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THE HOUSING IN CONTEMPORARY URBAN DEVELOPMENT TENDENCIES OF LVIV

WSPÓŁCZESNE TENDENCJE ROZWOJU BUDOWNICTWA MIESZKANIOWEGO WSPÓŁCZESNEGO LWOWA

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ABSTRACT

After the collapse of the Soviet Union in Ukraine, each city had to develop its development strategy. The lack of housing was common for all Ukrainian cities. The rapid growth of new buildings is due to the removal of the former (Soviet) restrictions on construction. Construction also allowed investing by the population of the real estate sector and engaging in the rental of these premises. This led to the fact that housing construction has become a highly profitable business through the implementation of state social policy, causing a number of urban tendencies.

Key words: dispersion of the city, housing, modernization of the city, new urban density, urban tendencies.

STRESZCZENIE

Po rozpadzie Związku Radzieckiego każde miasto w Ukrainie musiało opracować swoją strategię rozwoju. Wspólnym wyzwaniem dla ukraińskich miast stało się uzupełnienie deficytu mieszkań. Szybki rozwój mieszkalnictwa wynika z usunięcia ograniczeń ustanowionych w dawnych (sowieckich) przepisach budowlanych. Mieszkalnictwo powstawało dzięki funduszom prywatnych inwestorów. Budownictwo mieszkaniowe z instrumentu realizacji polityki społecznej państwa stało się wysoce dochodową działalnością gospodarczą. Realizuje interesy ekonomiczne prywatnych firm budowlanych i deweloperskich, powodując szereg tendencji urbanistycznych.

Słowa kluczowe: mieszkalnictwo, modernizacja miast, nowa gęstość miejska, tendencje urbanistyczne, rozlewanie miasta.

1. INTRODUCTION

1.1. New priorities for urban development of Lviv

After the collapse of the Soviet Union in Ukraine, each city had to work out its development strategy based on extensive post-Soviet heritage. Without the systematic transformation of Ukrainian cities, the proclaimed course of democratic transformation and European integration can only remain a good intention. It is worth recalling that the spatial planning of the USSR had the entire territory for the effective implementation of the military and industrial doctrine, and Ukraine, rich in resources and population, responded to this criterion most of all (Petryshyn, 2014, p. 118). Against the background of mass construction in accordance with the Soviet rules, the first signs of stagnation of cities in the most industrialized areas of eastern Ukraine were observed already in the 1970s. (Petryshyn, 2016, p. 41–47) The first decade after the collapse of the USSR was marked by spontaneous urban movements, when the General Plans of cities built on Soviet methodology appeared to be useless, including that they were based on state investments and high natural growth of city population. The General Plans of the cities were subjected to serious corrections, and together with that the strategies for the cities began to be formulated. For the purposes set in 2010 in the Complex Development Strategy of the city of Lviv until 2025, Lviv should become a city of services and not of production, and yet - a "city of creative intensity". (Integrated Lviv City) These goals are subordinated to investment plans and shaping of its new architectural and urban vision. The massive post-Soviet heritage in urban development has experienced a process of permanent adaptation to the requirements of the market economy, and in the places where it has been degraded too much, it has been removed, freeing land for new urban development (Petryshyn & Sosnova, 2017, p. 123). This is especially true of post-industrial areas, which have become a reserve for housing.

The purpose of the article is to identify trends in urban development of Lviv, provoked by mass housing construction, and its assessment concerning quality of urban space development. Different sections of the city - from central to suburban - have been selected for analysis. Frequently opposite approaches to the design methods of a new (or complementary) urban space are shown.

1.2. Current state of knowledge

The problems of urban development belong to strategic tasks that are solved by different fields of knowledge. Global and pan-European urban trends are getting specific in individual countries and regions. Significant is the study of geographers and economists who see the implementation of globalization strategies in the process of urbanization. Creativity of architects and urbanists, aimed at solving local problems on the basis of current legislation, is a good material for comparison with the general theoretical concepts. It is worth emphasizing here that selected postulates are compatible with the goals of the article.

