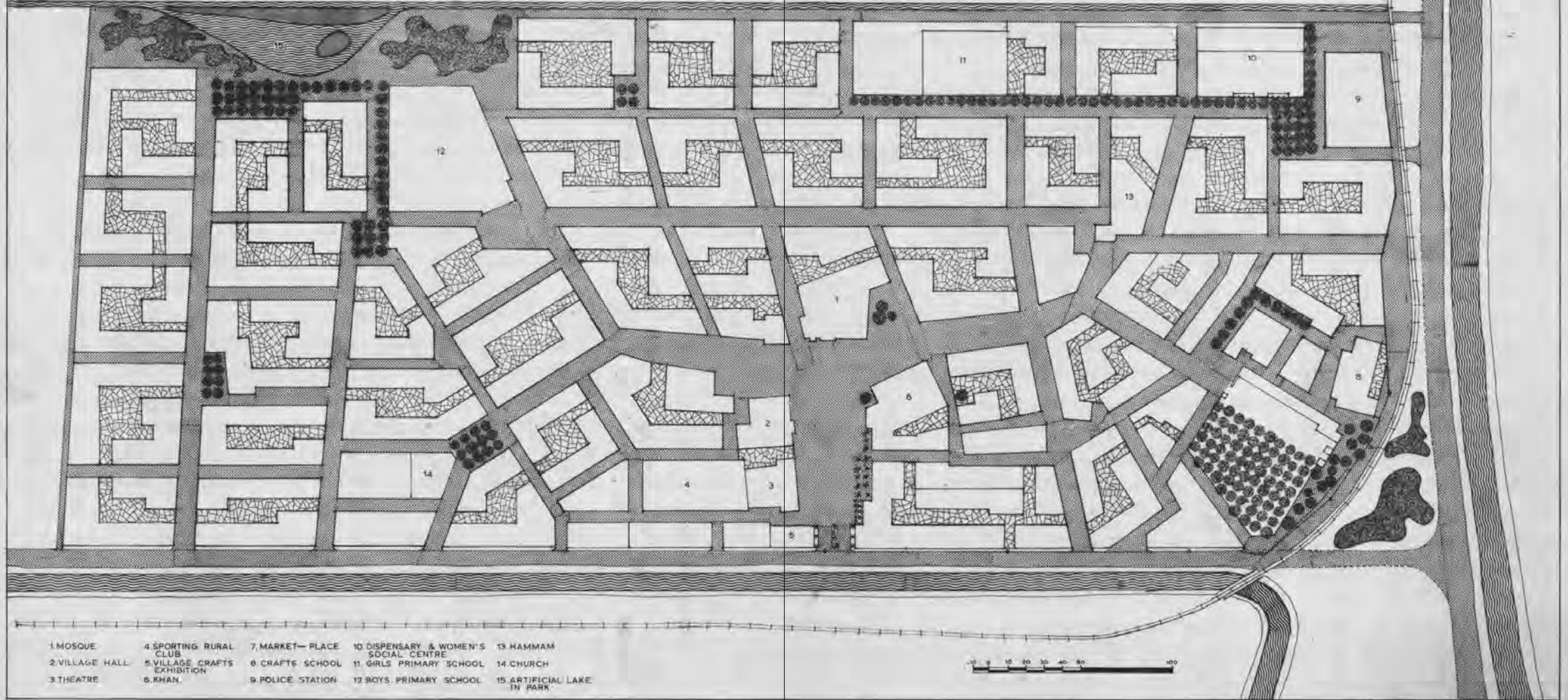
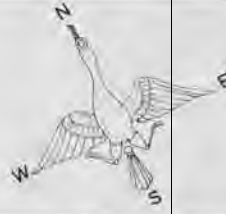


Archive image of the main square of New Gourná. Source: RBSCl, AUC



Archive image of a street of New Gourná. Source: RBSCl, AUC

GOURNA VILLAGE
GENERAL LAYOUT



- | | | | | |
|-----------------|------------------------------|-------------------|--|-----------------------------|
| 1. MOSQUE | 4. SPORTING RURAL CLUB | 7. MARKET- PLACE | 10. DISPENSARY & WOMEN'S SOCIAL CENTRE | 13. HAMMAM |
| 2. VILLAGE HALL | 5. VILLAGE CRAFTS EXHIBITION | 8. CRAFTS SCHOOL | 11. GIRLS' PRIMARY SCHOOL | 14. CHURCH |
| 3. THEATRE | 6. KHAN | 9. POLICE STATION | 12. BOYS' PRIMARY SCHOOL | 15. ARTIFICIAL LAKE IN PARK |



Version of the Masterplan of New Gournah. Source: RBSCL, AUC



Houses in New Gurna. Photo: Zs. Vasáros, 2017.

The new New Gurna

Ákos Balog

In 1961, returning to the Model Village, Fathy had to face the fact that nothing had changed during the previous decade in his absence. The Market, the Workshops, the Theatre stood empty and idle and not a single new building had been erected. Only the residential houses and the Mosque were in use. In his book, *Architecture for the Poor*¹ Fathy tells his honest, disillusioned opinion about the circumstances also naming the local and political reasons.

This state of never changing could hardly characterise the last few years. By 2010 the built and theoretical heritage of the village had deteriorated, even though New Gurna is situated in the area of the “Ancient Thebes with its Necropolis”, which was listed as World Heritage by UNESCO in 1979. Only a few of the homes with Nubian vaults built of mudbrick still stand, most of them are in ruins. These old buildings are being replaced by newly erected reinforced concrete skeleton framed multi-storey houses with no architectural quality. Hence, the imagined setting is continuously being demolished while Fathy’s organic masterplan is strangely getting conserved.

Yet this new informal character does not mean greater freedom of design, only the neglect can be felt in the streets. Nevertheless, these new, sometimes hybrid homes made by necessity and insecurity do not come into existence without reason. On the contrary, there is an immensely complex problem in the background including technological and social issues. At the time of planning the village, Fathy could not have had counted with the rising groundwater level, caused by the construction of the Aswan High Dam after 1970, which contributed the most to the structural decay of the buildings in New Gurna. Moreover, he could not have counted with the high demand of multi-storey buildings that stems from the intense growth of the population. However, these circumstances per se are not enough to ruin a project. Architectural decisions, like using Nubian vaults or placing the bedrooms onto the second floor simply did not meet the traditions and lifestyle of the locals who were just resettled from their former homes.

Therefore, mostly because of these aforementioned factors is why the houses designed by Fathy are being replaced by these reinforced concrete multi-storey blocks, standing with some original mud buildings dwarfed next to them painted in faded Egyptian blue. Despite their friendly suspicion, the inhabitants’ hospitality is fascinating, the freshly brewed tea was an indispensable ingredient of every survey.

In these houses and on the streets in-between them European visitors can feel like they stepped into another, strange world even within Egypt, into a world which in its true essence has never really existed. Is it important to save and comprehend all of this? For us, maybe yes. It is interesting and instructive to ask the question: why this local microcosm did not work as the architect imagined? However, the answer seems obvious even to an outsider. Like anywhere in the world, the height of the parapet is insignificant

¹ See FATHY 1973.

in view of a problem like that. Implicitly, there would be no need for new houses if the old ones had not fallen to pieces or were adaptable to the changing demands. The idea, imagined during the programming phase would have required a level of expertise and strong community in regard to the afterlife of the project which was a daring expectation from the architect and unfortunately did not come true in the case of the Model Village. Notwithstanding, beyond the technical problems primarily it is the abandonment and the indifference towards the onetime innovative ideas which turns New Gourna into an even newer one.



Decaying mudbrick wall in New Gourna. Photo: Zs. Vasáros, 2018.



New Gourna. Photo: B. Miklós, 2017.



'Old' and 'new' houses in New Gurna. Photo: Zs. Vasáros, 2016.



The arcades of the Khan. Photo: G. Sági, 2015.

PUBLIC BUILDINGS IN NEW GOURNA

The Khan

Judit Bielik

In the architecture of Hassan Fathy the building of New Gourna takes an important place. Firstly, he intended it as a model village, therefore the master plan follows a strict hierarchy and design. The plan of the village is divided into four parts, wide streets separate the neighbourhoods dedicated to different clans. Connecting the public buildings together these streets meet forming the main square of New Gourna. When designing the public buildings Fathy also wanted to create the institutions crucial for the foundations of the new lifestyle of the village. This is how the concept for the market was developed, which served an important role in the trading of agricultural products coming from nearby lands. The Tombs of the Nobles, the Mortuary Temples and other archaeological sites can be found in close proximity of the village, therefore a lot of tourists pass along the main road nearby every day. The architect was hoping to create the circumstances for a better life based on tourism. As one of the buildings surrounding the main square he designed a khan which, expanded by boutiques could have served as the place for selling local artisan products according to the original concept.

The khan traditionally is a building which serves as a multifunctional space for the travelling tradesmen, during the day they could sell their products, while at night could be used as lodging. The khans of medieval times were surrounded by walls arranged to form a square, secured by towers, with only one entrance. A standard khan had two built-together parts: the outer open courtyard surrounded by domed arcades and the building dedicated to prayer in the middle. The fortress-like character of the exterior was eased by the ornamentation of the façade. Inside the khan shops operated, and were used as storage for feedstuffs for the livestock.

The main purpose of the Khan designed by Hassan Fathy was to bring consumers to New Gourna. Therefore, unlike the medieval khans, which were nearly never placed inside the habitat, the khan designed by Fathy is in the middle of the village. There is only one distinct commonality between the Khan of New Gourna and the traditional ones; the typical courtyard surrounded by walls can be found in the layout in the village, too. A fundamental part of the Khan imagined by Fathy were the domed arcades. The shops were placed closer to the main square, while the lodgings were at the back.

Other public buildings on the main square were the Mosque and the Theatre, but the Village Hall was also in an important spot, beside the Mosque. The public buildings received a lot of criticism, they did not attract visitors. Their functionality is also questionable when reimagining a village. Subsequently looking back on the project the lesson to be learnt from the past of more than seventy years is that the part of the main square was overrated considering the true needs of the residents; only the Mosque functions now according to the original plans.



Archive photo of the Khan. Source: RBSCl, AUC



Inner courtyard of the Khan after removing the debris. Photo: Zs. Vasáros, 2018.



Windows and doors of the Khan. Photo: Zs. Vasáros, 2015.



Eastern façade of the Khan during the renovation process. Photo: G. Sági, 2019.



Detail of the Cattle Market. Photo: Zs. Vasáros, 2015.

The Cattle Market

Fruzsina Ács

In Fathy's concept for New Gourna the Market had an outstanding role due to both its function and its position within the structure of the settlement. The plot designated for New Gourna was separated by the railway which turned north at the south-east corner of the land. This curve defined the position of the Cattle Market, which served as an entrance for visitors arriving to the village. Visitors entered the area of the market via a double gate, then, on the opposite side of the Market they could enter the village of New Gourna along the main road through another gate.

Traditionally the Market was the main area of business: local traders and salesmen from nearby villages were selling their product here on market days. The selection in the local shops was often very restricted, normally only offering non-perishable goods for everyday use, e.g. coffee, sugar, oil. Other products like grain, vegetables, eggs could be bought at the market once a week. Besides food it was common practice to also trade with livestock, such as cattle, donkeys and camels. Markets in most villages did not have their own designated buildings, otherwise unused pieces of land were usually fenced off for this purpose.

However, the market in New Gourna was significantly different: it received its own building which served as the permanent location for the weekly markets, with mangers for the animals and planted trees.

The Market is in the south-eastern corner of the village and is accessible throughout a double gate. Through here a road leads to the gate on the other side of the Market which opens up to the village. On market days this road was occupied by grain salesmen. Nearby the entrance of the market, to the right was a café which was covered by six domes. The café building was followed by fourteen stables. The empty plot on the left side along the road was shaded by planted trees, with long stables underneath with water access for the animals.

The project received a lot of criticism and in the end was not fully built; only the Mosque, the Khan, the Schools, and the Market were constructed from the planned public buildings.

Compared to the scale of the village the Market was considered to be overly big, the area was very large in scale to the needs of a village this size.

During the surveying it was only possible to collect data from certain parts of the building: the fourteen stables were found in a fairly good condition during our first visit, but by 2018 it deteriorated significantly: the arches partly collapsed, some of their openings were walled up. The land around the Market was completely built in, the openings on the outer façade are mostly walled up to allow for building houses along the walls of the Market.

The Market has not been fulfilling its primary function, it is not being used, therefore it is in a run-down condition. The Cattle Market as a function is not justified in New Gourna like it used to be, its remaining parts are being put to use to contemporary needs: the building of the double gate gives space to a whitewash shop and a weaving manufactory, the empty plot which was meant to be the marketplace and the massive land around it is slowly taken over by the village.



Remains of the former stables of the Cattle Market. Photo: Zs. Vasáros, 2015.



Temporary use of the former stables. Photo: Zs. Vasáros, 2015.



Archive image of the Market. Source: RBSCCL, AUC



*The vaulted stables of the former Cattle Market and remains of its eastern gate.
Photo: Zs. Vasáros, 2015.*



A window of the Village Hall. Photo: Zs. Vasáros, 2017.

The Village Hall

Dóra Dávid

There is an interesting, two-faced house on the main square of New Gourná, by the Theatre. On one side of the façade one can identify the mudbrick wall, we can see the outline of a dome on the roof; the mashrabiyya of the window and the traditionally decorated door evoke Fathy's designs, too. The other side of the house, however, faces the Mosque with an obviously much younger, colourful façade.¹

Based on the original masterplans and Fathy's description of the project² we can presume that this building, the 'Village Hall', or as it is called in the village today: the Omda's house was one of the first buildings to be erected in the village, along with the Khan and the Mosque. In his book, titled "Architecture for the Poor" Fathy emphasizes that he deliberately wanted the public buildings to be built first. He was afraid that, after completing the essential residential houses, the project might run out of money and the construction of the public buildings would have had to be cancelled, thus he aimed to avoid this scenario by all means.

The Village Hall occupies an important spot in the main square, it is obviously one of the central elements of the village. The arcade of the entrance facing the Mosque used to rhyme with the vaulted, open façade of the Khan; these houses framed the view of the Mosque, the largest building of the village.

Interestingly though, apart from some mentions Fathy does not write about this building in his book that tells the story of the village, even though its design is as interesting as that of the other public buildings. The house does not have an outstandingly public building-like atmosphere, nevertheless, in its spatial structure and details it differs significantly from the private homes.

This house was meant to be the administrative centre of the settlement, the arcades opening up to the square were the space for gathering, meeting. The council room is made up of two connecting parts: the domed room which is larger and more decorated than the general domes in New Gourná; and a space of an equal clear height, covered with Nubian vaults. The domed part has a large window opening to the square, the pair of which on the opposite wall connects the hall to the courtyard. The main entrance of the hall is from the arcades. This arrangement makes the hall visible to the outsiders, which is a very unusual situation in the village following much more introverted, traditional layouts. The other unique architectural element (at least unique in the village) is the vaulted corridor around the second courtyard, which made waiting in front of the doors more pleasant.

¹ The research topic is based on the field research of the Hassan Fathy Survey Mission in Egypt of the Budapest University of Technology and Economics, Faculty of Architecture. This program is "Supported by the ÚNKP-19-4 New National Excellence Program of the Ministry for Innovation and Technology" (Zs. Vasáros) and is "Supported by the ÚNKP-19-3 New National Excellence Program of the Ministry for Innovation and Technology" (D. Dóra)

² See in: FATHY 1973.

Among all the public buildings of the village, this one has suffered the most radical changes over time. Since the majority of the rooms have a similar size to those in residential buildings, the house could be transformed to fit residential functions with little effort. Larger spaces were divided into smaller ones, and some rooms were added on top of the roof, creating the necessary living space for the new owners. Now the house is the home of many families. The modifications of the interior do not compare to the loss of the arcades in the entrance area; instead of it now we see a flat-roofed, completely closed mass out of proportion, even overstepping the original layout of the house, thus disturbing the carefully planned perimeter of the main square.

We do not know whether the building was ever used as a village hall. It probably was not, since the village never reached its planned number of inhabitants, and it still does not have its own Mayor's Office.

During the course of seasons 2017 and 2018 we had the fortune to visit the house, we managed to document its condition at the time. Discovering the complicated inner rooms we realized we were exploring a strange, hybrid house, in which a room of mudbrick and vaults is often and quite unexpectedly connected to a new, concrete-walled one just by a door. However, in spite of the numerous modifications and the out of context, underdesigned extensions this house is still in a much better condition than those residential units of Gurna which almost completely disappeared due to the changing needs. We hope that this one survives for a while longer in its current form.



Current state of the former Village Hall. Photo: Zs. Vasáros, 2018.



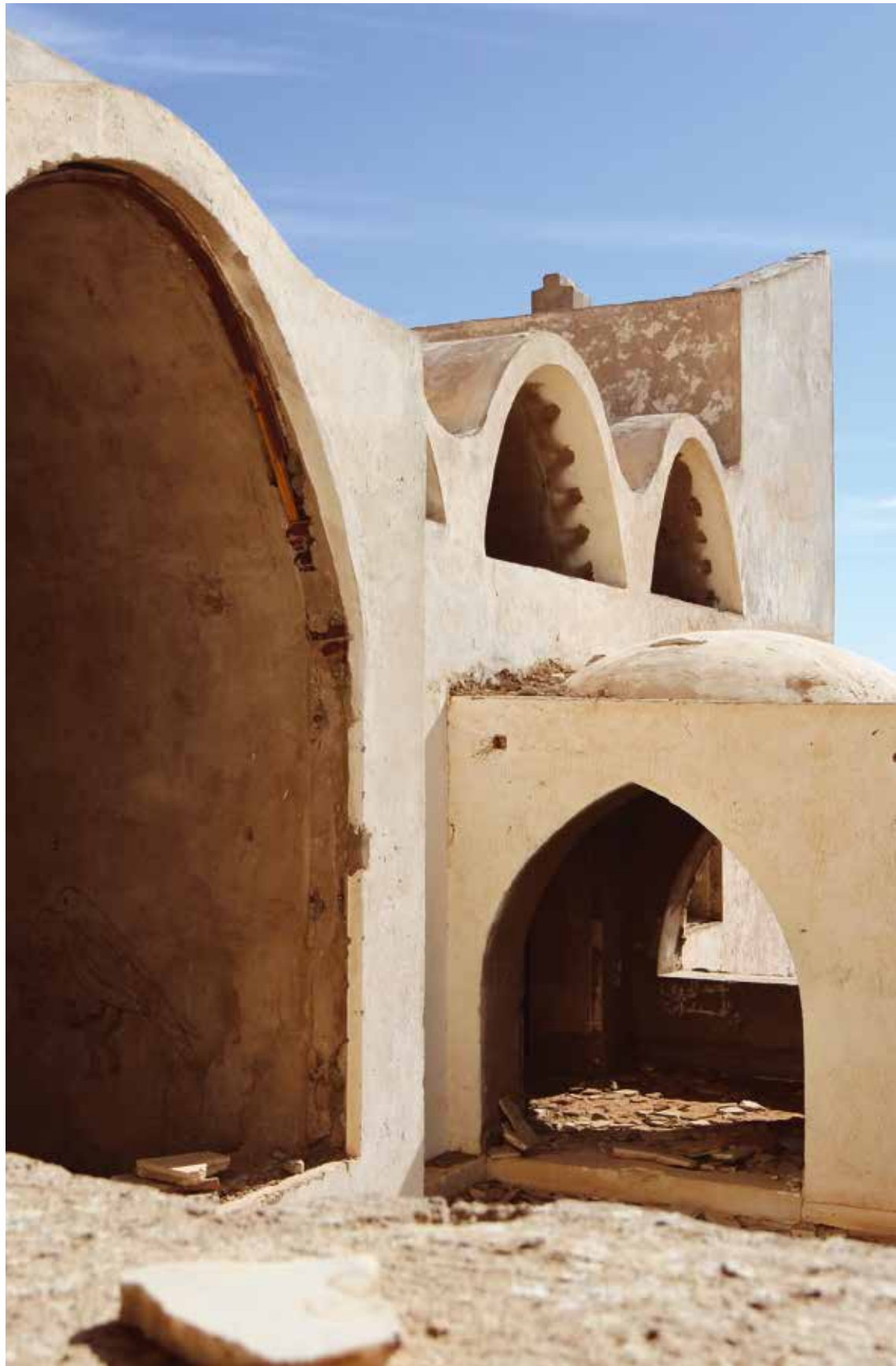
The second courtyard of the former Omda's House these days. Photo: Zs. Vasáros, 2017.



The view of the Village Hall and the former Omda's House these days, with the Theatre in the background. Photo: Zs. Vasáros, 2017.



The Village Hall and the former Omda's House photographed not long after its construction.
Source: RBSCl, AUC



Rest House of former President Anwar Sadat in Gerf Hussein. Photo: Zs. Vasáros, 2017.

VILLAS IN FATHY'S ARCHITECTURE

The architecture of detached villas in the work of Hassan Fathy

Júlia Pokol

When we think of Hassan Fathy's architecture we mostly associate it with the architecture for the poor; traditional housing techniques and small-scale urban projects. For these projects and his dedicated research into Islamic architecture he was honoured by the Chairman's Award of the Aga Khan Institute in 1980.

While delivering urban plans and housing projects, he also designed several villas and holiday homes for private customers. The question is: how is it possible to keep the economical solutions, traditional forms, local materials and techniques promoted by Fathy, when the commission is to design for a wealthy social class?

