

## **MASS HOUSING ESTATE LOCATION IN RELATION TO ITS LIVEABILITY: BUDAPEST CASE STUDY**

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### **INTRODUCTION**

The conditions of mass housing estates in post-Communist countries have long been of concern for their inhabitants, while they have also begun to generate research interests. Some authors advocate for upgrading and renewal of these buildings<sup>1</sup>; yet, others see them as a mass of aesthetic and socioeconomic burden reminiscent of the past, centrally planned economy, and therefore propose gentrification and/or urban regeneration to replace them.<sup>2</sup> However, economic realities often dictate the social housing policy of the day. While in most Western European countries mass housing constructed from prefabricated building elements represent about 8-10% of the housing stock, in Central and Eastern European cities, this ratio varies between 15 and 80%.<sup>3</sup> This is the consequence of a complex social, economic and environmental legacy of the previous political system.

Through the case of Budapest, this paper explores the conflicts between micro and macro scale development of prefab housing estates and how they are influenced by the criteria of liveable urban environment. The main factor that defines today's housing market situation with respect to prefabricated panel housing stock in Budapest is the location of its micro-districts.<sup>4</sup> Location is essentially the basis for residential housing market.<sup>5</sup> In this way, the hypothesis of this paper is based on the premise that purports location to be able to override any other advantages of a housing estate, suggesting a rethink of today's housing rehabilitation process in practise. When evaluating liveability of housing estates in Budapest, location has been found to play a fundamental role.

### **Overview**

At the turn of the twentieth century there was a need for urban planning reforms which were capable of improving the then living standard and also offer an effective and quick architectural solution to the increasing shortage of housing. By the end of the 1930s, the answer of the architectural profession to the pressing problems were delivered at a CIAM (International Congresses of Modern Architecture) conference in 1928. In 1933, the functional city theory was laid down in the Athens Charter, after which this typified design and construction gained ground.<sup>6</sup> These series of events did not just define Western Europe's architecture in the subsequent years, but were also reflected in the Eastern 'block', including the Soviet Union. Hans Schmidt, a German academic, who served as an advisor to the then Soviet

government, developed an ideal plan he called the “socialist residential complex” that, though based on a functional unit, operated with a quantitative method during planning.<sup>7</sup> In this way, blocks of flats and services in a living unit were calculated based on the number of inhabitants. The interpretation of this conception was in line with the Soviet ideology, because community scale solutions were embraced against individualism. The concept was further improved and advertised as equality and finally became one of the central tenets of the Soviet political structure after World War II in Central and Eastern Europe. In their homogeneity and plot structure, housing estates formed a ‘whole’ image of the cities. Mass housing estates could have from 100 inhabitants to more than 50,000 in Budapest; the largest estate is Újpalota with 70,000 inhabitants.<sup>3</sup> The large-scale nature, the building technology and other socioeconomic characteristics of these units influence the housing market and portray an image of their liveability.



Figure 1. Construction of Óbuda Housing Estate in 1967 – prefabricated modern housing replaced the former historic urban fabric

### **Technology**

To realise the large-scale housing development the building construction system had to be in progress. In 1949 the first set of housing developments were constructed using the traditional construction methods. After the large-scale housing estates entered the urban planning practice, the first experiments showed up in many professional practices as well. In Central and Eastern Europe, prefabricated big panel technology was appreciated as the most efficient method. Prefabricated big panel technology is a special construction method; the building construction is produced from concrete with room-scale elements prepared in house factories. The whole construction process, including the transportation and assembling of block elements were pre-planned and mechanised with the help of highly skilled workmen. The process was a very well-engineered technology that was able to maintain the same quality, at the same maximum mass housing production rate. The speed of construction was made possible as the element set contained not just walls and slabs, but completely equipped bathrooms were prefabricated in a factory and subsequently lifted into position on the construction site. In Budapest in

1961 the first 15-year housing development plan was commissioned to erect thousands of new apartments. To cope with the resulting demands, three house factories were built around the capital, with a fourth added as demand increased. In the initial period, the technology came from the Soviet Union. However, in the 1970s, a so-called Larsen-Nielsen Danish panel housing factory was built to offer alternative types and sizes of apartments.<sup>8</sup> Due to this technological method, the largest-scale residential development of the twentieth century came to fruition. Today in Europe, approximately 176 million people live in prefabricated blocks of flats, which are generally found in smaller or larger housing estates. In Hungary, the number of inhabitants of prefabricated housing blocks is 1.9 million, who live in 837,000 apartments, 33% of whom are residents of Budapest.<sup>9</sup>