Looking ahead and developing visions of the cities of tomorrow is becoming increasingly important at all levels. The development of our cities will determine the future of Europe (Cities of tomorrow, 2011). Housing development demand for urban areas is primarily affected by the urban planning standards used in defining the indicator of built-up areas, implemented in practice. A partial reduction of dispersed urbanization in favour of compact urbanization (including compact urbanization using the revitalization and re-urbanization) gives the possibility to limit the expansion of residential areas. (Jeżak & Wierchowski, 2013. s. 4-11.). M. Cesarski present the analysis the meaning of settlement infrastructure in the context of the perception and realisation of sustainable development of contemporary living spaces, as defined by society, which then leads to progress in modern urbanization and general societal development. The practical means of accomplishing this goal is to equate societal development with living space or the global apartment of civilization (Cesarski, 2014, s. 31-40).

1.3. Research and their methodology

For comparative analysis have been used data from statistical (Indicators of construction 2002-2015) and geoformation sites (Petryshyn H., Sosnova N. 2017, p 23), monitoring of Lviv master plan (Correction of the general plan), historical maps. The locations of new construction (LUN.ua

2008-2018) and the conditions for new housing units were surveyed. Graphic and visual comparisons of building types were made.

2. RESULTS OF THE STUDY

2.1. Urban tendencies in Ukraine in the years 1991-2018

A breakthrough period. In the Soviet period, various social programs existed in conjunction with industrialization programs, and the state usually provided housing for citizens, especially for the most needy, although most families had to wait for separate flats for 10 and up to 20 years. In 1981-1990, 200 million sqm of flats were built in Ukraine, of which 17 million sqm were built in transition year of 1990. In 1990, the living space of one inhabitant was 17.8 sqm. (Atanasov, 2010, p. 69).

With the regaining of independence by Ukraine in 1991 against the background of a deep economic crisis, the practice of providing citizens with a flat at the expense of the state was actually suspended. Gradually, privatization reforms in various industries have begun. Owned housing on the basis of the privatization act became the personal property of citizens, as well as part of the production structure. Most of the construction companies were also privatized, also the companies providing housing and communal services were moved to the market rails. In this way, the residential real estate market was created, which went through various stages of development until the creation of powerful construction and architectural companies which spread their activities throughout Ukraine. Developers monopolized the market, refusing mass-build housing of the economy class and preferring housing in the "above-average" price category. They created a situation of artificial shortage of housing in the lower price segment - it was also caused by the galloping price increase (Atanasov, 2010, p. 71).

A significant improvement in the extensive housing conditions was the main priority of the newly emerging economy, while the economy of the Soviet period of Ukraine was oriented towards a massively intensive solution to the "housing problems". By changes in the political system can also be explained the structural changes related to the increase of measurable and effective proportions for housing, with the maximum reduction of the whole building industry product. Such a situation was expected due to the society's refusal to value the totalitarian system and shifting social priorities from the implementation of giant or mass projects to small individual consumption. The reduction of the state's share in the national economy has inevitably led to the limitation of the majority of ultra-expensive construction investments of republican significance (for Ukraine). The same happened with the building projects for former "trade unions". Most of such projects remained in the form of ruins (Kyslyy, 2017, p. 40).

The constant reduction of construction in Ukraine was observed until 1998, one-two-year cycles of deceleration and acceleration changed each other until stabilization in 1997. Stabilization in construction has become an indicative sign from which there has been some increase in construction during the period of economic growth. A significant exception was the sufficiently long decline caused by the global financial crisis of 2008, and a slight decrease in 2014 due to the occupation of eastern territory and Crimea by Russia (fig. 1).

Housing development. A common challenge for Ukrainian cities has been supplemented by the housing deficit. The rapid development of housing resulted by the removal of restrictions laid down in the former (Soviet) building regulations. Private entities were also allowed to invest in the real estate sector and rent premises. Monitoring of the implementation of the General Development Plan of the territory of Ukraine (since 2002) indicated the progress of spatial and economic transformation of Ukraine (Strategiyi urbanistichnogo, 2011).