Fathy's international reputation and idealised personage makes us see him as a 'modern Robin Hood architect', whose work focuses on helping the poor; however, the architect's talent was not exclusively benefiting charitable purposes.

We find such parallels between the different works and scales in the oeuvre which prove Fathy's amazing talent in forming new ways of living with his unique set of elements and tools. In this piece I am presenting this similarity comparing the layout and design of the houses built in New Gourná with some of the most famous solo projects. During the course of our survey work in the Hassan Fathy Survey Mission, we have found and documented or examined several villas designed by the architect, among these are the Hamdi Seif al-Nasr Villa, the holiday home of Ms. Nawal Hassan and Mr. Gerry Andrioli, and the Stoppelaère house, which is located quite close to New Gourná. The analysis below is based on this fieldwork experience.

The most obvious indicators of the similarity in the projects are the façades: the two sets of buildings (publicly funded, urban projects and the private houses) have very similar decorative elements and volumes, therefore they look very much alike. The same principles were guiding the design: natural lighting, comfortable climate and circulation and aesthetic proportions, which resemble traditional elements. The difference is mostly recognisable in the size of the properties: the private homes are generally more spacious than the ones in New Gourná.

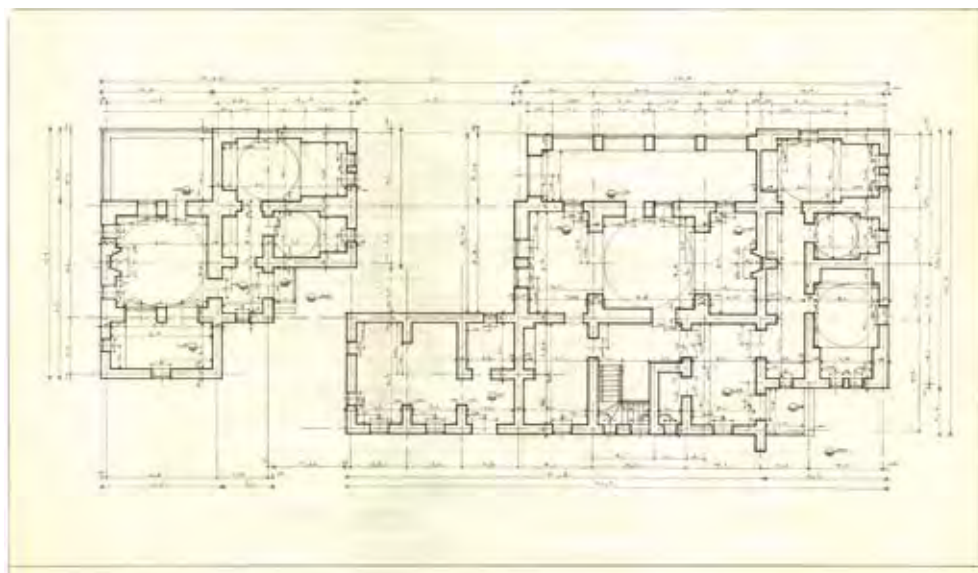
The building materials are also similar: the thick walls and structures were composed either of local clay or mudbricks. Though even the techniques and forms are often identical it seems the villas remained in a much better condition than the homes of New Gourná. It is supposedly mainly due to regular maintenance work and the properties of the location, but not the result of the difference in the quality of materials. As we know, the problem at New Gourná was the rising water levels in the soil which damaged the foundations. Also, most of these villas are one-storey buildings, which is adequate for mudbrick walls, since the smaller vertical loads caused less cracks and damages in the wall structure.

Examining the floorplans and the composition of the linked spaces we can observe many similarities between house and urban fabric created by Fathy. The same proportions and system appear in the relations between a small corridor and rooms of a house and between the streets and building blocks of New Gourná.

Some differences can be found in the smaller details of Fathy's houses. Mostly all of them are centred around a traditional courtyard, although in his villas a central ornament appears, a small pool made of traditional patterned mosaics. (Detailed description can be found in the chapter of Fruzsina Serfőző – see the next chapter.) Fathy also paid attention to the interior design of these houses suited individually to their character. Probably the Stoppelaëre house is the best example to demonstrate a refined unity in which not only the spaces and structures, but also the furniture, the openings and the shading were realised according to Fathy's drawings. Some of these elements can be found in a more modest version in the houses of New Gourná.

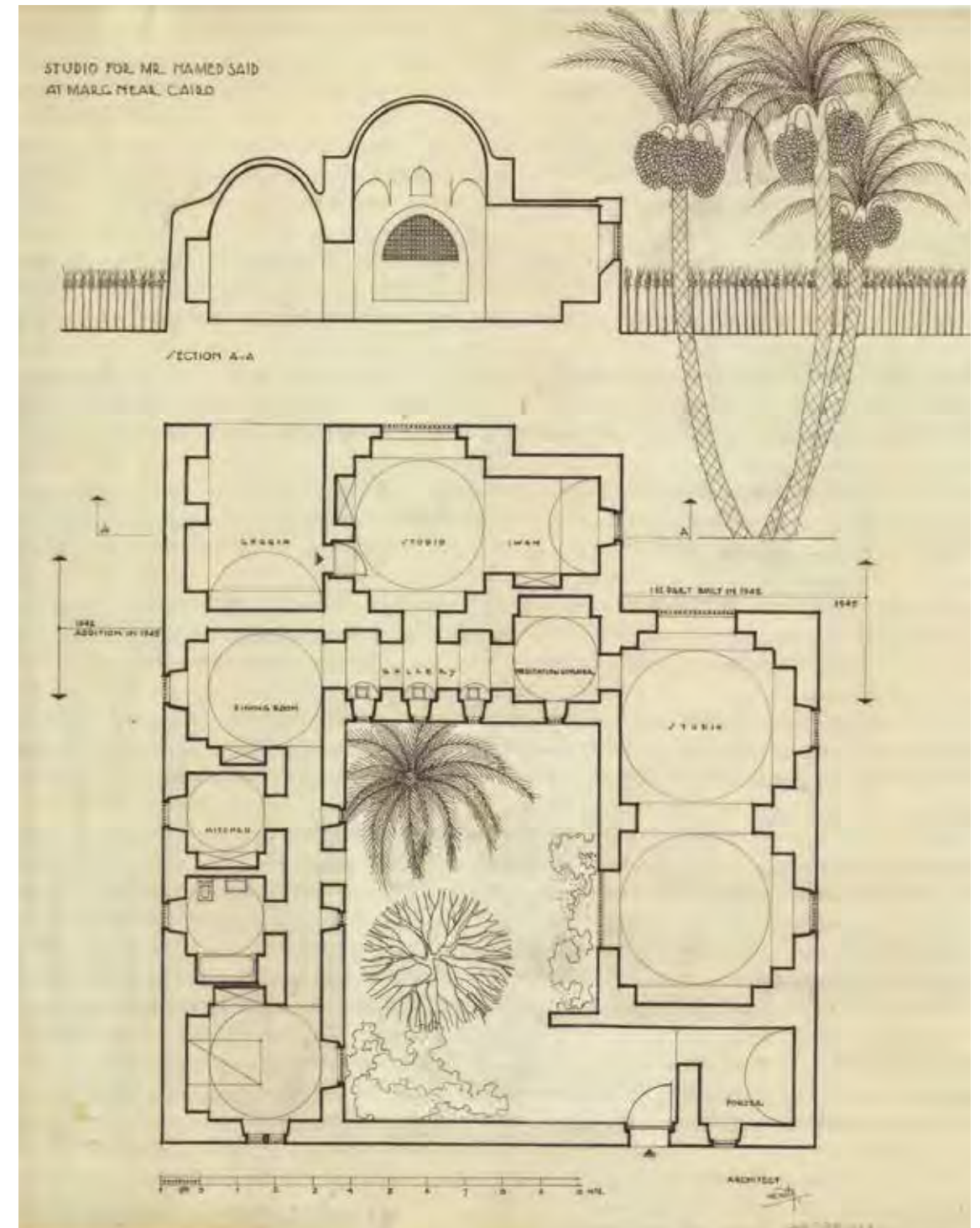
Probably due to the mudbrick walls and brick structures vast spaces are not common in Fathy's designs, neither in New Gourná nor among his villas. Rather they are articulated in a chain of rooms linked by small passages. Another common element is the flat roof with terrace, which is an important part of everyday life in these areas, and almost all of his houses incorporate domes built over square rooms and halls inspired by religious architecture. These cupolas were new and strange to the inhabitants of New Gourná but seemed to work well in the private homes. Thus, the idea of reusing traditional elements of Nubian architecture is not a „failed utopia” as Miguel Guitart says in his description of Fathy's work, just needs to be assessed through a wider set of works: the traditional architectural elements become organic parts of the building, and gain meaning in a contemporary context.¹

Visiting again the original dilemma I believe Fathy's greatness stands not in his dedication to the architecture of the lower social classes, but in the way he could meet his standards in all kinds of circumstances from low-income to wealthy, small to grand. Fathy remained adventurous and very accurate in all his designs, keeping local climatic needs, building traditions and precise shaping in a harmonic balance. After seeing some of the holiday homes and villas designed by Hassan Fathy I admire the integrity in the way he could shape space and substance, and I find them really coherent with his major projects both visually and spiritually.



Original floorplan of the rest house of Ms. Nawal Hassan and Mr. Andrioli in Fayyom. Source: RBSCl, AUC

¹ See GUITART 2014.



Original plan for the Hamed Said Studio in Marg, Cairo. Source: RBSCl, AUC



The façade of the Stoppelaëre House, Luxor West Bank. Photo: Zs. Vasáros, 2016.



The Sadat Rest House in Gerf Hussein. Photo: L. Veres, 2017.



The abandoned interior of the Sadat Rest House. Photo: L. Veres, 2017.

Ornaments in the modern space - the Sadat Rest House

Fruzsina Serfőző

Hassan Fathy's work in the 1980s has become one of the best-known part of his architecture. Even though the number of his commissions decreased significantly during this period, most of his designs were built. His late career includes includes the villa designed for Egyptian President Anwar Sadat, commonly called the "Sadat Rest House" in Gerf Hussein, Upper Egypt. During the 2017 season, the Mission had the opportunity to visit the area twice. The villa offers countless opportunities for further research, including the three mosaic pools which have been almost completely destroyed.

The design of the Sadat Rest House is outstanding. It was made for President Sadat's official travels, although the building was never fully completed. The building complex consists of three distinct parts, tailored to its users' status from the employees and staff of the president to the rooms used by his family. In the layout and design of the building the archetype of the "Arabic House" is the main principle, which Fathy used during most of his career. One of the essential elements of this house type is the central placement of the courtyards in the composition of the spaces.

In addition to respecting traditions in his designs, there are some inevitable factors characterizing the Middle East which determined his houses, i.e. climatic conditions and the Islamic lifestyle's high demand for intimate spaces. The use of courtyards has been a widespread solution in the area since the advent of Islam, Fathy was seeking inspiration from historic examples as early as the Al-Fustat in Cairo.

The function of patios is well defined in traditional architecture, and it did not change in Fathy's modernised architectural shaping: they mitigate the unpleasantness of a dry, warm climate and create a transition between private and more public spaces. Patios do not necessarily fulfil these functions on their own though, additional elements help to create a more comfortable climate.

Such elements are pools and vegetation, which, in case of a good floor plan can provide a soothing ventilation for the rest of the building. The central location of the courtyard also has a cosmological meaning, the walls surrounding the space symbolize columns which hold the "dome" of the sky, thus evoking the family's private "sky". Its appearance as a transitional space can also be demonstrated through the example of Sadat Rest House, where the three units forming the ensemble are separated by patios, providing a continuous transition to the most private spaces.

Here, as well as in Fathy's other buildings in general the pools are much unexpectedly rich in ornaments compared to the rest of the house; the architect highlighted their importance and authenticity this way.

There are three marble mosaic pools in the villa, one in each courtyard. In the season of 2017 the research group have had the chance to visit the site twice; by that time only some fragments of the marble pools and their positions were possible to locate. Due to the distinctive location of the pools they can be identified quite easily; however, the exact position of the fragments within the pool is quite difficult to define, since the fragments are of a repeating pattern and in very similar colours. The current condition of the Sadat Rest House and its fast decay made the comprehensive documentation urgent, moreover the reconstruction of the marble pools has proven to be an interesting research regarding the Fathy oeuvre.

The reconstruction project of the marble pools of the Sadat Rest House has so far only covered one of these marble pools. We did not have good resolution archive photographs of this pool in its original condition during the reconstruction, and it had the least amount of finds on the site according to our first assumptions.

We documented the fragments in Egypt by drawing and photo documentation. Based on the photos we generated 3D models of the fragments, in the correct scale and colours with the help of the Agisoft PhotoScan program, and the reconstruction could continue in Budapest, without the actual fragments by digitally piecing together their 3D models. Analysing other pools from Fathy's oeuvre was also part of the research, i.e. the one in the Shahira Mehrez Apartment in Cairo. As a result, based on the examples, using the geometric regularities of the Islamic patterns we created the model of a possible reconstruction of one of the pools.

(This chapter was written based on the Author's paper of the same title which won the Honorary Mention in the National Scientific Students' Competition in 2019.)

For the full paper see: <http://tdk.bme.hu/EPK/Iparmodern/Ornamentika-a-modern-terben-Az-udvarok>



The pieces of the marble fountains in the Sadat Rest House. Photo: Zs. Vasáros, 2017.



Structure from Motion-based models of a fragment of the mosaic. Compiled by F. Serfőző in 2018.



The reconstruction of one of the marble fountains by F. Serfőző, compiled in 2018.



Prince Sadruddin Khan duplex apartment, Manzil Ali Effendi Labib, Darb al-Labana, Cairo, 16th-17th century. Photo: Zs. Vasáros, 2019.



Mausoleum in the Bagawat cemetery. Photo: Zs. Vasáros, 2019.

FUNERARY ARCHITECTURE

Ancient Christian forms - Bagawat

Zita Zöllner

One of the oldest ancient Christian cemeteries is in the heart of the Kharga Oasis in the Western Desert of Egypt, which was the burial place for Christian communities of the Oasis in the 3-7th centuries. There are 263 mausoleums and chapels in the area, most of their walls and vaults are still in a relatively good condition. The significance of these edifices in architectural history is beyond doubt.

El Bagawat is also known as the "Dead City" because the graveyards are bordered by streets. Its topography is reminiscent of a city whose mapping motivates continuous movement on the narrow walkways. The architectural style of the chapels ranges from simple one-room buildings to family mausoleums with ornate façades, artificial columns, arches and domed roofs.

The buildings also show some changes in style. Although most graves were not decorated, some of the more important ones have thick plaster with frescoes on them. These interestingly depict Biblical stories with a style reminiscent of Egyptian representations.

The most outstanding of the decorated chapels are the Peace and Exodus chapels. On the latter one the scenes of Exodus are portrayed in a frieze which surrounds the building, while the other chapel shows the Annunciation of the Virgin Mary and other early Saints.

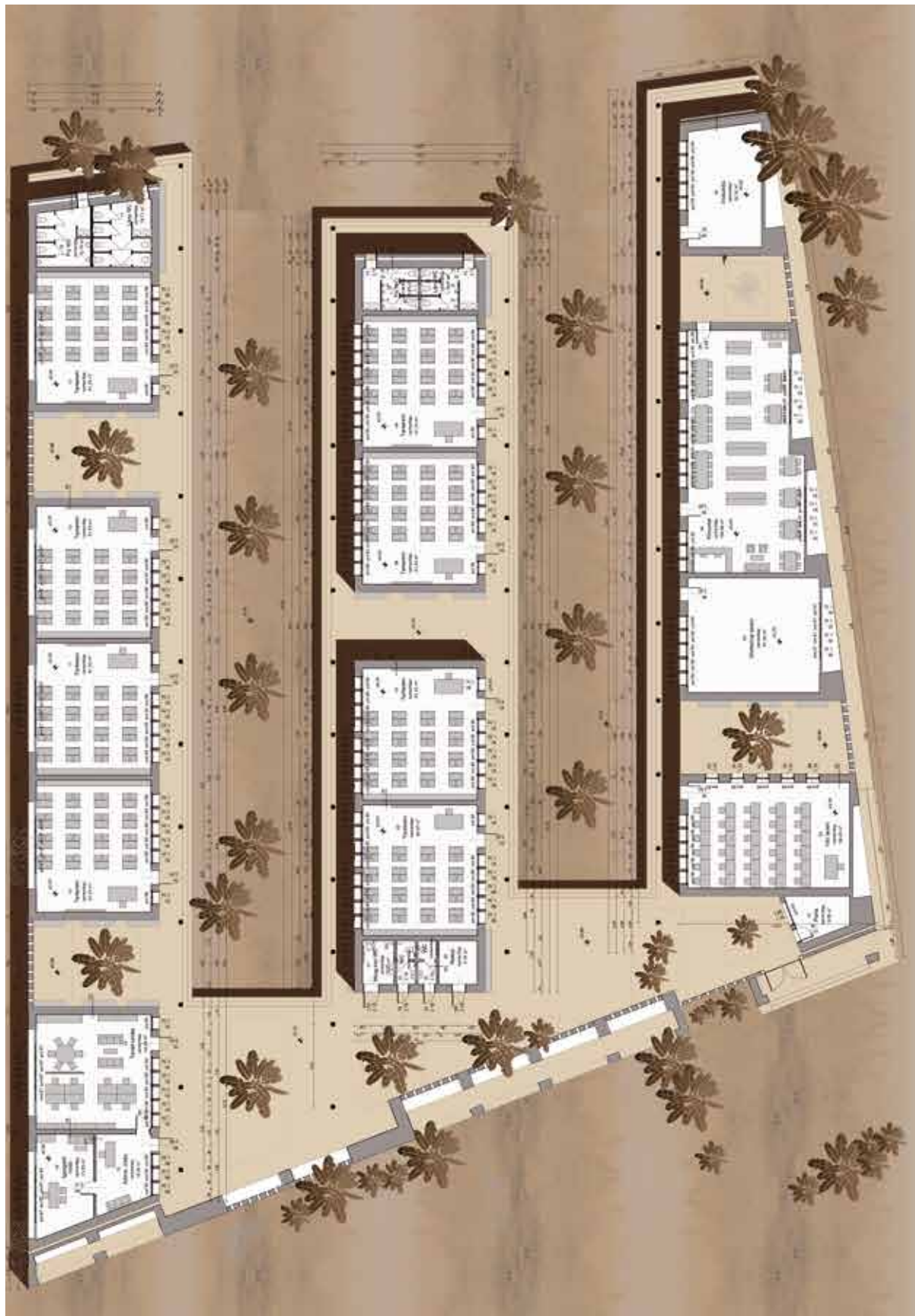
The early Christians partly continued their pagan rites or the Egyptian burial practices. Tombs were usually built over a deep pit where various valuables and sacrifices were placed on shelves. In the Kharga Oasis the carcasses were embalmed long after this tradition was abandoned in other areas. Unfortunately, they are no longer visible since with the passing of time the tombs have been emptied and the pits became the preferred shelters for the creatures of the desert.

The material of the mudbrick chapels is sensitive to water and extreme weather and even though the climate in Egypt is very favourable for this kind of structure, the condition of the mausoleums is getting worse year by year. During our field trip we attempted to observe the different types of chapels and set up parallels with Fathy's oeuvre. It seems Fathy created his architectural toolset from a wide range of historic elements; besides the Nubian vaulting technique which he considered to be of high importance, he was interested in the solutions of Coptic churches and tombs. We see a successful implementation of these techniques in the Kharga Oasis, on the unfinished buildings of New Baris. We know Fathy visited Bagawat, he had the chance to study the mausoleums when his friend Ahmed Fakhry was working on the excavation of the cemetery in the 1950s.

In these buildings, due to the abundance in variations and details a lot of architectural solutions and tricks of the trade can be observed even today, which was without doubt necessary for Fathy, too. Constructing vaults, cupolas and using them to cover complex spatial structures could not have been an everyday job in the middle of the last century either, for which the chapels of the cemetery are a good reference.



El Bagawat Cemetery. Photo: Zs. Vasáros, 2019.



Classroom interior. Rendering: A. Lukács

DIPLOMA PROJECTS

Wind-Catch! – Elementary School, New Gournia

ANNA LUKÁCS

consultant: Prof. Zsolt Vasáros (Architecture),
Balázs Tőkés (Construction Management),
Prof. Gábor Becker (Building Constructions),
Gábor Cséfalvay (Mechanics and Structures),
György Koncz (Energetics and Building Services)

The subject of my diploma is the design of an elementary school. The site is in New Gournia, Luxor, Egypt, which was one of the main scenes of Hassan Fathy's work in Upper Egypt. The site is located beside the Mosque and the Khan. The two buildings and the site create a square that Fathy intended to be the main square of the village.

THE CONCEPT

It is based on two main principles: first and foremost, utility. Because of the hot, dry climate we need to pay special attention to the cooling of the building to give children the chance to study in good conditions. My aim was to use tools of sustainable architecture to keep the building cooler and useable in an eco-friendly way.

The second principle is connected to the oeuvre of Hassan Fathy. The plan he had for this site was never completed, but his work and memory is important for the inhabitants of the village. Based on this thought, the starting point of the design process was the outline he drew for this site. Afterward, by harmonising the form and the function the school became a useable building and a subtle motif commemorating the architect.