### **Socioeconomic situation**

While in Western Europe social housing provides shelter for the underprivileged members of the society, in Eastern Europe virtually most groups of the social stratum are present. In Budapest between 1965 and 1985, in response to an acute shortage of housing, nearly 75% of the capital's annual budget was spent on housing construction.<sup>8</sup> Consequently, a significant stock of the block of flats were state-owned. Over time, some of them were financed by National Savings Bank (OTP), while others were bought by private investors. This ownership structure was no different compared to the current practice in Western European countries. However, after 1991, as the Eastern part of Europe switched to democratic political systems, the housing regimes also changed. One of the most important moments of this transformation after the change of the political system was the privatisation of the housing stock. At the national level only 5-6% of prefabricated block of flats remained in government ownership.<sup>10</sup> The transformation of real estate ownership had led to significant problems. The most acute problem was the increasing costs of heating these blocks of flats, due to technological shortcomings, which surfaced in housing estates built in the 1970s.<sup>11</sup> The inhabitants of these estates were simply not able to pay for the maintenance of their own apartments; in some instances, residents could not cover the costs of maintaining the communal areas of their living environment. For this reason, by the early 1990s and through the year 2000 the conditions of housing in most of the estates had deteriorated in Budapest, though a condition survey of the block of flats predicted a lifespan of between 50-100 years.<sup>3</sup>

### **Towards actualities**

The government and professionals recognised the difficulties around the housing stock and with the help of the National Panel Program and European Union funding schemes, the refurbishment of these block of flats could commence.<sup>10</sup> However, after many successfully presented renewal projects, an assessment of how the investment reflects the global situation of housing estates nowadays is required. While some neighbourhoods can achieve several liveability goals through renewal processes, accessibility can only be changed through large scale urban development over an extended period of time.<sup>4</sup> In this respect, the principal issue that define today's housing market situation of the panel stock in Budapest is the location of some micro-districts.

### **METHODOLOGY**

The quality of housing estates can be assessed from a range of perspectives, while the surrounding environment can be rated at different urban and architectural levels. This research is based on a three-scale analysis system, that evaluates housing estates from the city (development and planning), neighbourhood (planning and urban design) and architectural levels (design and technology).<sup>4</sup> The current renewal process is concerned with an obsolete technology (scale: "building"), which typically focus on changing the windows and the insulation of the building envelop to reduce the effects of thermal

bridge and internal technical building system interventions to reduce the utilities cost.<sup>12</sup> Nowadays, it is becoming increasingly necessary to rethink housing estates as sustainable neighbourhoods (scale: “neighbourhood”).<sup>13</sup> It is necessary to devise new development criteria that could attenuate the current situation; however, a sustainable neighbourhood is defined today by size.<sup>14</sup> This study brings to bear the characteristics of housing estates in large urban areas in which the location within the city is the most important component. Location is a complex notion, which defines position of the housing and its accessibility through urban infrastructure that is capable of overshadowing many other quality preferences.

<b>CITY OF BUDAPEST</b>	<b>NEIGHBOURHOOD</b>	<b>BUILDING</b>
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Figure 2. Three-scale analysis of housing estates <sup>4</sup>

### Location

Location is a basic and intrinsic feature of a housing estate that generally determines its prospects in the housing market. To analyse the situation of housing estates in Budapest, two main principles will be presented. *Position* will present Budapest’s basic urban structure to understand the differences between areas, while *accessibility* is based on the capital’s traffic system, which is particularly important, because many of the public transport lines were developed alongside the mass housing projects.

### Position

Each housing estate has a different geographic position, one may be located in a high-quality mountainous area and others may be neighbourhoods of industrial or peripheral zones. During the research, we focused on the current administrative area of Budapest that was formed in 1950, when 23 neighbouring settlements were connected to the historical Budapest. The capital demographically came up against difficulties, because it soon grew to three times of its original size over a short period of time, with a current population of 1.8 million people.<sup>15</sup> As a result, successive governments have had to formulate new strategies to address social, economic and environmental issues.

From urban planning perspective, the Hungarian housing development followed somewhat international trends, when the new scale of the city organisation was conceived and constructed. Building up a unit meant not just housing development, but also implied the construction of the associated infrastructure and service outlets. It is not a coincidence that they were called new towns or micro-district in the UK and Großwohnsiedlung in Germany, Микрорайон (micro-district) in Soviet Union and ‘lakótelep’ (housing estate) in Hungary.<sup>4</sup> The housing estate developments fundamentally changed the dwelling stock in Budapest. The listed 121 units, including 7 huge estates account for 35% of Budapest housing stock. In most Eastern European cities, we can find these housing estates close to the historical inner part of the city. Obviously, the position of new housing estates in a capital city creates a ring-like location around the inner city, and also chronologically show the building processes toward the outskirts area.<sup>11</sup> New construction projects were made possible either after the demolition of built-in areas or by taking new zones into the city fabric. This was how mega-structures, such as the Újpalota housing estates, located 8km from the inner city of Budapest, were constructed. Sampling was conducted by selecting housing estates, which had more than 2000 apartments; accordingly, the study shortlisted 24 housing estates in the capital of Hungary (Figure 3).

