

Urban Densification of Large Housing Estates in the Context of Privatisation of Public Open Space: the Case of Imanta, Riga

Sandra Treija, Uģis Bratuškis, Alisa Koroļova, *Riga Technical University, Riga, Latvia*

Abstract – Urban regeneration with a view to efficient use of urban areas has been a strategy for urban development for decades. Densification is used as a planning approach to promote the implementation of the compact city model and to discourage urban sprawl. The central parts of the city are usually of high density, so the areas outside the city’s historic centre are seen as potential sites for urban densification. In many European cities large-scale residential areas built after the Second World War occupy a significant part of the territory outside of the city’s historic centres. Today, these housing areas are in most cases sleeping areas with great potential for development. Densification of urban areas outside of urban nuclei is not an easy task, and deals with a whole series of challenges.

The paper examines the existing approaches focused on densification in large housing estates. In order to define the typical challenges of this process, the examples of infill developments in large housing area Imanta in Riga are analysed. The analysis of infill development in Imanta showed four possible approaches. Some approaches contribute to the improvement of public space for neighbourhood inhabitants in general, still some approaches tend to isolate the new development and inhabitants from the surrounding territory.

Keywords – Infill development, large housing estates, urban densification.

INTRODUCTION

The concept of a compact city in the context of sustainable development focuses on an urban regeneration model, with an increasing role of densification policy. It combines both quantitative parameters and requirements for high-quality urban environment. Many European urban planning strategies use densification as one of the tools to promote sustainable urban regeneration [1]. However, implementation of this idea faces significant contradictions between the global interests of the whole society and those of individual citizens [2]. Most people, developers and businesses are trying to implement their private interests, which can only be met at the expense of public interest. For example, entrepreneurs tend to place businesses in areas that are easily accessible by private transport and provide extensive parking facilities. Another example relates to housing choices – most families prefer a housing in sprawling suburbs, which poses a serious global environmental and social challenge from the global perspective of sustainability.

Within the overall trend of urban densification, the infill projects in large housing estates come to the fore. In many Western and Northern European cities, large housing estates are perceived as degraded territories inhabited in general by low-income people [3]. For that reason, these neighbourhoods face variety of problems like poverty, high risk of criminality, etc. [4]. In Riga, similarly as in other cities of Eastern Europe, large housing estates are easily accessible from the city centre and still accommodate an important share of residents. Still it is obvious that

post-war housing does not respond to demands of contemporary housing standards; green open space is poorly managed, as well as lack of information and motivation prevents inhabitants from taking action for neighbourhood improvement [5]. The construction of new homes with different housing standards attracts new residents to these areas and thus leads to creation of a mix income community.

However, an analysis of infill projects points to possible risks and conflicts. Infill development in large housing estates is particularly challenging because of controversial guidelines in the concepts of these objects – the relationship of public and private space. This article discusses the motifs for densification of large housing estates, the main challenges of infill development and, through case studies, analyses the infill approaches to public/private space in large housing estate Imanta in Riga.

I. INFILL PROJECTS FOR URBAN DENSIFICATION IN LARGE HOUSING ESTATES

Large housing estates represent an important part of the housing stock in Central and Eastern European countries. They serve as home for a large proportion of inhabitants, in some countries reaching up to 40–50 %. So, in 2016, 41.8 % of EU-28 population resided in flats. Among the EU Member States the highest proportion of people living in flats was in Spain and in Latvia (both 66.1 %) [6]. Today many neighborhoods suffer from aging building stock and aging population [7]. Still, both physical infrastructure and public services exist in these areas. The amount and concentration of housing, affordability of housing comparing to other types of residential development, as well as high demand for dwellings leads to a scenario, where housing estates will continue to be an important part of housing stock for a large proportion of population in Central and Eastern European cities in the foreseeable future [8].

Urban densification in form of infill developments has been seen as a correct answer to many of these questions. It is highly preferred and highlighted policy in urban areas aiming both for more sustainable and more economically efficient urban structure. In addition, infill developments often have other additional goals and benefits. Carefully planned and implemented, infill developments can affect vitality, social structure and attractiveness of a neighborhood. On the other hand, infill projects are often protested by local residents [9].

