

# The Samarsky yard: context

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**Abstract.** Samara is the sixth largest city in Russia, as well as an important social, political, economic, and cultural centre. Unfortunately, it is also one of the best examples of the process of systematic decline of the historic environments in Russian cities. A city's built heritage is an important part of its identity and that of its inhabitants. It reflects not only the history of the city, but also its unique set of social values and cultural richness. It can help create a sense of belonging and mutual understanding that strengthens local communities, at the same time that it attracts the interest of visitors and new residents. A methodological model has been developed that links the morphological features of the historical environment of Samara with the parameters of reconstructive intervention in the urban development of the central part of the city. The model is considered as an evaluation of the existing approach in the historical centre of Samara on the basis of the existing Rules for development and land use. The neutral approach should enhance a balanced and equal discussion between all different stakeholders.

## 1. Introduction

The ministry of culture for the Samara region said that «The lack of acknowledged value of architectural and town planning heritage, including the economic aspect, and in the end, simply a lack of responsibility, brings damage to cultural heritage no less than enemy bombing does» [1].

While this quote gives rise to various questions, this article will focus on discussing the meaning of cultural heritage in Samara. What is meant by 'cultural heritage'? To reflect on this, I will partly refer to analytical work done for the last year in cooperation with urban professionals from the Netherlands and Russia for a project sponsored by the Dutch Creative Industries Fund.

The definition of cultural heritage can include spatial, social and functional concepts, and can be both tangible and intangible [2]. Although this article will focus on the spatial aspects of cultural heritage (grid, block-structure, and building-constellation), it is also important to note that immovable cultural heritage does not only consist of the build environment, but also the social structures and functional mix emerging within.

## 2. Materials and methods

The methods are based on the building of a complex model, which combines the features of the morphology of the historical environment and the parameters of reconstructive intervention. The transport infrastructure, street planning, the size and structure of blocks and the features of the evolution of courtyard spaces were analysed. For this, the analysis of graphic documents, a field survey of the city blocks together with the creation of models and schemes was conducted.

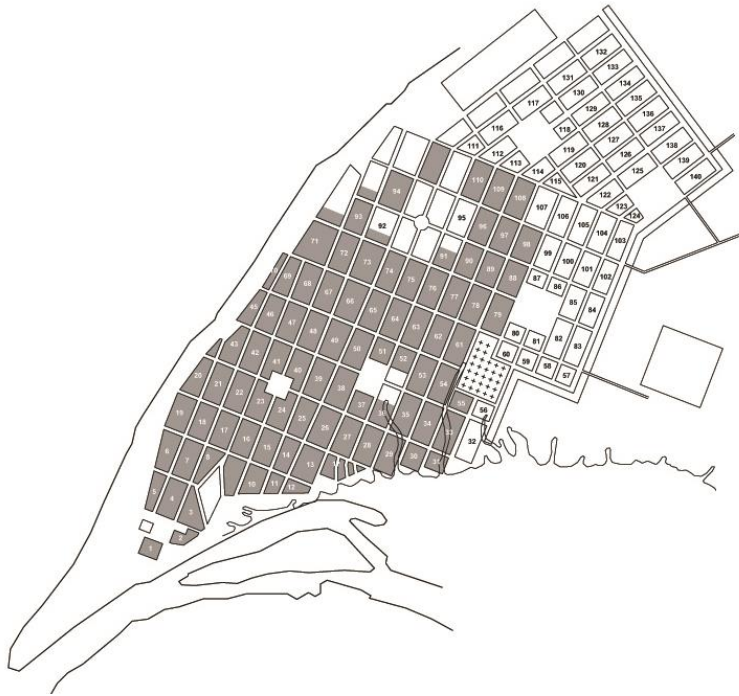
## 3. The structure of the historical development

It should be noted that the area in which Samara's cultural heritage is located is not clearly defined, and the borders of the historical city differ from one document to another depending on the year and the source.

Looking at the natural growth of the city, the historical grid was completed in 1916. Thereafter, different urban strategies were chosen for further layout of the city fabric [3]. Subsequent



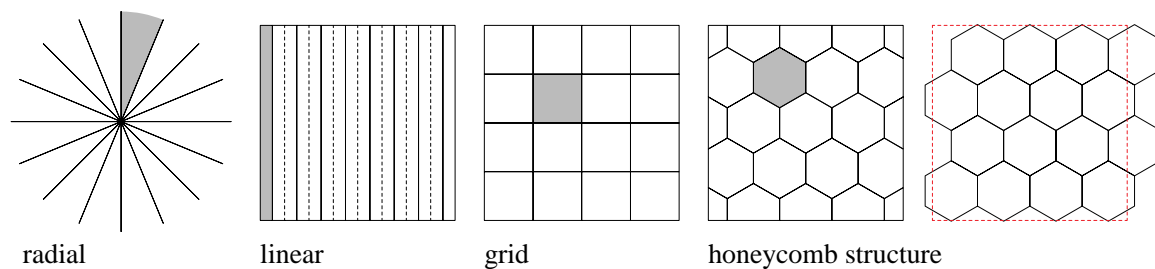
developments within the 1916 grid naturally continued over time, but the fact that there are always newer buildings appearing within those boundaries should not change the area defined as the historic city.