In the absence of a state order, design and construction practice was suspended on the principle of creating micro regions of large housing estates. In principle, the use of typical projects has been eliminated from the arsenal of modern architectural practice, so characteristic during the domination of industrial construction, especially in 1970-1980s. Designing, carried out by private architec-

tural workshops in the 1990s, made it possible to personalize projects, but it is difficult to see patterns yet that are worth noting due to low technology and construction culture.

Since 2001, a gradual increase in housing construction has been observed in Ukraine. The restoration of housing construction in the 2000s took place on new, commercial terms. Housing was carried out thanks to private investors' funds. Housing construction from the instrument of social policy implementation has turned into a highly profitable business activity. It implements the economic interests of private construction and development companies, as well as housing needs of a large part of Ukrainian society (partly of the middle and upper class). Currently, the average rate of residential space in Ukraine is 23.6 sq m per one person. Key areas - IT (thanks to foreign clients) and tourism (due to relatively low prices) have become the key priorities of the development strategy of Lviv since 2007. Both influenced the shaping of high demand in the housing market.



Fig. 1. Housing construction intensity in Ukraine (thousand sqm of the total area, indicators from 100 to more than 600).
Ryc. 1. Intensywność budownictwa mieszkaniowego w Ukrainie (oddanie do użytku mieszkań, tys. m kw, łącznej powierzchni, wskaźniki od 100 do ponad 600). Source: / Źródło (Indicators of construction,, 2002-2015)

3. MODERNIZATION OF LVIV

3.1. Addition of urban tissue



Fig. 2. New infill building in historical area of Lviv), architectural workshop „Zelemín”: a - Lviv, Pekarska str. 30 (2017); b - Lviv, Hlyboka str. 7 (2013).

Ryc. 2. Nowy budynek-plomba w historycznej części Lwowa), warsztat architektoniczny „Zelemín”: a – Lwów, ul. Piekar-ska 30 (2017); b – Lwów, ul. Głęboka, 7 (2013). Source / Źródło: (Villa Magnolia)

Building investors selected areas close to the city center, where the transport network and social infrastructure were already developed. The apartments built in such locations enjoyed high demand. This led to the popularization of construction constituting point interventions - new “seals” were relatively subtly inserted in the surroundings. Searching for areas within the existing city territory with developed infrastructure contributes to excessive congestion in the construction. The system of urban greenery started to be under threat (Sosnova, 2012, p. 118). In historical city areas

there are mechanisms controlling building parameters, including building limits in high, which also increases the cost of new housing. According to the designer's opinion, *high density building in city blocks is a test of the ability to search for compromises, to solve common tasks. The city's comfort depends on the quality of such compromises* (Villa Magnolia) (fig. 2).

3.2. Old – new estate

The second wave of modernization concerned the construction of settlements, which were built in 1970-1980es. The building of new apartments in the modernist shaped housing estates can contribute to improving their surroundings by diversifying open space and creating spaces around courtyards with more humanistic configurations and scales. However, due to the lack of an urban housing strategy and mainly because of commercially interested developers, the projects are not focused on the future development of districts. In addition, as it turned out after the implementation of new objects, the living space of new buildings does not provide a qualitatively new standard of living compared to residential buildings from the previous period (Hnes, 2004, p. 263).

Construction companies benefit from the already existing housing environment to reduce investment outlays and self-promotion, and therefore the construction of new residential buildings and complexes in modernist housing estates is attractive due to the infrastructure already created there. As polls show in the real estate market, consumers prefer areas "habitable" with a well-formed local community to which they gladly join. In particular, in the descriptions of new buildings, developers often point to the proximity of schools, kindergartens, trade and services, as well as a short distance from public transport and good connections with other parts of the city. Parks or views of the green surroundings of the city are mentioned as well. Additional housing development does not always mean an improvement of the environment for modernist housing, because it can overload local infrastructure and be insensitive to the environment (Mysak, 2014, p. 122). In particular, since these settlements were not completed in terms of infrastructure until 1990, new homes are built as if the areas were free, although Soviet urban plans have reserved these areas for the development of public space, including other functions, such as: trade, healthcare, administration, culture and sport, hotels (fig. 3).

