SMART REHABILITATION 3.0

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The future option of wooden suburban houses.

Modernization of a one-room residential house in Marijampolė.

Type of intervention

[ ] *Restoration* [X] *Rehabilitation / Renovation*

Concerned elements on the intervention project

[ ] *1. Foundations and underground structures*
[X] *2. Vertical structures*
[X] *3. Horizontal structures and vertical connections*
[X] *4. Roof and terraces*
[X] *5. Façade and building envelope*
[X] *6. Finishes and completion elements*
[X] *7. Integrate services*
[X] *8. General strategies for building recovery*

Site	Residential house, Tarpučių g. 37 , Marijampolė, Lithuania
Objectives	Renovation of living house
Property	Private
Designer	Arch. Rolandas Šarapajevas
Date	2013

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Background to the intervention

Marijampolė is the seventh largest city in Lithuania and the centre of the county. The development of Marijampolė in the interwar period developed like most Lithuanian county centres. After the land reform in 1922, the cities were expanded by connecting the lands of the parcelled estates. New parts of the city were formed in these areas, and new, mostly wooden, buildings were being built. One more ornate brick object of historicist stylistics was built for the more important functions of society. The infrastructure mostly inherited from tsarist Russia has been used for cultural administrative and commercial life. Around the 1930s, almost every other object of "modern", new architecture appeared in almost every city, and the characteristic features of the area associated with the interwar period began to emerge. The most significant changes were in the last years of independence, when the number of ambitious public and private projects grew rapidly. We will recognize these regularities quite easily in Marijampolė as well. Although we can also discover individual features in each city and its planned structure, the development of Marijampolė did not have a clearer urban logic, in which the ideas of urban planning at that time would be reflected at least a little more clearly.

At that time, wooden construction in Lithuania was associated with the category of the cheapest housing; One suburb of workers began to develop in the eastern part of Marijampolė, near the railway, and another in Tarpučių st. district. In these places there are still surviving wooden houses of that time.
Such a house at Tarpučių st. 37, chosen by the hosts, who decided to move from an apartment building to an individual home district. It was redesigned by their son, an architect, adapting it to a comfortable modern life.

