

SOLIDARITY ARCHITECTURE FOR SUSTAINABLE SOCIETY: COMMUNITY BUILDING WITH INDUSTRIAL HERITAGE

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ABSTRACT

In my paper I show how the architecture education at the University of Pécs aims to manifest the “Copenhagen principles” within the framework of a socially sensitive pedagogical program that focuses on affordable housing, while respecting the built heritage of the city.

These Copenhagen principles, advanced by UIA World Congress of Architects in 2023 asks architects to fundamentally change their relationship with the built and natural environment:

- _ Architecture must serve everyone, without exclusion.
- _ People at risk of being left behind must be accommodated first.
- _ Existing built structures must always be reused first.

With these principles in mind, the Lakni Kell (We All Need a Home) program, organized by the Research Group for Solidarity in Architecture at the Faculty of Engineering and Information Technology of the University of Pécs, seeks to find environmentally, economically and socially sustainable approaches to the complex and urgent need for housing facing our region.

In the previous economic regime of socialism, a significant part of the housing stock was built for laborers in the mining industry in Pécs. A former miner's apartment that has been uninhabited for decades will be rehabilitated through an extensive collaborative project. The transformation of the site is being designed, planned and will be realized by architecture students with the support of multiple community partners providing resources and expertise. A chief outcome of this project is realizing an affordable home for a young family with a small child that is currently homeless. At the same time, a piece of the physical heritage of the once glorious mining past will be renewed.

The project aims to develop an adaptable, flexible and sustainable architectural methodology. In addition to being a pilot to examine the potential for rehabilitating the significant mining stock in Pécs for affordable uses the project aims to inform efforts in other communities with similar industrial heritage and facing similar housing challenges.

KEYWORDS _ *Affordable housing, solidarity, mining heritage, social sustainability*

INTRODUCTION

Pécs is one of the five largest cities in Hungary, excluding Budapest. Its industrialization was largely due to mining. In 1829, Hungarian aristocrats and Austrian capitalists founded the First Danube Steamship Company, which was established to extract black coal from Mecsek. Welfare measures have always played an important role in the operation of the company, so the so-called mining colonies were built one after another from the middle of the 19th century. Due to the lack of public transport, they were typically located on the administrative border of Pécs, far from the city center, close to the workplaces. One of the largest and most developed neighborhoods was Pécsbányatelep. In addition to simpler residential buildings for workers and villa-like residential buildings for mining engineers and managers, a casino (community center), shop, church, hospital, pub, fire station, school, and even a meat smokehouse were built on the colony. The buildings, built more than 150 years ago, were up to the standards of the time. A map from 1878, found in the archives, already shows the installation of public gas lamps. (Fig 1.)