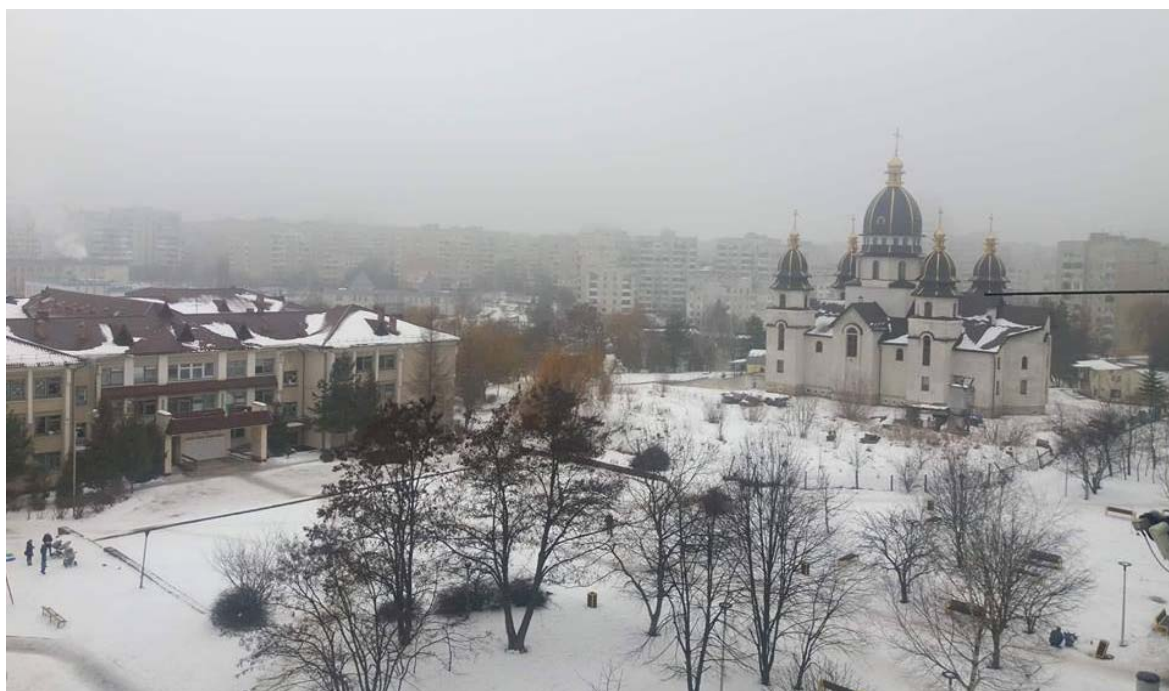


Fig. 3. New appearance of socialistic housing. Lviv, Syhiv (Photo by S. Konyk, 2019)

Ryc. 3. Nowy wygląd blokowisk socjalistycznych. Lwów, Sichów (fot.S.Konyk, 2019)

3.3. Revitalization and urbaning impuls

The closer to the city center, the more serious changes in urban net occur especially when the district's revitalization starts with a building, branding a new developmental thread. An example of a successful location of an object with a current significance for the city is Forum Lviv – a shopping and entertainment center opened in 2015, located in the central part of the city, at Pid Dubom street. It was built on a devastated site with a low urban-forming function where a bus station was established on the post-war debris in the 1970s, followed by a parking lot. Owned by the Dutch Multi Corporation development company, it became the first certified by BREEAM in Ukraine for the effective environmental performance as a shopping and entertainment center, with an area of 69,000. m². In the neighboring quarter, Forum apartments are being built on the territory of the “fallen” auto-electrical plant, also showing new planning and energy-saving approaches. The neighboring quarters have developed functional projects. Cafes, art clubs (cafe-gallery "Sztuka"), youth space loft Molodo-Zeleno, etc. have been opened there (fig. 4).