Infill projects have been implemented for several decades as one of the ways in the regeneration of large housing estates in different countries of Europe. In many largest cities of

Eastern Europe, new construction activity in large-scale districts includes both public and commercial buildings and residential buildings [10]. Research in Poland showed that new construction in large-scale districts has not caused physical or social degradation. Furthermore, these processes supported prevention of the negative phenomena of physical and social declining, in Western countries named as “large housing estate syndrome”. Also, it has been found that in recent years the large-scale districts in Poland have been undergoing numerous transformations, which include intensification of residential development by construction of new individual multi-family buildings or complexes. These developments are represented by higher standard and distinctive physiognomy (architectural detail, the colour and shape of the buildings), thus, fostering inflow of new residents and affecting formation of enclaves of a higher socio-economic status within existing estate. These processes lead to an increase in the socio-spatial diversification of these estates [10]. So for example, introduction of high quality residential development at the fringe of the large housing estates became quite popular in Sofia. Investors are choosing these areas to take the advantage of the existing infrastructure. These new developments of higher quality in terms of design and construction firstly appeared at the periphery of the housing estates, but later also in the inner courtyards of residential areas. This new construction can be described as chaotic, in a way it began to fill in the generous expanses of open space between the pre-fabricated high-rises. In some cases it leads to critical outcome, when new structures appeared in very short time in distressing proximity to the windows of unwary residents [11].

II. CHALLENGES OF INFILL DEVELOPMENT

As infill projects are located inside existing urban structure, they generate impacts of many kinds and various targets. Urban nature and ecosystem is affected as well as existing infrastructure and service structure. In addition, local residents experience several changes. Their customary and common environment changes. Sometimes, it is a question of diminishing green area – parks or forests [12]. From a resident’s point of view, a small piece of “wasteland” can be an important place to recover. New residents are moving in. The use of services (the utilization degree) may change. Quite often infill developments increase the need for parking space in the neighborhood. Often, these changes are becoming more and more restrictive in the use of public space.

It is considered that the increasing number of closed-off (“privatized”) areas in cities has a negative impact on residents of particular districts and housing estates, leading to growth in criminal rates and so increasing fear of crime. The necessity to improve safety standards is often mentioned by developers as an argument to defend this type of development [13]. Still, other opinions explain this process with growing social polarization, which is followed by the wish to emphasize one’s social status, which, among other things, includes the wish to live in protected, monitored district with its “own” public space and amenities with limited accessibility to wider public [14]. The popularity of closed communities stems mainly from the idea of privatization,

which encourages economic and political decisions that support the construction sector, but the lack of political stability is also important here.

According to various researchers, in case of gated communities, appropriation of space involves mainly the following:

- limit in public access, which is in contradiction with the rules of modern urban planning;
- exclusion of inhabitant participation, decrease of socially oriented activities, which in a way result from lack of places, which might support engagement in community life;
- growing spatial segregation and homogenization of the estate community, emphasizing the fact that newcomers are of a similar social status, but the neighbouring community is assumed to threaten the level of safety and so is excluded;
- development of spatial barriers, which cause, for example, traffic jams.

Gated communities are becoming of high demand because people value security and the architectural aesthetics. However, from the social perspective they cause many problems. Limiting the construction of gated communities is a challenge faced by city authorities in various regions of the world [13].

III. INFILL PROJECTS IN LARGE HOUSING ESTATE IMANTA IN RIGA

However, the majority of working places, as well as entertainment and cultural institutions are concentrated in the central part of Riga, the widespread offer on the real estate market, as well as the prevalence of auto-dependent lifestyles, lead to the expansion of the city. The neighbouring municipalities of Riga are the only territories in Latvia with a positive dynamics of the population growth. Undergoing transformation processes has affected also the large-scale residential estates [15]. As approximately 60 % of Riga’s residents live in large-scale estates, which compose 40 % of the housing stock in the city, the future of these areas is an urgent topic in the context of urban development in Riga.

The large housing estates were planned as residential areas with an appropriate network of consumer service, educational and recreational institutions applying similar principles of spatial organization. Green areas in those districts covered 40–45 % of the territory. Open courtyards offered space for household, parking and recreational functions. With denationalisation of land properties during the 1990s, the land ownership structure was fragmented. The legal basis for new construction in the non-built areas (i.e. green open spaces) was created [16]. The increasing demand for housing in Riga led to the development of infill projects. Previous research data shows that about 50 residential buildings were constructed in the public open spaces of large housing estates.

Imanta is a typical large housing estate in Riga with about 50 000 inhabitants. The original idea of Imanta conformed to the concept of an ideal neighborhood, with green and natural territories both inside the courtyards and also surrounding the whole neighborhood from the inner and from the outer border.