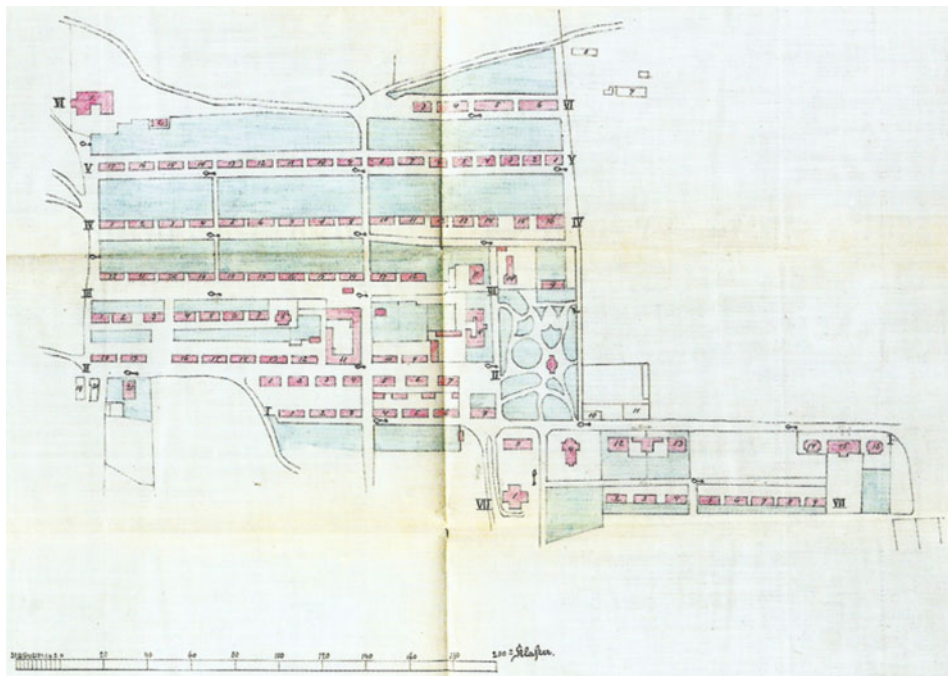


Figure 1: Map of Pécsbánya from 1878 - Baranya County Archives: 4013/1878

The first significant change in the life of the residential area came with the change of regime after World War II. The mine, which had been privately owned until then, became state-owned. New jobs were created and new housing estates were built for the workers, but this time not near the mines. Thanks to the developed public transport system, the new residential areas were established further away from the Mecsek Hills. The peak of housing construction during the socialist era was in 1975, when 99,588 new apartments were built in Hungary (Lakás- és üdülőlépítés). For comparison, in 2024, 13,295 new apartments were built in Hungary (Gyorstájékoztató), while the country's housing stock was 4.603.906 (Lakásállomány, laksűrűség) at the end of the same year. If only this many apartments are built each year, this means that the apartments built will have to stand for 345 years before they are replaced. This fact also underlines the importance of investing much more energy in preserving the condition of the existing housing stock.

With the construction of the socialist housing estates, the former apartments in Pécsbánya, lacking the comforts of the 20th century, served as social rental apartments for the lower income strata of society. After the years of socialism ended, when the local governments allowed residents to purchase the social apartments they lived in, these low-income strata were unable to take advantage of this opportunity. As a result of these processes, we find a higher proportion of municipal rental apartments in this part of the city than the city average, and their quality and comfort level are below average. The Integrated Urban Development Strategy of the city of Pécs describes the streets of the former miners' apartments as one of the 8 segregated areas demarcated in the city.

A study published in 2015 found that there are significant differences in the quality of the housing stock in Pécsbánya depending on who owns it (Dányi, 2015). Privately owned properties are clearly in better condition, while municipal housing is almost always in need of renovation. The situation has not improved since then. In 2024, the local government representative of the area showed five social rental apartments that the local government could not rent out due to their poor condition. The city of Pécs offered one of these uninhabitable apartments for the purposes of this current pilot project.

THE ACTORS OF THE COLLABORATION

Solidarity architecture is an approach that puts the communities most in need at the center of its design and construction. It is concerned with addressing social, economic and environmental inequalities through the creation of accessible, sustainable and functional spaces. (Solidarity Architecture) We All Need a Home is an initiative of the Research Group for Solidarity in Architecture at the University of Pécs, Faculty of Engineering and Information Technology, which has been organizing smaller and larger artistic and architectural interventions since 2016 with the aim of drawing the attention of society and the future generation of architects to the neediest segments of society. In 2024, they joined forces with others to organize an event that is based on a broad collaboration, contributes to the rehabilitation of the city's industrial past, appears as an educational program for students and helps young families threatened with homelessness find a safe home. The members of the research group received an uninhabitable apartment in the former mining housing estate that had been vacant for years for use. One of the most important partners of the initiative is the Kapocs non-profit Kft. Their institution is the Transitional Home for Families. The planning of the trauma-aware transformation of this institution took place under the auspices of the research group (Dányi, Szintén) in 2023. The most important task of the non-profit organization in this alliance is to find among their clients a young family that is suitable for independent living in a renovated municipal rental apartment for them. The Hungarian Maltese Charity Service provided great assistance to the Lakni Kell collaborators in the implementation of a homeless hut built in one of the hobby gardens around Pécs. (Dányi 2023) The charity service is one of the most important participants in homeless care in Hungary and in Baranya County. Their connections, esteem and recognition can greatly help in the successful implementation of the project. The fourth participant in the Lakni Kell 2025 project is the Municipality of Pécs. The Baranya county seat owns approx. 4000 municipal rental apartments and approximately 400 that are not rented out because of their inadequate technical condition. Due to the city's limited financial resources, apartments have been vacant for years, while a significant number of apartment seekers are waiting to satisfy one of the most basic human needs, housing. Among these empty apartments, we received a former 33 square meter miner's apartment from the municipality for utilization within the framework of the project.

Financing the project

The organizers of Lakni Kell participated in the Swimathon fundraising at the invitation of the Pécs Community Foundation and collected nearly 1,000,000 HUF (approx. 2,500€) in micro-donations. In addition, local government representatives offered smaller or larger amounts from their representative

budget for the implementation. The local government, in addition to offering the apartment for utilization, undertook the costs of reconnecting to the utilities (electricity, water and sewage network). With the idea of renovation in a community collaboration, we approached the Construction Cluster of the Pécs Baranya Chamber of Commerce and Industry, whose members support the program by offering raw materials and participating in the construction. Following reports in the media, Duna Dráva Cement, one of the country's largest construction materials manufacturers, contacted us and offered us raw materials and financial assistance. According to the plan, we will organize all work as voluntary work and will also obtain the building materials from donations. To this end, we contacted the commercial and manufacturing companies related to the construction industry in Baranya County. We contacted door and window manufacturers, thermal insulation companies, and roof tile manufacturers. We also addressed the civilian population on social media. Building materials left over from private construction projects will also be accepted.