Fig. 4. Modernization process of the area between Kulisha-Pid Dubom-Dzerel'na streets in Lviv (Author, 2018).

Ryc. 4. Proces modernizacji obszaru między ulicami Kulisha-Pod Dębem-Źródłana we Lwowie (Autor, 2018).

3.4. Developing of post-industrial areas

In line with the objectives set out in the current Development Strategy of Lviv, the increase in housing stock is also one of the priority tasks. For this purpose post-industrial areas have been designated as spatial resources. Reurbanization of these areas will contribute to the intensification of the city and its compactness. The number of post-industrial plots with the target adaptation for housing in accordance with the General Plan of the City until 2025 has now been increased almost twice (from 24 to 42) [9] showing the scale of application of the development approach (fig. 5).

As shown by field research (2014-2018) (Petryshyn & Hanets', 2014, p. 143), most of the plots before the start of new construction were completely released from the previous buildings without their preliminary valuation, also the internal planning was left for builder's consideration. The locations of old industrial plants in the inner-city areas were developed first as they were well-connected with city communication and, in principle, their territories were not large. The locations of the socialist industry, after 1945, covered the outskirts of the city by a broad belt. Most of them were given for rent for other purposes and functions not connected with previous activity as well as providing services for adjacent residential districts. In Ukraine, General Plans of cities provide directions for the development and reorganization of industrial facilities for the development needs of cities, but public initiatives and private investors become the impulse for restructuring them. Often these “investors” consider these locations as the possibility of an efficient business, resulting in a chaotic mode of restructuring (Senkovska, 2017, p. 17).

Fig. 5. Scheme of Lviv with areas, selected for housing development according to Masterplan of year 2008. Industrial areas are indicated with black. Source: (Petryshyn & Hanets', 2014, p. 143).

Ryc. 5. Schemat Lwowa z obszarami wybranymi pod zabudowę mieszkaniową zgodnie z Planem Generalnym z 2008 roku. Obszary przemysłowe oznaczone są kolorem czarnym. Źródło: (Petryshyn i Hanets', 2014, s. 143).



Post-industrial areas today fall out of the special regulation zone of new construction and do not have rigid restrictions on their re-inclusion in the historical context of the city in terms of scale, construction height, textures, colours etc. Restructured post-industrial areas often differ from each other. Some restructured plots, sold at investment auctions, often are massively filled with residential buildings with a minimum of services.

The creation of one-function housing units with a low level of internal infrastructure and high population density leads to many complications: - creating pressure on existing urban infrastructure; - increasing of the number of transport accidents; - high concentration of cars in the central part of the city; - destruction of interesting artefacts of industrial architecture; - creating of visual disharmony through a disproportionate increase in building height and aggressive implantation into panorama of a city (Hanets', 2018, p. 15).

New residential quarter "Semycvit" estate being built at Shevchenko str. is surrounded by 19-20th century 2-3 storey houses, on the territory of a disused quartz sand mine and glass factory at a distance of 1 km from the center. It consists of 11 buildings 8-10, 12 and 16 storeys, designed as a habitation of closed type with playgrounds and areas for the rest of children. Developers encourage clients that: *"The panoramic view from the window of the house will make you fall in love with dwelling as soon as the potential resident crosses the threshold. Every morning you will be able to enjoy the green slopes of the district, the domes of St. George and the towers of the church of St. Elizabeth"* [13]. The scaled bodies of buildings and the aggressive colours make the settlement a factor that disfigures the panorama of the city and is insensitive to the surroundings (fig. 6).