The zoning map of Budapest serves as a basis of the study. After the 1994 Master Plan, Budapest is segmented into five zones that reflect the urban development, city usage and the relative unity of urban and architectural form.<sup>15</sup> In this sense, we can identify the five zones as: historical inner city (1), highland areas (2), section of the River Danube (3), transition areas (4) and outskirts (5) (Figure 3).

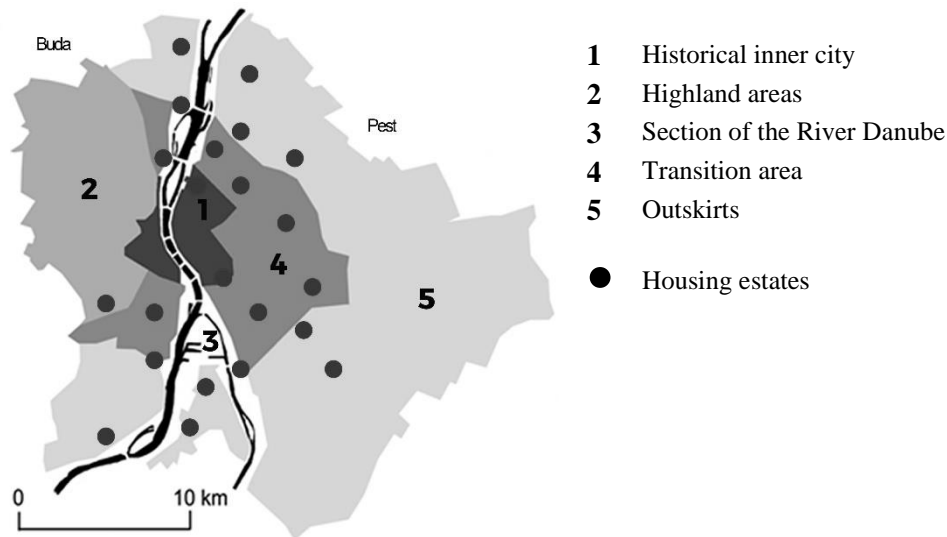


Figure 3. City zones of Budapest and position of housing estates / drawing by authors

Each zone defines a different urban position. At the same time, the zoning system is an indication of the liveability of a large part of the housing estates. In the course of this study, the urban positions of housing estates were reviewed by the displayed zoning structure.

### Accessibility

Accessibility is a major issue in Budapest. The development of metro lines in the 1950s and 1960s shaped the structure of the city, by connecting most of the mass housing projects. The review of a 1970s development plan showed 9 metro lines that could have connected the city centre and the housing estates. For instance, Metro line 2 was completed according to plan, with all the stations. However, the construction of Metro line 3 was suspended, meaning the line could not reach the lastly built housing estates in Budapest Káposztásmegyer, which have since been grappling with accessibility issues until the present time (Figure 4).<sup>16</sup> After 40 years of delay the recent commissioning of Metro line 4 in 2014 has transformed the connected housing estates with respect of accessibility. The block of flats located along this new metro line underwent markedly appreciation in market value, which confirms the importance of accessibility of housing estates. But earlier versions of the plans did not materialise, as some rapid transit and commuter rail supplement the public transport system in Budapest today (Figure 4).<sup>17</sup>

The accessibility of housing estates is examined by their linkage to the main public transport hubs. These hubs are four main squares on the Small Boulevard around the old historical inner city: Deák Ferenc Square (D), Astoria Square (A), Kálvin Square (K) and Fővám Square (F), where the main metro, tram and railway lines intersect (Figure 4).