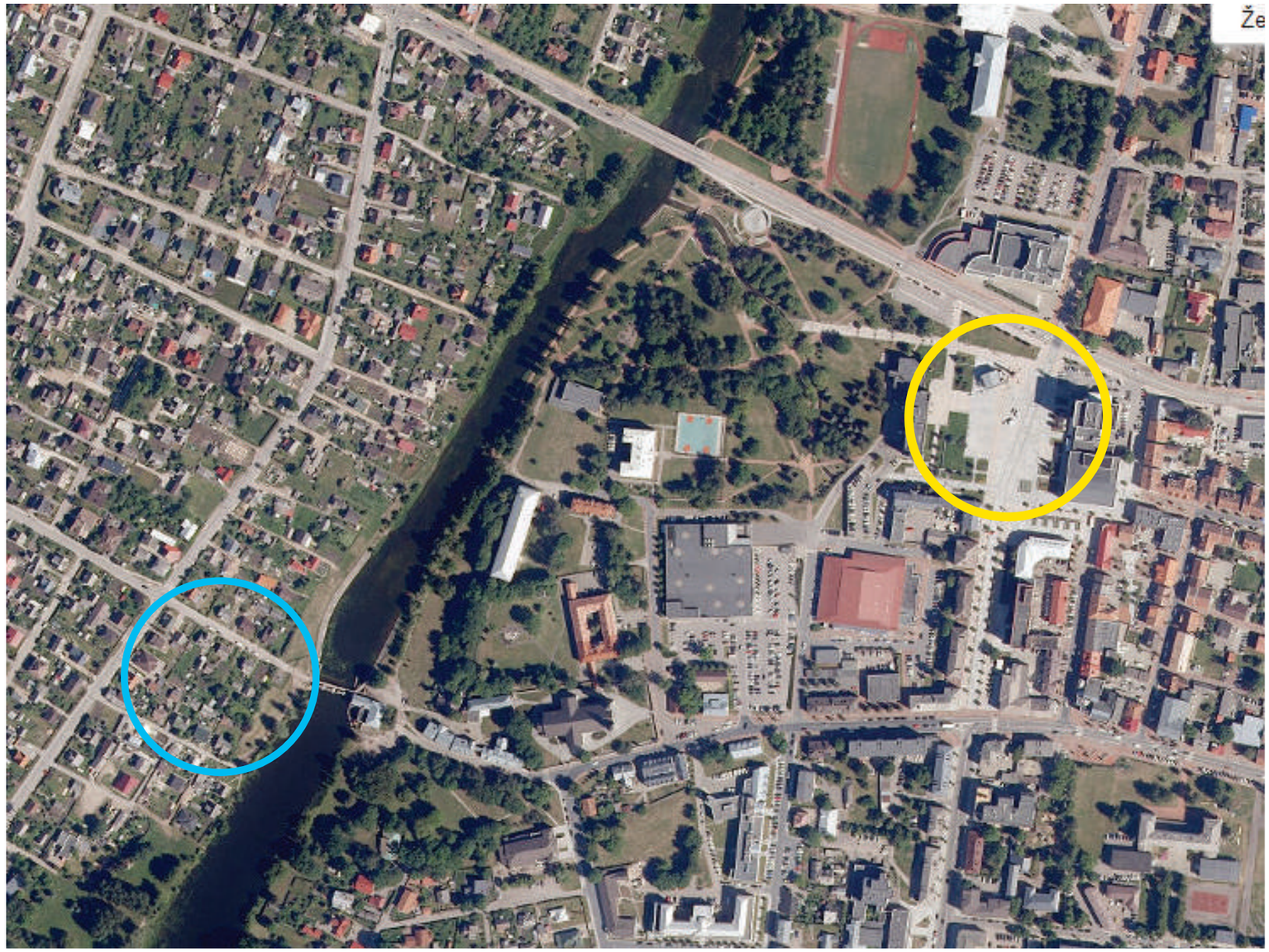

Fig.1: View of Marijampolė downtown, a bird's eye view. The main square is marked in yellow; the residential block is marked in blue.

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Fig.2: A fragment of an area where a is renovated building, marked in red.

Description of the building

Residential building for one family. Compact volume with sloping roofs and extensions to increase the area.

Fig.3: View of the renovated building from the street.

Fig.4: View of the renovated building from the courtyard.

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The Diagnosis of the building (values and state)

Typical of Lithuanian towns in the 20th century. first half construction residential building. The value is not special, more than part of an urban structure.

The attic offers a panoramic view of the city and the river.

Fig.5: Building before renovation.

Fig.6: Building after renovation.

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Rehabilitation works

This example is just the right renovation of an ordinary provincial wooden house. The idea of two intersecting volumes. An old log part of the house forming the perimeter of the street has been left, to which a small extension is connected from the side of the yard. The traditional volume is left with a sloping roof with typical overlaps. The new transverse volume crosses the old one, making the building a little taller and wider. Its architecture is modern, the plane of the wall passes smoothly to the roof and they are both tinned. The division of the facades is also modern, and a continuous plane of glass is used on the courtyard side. In order to save as much space as possible in the yard, the external dimensions of the building have been slightly increased. After demolishing the foundations of the former porches, a reinforced concrete 25 cm foundation for the new annex was formed. The entire plinth is insulated and plastered. The old log walls were well preserved, insulated with mineral wool and clad in cladding. After dismantling the old roof structure, a new one was formed. Rain drainage is hidden in the protrusions of the walls. The facades are covered with impregnated pine boards; they are in colour with other surfaces.

There are three-chamber windows everywhere. The courtyard facade accumulates solar heat even on sunny winter days. The interior is dominated by light colours, some of the surfaces are made of bleached pine siding. The premises are small, but rationally arranged, there is a basement with a sauna.

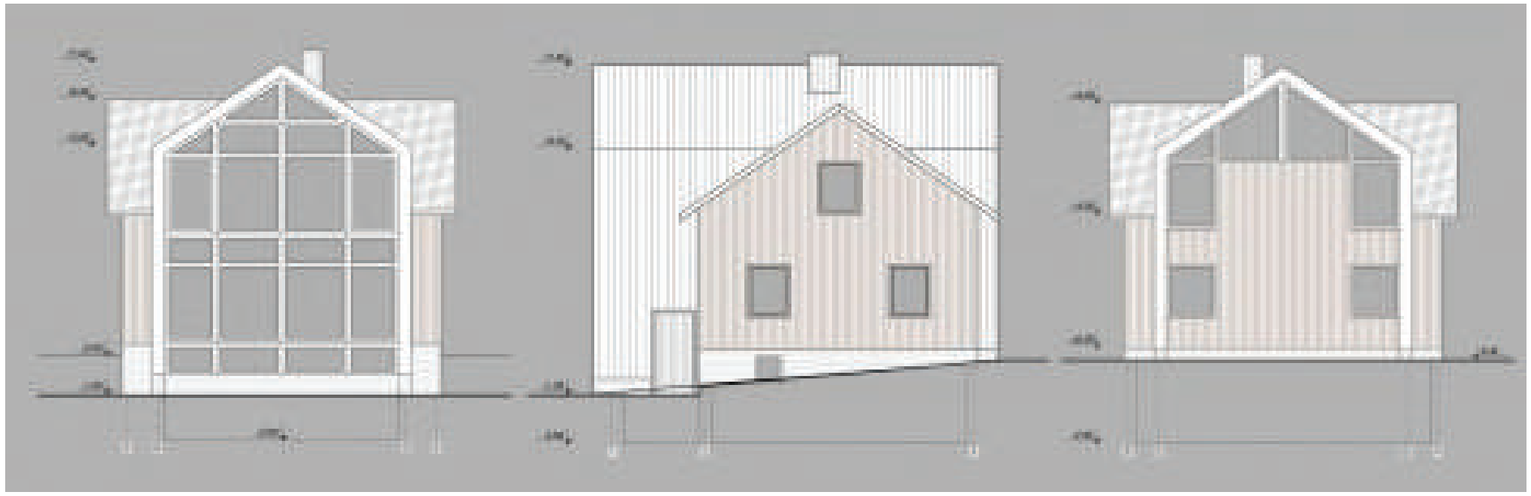

Fig.7: Façades of the renovated building.