Catching of the same note of creation of the investor with that of the client favors creating of a shared vision of a new housing estate. Such an example is "Villa Magnolia" - a modern, low-level residential complex, based on the maximum functional use of space, which takes into account the natural human needs in terms of privacy and comfort.¹ It was built in the years of 2015-2018 also in the post-industrial area at 160 Pasichna str. at a distance of 7 km from the center of Lviv. On their blog the authors soon define their creative attitude: *"Traveling to Vienna, Munich, Geneva and*

¹ architectural team – Ihor Hnes (chief architect), ATO-Bel architects & studio Submarine – received a prestigious award European Property Awards 2017-2018 in the nomination Home Residential.

looking at cosy, low, modernist houses there (they are also called "New Villas"), we suddenly recognize our hometown. We have seen its past and understood how to build its future. Lviv architects built such private, functionalist-style villas 80-100 years ago, and filled newly designed streets and entire districts of the city, building comfortable apartments for their citizens, which are rightly considered elitist in Lviv even today. This is how beautiful Lviv was created, which has always been an integral part of the European architectural tradition, which respects the person, his personal space and comfort. We have decided to restore this tradition and invite you to become owners and residents of the architectural flower called "Villa Magnolia" (The general scheme) (fig. 7).



Fig. 6. Housing estate „Semycvit” at Shevchenko str. in Lviv during the construction process in year 2018.

Ryc. 6. Osiedle mieszkaniowe „Semycvit” przy ul. Szewczenki we Lwowie podczas procesu budowy w 2018 r. Source / Źródło (LUN.ua 2008-2018)

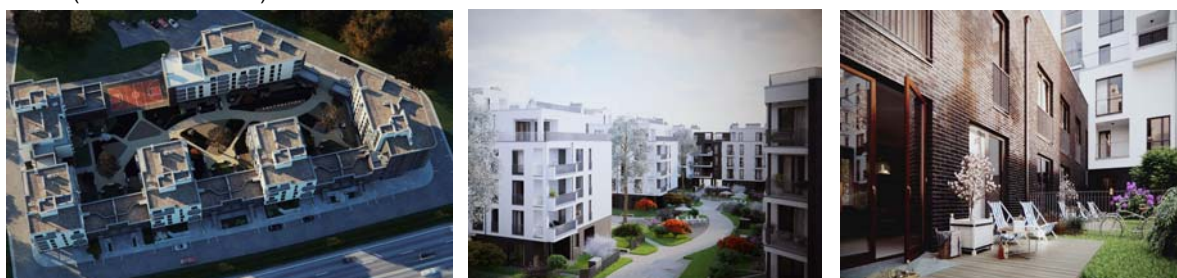


Fig. 7. Housing estate „Villa Magnolia”, Lviv, Pasichna str. 160. Source: (The general scheme)

3.5. New urban density

In Lviv housing industry from 2015, new, larger scale housing estates predominate. Political changes are the reason for this, namely the aggression of Russia in the east of the country and the related transfer of investment capital to the center and to the west. The analysis of the dynamics of residential construction in Ukraine in 2016 showed that the Kiev region occupies the first place in terms of completed living space (3.4 million sq m), while the Lviv region ranks second with the index of 0.86 million sq m. (Indicators of constructio, 2002-2015)

Today, there is a tendency to increase the density of the city of Lviv, which is based on large volume of housing construction, mainly on the post-industrial areas. Therefore, it is important to use the land efficiently, create a comfortable and high quality of the city's environment and ensure the proper level of functioning of the newly built and existing historic building complexes.

It should be stated that the methods and quality of designing of new urban units are not directed by objective indicators, they do not rely on scientific conclusions and do not keep up with the trends of sustainable spatial development, and partly violate the existing conditions and limitations. The new urban density reaches the level of 270 persons / ha in Lviv and 827 persons / ha in Kyiv, indicators that exceed the critical levels.

The main trend of housing development is the living block type, shaped by a group of segment buildings with common or different number of storeys. For example, in Lviv morphologically it can be buildings built around closed courtyards (complexes "Semytstvit", "America") or with built-up area ("Villa Magnolia"), or with a more dispersed organization of territory ("Pasichnyi"). Despite the different construction heights and different planning principles, a common tendency can be noticed that, regardless of the size of the building area, the percentage of buildings is around 20-40%. The tendency to increase the area of construction and density on it is also noticeable, despite that the total area of land for construction can be smaller (Cherkes, Petryshyn, Kolomyeytsev & Konyk, 2017, p. 9).