THE LAYOUT OF THE BUILDING

In Egypt the number of births is very high, which influences the schools as well. Due to a large number of children, they study in two shifts per day, in morning and afternoon groups. The program requires only the most necessary elements due to the overcrowding. The school consists of three structurally independent blocks and the courtyards connecting them. Two of the units give place to functions connected directly to education: classrooms, teachers' lounge, etc.; the third one is for activities outside school hours. The hot, dry climate determines the design of the building: there are no enclosed spaces, corridors, lounges anywhere else but the strictly functional rooms. The students spend their time outside, apart from classes on covered terraces and courtyards.

I used a passive ventilation system in my design for the cooling of the building. The main elements of this system are the wind-towers. The principle of the workings of the so-called malqafs is when oriented in the direction of the prevailing wind they are able to catch the wind and lead it like a duct into the interior, creating airflow. As a result, a gentle breeze circulates in the interior, slightly cooling it down, helping the moisture evaporate on the skin, thus creating better thermal comfort inside.

With the use of wind towers the internal temperature can be lowered by as much as 10°C compared to the outside, therefore the students and teachers are able to stay focused even during the unbearably hot days. The other key element of this system is the perforation on the upper part of the wall, through which the wind and used air can leave the interior. The combination of perforation and towers ensures a continuous airflow, even when the doors and windows are closed.

BUILDING MATERIALS:

I have only designed with the materials known, used and favoured by the locals, harmonising the aspects of functionality, structure, financing and aesthetics.

CONCLUSION:

Planning required plenty of research in terms of functionality, design, structure and sustainability. By paying attention to each, one by one and also as a whole, the design for the school has become a solution that could benefit the villagers in the future.



The courtyard. Rendering: A. Lukács



The façade of the school with the Mosque. Rendering: A. Lukács





Courtyard of the school. Rendering: A. Lukács



The site from above. Rendering: M. Raslan

DIPLOMA PROJECTS

Gournah Research Base

RASLAN MOHAMED RAMADAN SAID IBRAHIM
 consultant: : Dr. István Bartók (Architecture),
 Adrienn Lepel PhD (Construction Management),
 Zsuzsanna Fülöp PhD (Building Constructions),
 Dr. András Draskóczy (Mechanics and Structures),
 Norbert Harmathy PhD (Energetics and Building Services)

The site has a sensitive location, due to its position enclosing the main square of a World Heritage Site. The square combines the Mosque and the Khan designed by Hassan Fathy which are considered a valid example of the Egyptian architectural language that Fathy tried to express.

The proposed project is going to serve as a temporary accommodation, a base for archaeological and other research expeditions, which spend about 3 to 6 weeks at the place. In the area researchers work on multiple sites, usually in the framework of international cooperation. The designed layout reflects an operational plan which was proposed in the design brief so that the services part of the project can be managed to serve the community in the absence of the missions.

Investigating Hassan Fathy's standing buildings in New Gournah, it was clear that he oriented his designs facing the direction of the prevailing wind (north/west) to ensure natural ventilation of the interior spaces. Consequently, the designer decided to choose the north-western direction of the prevailing wind as the main orientation direction for the building masses, to maximize natural ventilation. Domes, vaults and shades were used carefully by choosing precisely from the national architectural language that Hassan Fathy revitalized but with incorporating a mix of traditional and modern technologies and by optimizing the traditional solutions, keeping in mind the concept of unity within variety when designing the openings and the shades.

Since one of Fathy's principles was to create buildings that serve the community, the services part (studios, IT labs, office, storage) were allocated on the entrance wing which can be separated from the rest of functions. This was specially regarded in the early design stages, so that the village residents can benefit from these facilities if the missions weren't present or an operation plan can be managed with working hours to serve both the mission and local village residents.

Courtyards with varying sizes were designed with vital awareness of their shading, either by timber shaded textile or by vegetation. The double ventilated roof with textile shades was used on the roof in the areas where domes and vaults weren't present to minimize solar heat gain on the flat roofs. Protection of the southern and eastern façades is ensured by ventilated timber shades. The eastern shade area can be used for future extension of the accommodation rooms.



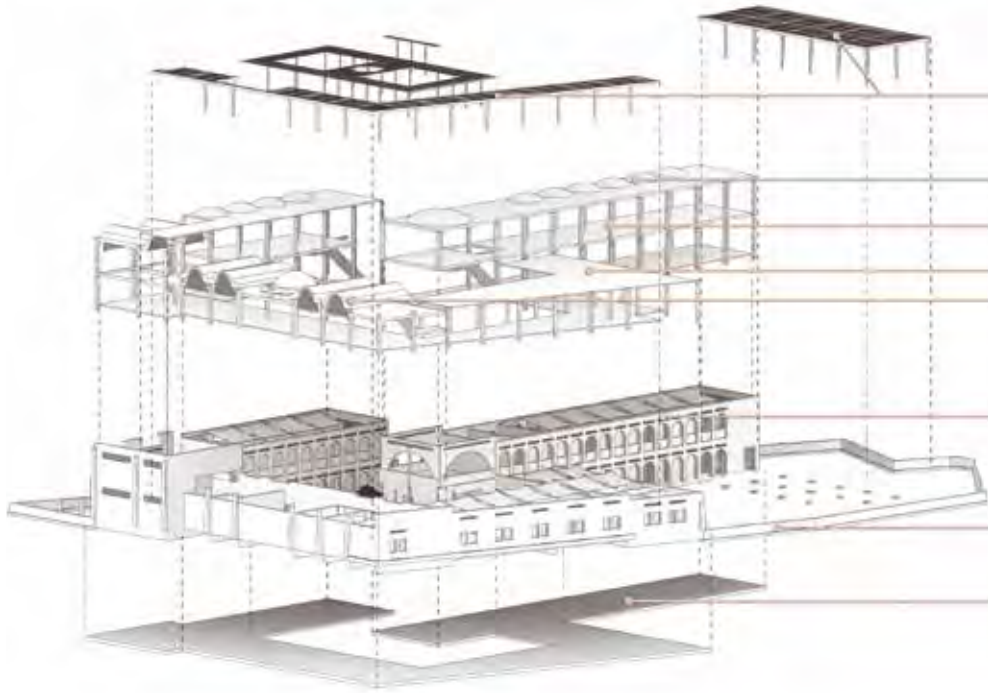
Cross section. Rendering: M. Raslan, 2019.



Longitudinal section. Rendering: M. Raslan, 2019.



View of the Research Base from the main square of New Gournia. Rendering: M. Raslan, 2019.



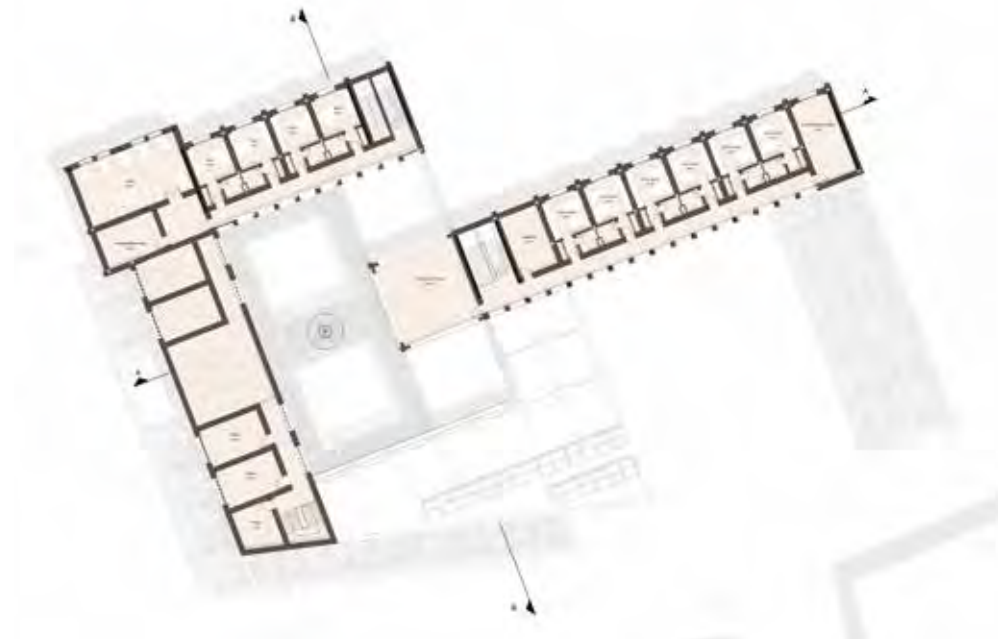
Axonometric model. Rendering: M. Raslan, 2019.



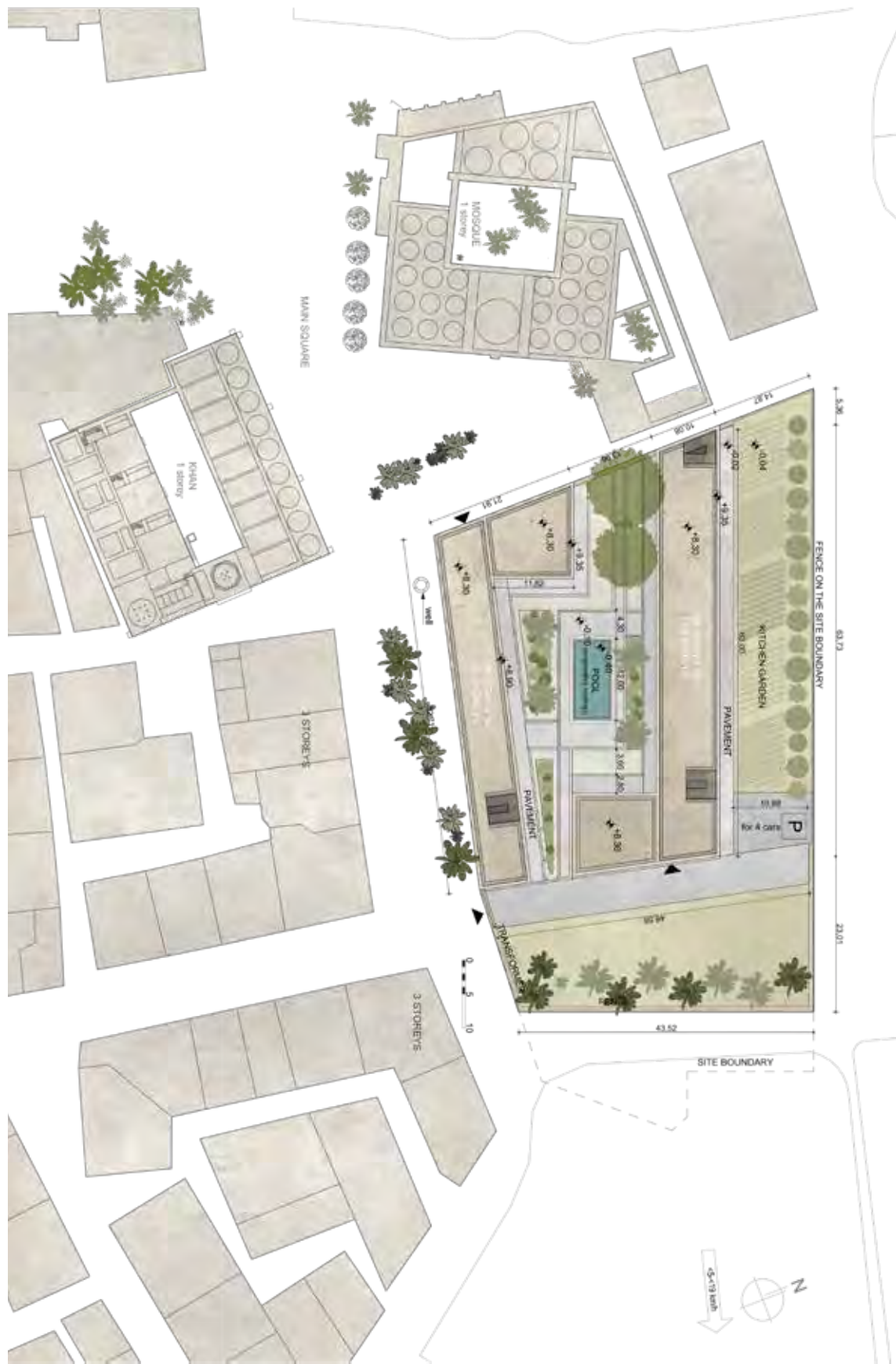
Ground floor plan. Rendering: M. Raslan, 2019.



Functional zoning. Rendering: M. Raslan, 2019.



First floor plan. Rendering: M. Raslan, 2019.



Siteplan. Rendering: A. Kövesdi, 2019.

COMPREHENSIVE DESIGN PROJECTS

International Research Base, New Gurna

ANDREA KÖVESDI

consultant: Prof. Zsolt Vasáros (Architecture),
Róbert Klujber (Construction Management),
Dániel Heincz (Building Constructions),
Mariann Volszky (Mechanics and Structures),
Lajos Gyurcsovics (Energetics and Building Services)

INSTALLATION AND CONNECTIONS

The construction site is defined by the plots of the masterplan designed by Hassan Fathy. The architect showed three larger buildings in this area: the eastern, irregular polygon is slightly smaller than the silhouette of the Mosque, and the two swirling shapes closer to the Mosque roughly predict the width of the residential blocks. The two masses surround a smaller space – about 2 or 3 times bigger than the size of the courtyard of the Mosque – which can be reached from narrow streets.

The challenge, therefore, is to create an ensemble of buildings on this irregular, block-sized site that fits into the existing building fabric and does not compete with architectural forms that are part of the World Heritage.

Through the design process an important aspect was to keep the existing trees outside and inside the site. The two large deciduous trees on the construction site are particularly important. Currently there is an agricultural road through the designated area which is used by the locals on a daily basis.

The requirements of the program I designed for did not justify the inclusion of the entire site. Between the original borders of the plot, I divided the area into two parts by the aforementioned road. A rectangular area was thus created right next to the Mosque, where the planned buildings are located. The detached polygon was cut in parallel to the dirt road, which reduced the construction area, but still provided ample space for future expansion. The enclosed part of the land is surrounded by a fence. This is not only indication the borders of the intervention, but also important from a security point of view. The path marked by Fathy is symbolically marked by a pavement.

The research base is primarily accessible from the main road, with a more generous entrance to the exhibition space from the main square in front of the Mosque. Daily approach is possible through the gate at the eastern edge of the building, both on foot and by car. On the north side, parking for 4 vehicles is possible on a covered area close to the warehouses.

FUNCTIONAL LAYOUT

The layout of the buildings consists of two separate 'L'-shaped masses, each with the same character. The roof is walkable and can be accessed via a staircase open from above. The rooftop terrace has a comfortable climate during the evenings.

The building on the street (building 'A') houses community and service functions, while building 'B', at the back of the site consists of living rooms and storages. Building 'A' has a serving kitchen and its associated rooms. From the Mosque, you can access the double-height exhibition space, which shows the work of the current group at the end of each research period (every 5-6 weeks).

The studios are located upstairs where research and documentation work takes place. Apartments are positioned in the north wing, each with a private bathroom. The rooms are always accessible from an open corridor facing south.

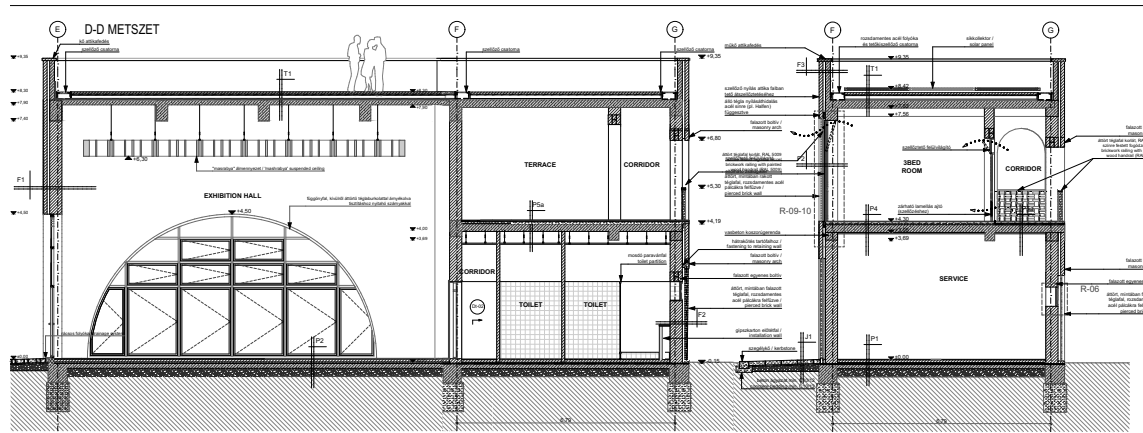
In the middle of the courtyard there is a mosaic basin with oriental pattern, which provides evaporative cooling of the micro environment and makes the outside and inside (with adequate ventilation) more comfortable. In the backyard a kitchen garden can be created with fast growing shrubs and trees.



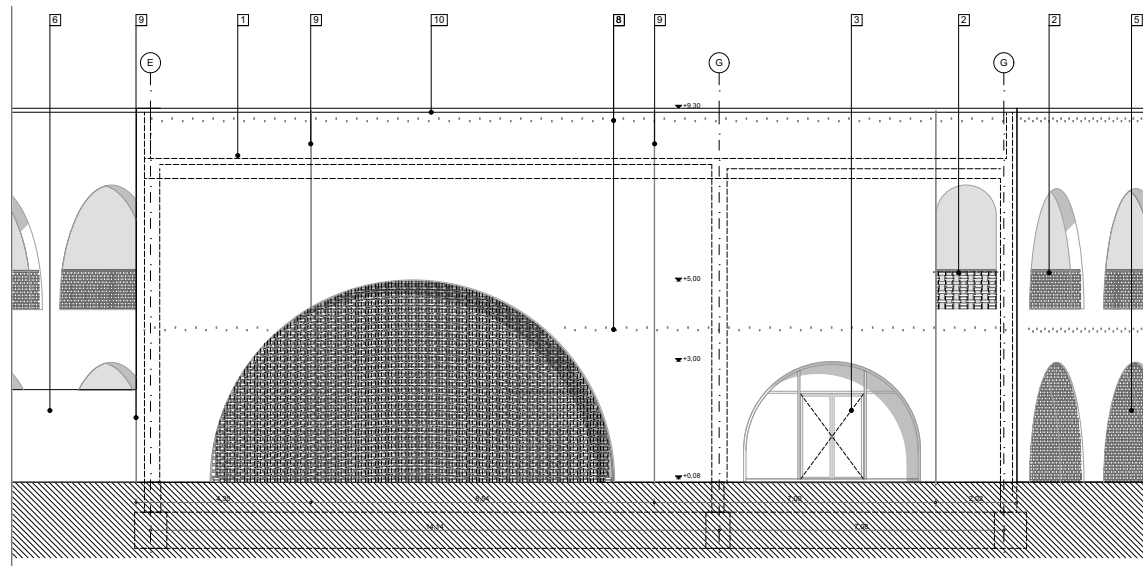
View of the inner courtyard. Rendering: A. Kövesdi, 2019.



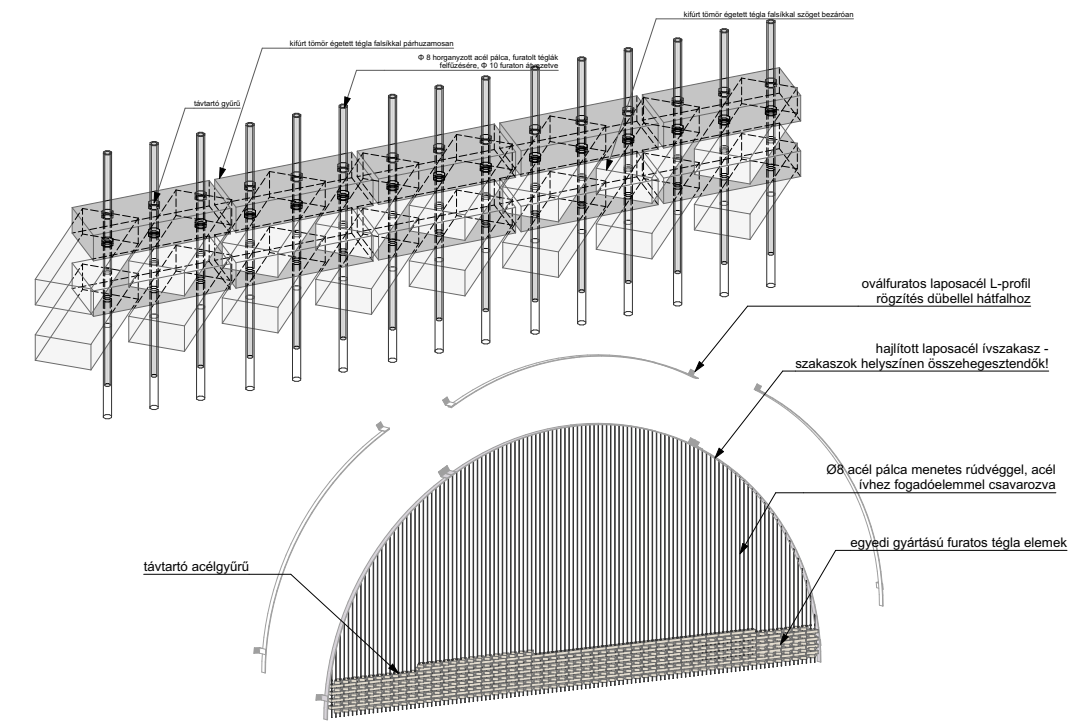
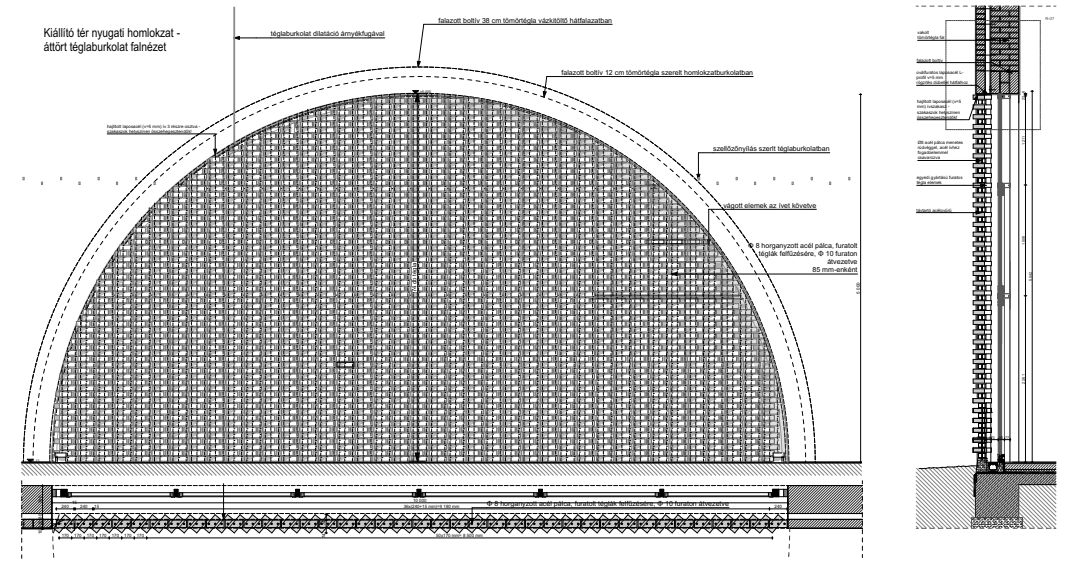
View of the project from the main square. Rendering: A. Kövesdi, 2019.