Fig.8: View of the renovated building.

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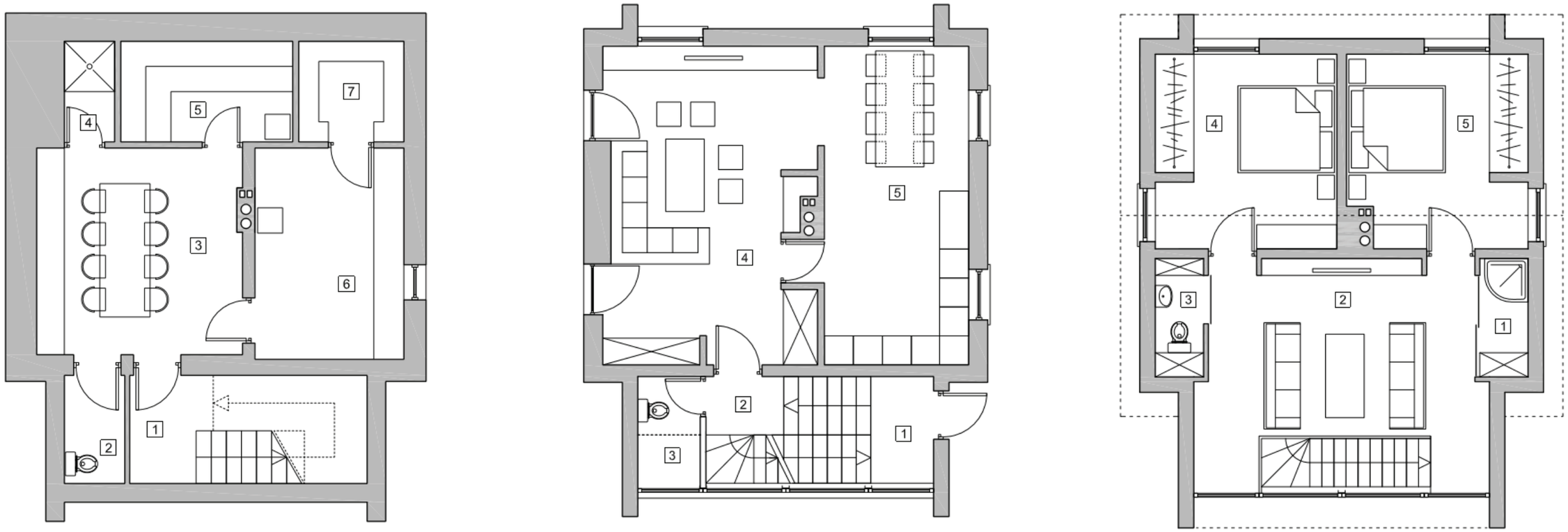

Fig.9: Renovated building plans.

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Fig.10-11: Changes in building volume and facades.

Fig.12: Building during renovation works.

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Renovations often aim to increase living space by introducing extensions to existing buildings. How can the value of a building be increased by increasing the area so that the additional volumes blend harmoniously into the environment, fit into the existing building and create a comfortable living space? How to adapt innovative shapes to the existing environment, choose sustainable shapes, scales, materials, and more.

The author of the project chose to follow the principle of contrast consciously and motivated - this is an interesting option. Only by glueing the extension to the building and installing a bathroom, stool or staircase in it, which is usually lacking in old houses, the effect of an organic whole will not be achieved. The architect has chosen a complex solution - evaluating different functional areas, with a convenient communication system, providing a whole series of moves forward. Attention was also paid to the relationship of the renovated building with the environment, the context and visual connections were assessed. The building does not protrude from the existing paving; its novelty does not contrast with the buildings presenting the old construction.

Fig.13: Interior fragments.

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Fig.14-15: Interior fragments.

Assessment of the results

Right renovation of an ordinary provincial wooden house. A good example of reconstruction, where, considering the proportions of the existing building and the living needs of the customers, the building is renovated to a second life.

Simple renovation of wooden house with increased living space, redesigned interior spaces adapted to new needs and comfort.

An example of the sensitively nuanced incorporation of new forms into the existing urban environment.

References

http://www.lietuvosarchitektura.lt/2012/index7577.html?lang=lt&pid=3&obj_id=70&obj_search=&order=

https://www.geoportal.lt/map/ (Fig. 1, 2)