In Kiev, a world-class city, amazing due to the beauty of natural landscapes, historical-cultural and architectural monuments, all the manifestations of the heavy so-called "urban illnesses" is noticed very vividly. Kiev in the first place became the epicenter of the new capitalist competition for land attractive for unproductive, but extremely profitable development. Residents of the city were forced to resist, build their own fences in front of the parks, valuable historic buildings and landscapes. In this way, the deformed relations between the government, business and local communities have emerged. The community perceive these first two above mentioned facts as obstacles to the implementation of their interpersonal arrangements. Such protests against building expansion have received the form of "construction wars", which have widened throughout the country (Sosnova N. 2012).

3.6. Spreading of the city

If the buoyancy of the construction in the housing sector is observed at the end of the 1990s, the first tendency that turned out to be the fastest, was the chaotic formation of private development areas in suburban villages, and therefore cities became in the ring of private construction (e.g. in the 1990s, around 45 thousand residential single-family buildings were built around Lviv alone) (Linda, 2004). The post-Soviet phobia of a minimized living space led to a marked exaggeration of the total area of buildings (an average of 300-600 m²), usually hoping for a joint living of a large multigeneration family (fig. 8). The result of this phenomenon was not the completion of the construction, or later – the impossibility to maintain the house. Today's trends indicate rationalization of customer thinking, which leads to more modest and economical solutions (Linda, 2004). Low-priced terraced houses or enclaves are commonly found, i.e. so-called club type housing estates for well-to-do families (fig. 9).

The General plan of Lviv of 2008 also foresees the development of territories as part of the urban planning system through the development of suburban settlements that could supplement the housing for about 80 000 people. This number characterizes the local potential of peripheral areas within the urban system "Large Lviv", which connects the ring of rural settlements around the Lviv ring road, 3 km wide (Correction of the general plan).

Today, in this area, and even outside it, numerous new high standard housing estates have been built. This leads to the expansion of the city and connecting built-up terrains. The cadastral plans (Petryshyn H., Sosnova N. 2017) available on the portals of municipal departments show the dominance of a small private property. A number of complications can be anticipated in the next steps towards urban development of suburban territories, especially concerning infrastructure development (fig. 10).



Fig. 8. Suburban houses of years 1990s, Lviv, Briukhovychi, Svitla str. (Photo by author, 2018)
 Ryc. 8. Domy podmiejskie z lat 1990., Lwów, Brzuchowice, ul. Svitla (Zdjęcie autora, 2018)



Fig. 9. New appearance of suburban houses, Lviv, Briukhovychi (Photo by author, 2018)
 Ryc. 9. Nowy wygląd domów podmiejskich, Lwów, Briukhovychi (fot. Autor, 2018)



Fig. 10. Suburban area of Lviv according to Masterplan of year 2008. Territories, that are currently included to the city are indicated with darker colour Source (Petryshyn H., Sosnova N. 2017), graphics by author, 2018

Ryc. 10. Podmiejski obszar Lwowa zgodnie z Planem Generalnym z 2008 r. Terytoria, które są obecnie włączone do miasta, są oznaczone ciemniejszym kolorem Źródło: (Petryshyn H., Sosnova N. 2017), grafika autora, 2018

4. SUMMARY

The development trends of Ukrainian cities at the beginning of the 21st century convincingly confirm that the post-Soviet model of "survival of the strongest" through construction expansion and neglect of the rights of the majority of residents, the loss of unique landscapes and cultural heritage became a point of reflection. Development strategies come into force in support of the "city for all" goal, a city with sustainable development. The revealed trends direct all consumers of urban space to such forms of interaction that arise in the name of common goals and are achieved through joint efforts over a certain time.

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