Section



Façade



Façade details



View of the courtyard from above. Rendering: Zs. Bogáthy, 2019.

COMPREHENSIVE DESIGN PROJECTS

Archaeological Research Base, New Gourná

ZSOLT BOGÁTHY

consultant: Prof. Zsolt Vasáros (Architecture),
Balázs Tóké (Construction Management),
Álmos Dömötör (Building Constructions),
Tamás Bajnok Nagy (Mechanics and Structures),
Attila Zoltán (Energetics and Building Services)

The archaeological research base I designed has similar extents to the Mosque and the Khan, thus the three important elements of the village – religion, tourism / commerce and scientific research – are represented equally on the main square. The space between them is one of the most important spaces of local community life. The design of the research base, with its form and proportions, also reflects to the original contours of the site designed by Hassan Fathy. The symmetrical layout is enriched by asymmetrical spatial organization.

During the design process, I took the climatic conditions and the orientation of the neighbouring architectural monuments into account. The house faces north, as the east and west façades are the most exposed to the strong sun radiation. The sunlight reaches a high angle of incident at the southern façade, the northern one is constantly shaded. On the eastern and western façades I provided sun protection with loggias of two meters, equipped with shading perforated brick walls. Its appearance resembles the Egyptian woven fabrics. The north-south façades - due to their orientation - did not require the same shading solution, but I used inset brick as a standardization of the façades. I designed a shading cantilever for the southern side.

The exterior façades and the mass of the building do not compete with the surroundings. I use the popular architectural feature of the perforated brickwork on the exterior surfaces. Doors and windows have rectangular shapes, arches only appear in the atrium of the inner courtyard.

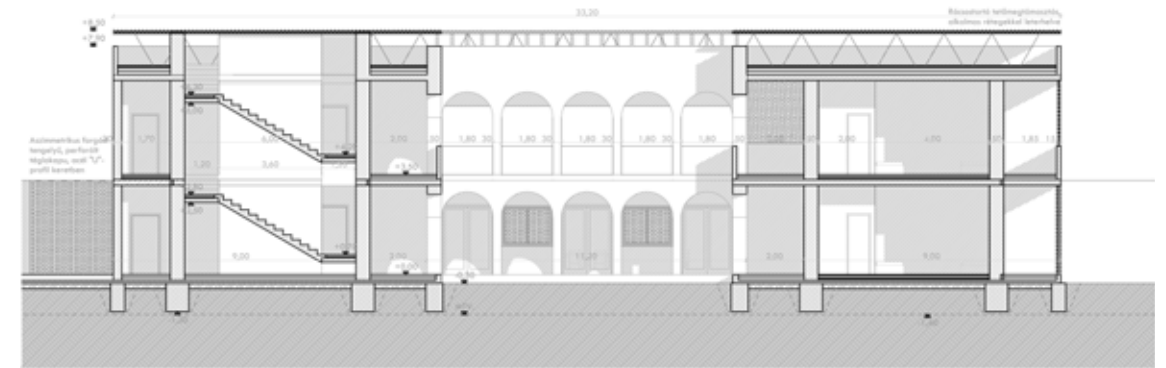
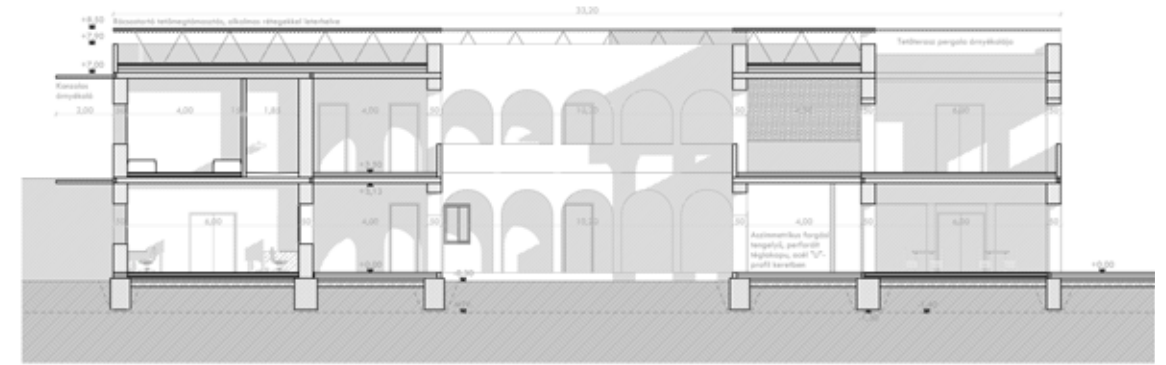
The research base is composed of two floors, covered by a flying roof. The building height matches the height of the surrounding buildings.

A public well is established at the main entrance on the western façade, from where locals can take fresh water. The gate is made of clay bricks strengthened by steel frames. With this solution - when closed - I provide the necessary safety, while keeping up constant ventilation. On the other side of the building there is a similar gate which opens from the garden. This corner of the building is used for the resupply of the base and parking for cars and vans.

I placed the dining/workshop room on the most favourable northern façade and designed a terrace upstairs with a shading pergola system. The ground floor is a place for work, dining and recreation. I designed the workplaces on the western and southern sides, including IT labs, studios, storages and a kitchenette. On the northern side we can find the kitchen connected to the dining/workshop room, next to the porters' bedroom. On the eastern front I placed a toilet/laundry room, restroom and three professor bedrooms. The researchers' bedrooms are located on the first floor.

The walls are made of burnt clay bricks produced on site. Graffiti-resistant impregnation coating on the exterior surface and anti-dust coating on the interior walls are recommended. Most of the flooring is cement sheet.

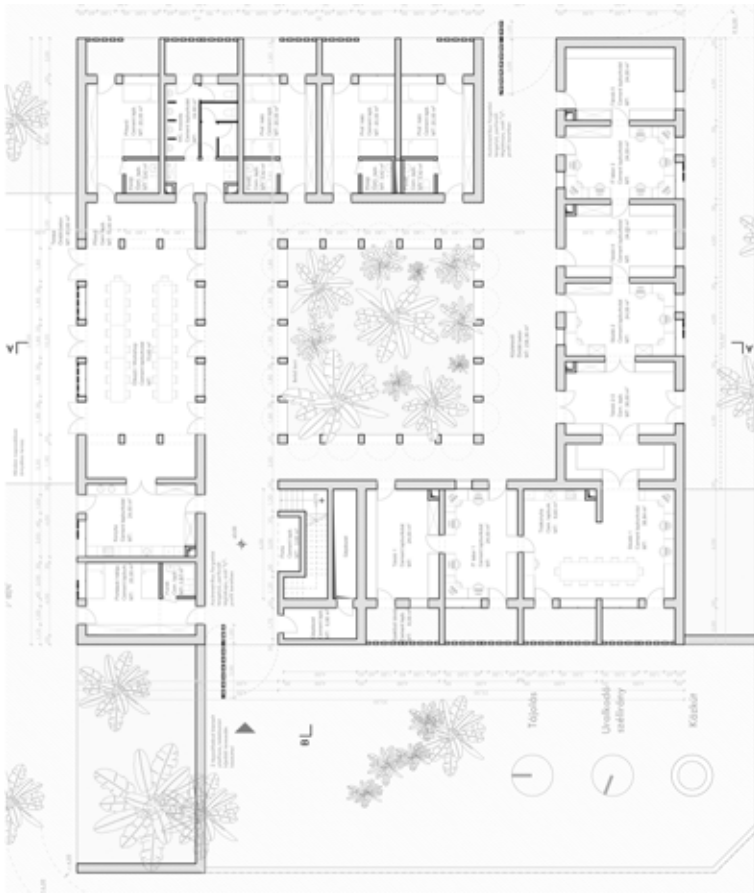
I preserved the valuable vegetation on the site. Alongside the existing ones, native trees will be added, creating internal gardens, with an agricultural, inland water area providing a pleasant living space.



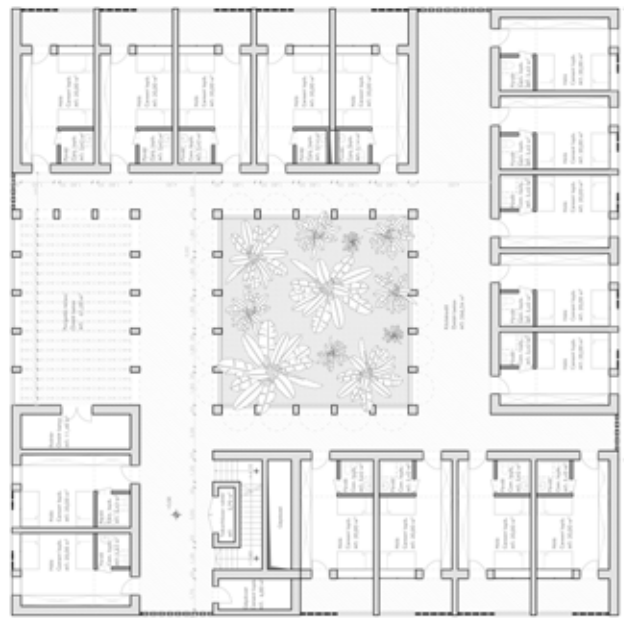
Sections



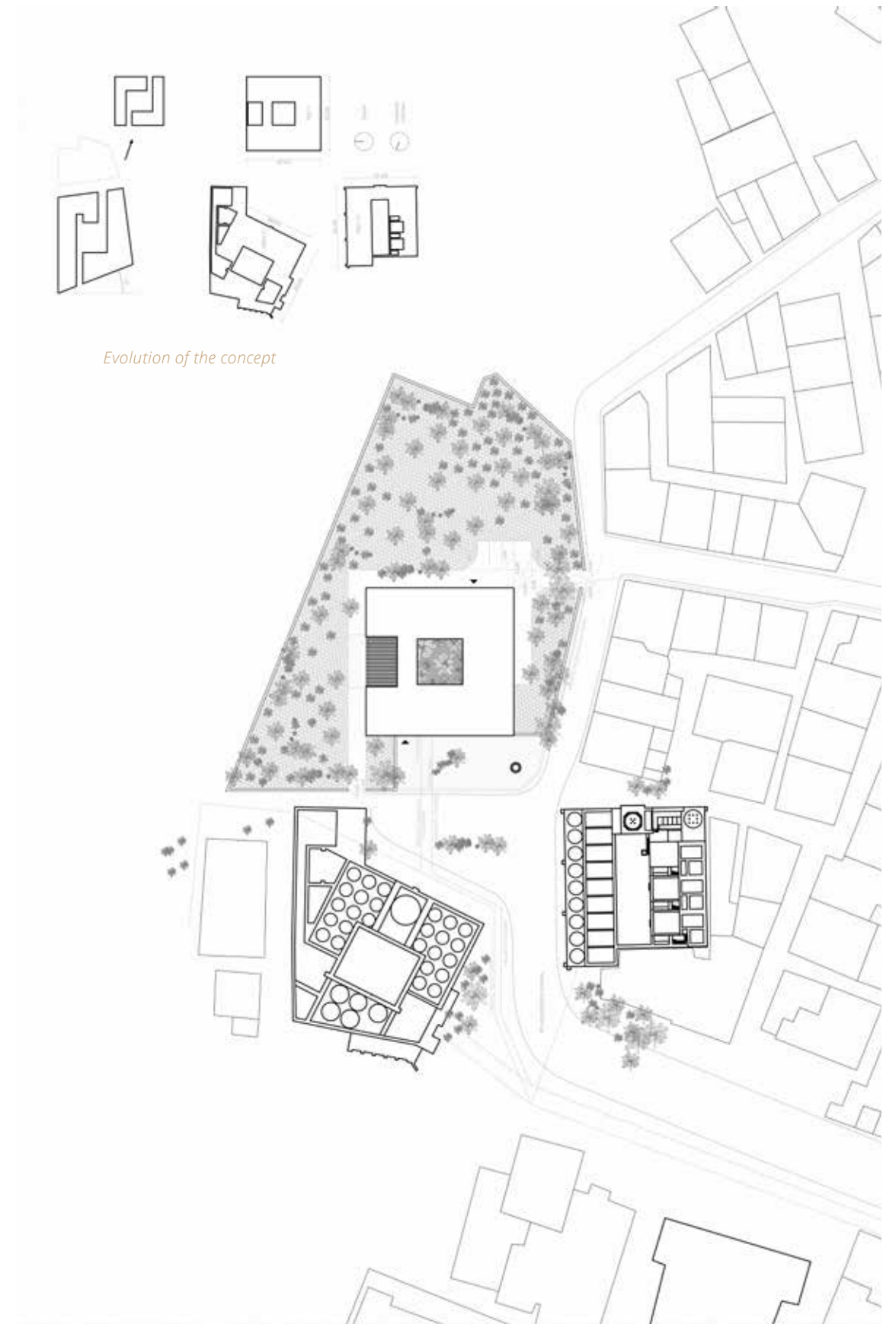
View of the project from the main square. Rendering: Zs. Bogáthy, 2019.



Ground floor



First floor



Evolution of the concept

Siteplan



Detail of the cupola of the mosque in New Gurna. Photo: B. Zacher, 2018.

STUDENTS' COMPETITION 2018

The "Luxor School Project"

Dóra Dávid

More than forty students of architecture had participated in the work of the Hassan Fathy Survey Mission on the field, and numerous more from the desk by the beginning of the fall semester of 2018 - it was high time we started spreading the accumulated knowledge and experience of the four seasons within the university system.

The annual design competition of the Faculty of Architecture (Students' Scientific Conference) seemed like a good place to start, since with a call for design proposals to New Gurna, we could raise attention to the design challenges of an extreme, interesting environment, the reality of the developing countries that are so underrepresented in the curriculum, as well as the story of the village and the research project. Given the international character of the topic, it was obvious that we were putting out the call for proposals in English, and ask for all the submitted materials accordingly. Thus the international students, similarly to some of the Department's previous design competitions, could participate again in the normally Hungarian-language competition. This year a good number of international and mixed groups participated as well, which was an especially important success for us.

In the design brief we challenged the students to design the much-needed elementary school of the area on the plot just east of the Mosque of New Gurna. The task was interesting and inspiring for a number of reasons, since it was filling in a functional and physical gap in the village: the elementary schools of Fathy's design have been demolished. The assigned plot was never constructed upon; it is now and has always been an undefined void, a scar on the main square of the village, between the two, arguably most important and characteristic public buildings of the village, the Mosque and the Khan. Thus the challenge was quite complex: students had to design a school for an extreme climate that most didn't know before; and they had to find a contemporary architectural answer to an urban design problem of a village of a very strong character, which is also a UNESCO World Heritage Site.

It was important for us to make participation possible for everyone in the Faculty, thus students were given a detailed design brief with the description of the Egyptian school system, the problems it faces today, and the number/function of rooms needed. For inspiration, we provided plenty of background information on the village, and suggested bibliography for research. Anything else was up to the competitors' imagination; and the special success of the competition is best shown by the high quality and versatility of the submitted proposals, which students elaborated within only two months.

We had the honour of hosting Mr. Tarek Waly and Mr. László Mester de Parajd as jury members for the presentation of the design projects at the university. Mr. Waly used to work with Fathy on the Nile Village Project and now is in charge of the renovation of the Stoppelaëre house and the Khan in New Gourná. Mr. László Mester de Parajd has designed and built a large number of schools in Africa, thus is an expert in the topic of the competition. In the jury panel the University was represented by Mr. Zoltán Schrammel from the Department of Public Building Design, Mr. Péter Bach, whose research area is urban development, and is now the leading the Department of Architectural History and Urbanism of the Széchenyi István University Győr, and Mr. Anthony Gall from the Szent István University.

In this booklet we are presenting the four best design proposals selected by the jury at the University. All these were presented on the national design competition in April, 2019, and had great success, as indicated at each entry.

All the competition entries are available here:

<http://tdk.bme.hu/Browse/Papers?f=EPK&t=MuveszIpar3&c=EPKTDK2018&s=lpar-Luxor>

DESIGN BRIEF¹

Participants are asked to transform the unused building marked on the site plan and the site nearby to design a new primary school for New Gourná. The site is located in the village centre, next to the Mosque, in front of the Khan, thus the plan should reflect to the central situation of the school.

The school must be able to accept 6 grades, 2 classes per grade and 30 students per class. The task must be accomplished according to the Egyptian school system, thus the new building must be proper for the two-shift school day. During the design process all the special circumstances of Egyptian climate and the possibilities of material usage should be taken into consideration. Also, considering that the school is theoretically funded by public investment in a poor area, the solutions should be as economic and reasonable as possible.

THE PROGRAM

- 6 classrooms
- IT lab
- room for the teachers
- director's office
- courtyard
- restrooms
- room(s) for prayer
- library

¹ The research is "Supported by the ÚNKP-18-4 New National Excellence Program of the Ministry of Human Capacities



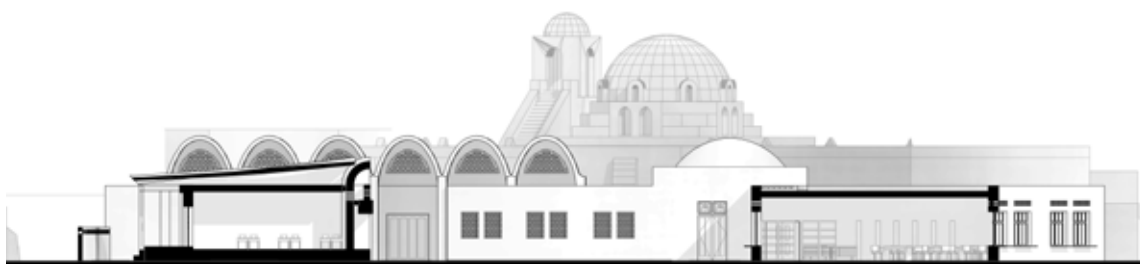
The designated design area



Main façade of the school. Rendering: J. Pokol, M. Raslan



Façade of the school from the courtyard. Rendering: J. Pokol, M. Raslan



Section of the school, with the Mosque in the background



Section through the classrooms

STUDENTS' COMPETITION 2018

School for New Gourn, Luxor West Bank

Authors: Júlia Pokol, Raslan Mohamed Ramadan Said Ibrahim
Consultant: Prof. Zsolt Vasáros

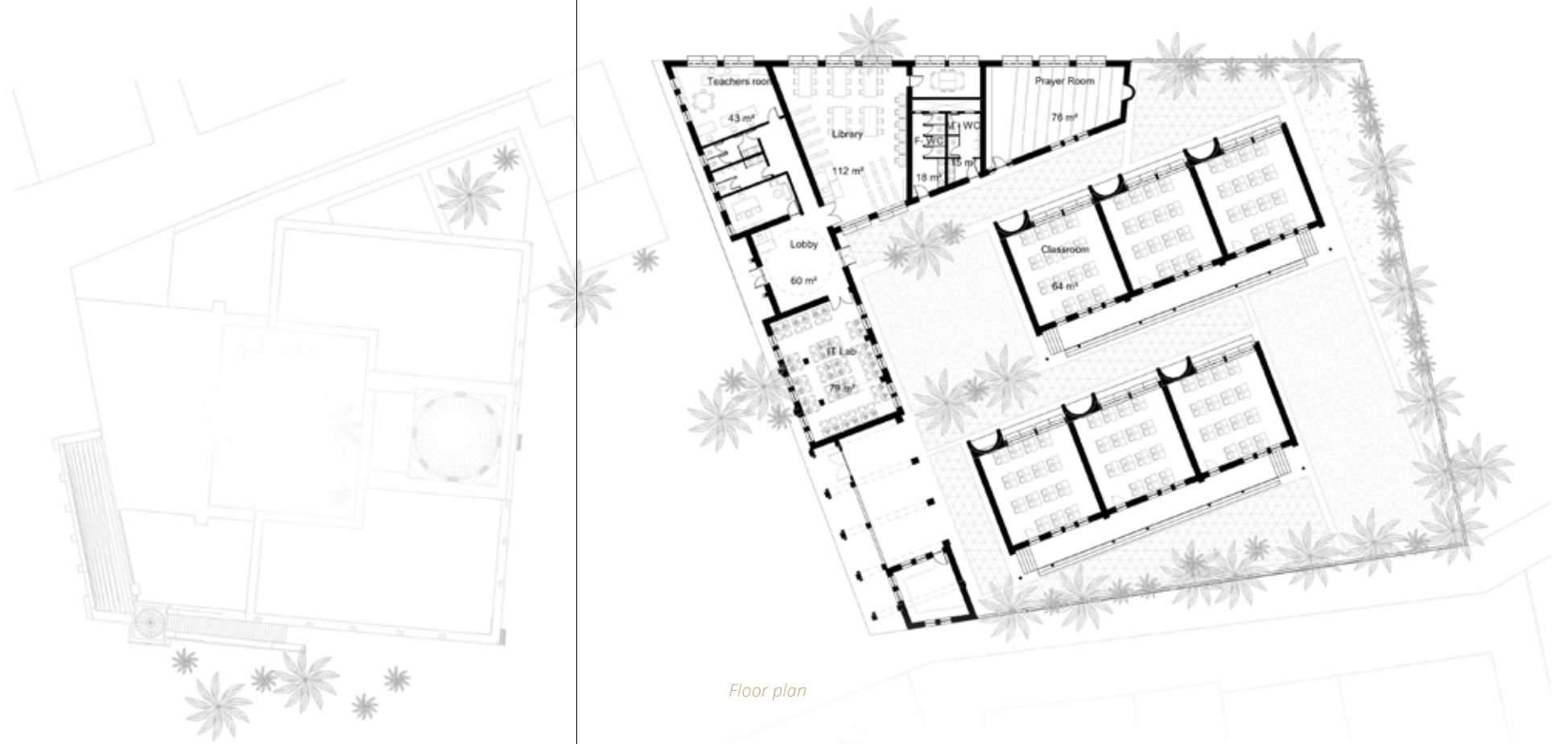
Our approach to the project is based on understanding the uniqueness and cultural richness of the site, surrounded by the few still standing buildings of architect Hassan Fathy. The Mosque and Khan designed by Fathy create a strong stylistic and historical environment which cannot be ignored. We would like to respect the local traditions through embracing Hassan Fathy's creations while implementing technologies which can enhance the learning experience of the students. Additionally, we aim to create spaces which can provide the opportunities for students for self-learning, interaction and cooperation according to a more up-to-date way of teaching.