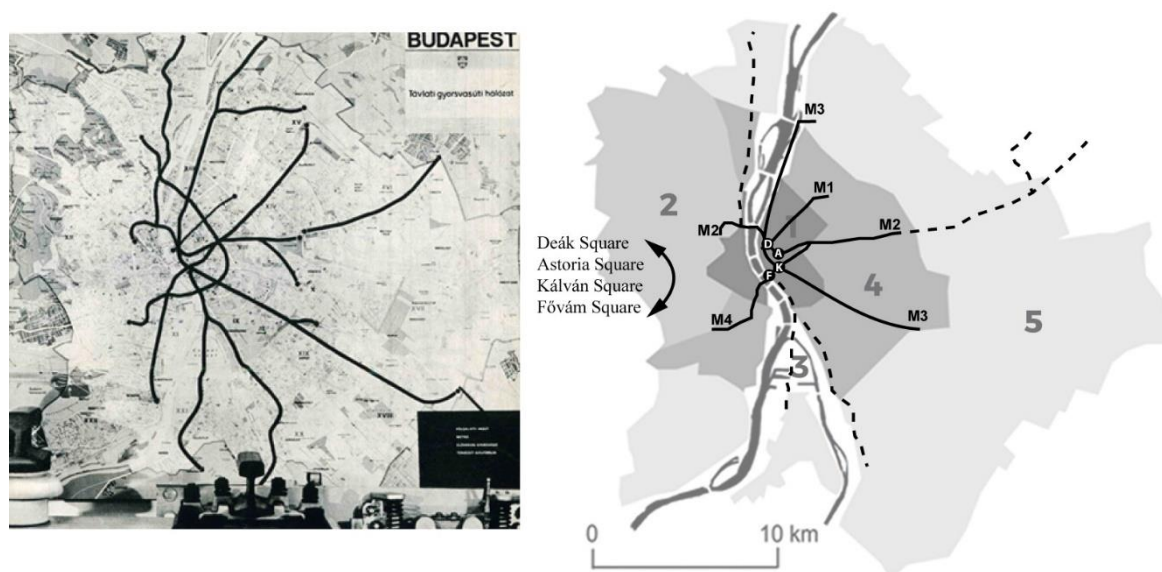


Figure 4. Public transport development plan from 1970<sup>18</sup> and metro lines (continuous line) and additional lines (dashed line) in Budapest in 2018, "DAKF" transport linkages, / drawing by authors

## RESEARCH RESULTS

After the determination of these two basic elements, the study collated the property prices of the housing estates with respect to their location. The data of selected units is imported into a database system that is presented in Figure 5.

Firstly, we reviewed the position of the units according to zoning map. It can be seen that all of the 7 major estates (Óbuda, Békásmegyér, Újpest, Kőbánya, Újpalota, Kispest, Csepel-Pesterzsébet) are located on the peripheral area and there are only a few units in the inner city (zone 1).<sup>8</sup>

Number	More than 2000 apartments	Year of construction	District	All in all 1960-1990	Real estate prices 2017	Location								
						Position (zones)					Accessibility (min)			
						1	2	3	4	5	BKV/ Deák square	BKV/ Kálvin square	BKV/ Astoria square	BKV/ Fővám square
1	Óbuda Centre	1968-1975	III.	13 529	392 392 Ft			x	x		<b>30</b>	40	31	32
2	Békásmegyér	1971-1983	III.	17 973	300 934 Ft					x	35	58	<b>32</b>	51
3	Kaszásdűlő	1981-1986	III.	3 312	374 072 Ft				x		30	37	<b>23</b>	43
4	Pók Street	1984-1990	III.	4 447	399 405 Ft			x			<b>32</b>	45	33	40
5	Újpest	1969-1986	IV.	16 917	319 711 Ft					x	<b>17</b>	20	23	28
6	Káposztásmegyér	1982-1990	IV.	5 688	349 155 Ft					x	31	<b>36</b>	40	43
7	Józsefváros	1957-1981	VIII.	2 773	344 857 Ft	x					13	<b>8</b>	16	18
8	Kerepesi, Gyakorló Street	1983-1986	X.	3 033	346 073 Ft				x		25	30	<b>24</b>	32
9	Kőbánya-Centre	1979-1980	X.	2 390	327 403 Ft				x		<b>21</b>	25	28	23
10	Óhegy / Harmat Street	1961-1982	X.	2 542	364 280 Ft				x		33	40	<b>28</b>	40
11	Újhegy	1974-1978	X.	6 968	<b>243 397 Ft</b>				x		31	<b>30</b>	35	36
12	Kelenföld-Centre	1966-1983	XI.	9 297	422 839 Ft				x		19	14	18	<b>9</b>
13	Fehérvári Road/Albertfalva	1974-1979	XI.	4 381	420 866 Ft				x		35	31	29	<b>24</b>
14	Gazdagrét	1983-1989	XI.	4 968	<b>442 592 Ft</b>		x				34	<b>30</b>	36	26
15	Órmező	1972-1984	XI.	3 094	414 545 Ft			x			29	<b>22</b>	30	18
16	Vízafogó	1882-1989	XIII.	2 672	<b>443 024 Ft</b>	x		x			<b>10</b>	13	16	21
17	Gyöngyösi Street	1979-1980	XIII.	2 784	384 470 Ft				x		<b>13</b>	17	20	24
18	Füredi Street	1967-1978	XIV.	12 133	369 776 Ft				x		28	35	<b>27</b>	35
19	Újpalota	1968-1977	XV.	15 886	302 248 Ft					x	34	36	<b>26</b>	31
20	Rákoskeresztúr Centre	1980-1989	XVII.	7 634	302 703 Ft					x	33	<b>33</b>	41	49
21	Allami/Havanna	1977-1985	XVIII.	6 222	<b>184 716 Ft</b>					x	43	<b>41</b>	47	47
22	Kispest Centre	1977-1986	XIX.	11 467	296 004 Ft					x	<b>31</b>	39	39	37
23	Pesterzsébet Centre	1976-1983	XX.	7 820	277 627 Ft					x	38	33	37	<b>31</b>
24	Csepel Centre	1968-1982	XXI.	10 568	288 182 Ft			x		x	37	33	38	<b>30</b>