The role of students in design and implementation

The special beauty of the project lies in the fact that it enables all participants to experience the solidarity that comes from helping those in need, the creative energy of thinking and working together. As a first step, the students surveyed and measured the building and created its CAD model. (Fig2) In addition to the architectural plans, the faculty students design the building's mechanical system, domestic hot water supply, electrical system, and students also check compliance with energy requirements. Before preparing the plans for the transformation, we laid down some basic principles:

- The conversion should serve the needs of the young family moving in
- A low-energy house should be designed with passive tools, minimizing the energy demand for winter heating and preventing overheating in summer
- The goals should be achieved with as little physical intervention as possible
- By purchasing as few new building materials as possible
- High-tech solutions should be avoided
- Expected costs should be kept to the lowest possible level.

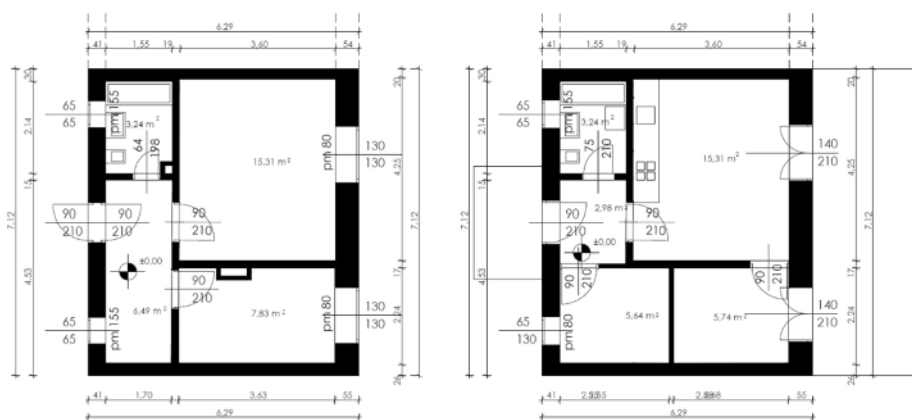


Figure 2: On the left: original floor plan of the building, On the right: reshaped floor plan. The author's drawing based on the students' measurements.

University students play an important role not only in design, but also in construction. During university education, it is important that students not only gain theoretical knowledge, but also become familiar with the quality and properties of building materials through real-life tasks. In addition to students from the Faculty of Engineering and Information Technology, we cooperate with students from other universities of architectural education in Hungary and with the construction vocational training schools in Pécs. (Fig3) We can offer many tasks to vocational students: plastering, wall tiling, carpentry, which are much better to practice in real-life conditions than in the school workshop, where they prepare and disassemble their tasks day after day. We consider the transfer of knowledge important not only for students. We also announce the opportunity for voluntary help for the residents of the housing estate, who can use the knowledge and skills acquired here to increase the comfort of their own living environment.

The versatility of the project is characterized by the close cooperation that is developing with the economics students of the Corvinus University of Budapest. We expect help from them at two connection points. We would like them to contribute to the creation of the long-term business model of the project. On the one hand, we expect to address partners for whom social responsibility is important and who are therefore willing to support We All Need a Home year after year. On the other hand, it would be fortunate to prove from an economic perspective that it is worthwhile for the local government to invest in the renovation of apartments that have been empty for years and make them habitable. It is very important for the municipality and future tenants, from the perspective of the future of the program, that the apartment rented on a social basis, ensuring healthy living conditions, can be operated by its occupant in an affordable and sustainable manner, and that the tenant of the apartment does not fall into a debt trap.



Figure 3: Volunteer architecture students from the universities of Pécs and Győr on the first volunteer day on 29th of March, 2025.

CONCLUSIONS

We consider Lakni Kell's 2025 Pécsbánya program as a pilot project. We trust that by the end of the process we will be able to gather useful experiences that will enable the creation of a long-term, stable university project focused on solidarity architecture. We would like to create a semester-long program during which students can learn about the traditions of solidarity architecture, the basic concepts of ecological, economic and social sustainability, the centuries-old traditions of social housing construction, and the possibilities of saving the built heritage within the framework of theoretical

education. In this way, we will meet the requirements that architects set for themselves in Copenhagen in 2023: protecting the built and natural environment and serving the most disadvantaged segments of society. The practical task of the semester would be to design and implement the transformation of the vacant municipal rental apartment itself. All this in order to create members of the future generation of architects who are sensitive to the social problems that need to be solved.

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