There are no design standards or benchmarks for the environmental performance of school buildings in Luxor. Therefore we are using local thermal and solar data to set what we think is the right performance standard for the school. Due to the hot and dry climatic conditions, specific design guidelines were explored to cope with this harsh climate. Consequently, our target is that the final design becomes a prototype and will be implemented in similar conditions, specifically focusing on the characteristics of Upper Egypt.

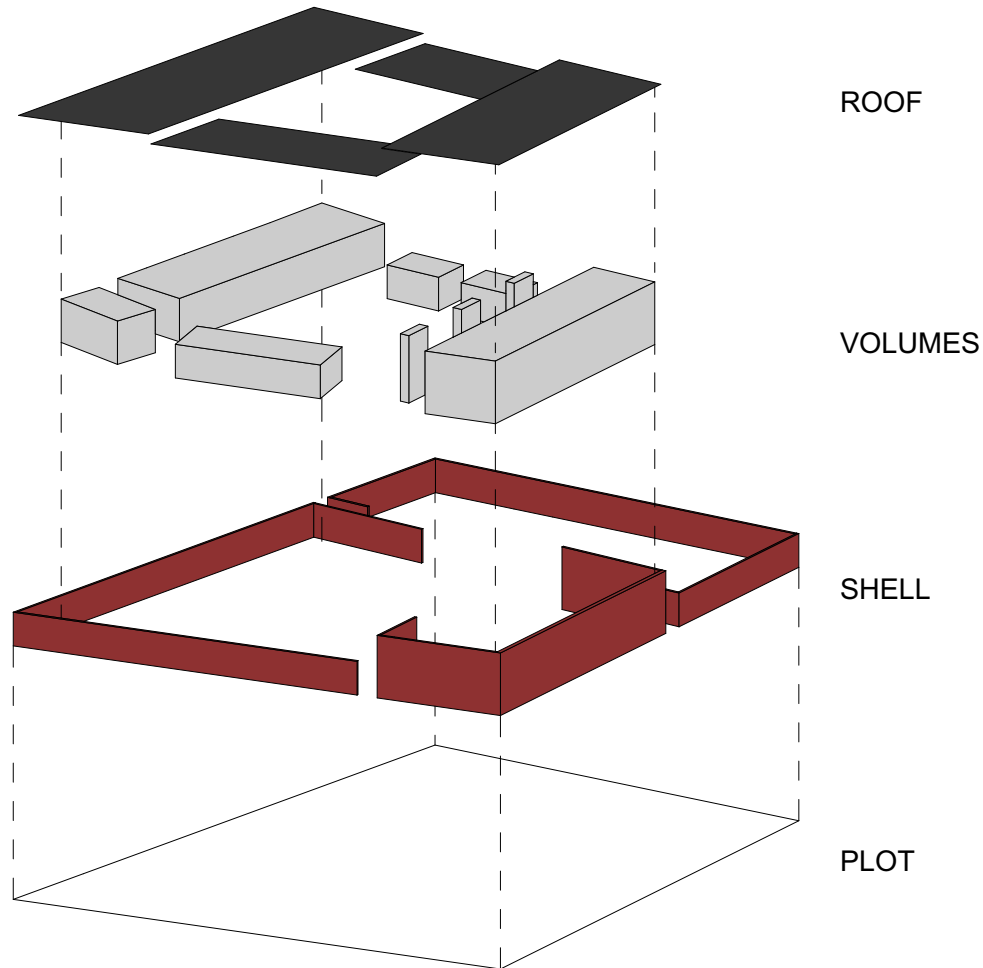
Existing schools in Luxor struggle to provide good natural lighting. They have small windows to avoid solar glare; but this restricts the amount of daylight getting into the building, something which is essential in areas where electricity is not always readily available.

The school building should be designed considering the community of New Gourn at its core. Dialogue with the local community if it is possible should communicate the design process and the school should be built by local builders using local materials. This not only provides training and employment, but also increases the community's attachment to their school. It would also encourage the community to take part in maintenance of the building later on.

UNIVERSITY COMPETITION: 2018 - 1st Prize
NATIONAL COMPETITION: 2019 - 1st Prize



COMPOSITION



Architectural concept. Rendering by B. Móré, A. Fárizs, 2018.

STUDENTS' COMPETITION 2018

A place to stay

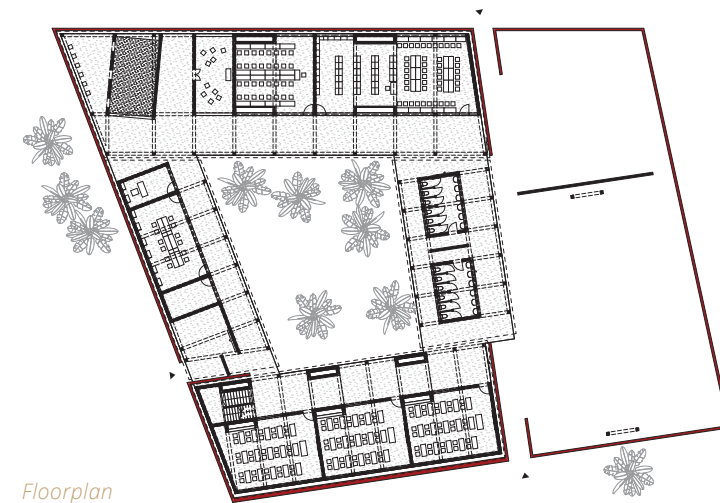
Authors: András Fárizs, Bence Móré
Consultants: Dóra Dávid, Prof. Zsolt Vasáros architects
Csaba Szikra, assistant research fellow

The goal was to create a place where children can not only spend their required school hours, but also have the opportunity to spend their leisure time in a proper environment. With some addition to the architectural program and the careful selection of the building's character, we wanted to make the building an integral part of the everyday life of the local community.

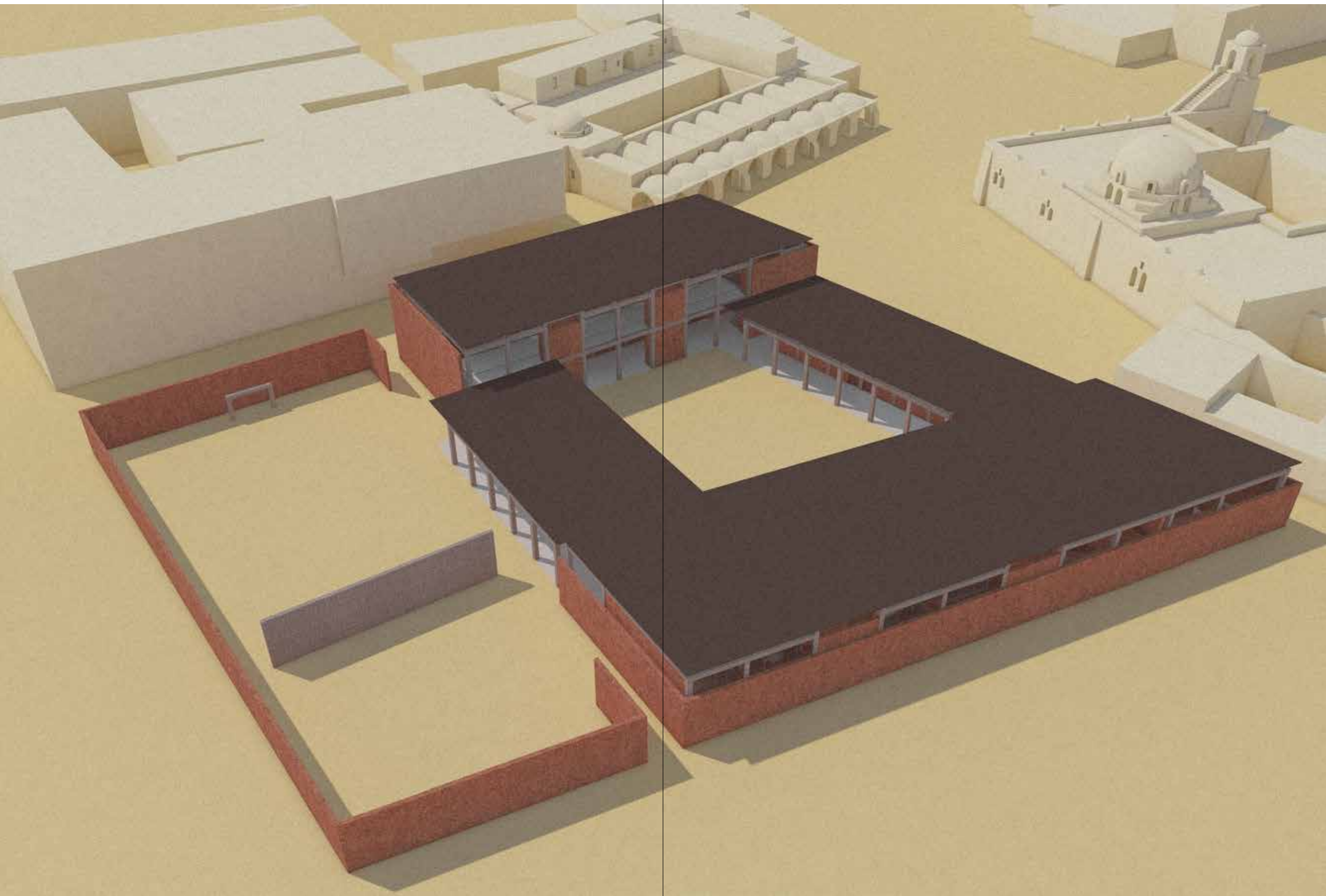
Through the design process we had to take into account the extremely warm and dry climate of the region and the scarce building materials and structural tools available.

The building was inspired by the traditional Arabic architecture, the "new-vernacular" architecture which is emerging in the country today and the solutions of contemporary architects to similar problems.

According to the principle of composition mentioned above we can split the building into three parts: the "floating" masses on the plot include functions which require a closed space, surrounded by perforated brick walls providing shade and separation, all covered by horizontal roofs raised away from the ceiling. The three elements form two courtyards and create transitional spaces. The western side of the courtyard which is closer to the main square is surrounded by the four wings containing all the educational and learning functions. The eastern, somewhat sheltered courtyard provides a place for relaxation and sports. Beyond these considerations, because of the climate, we had to place great emphasis on the comfort of the users, therefore all four wings were designed with passive air conditioning structures.



UNIVERSITY COMPETITION: 2018 - 2st Prize
NATIONAL COMPETITION: 2019 - 1st Prize



Visual of the School with the Khan and the Mosque. Rendering by B. Móré, A. Fárizs, 2018.



The façade of the school with the Mosque on the left. Rendering: P. Kaknics, R. Tábori, 2018.



Corridor in front of the classrooms. Rendering: P. Kaknics, R. Tábori, 2018.

STUDENTS' COMPETITION 2018

School Elementary

Authors: Regina Tábori, Péter Kaknics
consultant: Prof. Zsolt Vasáros

Designing in a country in North Africa requires an absolutely different attitude and method. The increasing population, the extreme climatic conditions and sociocultural differences pose such a challenge which cannot be answered with European solutions. Therefore the project is based on the architectural heritage of New Gourná.

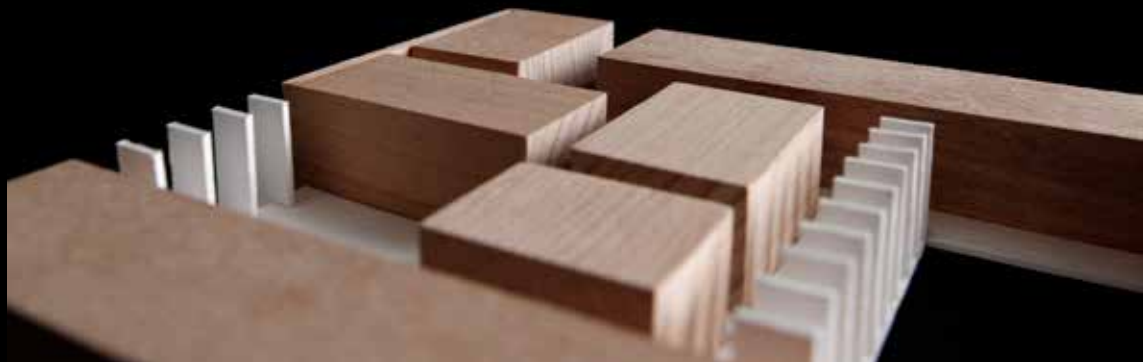
During the drawing of the city's masterplan Hassan Fathy used the archetype of the house with a courtyard which is widespread among the Arabic world. This model was used as the structure of the school which resulted in a building which is the modern redefinition of the house with a courtyard. The necessary functions compass the three courtyards with different images; by positioning these functions we created various spatial situations. Applying the analogy of Hans Scharoun narrow corridors are followed by spacious courtyards citing the structure and operation of the Arabic city. Details of the planned school also originate from the elements of New Gourná, such as the lacy pattern of the perforated brick walls designed for ventilation, the slim walls along the courtyards or the canopy roofs for shade.

The design we have drawn up may not be the simplest solution but adopting traditional motifs and using materials requiring the expertise of local masters resulted in a culturally deeply rooted but still contemporary building, and in this sense an elementary school was created.



Floorplan

UNIVERSITY COMPETITION: 2018 - 1st Prize



Conceptual model of the school. Model: P. Kaknics, R. Tábori, 2018.

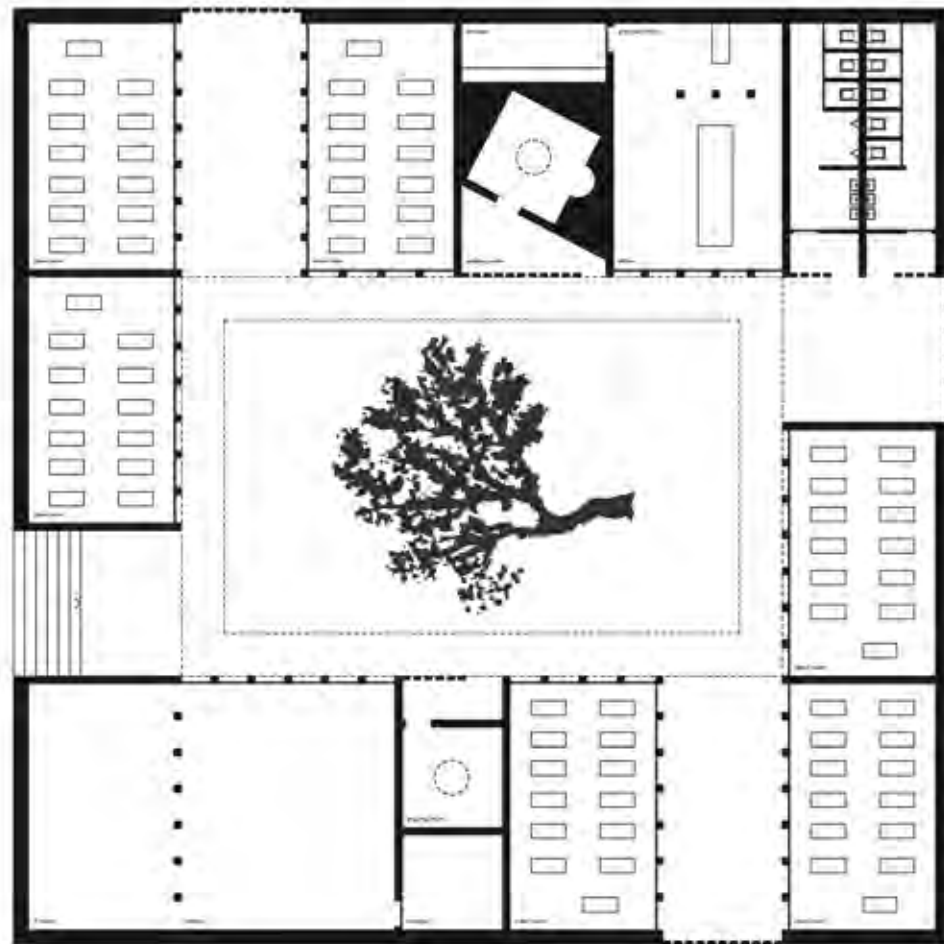
STUDENT'S COMPETITION 2018

Elementary Square 1

Authors: Ákos Balog, Bendegúz Zacher
consultant: Prof. Zsolt Vasáros

Walkways raised one meter above the ground, rationally designed spaces turned towards the enclosed courtyard and seclusion from the outside world make the building a solid entity. The square layout is opened up by arcades on the sides resulting in interior spaces of equal quality and smaller courtyards which differentiate between the buildings organized around the central courtyard. To avoid a church-like effect these openings are positioned towards the corners of the building, rather than its symmetry axes. The design of the layout reflects Islamic geometry while providing functionality.

Appropriate ventilation is provided by perforations and mashrabiyas on the exterior walls and louvered openings on the walls of the rooms facing the courtyard. Providing further shade and cooling is the 'floating' roof above the outer layer of the roof supported by reinforced concrete pillars. The exterior brick walls are 50 cm thick with sand filling in the middle layer. Except for the concrete roof, all walls and surfaces are made of bricks. Besides brick being the most readily available material in the area, constructing the building from a single material accentuates the quality and uniformity of its architectural intent. The plants in the courtyard mark the centre of the school and help separation from the less organised outside world. By making the library and the IT lab available to the public, the school can relate to the urban environment without losing the essence of its design. The strict design and avoiding all mannerisms can help the layout become a "standard" and function either in the regions of New Gourná surrounded by farmlands or in the increasingly informal cities and villages of Egypt.