**Figure 1.** Samara City plan (1853).

*Grid.* Somehow all versions of the border of the historical city include the grid structure as designed in 1853 and completed in 1916 (figure 1). Despite several attempts during Soviet times to place the city centre in the geographic middle of Samara, there is nowadays a common understanding that the historical city is the actual centre of the city. This centre contains over 140 blocks, with a total perimeter of approximately 110 km. Assuming that a pedestrian walks at an average speed of 5 km per hour and considering that an appropriate sized centre has a 1km radius, we can begin to understand that Samara's historic city actually contains multiple centres. To further analyse the grid's capacity to contain multiple centres, it is helpful to compare the grid with different features.

If we take a square of 1 by 1 km and attempt to divide it into 16 equal pieces, we can compare the length of the lines needed to do so in radial (21.6 km), linear (17 km), grid (16 km) or honeycomb (14.9 km) structures (figure 2). Honeycomb structures provide the shortest paths between points, but not many cities have a honeycomb-like structure as an urban layout. As an alternative, grids are highly efficient, which explains why several cities have adopted this structure.

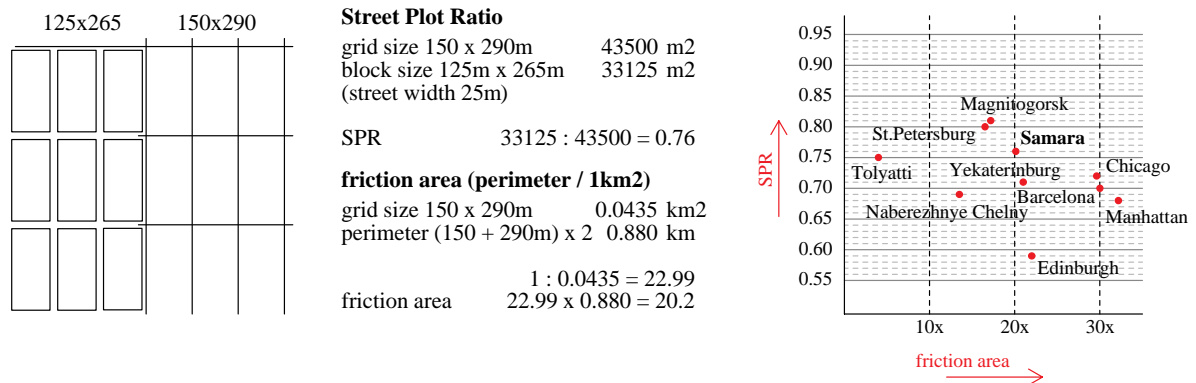


**Figure 2.** Partition of 100 hectare (1km<sup>2</sup>) in 16 equal pieces.

To compare different grid-structures we formulated two simple tools: Street Plot Ratio (SPR) and «friction area». Street Plot Ratio indicates the amount of public space in relation to the amount of private space. The less the public space per area is, the more cost-effective the structure is. «Friction area» is an indicator for the length of the boundary between public and private space. This indicates

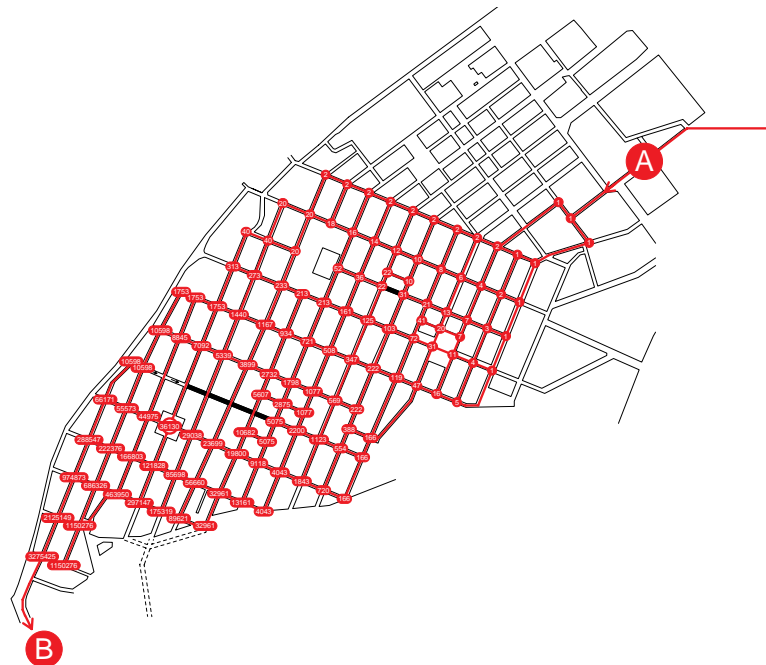
the amount of frontage, and therefore the amount of front doors and shop windows that can be supported by the structure.