TABLE I
INFILL BUILDINGS (2004–2017) IN LARGE HOUSING ESTATE IMANTA [18]–[22]

No.	Project	Year of construction	Number of buildings/apartments	Number of floors
1	CityZen	2005	2 buildings/ 53 apartments	2/7
2	Imantas Pērles	2006	2 buildings/ 156 apartments	12/16
3	Solaris	2006	2 buildings/ 360 apartments	25
4	Metropolia	2007	5 buildings/ 600 apartments	15
5	Progresā 3	2008	1 building/ 31 apartments	6
6	Dammes Liepas	2017	2 buildings/ 120 apartments	7/8

TABLE II
CHARACTERISTICS OF PUBLIC SPACE IN INFILL BUILDINGS IN IMANTA [AUTHORS OF THE ARTICLE]

No.	Project	Fenced outdoor space	Public space accessible for community	Public functions on the ground floor
1	CityZen			
2	Imantas Pērles			
3	Solaris			
4	Metropolia			
5	Progresā 3			
6	Dammes Liepas			



Fig. 1. Infill buildings in large housing estate Imanta [Picture: S.Treija].

The structure of the district is based on a clear semi-circular scheme the core of which is a vast green zone. It consists of 5 smaller urban units (*mikrorajons*), in which mostly residential, but also some public buildings were planned [17]. Starting with the end of the 1960s, when the construction of Imanta was started, until this time, Imanta has witnessed developmental processes.

The 21st century has been marked by a new residential development in Imanta. The new infill development varies in scale and attracts various inhabitant groups. Some of those new projects have a private fenced outdoor space, on-site security and even car speed-limit design measures.

The first infill development movement in Imanta started in the time of economic boom, with the last project being constructed in 2008. Currently a new wave of infill development started with *Dammes Liepas* project constructed in 2017 (Fig. 1). The projects were analysed using on-site observations and evaluation of infill development according to characteristics of gated communities presented in section “Challenges in infill development”. Analyses allowed to illustrate the impact of new development on the quality of public open space for both residents of new housing and those from neighbouring building blocks.

The first infill project in Imanta – *CityZen* – has been acknowledged as the “Best new project of the year 2005” in the nomination “Best Residential Building”. *CityZen* project includes 2 building blocks (Table I) with a fenced territory (Table II). The outdoor environment offers children’s playground, picnic amenities and even Japanese garden available for apartment owners in the inneryard. The territory has a 24-hour security ensured by 18 video cameras. Also, *Solaris* built in 2006 and *Dammes Liepas* built in 2017 have a fenced outdoor environment and on-site security (Tables I and II). Both projects offer children’s playground with emphasis on protected, safe environment. The territory of *Dammes Liepas* additionally provides



Fig 2. Open access playground in *Metropolia* [Photo: S.Treija].



Fig. 3. Fenced outdoor space in *Dammes Liepas* [Photo: S.Treija].



Fig. 4. Public functions on the ground floor in *Imantas pērles* [Photo: S.Treija].



Fig. 5. Infill development with no extra appropriation of open space in *Progresā 3* [Photo: S.Treija].

a basketball field and green outdoor environment with amenities for passive recreation. The projects offer outdoor (*Dammes Liepas*, *Solaris*) and underground (*Solaris*) car parking available for apartment owners. However, closed fenced territory is not a distinctive feature of every infill project in Imanta. So, for example, *Metropolia* even being a fenced area with much attention to on-site security, also offers a public playground, which has been constructed by project developers next to the *Metropolia* territory.

The architects of *Imantas Pērles* had a different approach (Table I). The project differs from other cases with its openness offering outdoor amenities and children playground available for everyone. Furthermore, the first floor of apartment blocks offers public services: children's play room, gym and sauna. In this way it allows to support community life not only for those who own or rent an apartment in the project, but promotes the creation of more liveable environment in general and encourages communication with neighbours. Still in some cases developers decide

to construct individual blocks following the principles of already existing housing. So *Progresā 3* is an individual 6-storey housing block with no additionally developed outdoor amenities.

Table II illustrates how infill development in large housing estate Imanta correlates with three criteria and shows that there are four approaches. The analysis of location (Fig 1.) and characteristics of six infill projects show, that they are implemented mostly in areas originally intended as green open space. In one case, also in the most comprehensive – *Metropolia* (Project 4), the new infill volumes actually continue the idea of the original district planning for high-rise buildings in the central part of the district. In the case of *Solaris* with high-rise buildings (Project 3), the area originally designed for public functions is being built. It is located in the core of the district near the forest area. The rest is built in an open green space.

CONCLUSION

Many European cities advocate urban densification as a sustainable urban strategy to promote the development of compact city concept in order to share resources and infrastructure reaching maximum efficiency and reducing the necessity for daily mobility. The strategy is positioned as the contrary to the car-based urban sprawl that the cities promoted in the second half of the 20th century.

Great part of the housing stock in many cities consists of dwellings in large-scale housing estates that were planned with the aim to provide sufficient outdoor space for various urban activities. Not always these outdoor spaces are used purposefully. In that case, urban densification dominates in the form of infill development in green open spaces.