Floor plan



Section A

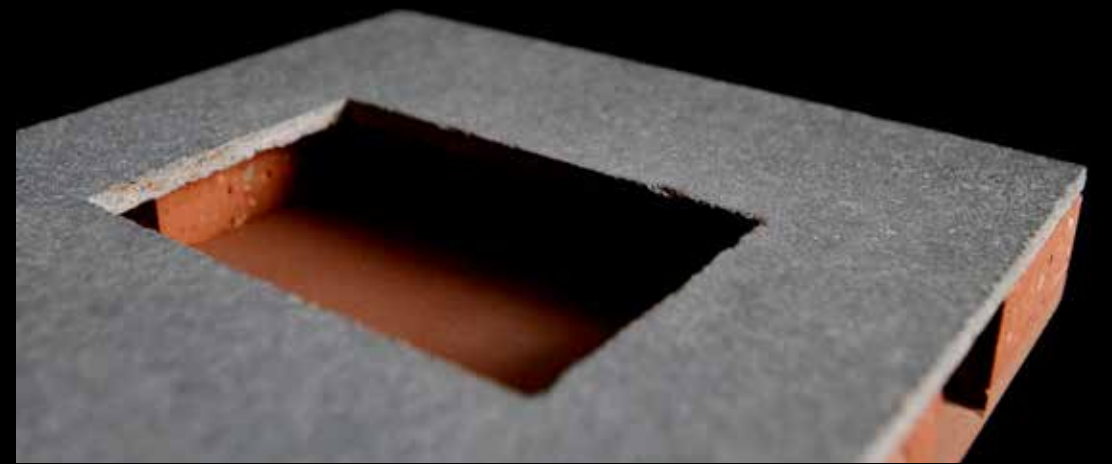
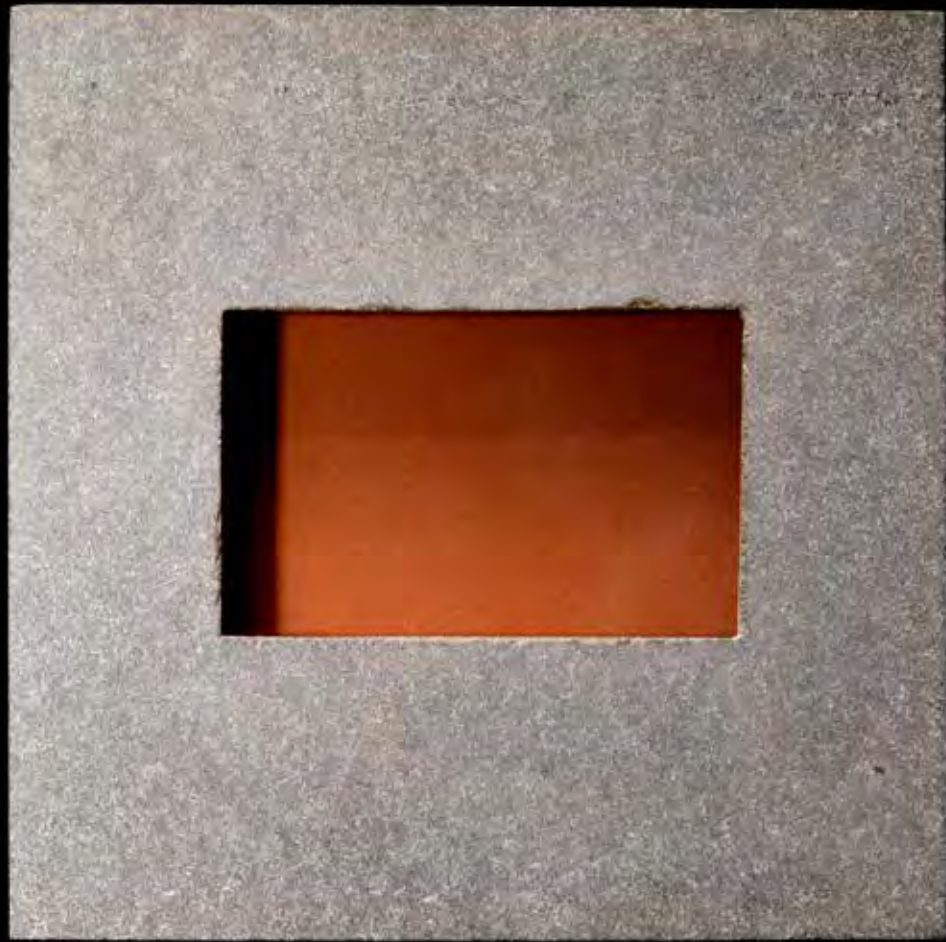


Section B

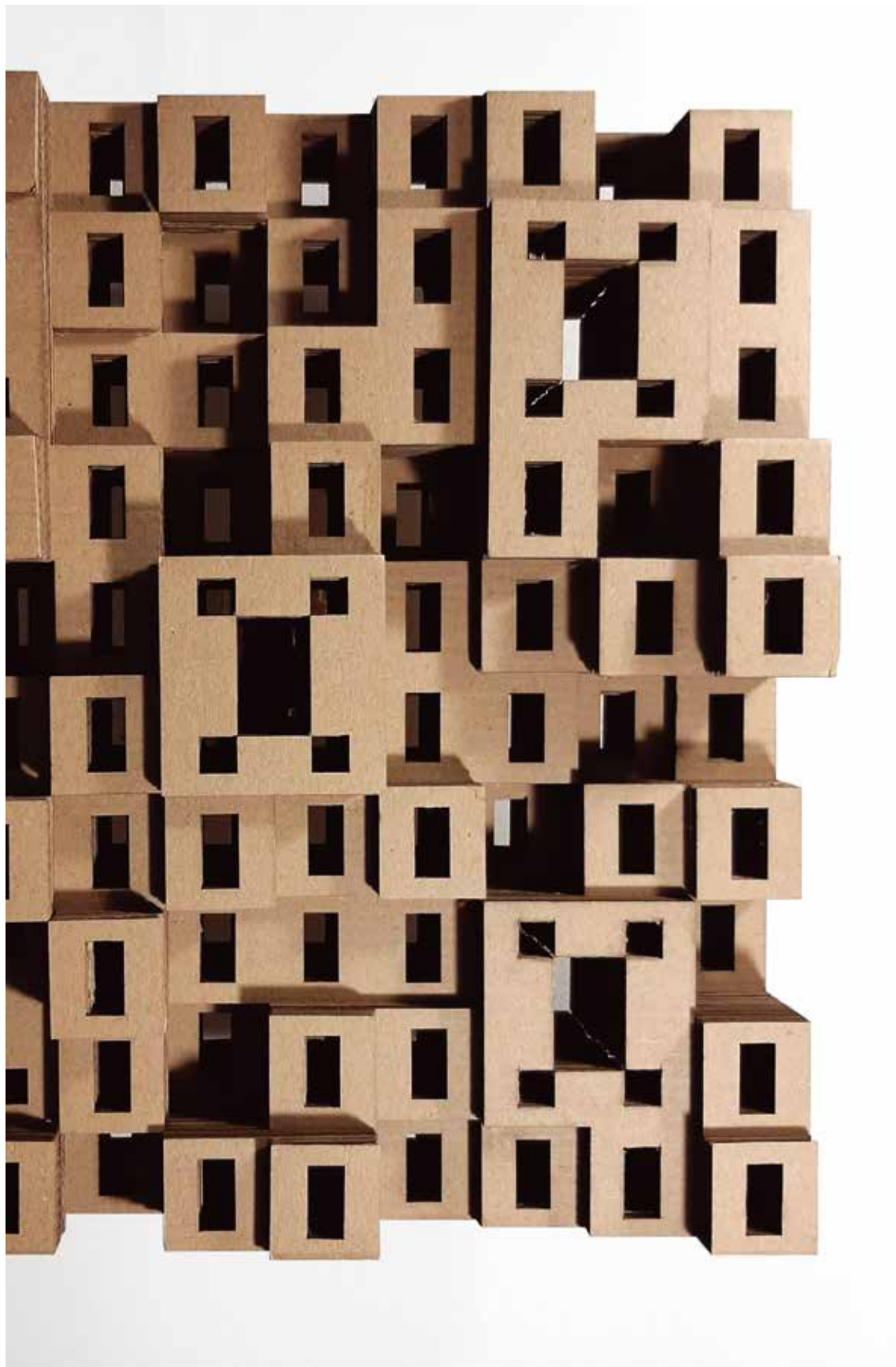


The inner courtyard of the school. Rendering by B. Zacher, Á. Balog, 2018.

UNIVERSITY COMPETITION: 2018 - 2nd Prize



Conceptual model of the school. Model by B. Zacher, Á. Balog, 2018.



Detail of the conceptual model. Model made by the Authors, 2019.

STUDENTS' COMPETITION 2019

Cairo Oasis

Authors: Sarolta Nardai, Annamária Olt
consultants: Dóra Dávid, Prof. Zsolt Vasáros, Dr. László Daragó architects

"Informality in urban life is a response to exclusionary measures taken by authorities to define and maintain what they consider to be formal. What is considered to be architecturally and urbanistically informal may, at times, share many of the physical characteristics of what is considered formal. Legal authority and market dynamics that segregate the city along social and economic lines determine the distinction between the two."

Mohamed Elshahed¹

Informal city/informal district: comes into being as a consequence of population growth and/or urban migration as people hope to exploit existing resources, disregarding existing territorial legislation, lacking prior central planning and a conscious development concept. The terms "informal city" and "informal settlement" used in this study do not refer to settlements labelled "slums." The term "slum" refers primarily to inadequate infrastructural conditions and very poor social and physical living conditions. Although the two phenomena can often be observed together, these two are separate concepts.

The boundaries of Cairo's informal neighbourhoods are shifting both horizontally and vertically, which seems to be "unusual" and even chaotic from a European perspective. The living conditions are different, infrastructure is underdeveloped, and people here live on the periphery of society. There are a few solutions to the challenges of population growth. The difficulty is mainly that the residents of informal cities reject state aid, which means that only some kind of grassroots intervention could solve the problems. For us, the motto "oasis" represents a promising potential in this process, which contrasts with and, at the same time, influences the environment. In our plan, we want to designate/create spaces that, like an oasis, constitute a kind of system and boundaries in their surroundings, and thus help organize communities. Perhaps we are not looking for an oasis in the classical sense in this desert-urban setting, but rather initiatives that, with the help of the community, could release unexploited potentials and, starting from several points, could swell into an oasis of common purpose with the help of urban-scale architectural intervention.²

¹ ELSHAHED 2020.

² The research topic is based on the field research of the Hassan Fathy Survey Mission in Egypt of the Budapest University of Technology and Economics, Faculty of Architecture. This program is "Supported by the ÚNKP-19-4 New National Excellence Program of the Ministry for Innovation and Technology" (Zs. Vasáros) and is "Supported by the ÚNKP-19-3 New National Excellence Program of the Ministry for Innovation and Technology" (D. Dóra)

THE PROBLEM

In the Nile Valley, social, sociological and economic changes are taking place at a rate which Europeans and Westerners would find unimaginable and alarming. It seems that we need to look at the phenomena from a different perspective in order to understand the processes. The population of Egypt, including Cairo, is growing rapidly (rising from 2.09 million to 20.484 million between 1947 and 2019 with a population density of 19.376 persons/m²).³ The country's population is growing by 2-3 million people a year.⁴ After the 1970s, and especially following the so-called "Arab Spring" in 2011, the poorer sections of society were forced to resort to illegal construction. As a result, informal neighbourhoods emerged initially in the capital and later in other parts of the country. Currently, more than 60% of Cairo's population lives in informal neighbourhoods. We have little data on this segment of the local population, but sources indicate that Egypt has more than 1,000 informal neighbourhoods,⁵ while Cairo has 100.

State measures to alleviate the demographic pressure on the Nile Valley are not yet delivering the expected results. Some of the desert cities have not been filled with residents since the 1970s.⁶ As a result, illegal construction continues to claim more and more agricultural land, thus seriously damaging agriculture and further increasing the contrast between growing populations and shrinking arable land. 83% of Cairo's informal areas are located on previously cultivated land.⁷ As a result of this and of similar construction in the countryside, Egypt currently has the smallest fertile agricultural area per capita among African countries.⁸ In addition, due to increasing food insecurity, populations are forced to migrate to urban environments where housing conditions are inadequate, thus further increasing the semi-legal and illegal infrastructure that provides housing on former farmlands. This vicious cycle seems unbreakable. The less privileged segments of society find their answers to their housing and income generation needs through informality, since the state has not been able to provide them with affordable housing through an official/legal scheme which would also provide rational employment opportunities within their reach. The grassroots, self-organizing, "semi-legal" communities can no longer be controlled by official law enforcement agencies beyond a certain level of density, mass, and territorial occupation; the state turns away from these areas, thus parallel societies appear, and the role of the state is fulfilled by small "forced communities."

From an architectural point of view, informal neighbourhoods in Egypt are characterized by underdeveloped buildings made of low-quality building materials and not arranged or built according to any concept of urban design or planning. The resulting extremely dense system seems chaotic, yet homogeneous.

3 Source: <http://worldpopulationreview.com/world-cities/cairo-population/> (downloaded 10.10.2019.)
<https://populationstat.com/egypt/cairo> (downloaded 10.10.2019.)

4 Source: <https://www.cia.gov/library/publications/the-world-factbook/> (downloaded 10.10.2019.)
<https://data.worldbank.org/indicator/sp.pop.totl> (downloaded 10.10.2019.)

5 See ANGÉLIL - MALTERRE-BARTHES 2016; KIPPER - FISCHER 2009.

6 For further details see SIMS 2014, 253-254.

7 Source: http://cairoclimatetalks.net/sites/default/files/Cairos-Informal-Areas-Between-Urban-Challenges-and-Hidden-Potential-2009_EN.pdf (downloaded 15.10.2019.)

8 See ANGÉLIL - MALTERRE-BARTHES 2016.

LOCAL BUILDING CONVENTIONS

The most popular building structure in informal neighbourhoods is reinforced concrete frame with minimal reinforcement, 12-15 cm thick-burnt brick masonry infill, due to its cost-effectiveness and easy implementation. This material allows rapid expansion, both vertically and horizontally. Unfinished roofs and brick walls, and protruding reinforcements unify informal neighbourhoods across the country. Compared to the architecture of "slums" in other parts of the world, these neighbourhoods are unique in development, structural quality, and construction technology. These techniques were introduced into the country by Egyptian workers returning from the Persian Gulf in the 1950s and 1960s.⁹ This is the reason why illegal construction could be realized here in a relatively high quality, since these neighbourhoods are not specifically slums. Informal districts offer relatively easy access to housing from the poorest to the lower middle class. Initially, the buildings were maximum 6 storey, today in the urban environment around Cairo, 12 to 15, sometimes 30-storey residential buildings are prevalent.

"FORM FOLLOWS FOOD"¹⁰ - THE MORPHOLOGY OF INFORMAL NEIGHBOURHOODS

... i.e. "the shape follows the food" or at least the pattern of informal urban expansion on the former farming areas.¹¹ Adapted to the agricultural structure, a hyper-dense urban fabric was formed in which cluttered buildings were divided only by ventilation ducts and unpaved, winding alleys. Building blocks tend to be constructed without windows, due to heat protection and the fact that extremely narrow streets (rather alleys) make proper illumination and ventilation impossible. The builders know exactly that soon another house will be built close to the exterior walls, so they do not bother creating openings which would become redundant later on. Another notable problem with floor plans created without proper design is that space utilization is not optimal at all.

A typical feature of traditional Arabic residential buildings was the inner courtyard. At the beginning of the construction, as a first step, they surrounded their land with walls, so that the family and their property were safe within the walls. In this way, the building could only receive natural light from the courtyard, and the residential buildings were open inward and closed to the street. As a result, "closed-row" buildings and narrow alley-like streets were formed.¹² In the multi-storey informal construction scheme there is no place for inner courtyards, and since it is not customary to have a "garden" outside the walls and not enclosed by them, there is no alternative left for open space.

After the Civil War, Egyptian Vice-President Khedive Ismail launched a European-style urbanization program in Cairo with the following message: *"My country is no longer African, we are already part of Europe."* They then tried to transform Cairo into a European capital by following the example of the Parisian urban planning. Due to this principle and the lack of space, the building style of opening to the street was established first in the city centre and later in the informal districts. Traditional solutions are inapplicable due to the rapid rise in building heights and increasing space requirements. The former inner courtyard

9 See ANGÉLIL - MALTERRE-BARTHES 2016, 269-274.

10 See ANGÉLIL - MALTERRE-BARTHES 2016, 269-274.

11 For a detailed analysis of the fragmentation of the agricultural fields see DIENER et al. 2010, 89.

12 In general see RAGETTE 2006.

has just enough space to build another apartment in it, so that buildings without any internal open space have become commonplace. The building model well-functioning in France, where there are more transparent urban spaces and wider streets, is less realistic in the Egyptian setting due to the differences in the street networks.¹³

The street system of the informal districts, along with the former agricultural land boundaries, is defined by the irrigation canals starting from the Nile as natural boundaries, and the streets that can also be used for traffic are usually adapted to this. Because there are areas along the canals in which no construction work has been done (i.e. there are no buildings), much of the waste is also disposed here, and roads which make automobile traffic possible are built on feet above the canals.

CONCLUSIONS

Experience has shown that criminalizing and stigmatizing a given area creates further tensions and limits development. Elsewhere, e.g. in South America, the government sometimes links poor suburban neighbourhoods with propaganda not only to food security concerns, but also to radical religious movements, thus labelling these neighbourhoods as both uncivilized and threatening.¹⁴ Based on the lessons of the past decades, it can be stated that neither the economic means nor the political will of the state is enough to stop/reverse the process of the proliferation of informal neighbourhoods. Designers, professionals, and scientists therefore need to treat informality not only as a problem, but as part of the solution.¹⁵ Only a development proposal that accepts the prevailing conditions and offers a renewable, repeatable and variable alternative that can adapt to this dynamic can succeed. It fits into both the urban fabric and the social schema and it involves all members of society in the process so that they can organize a structure that will work for all of them. Residents have also been more or less successful in adapting their spatial and social environment to their needs. This shows that they want to be in charge and are willing to “invest” in the growth of their own settlement. Their architecture is, in a sense, rational, inventive and efficient, but it clearly lacks conscious planning and long-term viability, thoughtfulness and sustainability that can only be ensured by design.

THE ROLE OF DESIGN

As this type of urbanization is extremely rapid, it is difficult to analyse, and design professionals may find it challenging to follow the process. In such a situation, the architect cannot touch the roots, they can only perform symptomatic treatment, and provide orientation points. In informal neighbourhoods, two approaches are possible: micro-interventions that solve a micro-problem in a house, apartment or neighbourhood. Most successful projects are of this kind.¹⁶ Alternatively, we can examine the informal part

¹³ See DIENER et al. 2010.

¹⁴ SINGERMAN 2009, 112-113, 117-125.

¹⁵ This proposal has already appeared in numerous places in literature and practice, too. One of the first projects of the Elemental Studio of Chile (Andrés Iacobelli, Alejandro Aravena) was reforming the Chilean social housing solutions, which was based on years of university research. The innovative approach they introduced was that the larger-scale housing projects should incorporate and utilise the people's will and capacity to shape and construct their own living spaces. For further details see ARAVENA – IACOBELLI 2012.

¹⁶ A realized case study is the Cairo Lights project led by Jana Revedin, see <http://www.revedin.com/architecture/cairo/cairo.html> (Downloaded 20.10.2019.)

of the city as an independent system, and we can look for development opportunities on this scale. The designer attempts to create “cosmos from chaos,” organizing the seemingly chaotic elements into a more viable system. We can propose changes that will improve the quality of life, make the built environment more liveable, while acknowledging that it cannot fundamentally change the underlying principles. We are facing a burning, practically insoluble social problem, a demographic crisis, the outcome of which is the emergence of parallel societies drifting towards mass migration or anarchy.

The following questions should be asked:

- What factors are missing to provide relevant architectural responses?
- Is it possible to exploit the positive aspects of informality while shifting them to (more) legal, more verifiable frameworks and at some level ensuring sustainable development and a more decent living environment?

WHAT IS THE VIEW OF THE AUC?¹⁷

According to Hubert Klumpner, professor at ETH Zurich, architecture and urbanization are frozen politics. In line with this notion, the American University of Cairo defines informality as a manifestation of community needs. Its vision for the city of AUC is the “Juxtapolis of Cairo,”¹⁸ the vision of the various, clearly defined, juxtaposed elements. In recent years, this principle has been followed by the institution's studio projects, which tackle the friction between two apparently opposite poles (formal, informal). They focus on mediation and on-going communication/negotiation, which are even more relevant in a city like Cairo. There, the two-component relationship is undergoing constant change, and top-down initiatives are almost impossible to achieve because of the bureaucratic framework. The golden middle way between bottom-up and top-down approaches is being sought through their projects (titled: The Garbage City of Cairo / Heritage and modernity: reconciling history and prosperity / Reconciling the city and the Nile: step back, reclaim, and reconnect / The static and the mobile: renegotiating Cairo's gateway).

WHAT IS THE POSITION OF ETH IN ZURICH?

Although the informal city phenomenon has existed for almost half a century, Egyptian architectural schools pay relatively little attention to it. Much of Cairo today is shaped by the “architecture without architects” phenomenon, with young architects trained to serve a small proportion of potential clients, the elite, thus creating a huge gap between reality and architectural pedagogy. The ETH (Eidgenössische Technische Hochschule) of Zurich, Switzerland has conducted in-depth research on the subject, avoiding the “over-romanticization” of informality, treating it in an appropriate historical, social, economic and physical context.¹⁹ We received a large pool of new data, stories, and depictions that lifted Cairo out of the shadows of ignorance and put new tools in the hands of future architects. Understanding informality from an architectural design perspective fills a huge gap in the knowledge we accumulated in the meantime mainly from other disciplines. The University's established research and design “laboratory,” the MAS Urban Design (The Master of Advanced Studies in Urban Design ETH), currently led by Professor Marc Angélli,

¹⁷ American University in Cairo

¹⁸ See MOSTAFA 2016, 2010-221.

¹⁹ See DIENER et al. 2010.

is conducting experiments to help develop swiftly emerging urban areas such as the one discussed here. Their proposals for architectural interventions seek to change existing typologies through realistic, responsive interventions in order to achieve truly tangible changes in the lives of residents. They offer adaptable alternatives to a larger urban system. Among other things, they conducted a comprehensive study in the Ard el-Lewa quarter, which was built in the 1980s, and which we analysed, too.²⁰

WHAT DO WE THINK?

