

SMALL HOUSING ESTATES OF BUDAPEST 1945-1990



BENCE BENE
theses booklet

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INTRODUCTION

Today, small-scale projects with positive connotations are emerging in architecture due to human and nature-based solutions. The most relevant examples are the individual tiny house (Ford & Gomez-Lanier, 2017; Margier, 2023), the landscape architecture element that covers world cities, the Miyawaki pocket forest (Lewis, 2022), or small-scale public space rehabilitation and interventions at the urban level, whose buzzwords are tactical urbanism (Lydon & Garcia, 2015), placemaking (Thomas, 2016), or urban acupuncture (Lerner, 2014). Moreover, we can already discover and develop concepts for smaller low-cost housing estate units in urban planning for decades, such as the modern housing (Bauer, 1934), collage city (Rowe & Koetter, 1978), the 15-minute city (Moreno, 2024), then the 10- and 5-minute city (Staricco, 2022; Liu et al., 2024), or the San Francisco's Small Sites Program, which is buying out rent-controlled tiny (5-40 units) buildings and transferring ownership from private landlords to community land trusts. Although these examples are very different, the common thread that unites them beyond their scale is their aspiration for affordability, physical and social diversity, and alternative lifestyles. Rather than routine solutions to universal truths, the *genius loci* (Relph, 1976) come to the fore: the natural, built, economic, and social endowments and opportunities of the place (Spretnak, 1997). In this line, we can also fit in the 'urban injection' of Hungarian researchers Szelényi and Konrád (1969) on the topic of mass housing. Urban injection meant small housing estates (HEs) realized after the WWII period that could be more sensitive to their environment than larger ones. However, while Szelényi and Konrád's critical work about large HEs became world-famous, the topic of small HEs and urban injections was forgotten. They were sharply critical of the spatial separation of large HEs from the existing urban fabric. Due to the LHEs' scale and spatial design, they created urban boundaries (Jacobs, 1961). However, the biggest problem with large-scale projects was not their physical dimension, but their social consequences. LHEs were often built with poor quality, repetitive layouts, monotonous building and urban forms, and a lack of historical continuity (Migotto & Tattara, 2023). As a result, they tended to accommodate a relatively socially homogeneous urban population. Therefore, these neighbourhoods were made more vulnerable to political and economic shifts affecting not only the city but also the country or even the global context, increasing the risk of social segregation (Vale, 2013). This was first dramatically illustrated by the demolition of the 18-year-old Pruitt-Igoe public HE in St. Louis, USA (Freidrichs, 2011). Since then, numerous European cases and studies have documented the significant decline in the social status of large HEs (Power, 1997; Garcia, 2012; Mysak, 2016; Virág, 2020). A wide range of tools has been applied to address this problem (Sotoca, 2013; Tofiluk et al., 2019), including the revitalisation of public open spaces (Kristiánová, 2016), the appearance of new public and commercial functions (Hlib, 2024), the complete redevelopment of buildings, the demolition of the most socially problematic housing blocks to reduce the size of HEs (Bernt, 2017), the construction of new housing of a wider quality in order to diversify the social composition (Treija et al., 2018), and the privatisation of housing (Andrusz et al., 1996; Lelévrier, 2023). In this context, most contemporary residential developments in the Western world are now consciously designed as smaller, more diverse units, with a varied built environment and land use, targeting a socially heterogeneous population (Krier, 1998; Bowes et al., 2018; Babos et al., 2024). In contrast, however, market-driven housing production elsewhere around the globe often continues to pursue mass construction with little regard for social aspects. As a result, large-scale mega-projects reminiscent of 20th-century developments are being used to address housing shortages—thereby reproducing many of the same failures

and shortcomings associated with large HEs (Singh, 2015; Libertun de Duren, 2018). In the Hungarian government's new housing policy program (Otthon Start), only developments comprising more than 250 residential units qualify for priority investment status. This may lead to a surge in large-scale, single-investor housing projects within the country. To date, two projects in Budapest have been identified as intending to take advantage of this government decree, which aims to simplify the permitting process. Both developments plan the construction of several thousand residential units, thereby potentially reproducing many of the challenges historically associated with large-scale housing estates. This renders the question of what alternatives to large housing estates were envisioned during the 20th century still highly relevant today. The aim of my dissertation is to analyze small housing estates in Budapest, built between 1945 and 1990, as examples of the alternative housing model conceptualized by Szelényi and Konrád as urban injections. Could these historical examples serve as prototypes for contemporary real estate development?

Housing estates have existed universally and throughout history—from Roman castra and Renaissance ideal cities to the superblocks of Chandigarh or the Kakuma refugee camp. In Europe, the nineteenth-century urban revolution marked the mass adoption of HEs, most prominently in the form of workers' housing, civil servants' colonies, phalansteries, and garden cities (Dwyer, 2014). However, the image and discourse surrounding HEs came to be dominated by the large HEs constructed in the mid-twentieth century, both in capitalist and socialist countries (Hess et al., 2018). While no new large HEs were built on the European continent after the 1990s, elsewhere in the world they are still regarded as potential instruments for the large-scale elimination of housing poverty (Wetzstein, 2017; Potts, 2020). In Hungary, the smaller-scale form of housing estates—residential complexes—has taken their place (Vámos, 2003). If one were to place HEs (or the research devoted to them) on a timeline according to their scale, it would become evident that both before 1945 (Körner, 2004) and after 1990, smaller-scale projects predominated. By examining the small HEs constructed between 1945 and 1990, my aim was to strengthen the thread of historical continuity: the link between pre- and post-socialist periods. Naturally, in terms of political, social, and physical scale, small HEs did not represent the primary housing program of the latter half of the twentieth century. Between 1949 and 1990, a total of 462,114 apartments were completed in Budapest, nearly half of which - 229,921 units - were located in HEs (Kocsis, 2006). The 102 small HEs examined in my research contained 23,707 dwellings altogether, meaning that more than one-tenth of the city's housing estate stock was concentrated in such developments. Despite their modest scale, their numerical significance makes them a visible component of the housing supply. Moreover, owing to certain characteristics (ownership structure, plot configuration, building form, architectural diversity), as well as their potential role as historical or future precedents, I considered them worthy of in-depth scholarly analysis. For this reason, my dissertation presents the physical environment, urban design, and architectural character of all small HEs constructed in Budapest between 1945 and 1990.