Figure 5. Research result database

Additionally, housing estates in zone 2 are more conspicuous because of their riverbank connectivity. The same applies to housing estates in zone 4, where the building blocks overlook panoramic view to the mountain area. The accessibility of housing estates is typified by the travel time from the assigned 4 main hubs. The data shows the shortest and longest time spent by public transport travelling. The highlighted units reflect not just the time-distance relation, but it also visualises the metro lines in the city (Figure 6). To support the hypothesis, the study made reference to the apartment prices per square metre from 2017 on the selected estates and search relation across the three parameters, namely accessibility, position and price, for each unit.<sup>19</sup>

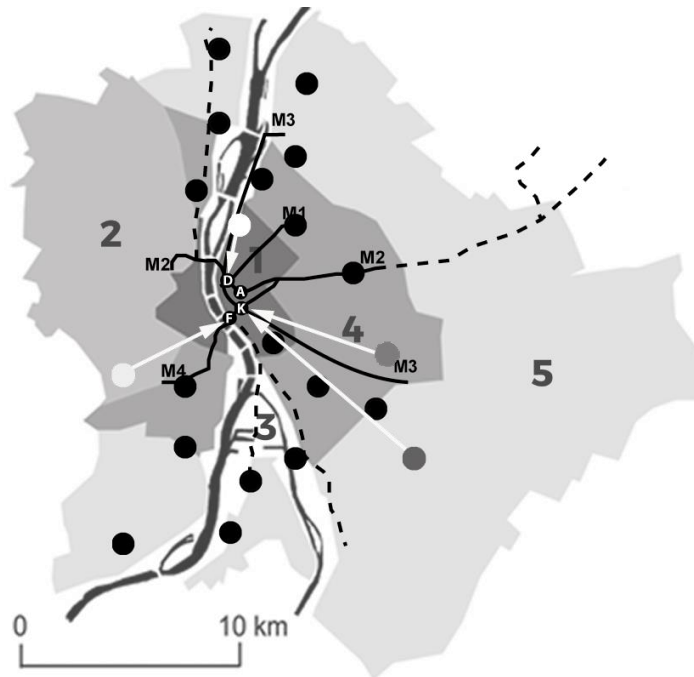


Figure 6. Studied housing estates according to the lowest (light) and highest (dark) property prices, / drawing by authors

In the outskirts zone the furthest estate has the lowest prices, while housing estates with the best traffic connection on a riverbank area, are associated with highest prices. Furthermore, it is evident that in some instances, access to natural green areas overrode the importance of accessibility. However, the position of the researchers of this study is that access to natural green areas only partially explains this discrepancy. Further research may be needed to unpick the exact cause-effect relationship across the three parameters.

## Results

The Vizafogó (row 16, Figure 5) housing estate is one of the most valuable residential areas with its direct metro connection, its proximity to the inner city and its riverside position. Interestingly, during the renewal process, the emphasis was on the public space rehabilitation and the modernisation of the building structures were far from complete at the time of data collection in case of Vizafogó.<sup>20</sup> The property prices in this housing estate were generally well above the average market prices due to its green space quality and connectivity to the inner city.



Figure 7. Vizafogó housing estate in 2017 and Havana housing estate in 2014

Havana housing estate (row 21, Figure 5) has the lowest real estate prices due to its very peculiar situation. As the number shows, transportation connectivity is in an abject condition. Inhabitants have to change transport several times to commute, hence it is a highly segregated outskirts area. While evaluating this unit, it was important to note that it has been inhabited by low income population right from the onset and even today by ethnic minority groups. After several attempts, at the turn of the millennium, the housing estates applied for various social and building rehabilitation grants, which enabled vital renovations on the Havana housing estate, and currently has some of the best built environment units, from the selected estates.<sup>21</sup> While continuous social rehabilitation projects have contributed to the success of the regeneration of the place, these efforts seem to have reached their limits.<sup>22</sup> For as long as Havana is separated from the dynamic public transport system, the change of population is very unlikely, social mobility is out of reach and the housing estate will remain a slum area.

From accessibility perspective, the best housing estate is the Józsefvárosi unit (row 7, Figure 5) in district VIII, the Szigony quarter. Historically, district VIII was characterised by its diversity and in the last 20 years, it has undergone dramatic changes. While the Corvin quarter – neighbourhood of Szigony – is developing dynamically as the biggest ongoing investment in Budapest,<sup>23</sup> the other parts of the district still have inhabitants with rather low social status. A remarkable process took place in the district, because despite the renovation in some parts of the district, the dwelling stock degraded in quality. This is coupled with the fact that a significant proportion of the population belong to the ethnic minority groups.<sup>24</sup> Nevertheless, property prices were well above the average market value. This phenomenon happened against the backdrop that the surrounding new developments transformed the earlier status of the district, and a change in the composition of the population slowly began, as new homeowners started to anticipate the complete renewal of the district. The question is, which investors will shoulder the revitalisation of a segregated housing estate in the historical city centre, where the demolition of a block of flats with 11 floors would not simply be a construction issue, but a social problem that would agitate the public and design profession's opinion. There are opinions that suggest the city government may decide on a high-quality rehabilitation plan in order to create a liveable district VIII.