In general, our attempts have provided answers for some of the problems, but we have not found a coherent solution that would address the chaotic proliferation of informal neighbourhoods. To this end, we would set up a “zero starting point,” which, by connecting these developments, could give rise to a better quality of life. We tried not to over-idealize the situation, so we used the current population density in our planning. While studying the Zurich examples, one of our most important observations was that building units were designed for the community in all vertical directions, which solved specific problems. The main element of our project is to bring the flats together horizontally, thus providing a basis for any type of further vertical initiative. We propose solutions for the following issues:

- Meeting state subsidy and the needs of residents. So far, the problem for residents has been the lack of real state aid and the state's problem was not having access to the root of the problems. The plan provides guidance on what specific steps the government could take to meet interests, focusing on the built environment.
- Impermeable, compact urban fabric, lack of streets - inadequate transport options.
- Windowless apartments - lack of natural light.
- Uncontrolled sewage system.
- The disorganized location of community functions.

In our design, we created an experimental neighbourhood that functions as a system which can be adapted anywhere and can be expanded to any extent. One of the most important inspirations we started from is the interior courtyard design of traditional Arabic architecture. We have solved the problem of narrow, impassable streets by building our residential blocks on feet. In this way, the ground floor becomes fully interoperable, providing space for community functions. Once the problem of horizontal transport has been resolved, full use of traditional wall-to-wall construction from the first level will require only vertical individual traffic spaces. Relying on state resources, the foundations of the apartment blocks would be built from prefabricated elements, i.e. pillar frames, the ceiling above the ground floor, the stairwells, and the sewerage adjoining the cores for traffic. This is the basis on which locals will be able to build freely within their own system, expanding the buildings on the horizontal base. In this way, the state could support this segment of society in a way that they could properly integrate a lifestyle which suits their own needs and customs. To help with the orientation, we would develop a signalisation system with different colour codes.

²⁰ See ANGÉLIL - MALTERRE-BARTHES 2016.

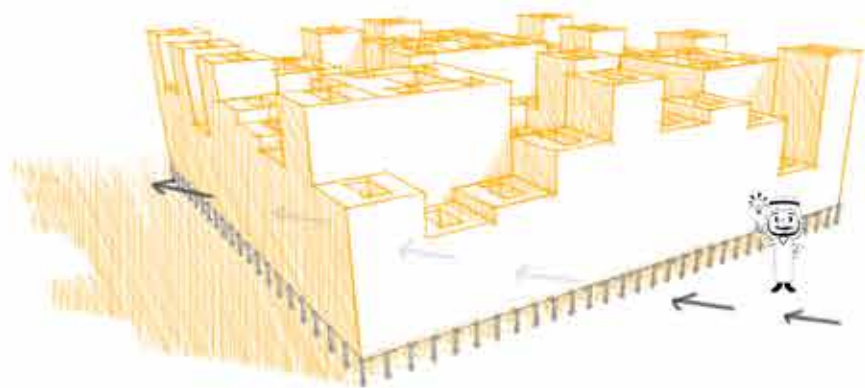
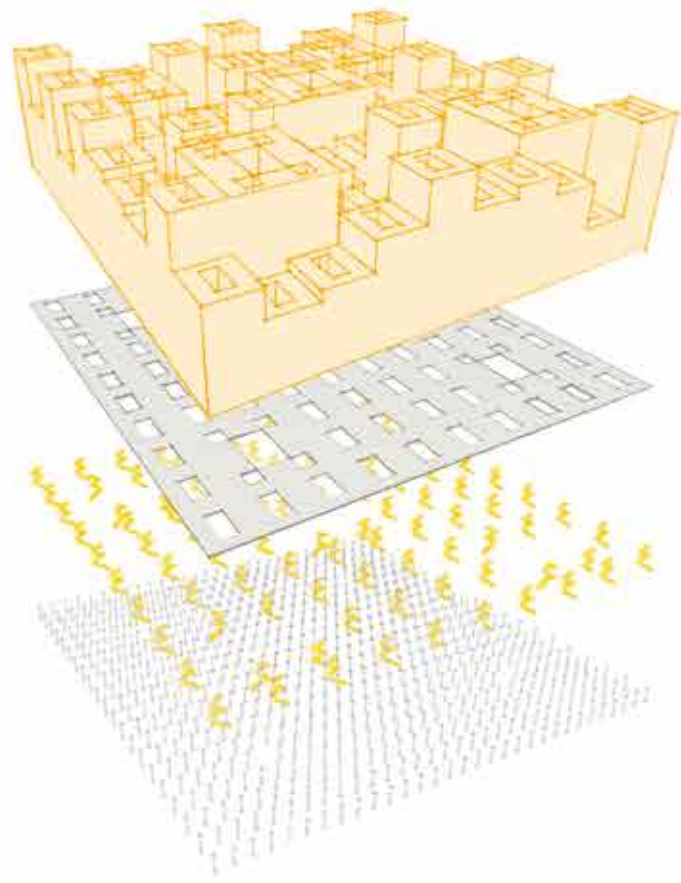
For the system to remain operational, it is essential that the community develops its own sets of rules. We propose the following requirements to be met for buildings in our pilot district:

- Do not build on the ground floor
- The stairwells have an East-West orientation and the interior courtyard has a North-South orientation
- The pillars should be placed parallel at evenly spaced intervals: 8m x 5m on the ground floor, 5m x 5m on the floor level
- Large atriums are required at certain distances

So, to reconcile people's needs and public spending, taking into account what we have read while dealing with existing problems, we have also made generous suggestions for further developments. According to our paradigm, the state takes certain steps the residents respect them. Egypt is one of the most populous countries in Africa whose problems are symptomatic of the global challenges we face. In the meantime, the demographic crisis on the African continent has become a vital issue, so there is no doubt about the relevance of the topic.



The conceptual model. Model made by the Authors, 2019.



Architectural concept. Rendering by the Authors, 2019.



Views of the proposed ground floor. Renderings by the Authors, 2019.



Hassan Fathy's own field house nowadays. Photo: Zs. Vasáros, 2019.

POSTGRADUATE STUDIES

The transformations of New Gourná

Gergely Sági

AN EXPERIMENT LEFT WITHOUT THE MORAL OF FABLE¹

"Everyone fought it. [...] Because there are humanitarian values [in the New Gourná project] and humanity was lost – belief and spirituality."²

There is not much precedent for a critical approach to the designer's attitude in the case of New Gourná, even though this viewpoint might give us answers to the grinding and irresolvable questions like what actually caused the almost complete decay of the internationally much celebrated New Gourná project. This is exactly why this chapter does not have its focus on introducing the New Gourná project, it's more of an analysis of the conditions of the present based on personal impressions, experience and research, through which the relevance of the Hassan Fathy and the heritage of the New Gourná project might come to light.

Old Gourná was established on the left bank of the Nile, across Luxor, where the fertile Valley meets the rocky mountains and the desert, above the ancient necropolis of the nobles. The livelihood of its residents was based on the illegal merchandising of the ancient artefacts that they were looting from the infinite network of tombs stretching below their houses. The Egyptian government decided to put an end to this practice and decided to abolish the village, to resettle its residents in the valley and turn them into farmers. The so-called New Gourná project was thus originally an experiment of the authorities between 1945 and 1948 for resettling people. Hassan Fathy, an architect already well-known in Egypt and with good connections in the Ministry was commissioned with the design task.

Due to the economic and social circumstances, the project was developing under very modest conditions right from the start. Fathy gives a detailed description of the circumstances of design and construction in his book titled "A tale of two villages" in 1969, almost twenty years later.³ The book points the failed elements of the work out and in multiple cases shows very clearly the disappointment and frustration of Fathy regarding the project, which haunted him for the rest of his life.

¹ The research topic is based on the field research of the Hassan Fathy Survey Mission in Egypt of the Budapest University of Technology and Economics, Faculty of Architecture. This program is "Supported by the ÚNKP-19-4 New National Excellence Program of the Ministry for Innovation and Technology" (Zs. Vasáros).

² DAMLUJI 2018b.

³ Later became famous by the title "Architecture for the Poor"

The story is somewhat self-contradictory considering that this was the project which put Fathy in the centre of attention of the international professional circles. The principles he elaborated, the idea of participatory design with and for the community were completely different from the European mindset of the time, the living machine of Le Corbusier, the canon of international modernism, and the cool and emotionless "existenzminimum" of Bauhaus. However, Egypt in that time – the 1950s and '60s- was still an exotic country in the eyes of the international architecture community, which did not have a realistic idea about the reality of the living conditions and the situation of Egyptian people. Thus, in the western circles the New Gournia project seemed to be a success right from the start since they saw only Fathy, the educated, good-mannered and open-minded architect, and they were satisfied with his revolutionary ideas, whereas at the time the serious mistakes and pitfalls of New Gournia had already become visible at the time.

The local people's resistance against resettlement was the first and basic problem, which is quite understandable. This situation was obviously very difficult to handle on the designer's part. He elaborated a masterplan that attempted to respect the lifestyle and the social hierarchy of the residents of the village – the blocks of houses were meant to provide a more tightly connected residential area for families and tribes, separated by wider roads. Equally importantly, he tried to integrate the best and most modern available infrastructural and service-related developments in the design of the village.

Fathy was trying to adjust his design to the architectural milieu to Old Gournia, which is proven by the recently discovered numerous sketches and notes from his research of the village, which are still to be analysed and published.⁴ Also, his strong attachment to the use of mudbrick as the material of his structures was born in this time, which in time grew even stronger and the use of mudbrick became exclusive in his designs. The different elements of the concept intersect at this point: the traditional way of construction of Old Gournia and the region had been applying mudbrick for thousands of years, which coincided with Fathy's desire to change the use of the expensive and hard-to-get timber to the cheap alternative of the mudbrick. All this points out the traditionalist, yet innovative mindset of Fathy, constantly searching for solutions for the future. His logic was almost impeccable given that at that time (before the construction of the Great Aswan Dam) the regular floods of the Nile provided an almost inexhaustible supply of mud, which in the Egyptian climate could easily be turned into brick without any special technical skills. As Fathy explains later, this experience is the root of the "mudbrick revolution", and the idea that the use of the soil-based construction material can bring the promise of dignified living to the poor of the developing world. He said that people move where there is fertile soil, and where there is fertile soil, mudbricks can be made. Therefore – he concluded – there is an unlimited supply of cheap building material where there is permanent human habitation.⁵

4 The sketchbooks, drawings and manuscripts are property of „The Hassan Fathy Collection of the Rare Books and Special Collections Library of the American University in Cairo“ and are soon to be analysed within the framework of the Hassan Fathy Survey Mission

5 See in DAMLUJI 2018, 38-51.

This statement is quite inaccurate, since there are countless places on Earth where people live and there is no unlimited supply of soil that is fit for use as a structural material, however, at that time and in that place Fathy's concept might have seemed to be right. It is another issue though, and not relevant to the validity of the original intent, that Fathy couldn't have foreseen those later changes in the circumstances (among others, the ever faster and extreme climate change alongside the rapid urbanization and demographic explosion), which in the end made the validity of the solutions he elaborated for New Gournia quite limited.

Nevertheless, there were more direct reasons for the failure of New Gournia, too. Fathy looked for and successfully found references for supporting his ideas: in the area of the Model Village he had the Nubian vaults of the monumental storages of the Ramesseum⁶, and a little further away the cupolas of the cenotaphs of the ancient Fatimid necropolis of Aswan⁷, and the ancient Christian cemetery of El Bagawat.⁸ These models were structurally suitable for his architectural purposes, also, they actually were pristine elements reflecting local architectural traditions. However, it seems that Fathy was not aware of the societal sentiment reflecting to these shapes. It was unbearable for the local people to have a cupola on a residential house, since they had this spatial experience exclusively in mosques and tombs, especially cenotaphs. The aforementioned Nubian vaults caused similar problems as well. The seemingly graceful, parabolic structure had previously been used for covering stables, agricultural buildings, and was not at all widespread in this region of Egypt, only much more to the south, in the area of Aswan and the Sudanese border. An average resident of Gournia had probably never seen this type of structure before, if not in the 3500-year-old storages of the Ramesseum, which miraculously survived to this day.

Besides the problems of the basic principles of design there were grave difficulties caused by environmental factors, too. The area dedicated to the Model Village was basically in the flood plain of the Nile at the time. Before the construction of the Aswan High Dam the area was regularly under water, and after it started working, the stabilized water level of the Nile kept the ground-water on a particularly high level at all times. These circumstances are unfavourable not only for the mudbrick, but they erode the limestone he used for the foundation of the larger public buildings, the Khan⁹ and the Mosque excessively. This caused not only the appearance of severe structural problems of the houses, but also a bad comfort in the interiors.

To consolidate the tensions caused by the countless difficulties and crippling financial constraints, Fathy proposed to involve the local community in the construction process, with the purpose of bringing them closer to understanding and accepting the project. This is why a part of the local community was actively participating in the erection of New Gournia. As a first step, the Mosque and the new village centre, the Cattle Market and the new gate of the settlement were finished. The area of the gate and the land between the main road and the Mosque was the first to be filled with residential houses, and by the time this district had been finished, the project, three years after the launch of its design was stopped due to the strong resistance of the locals and the passive, sometimes rather

6 Funerary complex of Ramesses II. (1302-1213 BC.)

7 Used between the 7th-12th century

8 Used between the 2nd-6th century

9 Accommodation and commercial building with rooms for rent and social facilities.

rejecting attitude of the authorities.¹⁰ The public buildings were more or less finished: the Village Hall, the Mosque, the Theatre, the Khan in the centre, the Market, the Crafts Centre, and the Boy's and Girl's Schools were opened to the public. These latter ones basically stood isolated from the village, in the agricultural fields without any context due to the unfinished urban fabric until their complete decay presumably in the late nineties. Only a few of the Old Gourná families moved to the Model Village, and they almost immediately started to transform their houses that were too small for them and didn't fit their lifestyles. Amortisation was fast and severe, and the resentment and soreness resulting from this caused constant frustration in Fathy's life then and later as well. He was blaming the failure of the project mainly on external factors (the authorities, the locals, bad financial conditions, etc.). It is not noticeable though and we don't see any traces in the later works that he would have understood, or even tried to understand the limits of his ideas. It seems he blindly believed in his good intentions, the pure inerrancy of his own principles, whereas the reality has pointed out the practical backlashes of these principles countless times. The severity of the problems caused by these became obvious already in Fathy's lifetime. He, however, couldn't and did not want to face these problems: he unwaveringly waited for the breakthrough, when the world would recognise the greatness of his proposals and the "mudbrick revolution" would come to the people.



New Gourná nowadays. Photo: G. Sági, 2019.

¹⁰ In several of his later writings and statements, Fathy strongly criticizes the passive and, in some aspects, cowardly attitude of the Egyptian state, which, seeing a series of difficulties withdrew the support of the project and which was considered by Fathy to be one of the main causes of the failure of New Gourná. Partly because of this, he left the country for a while in 1957.

NEW INTERPRETATION OF A LEGACY

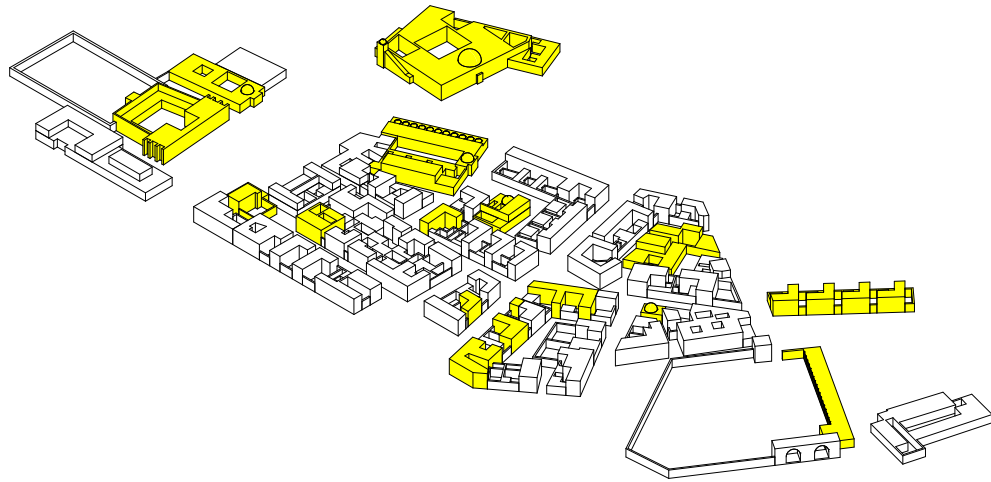
Almost eighty years have passed since the design of New Gourná. During this time the social, intellectual and physical environment has transformed at a speed and scale like never before. My goal is to phrase the consequences of this study in relation to this temporality. The relationship to the past has a great importance in Fathy's oeuvre. His buildings, designs show a strong connection to the architectural heritage, during design he was inspired not only by the recent, but also the far past of his projects' environments, too. He was constantly seeking references, and aimed to incorporate them in his work. Thus his pieces could be considered a kind of historicism, but his mindset was completely different from that. While historicism in many cases means a decorative attitude only, Fathy was aiming to use this tool consciously to shape and further the identity of the community on an emotional basis as well. For me it seems that the application of historic references was not only a contemplation about the past for Fathy, not the celebration of a "golden age" myth, it is rather a strong foundation upon which, according to his beliefs, the future of a community can be built. The past thus is not a factual reality for him, it is more of a question of identity, the tool for the survival of a community in a sense. This is well indicated by that he does not fight for the use of mudbrick based on historical - cultural sentiment, he does not see to be a way to keep the dignified memory of the past, but as a solution for the architectural challenges of the future.

Fathy's architecture is burdened by contradictions in many aspects. His spatial designs and references, which despite his intentions were hard to comprehend for its users, results and has resulted in his ambiguous judgement: either his appraisal without criticism, or his cruel condemnation. In the topics of social, community, and local design he is often referred to as an inevitable milestone milestone, nevertheless, these referrals usually represent a very superficial knowledge of his work, and the lack of critical attitude to his oeuvre.

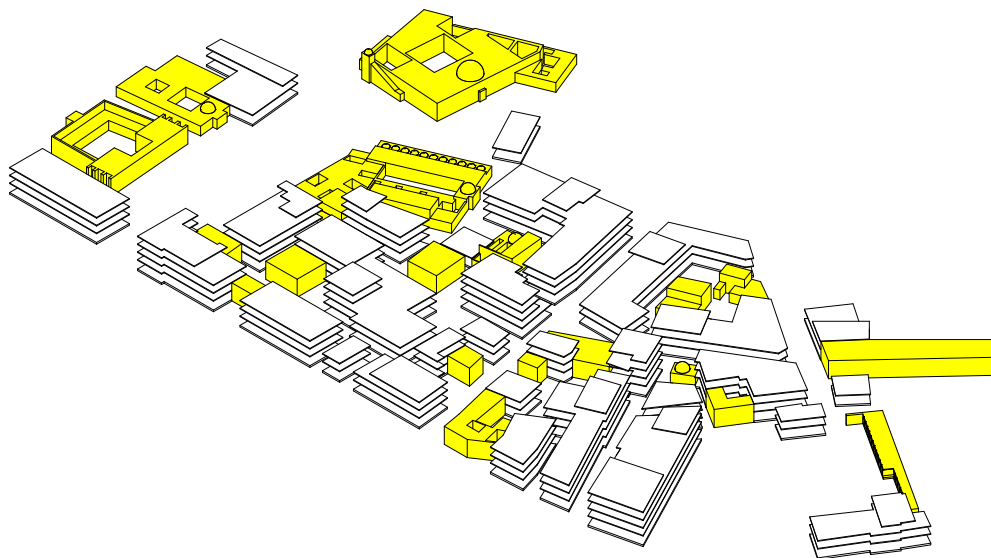
This analysis aim to further detail and tinge this image, and approach the architect's oeuvre from a different perspective. The past and present of New Gourná is a good case to observe the relation of the user to its built environment. It shows well that Fathy's enthusiastic and caring attitude was futile in every aspect of the design and construction, it couldn't resolve the conflicts originating from basic misunderstandings. The community never made peace with the idea of relocation, or the lifestyle changes they would have had to face in their new homes. The decay of New Gourná was so grave already in Fathy's lifetime that he had the Theatre, which was one of his most loved buildings and had already decayed seriously by that time, renovated on his own expense in the 1970s. His goal was to raise the locals' and the authorities' attention to the conditions and values of the village. All in vain; all his attempts proved to be useless against the complete indifference.

In the 1980s though, in connection to the crisis of international modern and the different architectural discourses taking place due to that, Fathy and his work received more attention again (sadly, but quite typically, outside his own country the most). The Aga Khan Foundation in 1980 and the UIA in 1984 awarded him, he had an exhibition of his oeuvre in the Pompidou Centre in Paris in 1981, and the first monograph about him was published in 1988.¹¹ It is surprising though that the international professional opinion was, and is still stuck in the enthusiasm of the beginnings, and is not fully aware of the actual condition of the village. The constant decay of the building stock that started

¹¹ See STEELE 1988.



*The building volumes of New Gournā according to Fathy's design
(the buildings which were still original in 2019 are highlighted)*



*The building volumes of New Gournā in 2019
(the buildings which were still original in 2019 are highlighted)*

right after construction is almost not mentioned at all, only a few photographs and notes testify to that. As of today, the majority of the buildings of the village have been completely destroyed. Those still standing are unstoppably getting into a worse and worse condition every year. The public buildings (the Khan, the Theatre, the Mosque and the Market) have avoided conscious destruction so far, but being abandoned and not maintained have affected these too, and the structural defects have made them life-threateningly dangerous. Those residential buildings that were unusable, or considered worthless by the locals were basically the victims of intentional demolition.