The processes, which include spatial and functional changes in *physiognomy* of large-scale housing estates, may be both planned and spontaneous. They both mainly are caused by the activities in real estate market on the one hand and by the usage of urban planning tools aimed at improving the livability in those areas on the other.

Infill development in large housing estates often causes variety of threats, like creation of gated communities and social segregation. The reason for such development is social polarization and people's wish to live in protected, monitored area. Furthermore, gated communities raise even more challenges, such as traffic congestions, spatial segregation and isolation and a decrease in social contacts.

The case studies of the recent infill developments in large-scale housing estate Imanta in Riga, Latvia, showed that both in the patterns of new residential houses and new public buildings the interventions generally have followed the originally defined spatial planning principles of the estate being well integrated into the surrounding environment.

As an added value to the new interventions, the overall improvement of the adjacent open space may be observed in most cases. However, the better quality of the outdoor environment being directly next to the new residential buildings mainly has not led to any improvements in the outdoor space next to the former buildings.

Since the new infills are laid in the former open green spaces thus decreasing the total area of them, one can evaluate public benefit obtained as a result of the new interventions. The analysis showed four types of infill development in the Imanta large housing estate, some of them showing spatial segregation thus possibly leading to social isolation and segregation, still some cases being considered as positive examples of infill development:

- Infill development with fenced adjacent outdoor space accessible for limited group of users and with no public services incorporated in the indoor space – no benefits for wider community.
- Infill development with fenced adjacent outdoor space accessible for limited group of users, but with additionally designed public outdoor space available for everyone – benefits are the improvement of public open space next to infill development.

- Infill development with open adjacent outdoor space and with public services available on the first floor – benefits are the improvement of public open space next to infill development and support for communication between neighbours.
- Individual new buildings without improvement in adjacent outdoor space and without any public services incorporated indoors – no benefits for wider community.

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CONTACT DATA

Sandra Treija

Faculty of Architecture, Riga Technical University
 Address: 6 Ķīpsalas St., Riga, LV-1048
 E-mail: sandra.treija@rtu.lv

Uģis Bratuškins

Faculty of Architecture, Riga Technical University
 Address: 6 Ķīpsalas St., Riga, LV-1048
 E-mail: ugis.bratuskins@rtu.lv

Alisa Korolova

Faculty of Architecture, Riga Technical University
 Address: 6 Ķīpsalas St., Riga, LV-1048
 E-mail: alisa.korolova@rtu.lv



Sandra Treija earned a PhD degree in Architecture from Riga Technical University (RTU). She is Professor and Deputy Dean for Research of the Faculty of Architecture, RTU. Her field of research includes sustainable housing, regeneration of neighbourhoods, quality of residential environment, and sustainable urban development. She is the author of more than 30 scientific publications. She is a member of editorial boards of the scientific journals *Architecture and Urban Planning* (RTU), *Landscape Architecture and Art* (LLU). She is a member of the Latvian Union of Architects, the European Network for Housing Research, and the coordinator of

the National Group of Documentation and Conservation of Buildings, Sites and Neighbourhoods of Modern Movement.



Uģis Bratuškins, Dr. arch., is currently an architect (b. 1961), Professor with Riga Technical University, the Dean of the Faculty of Architecture. He received the degree of Master of Architecture in 1994 and the degree of Doctor of Architecture in 2006. Since 1984, he has been a practicing architect with the design bureau *Komunālprojekts Ltd.* and *Sestais Stils Ltd.* He is a member of the Latvian Association of Architects. He is the author of more than 60 publications. He is a member of Editorial Boards of such journals as *Architecture and Urban Planning* (Riga, Latvia), *Journal of Architecture and Urbanism* (Vilnius, Lithuania), *Landscape Architecture*

and *Art* (Jelgava, Latvia) and *Journal of Sustainable Architecture and Civil Engineering* (Kaunas, Lithuania). He is an expert of *Fondazione Romualdo Del Bianco* (Florence, Italy) and *Slovenian Research Agency* (Ljubljana, Slovenia).



Alisa Korolova, Mgr. arch., is a 4th year doctoral student and Research Assistant with the Faculty of Architecture of Riga Technical University (RTU), Assistant Lecturer of RTU, and Technical Editor of the scientific journal of RTU "*Architecture and Urban Planning*". She was a working group member of the COST Action TU1201 (2012–2016), participated in working group meetings in Riga, Birmingham, Greece and Basel, and also in short term scientific mission in Malmo and the summer school in Salzburg. She has taken part in local and international workshops and summer schools and in local and international scientific conferences (Lisbon AESOP conference 2017, 2018, CA²RE conferences, RTU and LU scientific conferences). She is currently Management Committee member of the COST Action CA17133.

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