The second most expensive housing estate is the Gazdagrét (row 14, Figure 5), which is in a relatively isolated area. While public transportation is suboptimal in the area, it is probably one of the most popular housing estates in Budapest.<sup>25</sup> Its inhabitants basically consider reference to this part of Budapest as a 'housing estate' to be derogatory. This kind of public perception also, implicitly depicts the contemptuous attitude of Hungarian society to people living in this type of dwelling.





*Figure 8. Gazdagrét housing estate in 2017*

Whether this negative opinion is justified or not, the fact remains that Gazdagrét is embedded in the mountainous part of Budapest, while being close to the capital's circulation. Moreover, it is a recreational green paradise, where many parents would like to raise their children.

### **CONCLUDING REMARKS**

The liveability position of a housing estate can influence many liveable goals such as safety, social integration, diversity and cultural identity, preserving its cultural value, balancing mixed land use, providing a variety of services, and the presence and protection of green spaces.<sup>26</sup> In case of Budapest's housing estates, most of these liveability characteristics were present. However, these do not necessarily translate into higher property prices. The thriving units' prices could increase to the levels of the newly constructed areas, while the less popular ones underachieve on the presented list. Although the government and also the EU offer different supports to renew in micro scale, in the case of this panel building dwelling, there are only a few exemplary macro scale developments<sup>14</sup>. The position is an unalterable characteristic of a unit, and the infrastructure of a city can be developed or transformed in a long-term process, so the estates with high accessibility problems are generally disadvantaged. The most questionable is the destiny of those huge housing estates in Budapest, to which public transport development was planned at the time of their construction, but which were not eventually realised. Such housing estates are therefore isolated from the mainstream social, economic and cultural circulation of the city. Above all, these housing estates cannot rely on the changes of the surrounding areas that can generate positive processes, while the inner units can only make changes for their immediate neighbourhood city blocks, which will be continuously developed over time. All of these demonstrate that in Budapest, it is not enough to focus on micro scale renewing, as there has to be a balance between micro and macro developments for a liveable urban environment.