Fathy's design hasn't become part of the heritage of the community in Egypt, since it wanted to replace, overwrite an already existing one, ultimately unsuccessfully. The difference between the results of the attitude of "continuing the heritage" and "creating a heritage" shows well in this case. It is eye-catching that the Mosque, which has a collective value due to its function, is still there; while the Market and the Khan, which were unnecessary functions, are completely neglected and are sinking into slow decay due to natural amortization, but avoided intentional demolishment.¹²

It is interesting to see though that Fathy's legacy does not disappear completely, the decorative details of the world he created appear on the new buildings. The ornaments of the windows and doors, mashrabiyyas, i.e. the small, sentimental motifs continue to live. The layout of the village and the system of the plots is more or less unchanged as well.

The transformed building stock of the village highlights one of the greatest deficiencies of Fathy's plan. The homes of the families of Old Gournā were much bigger, and made the cohabitation of multiple generations possible. The rooms were covered by wooden slabs, thus, within the structural limits, houses could be expanded vertically. The organic system of the village, the freely formed street system, the larger inner courtyards and the labyrinthine public spaces provided the necessary flexibility for horizontal expansion, too. These were the living spaces of the traditional, community- and family-centred local people. It was impossible to carry on with this freedom of shaping the environment according to needs in Fathy's rigid, over-designed architectural environment. The current look of the village reflects this: new houses replaced the old ones, which are often 2-3 floors higher than the mudbrick constructions; the structures of reinforced concrete framework ensure flexibility of the interiors.

¹² Almost the two thirds part of the buildings documented within the last four years from 2015 by the Hassan Fathy Survey Mission were already demolished in 2019. In March of the same year the Mosque became also closed due to serious structural damages.

THE MESSAGE

Hassan Fathy might be considered an eccentric, who in the middle of the 20th century, in the age of modernism designed and built seemingly anachronistic historic shapes, used outdated materials and traditional methods and tools simplified to the extremes. His work was accepted by general appraisal at some, and by incomprehension and rejection at other places. Nevertheless, if we try to see beyond the puzzling shapes and sometimes hard-to-comprehend principles, we can discover a non-conformist, innovative and progressive attitude in his architecture.¹³

Mr. Tarek Waly, the Egyptian architect visited Budapest in November, 2018. He is one of the last immediate colleagues of Fathy that we can still talk to today. He commented on the design of New Gournas as follows:

“Fathy introduce a new element what has never been there before. He invented a completely new architecture based on tradition, but he did it in a very contemporary way. We should do now like he did, we should follow his past and do something new what our time requires.”

Fathy, counter to the superficial appearance, did not want to rebuild the past, he wanted to answer the questions of the future by the tools of the past, by furthering the identity rooted in the past. He made mistakes though in assessing the future possibilities and in asking the wrong questions related to the future. This is why his architecture wasn't continued, what's more, hardly survived himself. The message we should consider regarding his work is exactly this: can we create a more valid image of the future to ourselves based on our present knowledge? Are we able to assess the future that we are designing for more precisely? Are we understanding the past that we are building upon better?

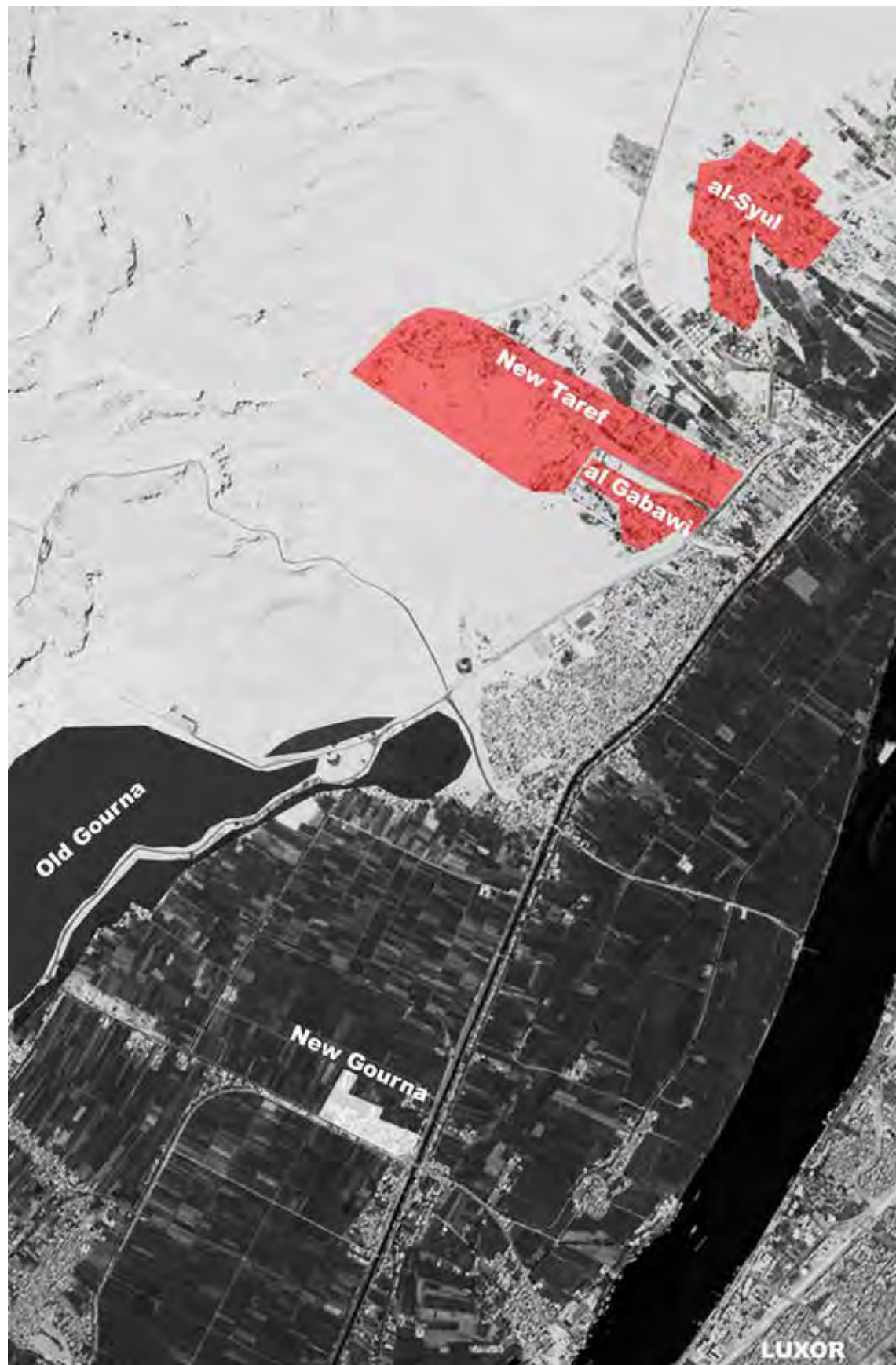
It is probably unavoidable for our houses to disappear sooner or later. The condition of the environment show that today we cannot think to design for “eternity” anymore, moreover, considering the pace of the changes of the past hundred years, it is doubtful that the houses of today can be relevant for 30-50 years.

Fathy's architecture is very perishable in the material sense, but if we take the time to see beyond the preconceptions and prejudice and the first image of the sad conditions of his houses, we might discover a fresh mentality. It is a mentality relying on the past, and constantly looking into the future. Even though the architectural idea is abundant in mistakes, it has an outstanding value together with the morals of those. Hassan Fathy's real heritage thus is not his houses, it is his intellectual legacy. If we are able to analyse his oeuvre with the necessary criticism and open-mindedness, we can discover the contemporary parallels relevant to us.

¹³ For contemporary critics on Fathy's work see: SENNOTT 2004, 728; HABRAKEN 2000, 265-266; JENCKS 1988, 142-143; MILES 2006, 116-139.



The renovated façade of the Khan. Photo: G. Sági, 2019.



The area of the analysed settlements. Source of the map: Google Earth, 2020.

The last chapter of the Old Gournas resettlement story

Dóra Dávid

The New Gournas project in the end did not reach the ultimate purpose it was created for – the majority of the residents of Old Gournas did not move, and continued to endanger the artefact protection goals of the Ministry of Antiquities.¹ This, and other events like the “flood” caused by the heavy rains in 1994 which demolished plenty of houses in the area made it urgent to create new residential areas in Luxor West Bank. This is why a few planned settlements / residential areas were constructed here around the millennium: New Taref, al-Syul (and Al Dabai’ya more to the south), which are made up of five significantly different house types. The development of these projects, located only a few kilometres from New Gournas show some very interesting features that are worth studying, especially in contrast to Fahty’s carefully designed, idealised village, and in contrast to the vast desert cities that are planned to be the remedy for the demographic challenges of the country by policymakers. These small settlements seem to be much more successful from these cases in many aspects, even though they were much more marginal and got less attention both politically and in the design. We don’t know much about the background of these projects yet, thus I can rely only our on-site observations, surveys and a few sources² in this chapter.

The first such settlement was al-Syul, about 5 km north of New Gournas, on the borderline of the desert and the irrigated agricultural land. This was the housing aid that the authorities provided for the victims of the flood on 1994, thus the houses had to be built very fast. Probably due to the short timeframe, there is not much to the urban design of the settlement, the plots of approximately 100 m² are arranged in an orthogonal system, just like the streets. There were two house types constructed here, both had an enclosed garden, one of those was a one-storey house with just three rooms inside, the other type came with an extra floor, with four rooms and two bathrooms altogether.

The second such project was made in an attempt of relocating the Old Gournas people again, around 2000. The designated area was again on the border of the desert and fertile land, but a little closer to the old village, about 2-3 km north of New Gournas. The first house type that populated this land is called the “Gabawi” by locals, referring to the small domed constructions, which included only 2 or 4 small rooms within a plot of about 110-150 m². Since these “houses” were completely unusable and unfit for any family, especially

¹ The research topic is based on the field research of the Hassan Fathy Survey Mission in Egypt of the Budapest University of Technology and Economics, Faculty of Architecture. This program is “Supported by the ÚNKP-19-4 New National Excellence Program of the Ministry for Innovation and Technology” (Zs. Vasáros) and “Supported by the ÚNKP-19-3 New National Excellence Program of the Ministry for Innovation and Technology” (D. Dóra)

² One of the most important sources for reconstructing the story of these settlements is the small exhibition about the Old Gournas area, curated by Caroline Simpson, which is now on display in New Gournas. In this paper I include the data displayed in 2018. Information about the exhibition can be found on this website: www.qurna.org/discovery.html



The al-Syul area in 1997. Photo: Zs. Vasáros



The al-Syul area in 2018, captured from the same place. Photo: B. Zacher, 2018.



A house of the "Gabawi" type. Photo: D. Dóvid, 2018.

those with many children, most of them were destroyed by the owners and replaced with more rational structures, sometimes by combining more adjacent plots.

The area around the Gabawi was a few years later transformed according to a schematic master plan to create New Taref. In 2006, only in a year 3000 plots were created here, and 750 houses erected according to a few house type designs. This larger-scale development was again in connection with Gourná – by this time the authorities finally had had enough of the reluctance of the residents, and demolished a large part of Old Gourná by force. People had no other choice but to move to New Taref. These houses are the most characteristic of those described here: they have a few decorative elements on the façades, as well as a façade painted in a deep red colour.

It is obvious that these settlements and their model houses were not designed by one single famous architect or urbanist. This might have been a conscious decision due to the unpleasant aftertaste of the New Gourná project, or simply the lack of resources, maybe lack of time for a more thorough design process. There are some common elements in all the house types, one is that all of them are of very simple structures, made in concrete or burnt brick as structural materials, which are cheap and widespread in the country. The use of mudbrick was probably not considered at all for multiple reasons: construction of mudbrick structures is quite time-consuming, and they are impossible to prefabricate; but first and foremost, it is forbidden to use up the fertile soil due to the unwanted effect of the Aswan High Dam. Since there are no more floods in the Valley, the Nile does not distribute the nutrients from the rain forest anymore on the agricultural lands of Egypt, which as a result are facing exhaustion all time – thus Fathy's presumption that there is unlimited supply of soil to create mudbrick in all places where there is permanent human habitation has already been confuted in the very country he based the idea on. The structures of the New Taref and al-Syul houses are not of a particularly good quality, the thin walls do not provide the necessary thermal protection. Also, the urban design is not as complex and deliberate in any of these areas than that of New Gourná.

Still, despite the much poorer overall design quality, these settlements are populated, and we can observe a very interesting phenomenon in all of them: except for the unusable el Gabawi house type, all others have been extended by the users, creating the necessary living area for them. The general image of the settlements today, after cca. 20 years of their foundation show a striking resemblance to the Chilean housing projects of the Elemental Studio³, which incorporated the future expansion of the houses in the basic design principles. This is what they call "incremental housing", meaning that they are building half of the houses and rely on the residents to finish them according to their needs.

Using the design principles of such projects of the Elemental Studio for analysis, we might understand better why these Upper Egyptian settlements, despite the relatively low quality of design seem to be working better in many aspects than either New Gourná or many of the infamous desert cities of Egypt, which couldn't develop according to expectations since the early 1970's.⁴

³ See details in: ARAVENA - IACOBELLI 2012.

⁴ See details in: SIMS 2014.

1. LOCATION

When social housing projects are designed, defining the location is a key question. Elemental claims that there is more rationality in spending more money on a land that is more central, well-connected than in spending money on architectural details, which can be developed in time. The location defines the future income opportunities of a family, thus it has to be a priority. In case of the analysed Egyptian settlements the locations (either on purpose or by chance) were chosen quite well: they are constructed right on the border of the agricultural land in a desert area, thus they did not occupy precious fertile area. They are also not too far from the city and other inhabited areas, which means that people are much better connected than they would be in the desert cities, which are often located tens of kilometres far from the Valley, in the desert, making daily connection to social networks, traditional trading and job opportunities basically impossible. It has to be mentioned though that the al-Syul project was criticised for moving people 4-6 km away from their village farmlands, which is in fact a long distance considering the undeveloped means for transportation and lack of proper infrastructure, but in comparison to the alternative of a settlement planted in the desert, this solution is still much more advantageous.

2. COST OF CONSTRUCTION AND FLEXIBILITY

It is almost impossible to design a “model house” that is fit for all the families of a community. Everyone has different needs of space – the “average” house can be too small for some, and might be too big for others, making it difficult to sustain. Due to the traditional cohabitation of multiple generations in Upper Egypt it is almost certain that the needs of space of a family change from time to time. Again, we don't know that the house types of these new settlements were designed for further expansion – most probably they were not – but the flat roofs, the concrete framework structures and the quite big courtyards that occupied cca. half of the plots and were not surrounded by rooms on all sides made both horizontal and vertical expansion quite easy. Since the structures were suitable for expansion, the original constructions were not transformed in most places, and families expanded their homes within their own plots. Once again, the design of these houses were not nearly of the high quality of New Gourná – still, this small element, the option of flexibility made it possible for them to survive the inevitable intervention of the owners. Now the families have much more floor plan area than they were given in the beginnings, thus the original construction did not cost as much to the authorities as they are worth now.

3. INCREASED VALUE OVER TIME

In the projects of Elemental the main goal is to make the value of the houses rise over time, in contrast to the average social housing project, where the value of the houses decrease constantly from their completion due to amortization and stigmatization. Their answer to this problem is the good location of the houses and the planned expansion of the floor plan area within the well-designed framework, which ensures the overall good urban quality of the public areas and the streets. Since the designed houses of New Taref and al-Syul were not demolished, and – especially those of Taref – have a very distinctive appearance, this latter principle is valid to these places, too. The framework exists and gives the streets a certain regularity that the ad-hoc houses replacing Fathy's buildings

in Gourná do not have anymore. In this aspect, New Taref seems to be more successful than even some of the Elemental projects, where the raw concrete façades were painted upon with not harmonious, bright colours and the regularity, the basic structure is very hard to notice anymore.

The message of Elemental is supported by these observations, too, i.e. there is no point in neglecting the people's will and capacity to shape their environments, since it is going to happen anyway. The designed parts of the houses, provided by the authorities / investor need to provide the overall structure, facilities and the location of a planned settlement, and from that base, if done well, people can shape their own houses, saving resources for the authorities and avoiding the problems caused by unfit homes as well. Comparing the life and development of these smaller planned settlements in Luxor West Bank to the New Gourná project and the desert cities further strengthens this message, and points out a so far undiscovered and unexploited chance for tackling the severe housing crisis of Egypt.



Expanded New Taref houses. Photo: D. Dávid, 2018.

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ABBREVIATIONS:

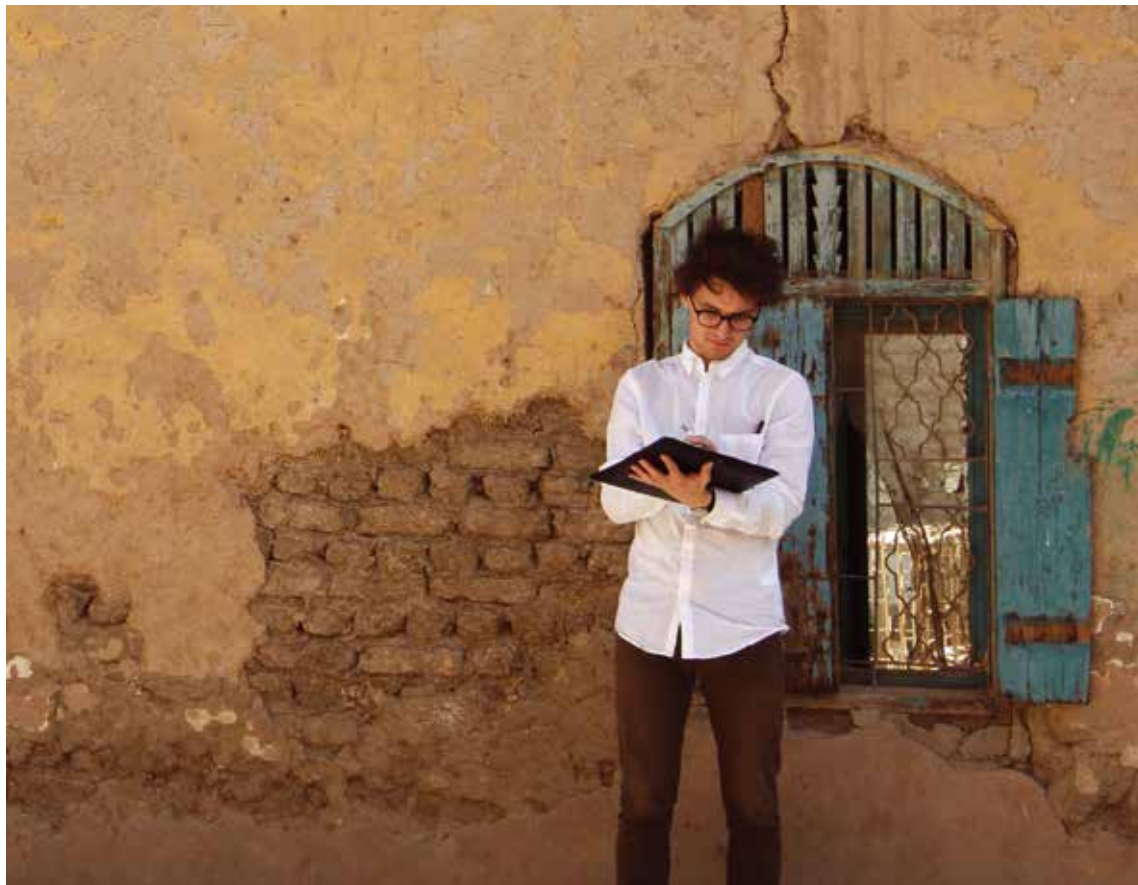
- BUTE - Budapest University of Technology and Economics
CASAE - Cahiers supplémentaires des ASAE (Cairo)
IFAO - Institut Français d'Archéologie Orientale
RBSCL, AUC - Rare Books and Special Collections Library, the American University in Cairo
HFSM - Hassan Fathy Survey Mission



Dóra Nagy during the field survey in New Gourna. Photo: B. Zacher, 2018.



Ákos Balog, Bendegúz Zacher, Dóra Nagy, Judit Bielik, Fruzsina Ács, Péter Kaknics and Fruzsina Serfőző during the field survey in New Gourna. Photo: J. Pokol, 2018.



Ákos Balog during the field survey in New Gourna. Photo: B. Zacher, 2018.



Dezső Hegyi, Andrea Kövesdi, Fruzsina Serfőző, Simon Szabó, Gergely Sági, Zita Zöllner and Balázs Tihanyi during the visit of al-Qasr, Dakhla. Photo: Zs. Vasáros, 2019.



Gamal Ahmed Tawfiq, Simon Szabó, Zita Zöllner, Fruzsina Serfőző, Andrea Kövesdi, Balázs Tihanyi, Dezső Hegyi and Gergely Sági during the visit of al-Qasr, Dakhla. Photo: Zs. Vasáros, 2019.



Judit Bielik, Péter Kaknics, Bendegúz Zacher, Dóra Nagy, Fruzsina Serfőző, Fruzsina Ács, Dóra Dávid, Júlia Pokol and Ákos Balog during the field survey in New Gourna. Photo: Zs. Vasáros, 2018.



Gamal Ahmed Tawfiq during the site visit in New Baris, Kharga. Photo: Zs. Vasáros, 2019.



Júlia Pokol surveying the Villa of Hamdi Seif al-Nasr, Fayyoun. Photo: D. Dávid, 2018.