With these two tools, we can compare grid structures all over the world. It turns out that Russian grid-structures are usually cost-efficient but have little «friction area». Samara, however, compared with other Russian cities, combines cost-efficiency with a rather large amount of «friction area» (figure 3).



**Figure 3.** Comparison of grid structures.

Grids have amazing qualities. For example, in Samara there are more than 3 million different paths connecting the Moskovkoye Shosse to the old bridge (figure 4). All are with a length of 6,3km. That means that it is possible to implement differentiation among the streets without negatively affecting mobility in the urban fabric. Nowadays, all streets in the historic centre have a speed limit of 60 km/h. Aside from a brief but successful implementation during the 2018 World Cup, the differentiation potential of the grid in the sense of permitted vehicles, speed limit, and function is not being fully utilized in Samara.



**Figure 4.** From A to B, 3.275.425 paths

*Block structure.* The historic city of Samara contains roughly two sizes of blocks. Since the grid is neutral, it can contain almost any form of building constellation or function, from farmhouses to skyscrapers.

The historical part of Samara is made up of 140 quarters with dimensions in the plan of 120 by 260 m. Each quarter is divided by a longitudinal boundary into two parts, each of which is divided by transverse boundaries into separate households. In total, there are from 24 to 28 separate households in the quarter. They form the structural basis of the Samara quarter. The Samara quarter consists of separate "Samara yards" - closed formations with buildings that are formed around a common internal space. Moreover, the development has different owners - private individuals, organizations, societies, departments and the municipality. This factor creates serious difficulties in carrying out complex reconstruction activities and inhibits the introduction of new construction in the historical part of Samara. Yard spaces have architectural and planning features of their organization. They are divided into angular, end and longitudinal types. The internal structure of the Samara yards is also heterogeneous. They have a different configuration and structure. They can have a longitudinal structure of the internal space, two-part in the longitudinal direction, two-part in the transverse direction, and other types. When carrying out reconstruction activities, it is important to take into account both the prevailing parcelling of neighbourhoods and the morphology of individual Samara yards [3].

In order to build a cohesive city, clear rules are necessary. One of the rules that are applicable in Samara is the insolation rule. Based on the insolation rules, an envelope can be constructed for both block sizes. However, it appears that many of the taller buildings in the historic city do not fit within this envelope, and consequently hinder the development of adjacent blocks.

Another set of rules applicable in Samara are the Rules for Development and Land Use (PZZ). However, our research shows that the PZZ's complex interpretation leads to more uncertainty than consistency. Perhaps this explains why in Samara all recently built high-rise buildings are located in an area without sufficient access to public transportation, thus going against a well-established and sensible density principle that is applied most everywhere else.

Registration and ownership rules also play a role in the block structure. Typically, all buildings have owners. In Samara, only a few of those owners registered their property in the cadastre [4], possibly because registration is complicated and expensive. Registrations done scatterly often result in the destruction of the original plot structure of the block. This makes the natural development of the block more difficult, and often leads to a number of unusable plots (figure 5).



**Figure 5.** Registered plots (cadastre) and original plot structure

*Buildings.* Buildings that should be protected are listed as monuments. There are different lists currently in circulation, but the only one that is actually enforceable is the one from the Ministry of Cultural Heritage of the Russian Federation in Moscow [5]. The official federal list of monuments for Samara includes 421 monuments. Thirty of them are outside the historic city, and 31 appear in the list two, three or even four times due to the complicated street numbering system existing in the historical city. Of the remaining 360 monuments listed, there are some that are no longer standing.

#### 4. Conclusion

Inhabitants, architects, academics, municipality and developers - everybody has their own perception of what should be preserved as cultural heritage: the grid, the structure of the blocks and/or the

buildings. In the meantime, the grid's potential is being neglected, the block structure is being destroyed and the buildings are not actually being protected. Ultimately, it seems that it lacks a mutually agreed vision including all aspects of the area's cultural heritage. The regretful consequence is the ongoing, systematic decay of the historic centre of Samara.

## References

- [1] Moore R 2010 Samara: the disappearing wooden city on the Volga *The Guardian*
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- [3] Samogorov V, Sysoyeva E and Chornaya Y 2011 *Samara wooden and stone-wooden architecture in the end of the XIX - the beginning of the XX centuries* (Samara: SSUACE)
- [4] *Public cadastral map of Russia*, available at: <https://egrp365.ru/map/>
- [5] 2016 *Information from the Unified state register of cultural heritage objects (historical and cultural monuments) of the peoples of the Russian Federation*, available at:  
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