## REFERENCES

- <sup>1</sup> Justina Muliolyté, "Rediscovering large scale housing estates in post socialist cities," *Journal of Architecture and Urbanism* 37, (2013) 51-58.
- <sup>2</sup> Szymon Marcińczak and Iwona Sagan, "The Socio-spatial Restructuring of Łódź, Poland," *Urban Studies* 48 (2011) 1789-1809.
- <sup>3</sup> Adrienne Csizmady, *A lakótelep*, (Budapest: Gondolat Kiadói Kör, 2004.)
- <sup>4</sup> Melinda Benkő, "Budapest's Large Prefab Housing Estates: Urban Values of Yesterday, Today and Tomorrow," *Journal of Hungarian Studies* 29(1-2), (2015) 21- 36.
- <sup>5</sup> Yang Xiao, *Urban Morphology and Housing Market*, (Singapore: Springer Verlag, 2016.) 29-31
- <sup>6</sup> Kenneth Frampton, *Modern Architecture: A Critical History*, (London: Thames and Hudson, 1985.)
- <sup>7</sup> Tamás Meggyesi *A 20. század urbanisztikájának útvesszői*, (Budapest: Terc kiadó, 2005.)
- <sup>8</sup> Gábor Preisich, *Budapest városépítésének története 1945–1990*, (Budapest: Műszaki Könyv- kiadó. 1998.) 81-98
- <sup>9</sup> Regina Balla, "Horizontális hézag - a paneles lakóházak földszintje." (paper presented at TDK BME (Scientific Student Conference, Budapest University of Technology), Budapest, March 21 2015).  
<http://tdk.bme.hu/EPK/DownloadPaper/Horizontalis-hezag-a-paneles-lakohazak>
- <sup>10</sup> Tamás Egedy, "The Situation of High-Rise Housing Estates in Hungary," In: Kovács, Zoltán (ed.) *Hungary towards the 21st Century – the Human Geography of Transition*, *Studies in geography in Hungary* 31, (2000) 169–185.
- <sup>11</sup> Zsuzsanna Körner and Márta Nagy, *Az európai és a magyar telepszerű lakásépítés története 1945-től napjainkig*, (Budapest: Terc Kiadó, 2006.)
- <sup>12</sup> Melinda Benkő and Regina Balla, "Fundamentum — A paneles lakóépületek földszintje," *Építés – Építészettudomány* 44(3–4), (2016) 317–332
- <sup>13</sup> Melinda Orova and András Reith, "Comparison and Evaluation of Neighborhood Sustainability Assessment Systems," (paper presented at Munich: PLEA 2013: Sustainable Architecture for a Renewable Future (Online), March 13 2015) <http://mediatum.ub.tum.de/doc/1169262/1169262.pdf>
- <sup>14</sup> Adrienn Gelesz. *Paneles lakótelepek felújítási lehetőségei környezet- és energiatudatos minősítő rendszerek szempontrendszerének figyelembevételével* (Diploma thesis, Debrecen: Debreceni Egyetem Műszaki Kar. 2012)
- <sup>15</sup> Balázs J. Kocsis, *Városfejlesztés és városfejlődés Budapesten 1930–1985*, (Budapest: Gondolat Kiadói Kör, 2008.)
- <sup>16</sup> "A budapesti közlekedés jelenlegi helyzete civil szemmel," *Urban and Suburban Transit Association*, accessed April 30, 2006, <http://veke.hu/oldsite/download/veketanulmany.pdf>
- <sup>17</sup> "The 4th Budapest metro line Wasteful plans from the past," *Urban and Suburban Transit Association*, accessed 2006, [http://veke.hu/oldsite/download/m4\\_study.pdf](http://veke.hu/oldsite/download/m4_study.pdf)
- <sup>18</sup> "Újpalotai várostörténet: kompromisszumok és kényszerpályák," (City history of Újpalota: compromises and constraints.) Gábor Tamás Rátonyi, Rákospalota, Pestújhely, Újpalota local history blog, accessed September 6, 2012, [http://bpxv.blog.hu/2012/09/06/varostortenet\\_ujpalota](http://bpxv.blog.hu/2012/09/06/varostortenet_ujpalota)
- <sup>19</sup> "Budapest Property Market Statistics," *ingatlanet.hu*, accessed February, 2017, <https://www.ingatlanet.hu/statisztika/Budapest>
- <sup>20</sup> "A Vízafogó lakótelep közterületeinek és zöldfelületeinek megújítása," (Renewal of public spaces and green areas of Vízafogó housing estate.) XIII. Kerületi Közszolgáltató Zrt. and Kert-Szín-Vonal Kft., accessed January, 2014, <http://tajepiteszek.hu/sites/default/files/cikk/vizafogo-lakotelep-kozparki-felujitasa/vizafogo-tervezesi-program-2014.pdf>
- <sup>21</sup> "Liveable - Sustainable Havana LOCAL ACTION PLAN 2014-2020," HitesyBartuczHollai Euroconsulting Kft., URBACT RE-Block project, accessed September, 2014, [http://urbact.eu/sites/default/files/re-block\\_lap\\_budapest.pdf](http://urbact.eu/sites/default/files/re-block_lap_budapest.pdf)
- <sup>22</sup> Melinda Benkő, "Evaluating Factors in the Image of Housing Estates," *Periodica Polytechnica Architecture*, 43(1), (2014) 33–36.
- <sup>23</sup> "Corvin-Szigony Project: project Description," Rév 8 Plc., accessed 2002, [http://ujrev8.epiteszforum.hu/wp-content/uploads/2013/02/Corvin\\_Szigony\\_Project\\_tender\\_2002.pdf](http://ujrev8.epiteszforum.hu/wp-content/uploads/2013/02/Corvin_Szigony_Project_tender_2002.pdf)
- <sup>24</sup> Zsuzsa Nagy, *Glove Actually: Integration and genetrification in a community center in Budapest*, (Diploma thesis, Budapest: Central European University, Department of Sociology and Social Antropology, 2010)
- <sup>25</sup> Adrienne Csizmady, "Housing estate and social segregation," *Review of Sociology*, (1998)

## Cities, Communities and Homes: Is the Urban Future Livable?

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Derby: 22-23 June 2017

<sup>26</sup> Hamam Serag El Din, Ahmed Shalaby, Hend Elsayed Farouh, Sarah A. Elariane, "Principles of urban quality of life for a neighbourhood" HBRC Journal, (2012)

### BIBLIOGRAPHY

- Balla, Regina. "Horizontális hézag - a paneles lakóházak földszintje." Paper presented at conference TDK BME (Scientific Student Conference, Budapest University of Technology), Budapest, March 21, 2015.  
<http://tdk.bme.hu/EPK/DownloadPaper/Horizontalis-hezag-a-paneles-lakohazak>
- Benkő, Melinda and Balla, Regina. "Fundamentum — A paneles lakóépületek földszintje." *Építés – Építészettudomány* 44(3–4), (2016)
- Benkő, Melinda, "Budapest's Large Prefab Housing Estates: Urban Values of Yesterday, Today and Tomorrow." *Journal of Hungarian Studies* 29(1-2), (2015)
- Benkő, Melinda. "Evaluating Factors in the Image of Housing Estates," *Periodica Polytechnica Architecture*, 43(1), (2014)
- Csizmady, Adrienne. *A lakótelep*. Budapest: Gondolat Kiadói Kör 2004.
- Csizmady, Adrienne. "Housing estate and social segregation." *Review of Sociology* (1998)
- Egedy, Tamás "The Situation of High-Rise Housing Estates in Hungary." In: Kovács, Zoltán (ed.) *Hungary towards the 21st Century – the Human Geography of Transition*, Studies in geography in Hungary 31, (2000)
- Frampton, Kenneth. *Modern Architecture: A Critical History*. London: Thames and Hudson 1985.
- Gábor Tamás Rátonyi, Rákospalota, Pestújhely, Újpalota local history blog. "Újpalotai várostörténet: kompromisszumok és kényszerpályák." (City history of Újpalota: compromises and constraints.) Accessed September 6, 2012. [http://bpxv.blog.hu/2012/09/06/varostortenet\\_ujpalota](http://bpxv.blog.hu/2012/09/06/varostortenet_ujpalota)
- Gelesz, Adrienn. *Paneles lakótelepek felújítási lehetőségei környezet- és energiatudatos minősítő rendszerek szempontrendszerének figyelembevételével*. Diploma thesis, Debrecen: Debreceni Egyetem Műszaki Kar, 2012. [ingatlanet.hu](http://ingatlanet.hu). "Budapest Property Market Statistics." Accessed February, 2017. <https://www.ingatlanet.hu/statisztika/Budapest>
- Hadjri, K., Durosaiye, I. O., Csanádi, G., Csizmady, A., Olt, G., Devetakovic, M., Mrdjenovic, T., Jokloya, V., Madrozo, L., Krasilnikova, E. & Kuzina, L. 2015. *A Critical Analysis of Urban Regeneration Programmes in Europe. Conference: Housing – A Critical Perspective*, 2015.
- HitesyBartuczHollai Euroconsulting Kft., URBACT RE-Block proje. "Liveable - Sustainable Havana LOCAL ACTION PLAN 2014-2020." Accessed September, 2014. [http://urbact.eu/sites/default/files/re-block\\_lap\\_budapest.pdf](http://urbact.eu/sites/default/files/re-block_lap_budapest.pdf)
- Kocsis, J. Balázs. *Városfejlesztés és városfejlődés Budapesten 1930–1985*. Budapest: Gondolat Kiadói Kör. 2008.
- Körner, Zsuzsanna. and Nagy, Márta. *Az európai és a magyar telepszerű lakásépítés története 1945-től napjainkig*. Budapest: Terc Kiadó 2006.
- Marcinkszak, Szymon and Sagan, Iwona "The Socio-spatial Restructuring of Łódź, Poland." *Urban Studies* 48 (2011)
- Meggyesi, Tamás. *A 20. század urbanisztikájának útvesztői*. Budapest: Terc kiadó 2005.
- Muliolytè, Justina "Rediscovering large scale housing estates in post socialist cities." *Journal of Architecture and Urbanism* 37, (2013)
- Nagy, Zsuzsa. *Glove Actually: Integration and gentrification in a community center in Budapest*. Diploma thesis, Budapest: Central European University, Department of Sociology and Social Anthropology, 2010.
- Orova, Melinda and Reith, András. "Comparison and Evaluation of Neighborhood Sustainability Assessment Systems." (paper presented at Munich: PLEA 2013: Sustainable Architecture for a Renewable Future (Online), March 13 2015)  
<http://mediatum.ub.tum.de/doc/1169262/1169262.pdf>
- Preisich, Gábor. *Budapest városépítésének története 1945–1990*. Budapest: Műszaki Könyv-kiadó 1998.
- Rév 8 Plc. "Corvin-Szigony Project: project description." Rév 8 Plc. Accessed 2002.  
[http://ujrev8.epiteszforum.hu/wp-content/uploads/2013/02/Corvin\\_Szigony\\_Project\\_tender\\_2002.pdf](http://ujrev8.epiteszforum.hu/wp-content/uploads/2013/02/Corvin_Szigony_Project_tender_2002.pdf)
- Serag El Din, Hamam, Shalaby Ahmed, Farouh Hend Elsayed and Elariane Sarah A. "Principles of urban quality of life for a neighbourhood." HBRC Journal (2012)

## Cities, Communities and Homes: Is the Urban Future Livable?

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XIII. Kerületi Közszolgáltató Zrt. and Kert-Szín-Vonal Kft. "A Vizafogó lakótelep közterületeinek és zöldfelületeinek megújítása." (Renewal of public spaces and green areas of Vizafogó housing estate.) Accessed January, 2014.

<http://tajepiteszek.hu/sites/default/files/cikk/vizafogo-lakotelep-kozparki-felujitasa/vizafogo-tervezesi-program-2014.pdf>

Urban and Suburban Transit Association. "A budapesti közlekedés jelenlegi helyzete civil szemmel." Accessed April 30, 2006. <http://veke.hu/oldsite/download/veketanulmany.pdf>

Urban and Suburban Transit Association. "The 4th Budapest metro line Wasteful plans from the past." Accessed 2006. [http://veke.hu/oldsite/download/m4\\_study.pdf](http://veke.hu/oldsite/download/m4_study.pdf)

Xiao, Yang. Urban Morphology and Housing Market. Singapore: Springer Verlag 2016.