METHODOLOGY

The objective of my dissertation was twofold. First, I sought to identify, catalogue, and describe in detail the small-scale HEs constructed in Budapest during the years of state socialism, based on their physical characteristics. Second, I aimed to demonstrate the relevance, originality, and particularities of these case studies by comparing them to other HEs. For this reason, my research frequently applied methodologies previously tested by other scholars in the study of

large HEs or contemporary residential projects. This comparative approach enabled the juxtaposition of datasets across different periods and scales of housing estate developments, thereby revealing the latent values embedded within small HEs.

The analysis is divided into four chapters, followed by a concluding section dedicated to evaluating the results, drawing comparisons, and presenting the theses.

Chapter 1 explored the concept of the small housing estate, primarily through Hungarian primary and secondary sources. After a thorough review of the literature, legislation, and housing estate catalogues, I formulated working definitions for both *housing estate* and *small housing estate* and established the temporal and spatial scope of the research. Although perhaps less spectacular, one of the most significant achievements of this dissertation was the establishment of an independent housing estate catalogue: the identification of 102 small housing estates constructed in Budapest between 1945 and 1990, which serves as the empirical foundation for the entire research.

Chapter 2 examined the physical environment of these developments through three complementary approaches. First, it assessed their distribution across Budapest's zones and functional districts. Second, it measured the accessibility of the Deák Square, the city's central hub, by public transport from each HE. Third, at the neighborhood scale, it described the spatial and (to a lesser extent) social characteristics of the walkable 15-minute catchment areas surrounding each HE. While neighborhood-level features were analyzed, an overarching pattern emerged, underscoring the primacy of location within the urban hierarchy.

Chapter 3 focused on the urban design aspects of the small HEs, analyzing them in four categories: urban form, functional diversity, plot structure, and open space design. Quantifiable data such as number of buildings, number of dwellings, and site area allowed for typological classification. Functional and landscape dimensions were assessed by adapting methodologies previously used in the study of other HE developments (Bakay, 2012; Schneller et al., 2012) or for public space quality (Carmona, 2010a; 2010b).

Chapter 4 presented the architectural character of the estates. In the first part, all 102 estates were briefly described and grouped by architectural style. In the second part, selected indicators—such as the use of standardized building types and circulation systems—were used to summarize their architectural data.

The dissertation draws upon a diverse set of sources:

- International and Hungarian literature (with particular influence from Szelényi & Konrád, 1969; Iván, 1996; Preisich, 1998; Csizmady, 2003; Körner & Nagy, 2006; Bakay, 2012; Schneller et al., 2012; Szabó & Bene, 2019)
- Archival architectural plans and documents, retrieved and documented with the assistance of students of the Housing in the City course (2024). As a result, the plans of all 102 small HEs available in the Budapest City Archives (BFL) were photographed, amounting to nearly 200 files associated with cadastral numbers
- Archival and current legislation, regulations, and official records (Jogtár, Hungaricana, HÉSZ)
- Archival newspaper articles and publications (Arcanum)
- Archival (Fortepan) and aerial photos (Fentről)

- Official metropolitan maps
- Review of the Hungarian National Catalogues of Standardized Housing Plans (MOT 1951, 1952, 1953, 1960, 1966, 1967; TTI 1966, 1976) and digitization of the standardized designs applied in small HEs
- Site visits and original photographic documentation of all 102 small housing estates (autumn 2023)
- QGIS / TravelTime
- E-utility mapping system (E-közműtérkép)
- Google Maps and Google Earth, without which it would not have been possible to locate the small housing estates missing from the literature

THESES

Definition

Although small HEs are not unfamiliar within Hungarian or international academic discourse, no comprehensive, systematic overview has yet been undertaken. As a result, both terminology and the composition of HE catalogues reveal notable inconsistencies. One manifestation of this is that neither Hungarian nor international twentieth-century research on HEs employed a uniform, universally accepted definition of the term *housing estate*. Following a brief international overview, I narrowed the analysis to Hungarian sources (legislation, journals, architectural documentation, secondary literature, housing estate catalogues) and identified 13 defining characteristics of the housing estate. By evaluating, retaining, or excluding these characteristics, I established my own working definition.

Thesis 1: A housing estate is a group of residential buildings with more than 90 dwellings built in a contiguous area, separated from its environment, with a uniform master plan and architectural design. It consists of at least three multi-storey, multi-family buildings. 90 dwellings. (Bene & Benkő, 2025; Bene, 2023)

The individual components of this definition are not novel; they are well documented in both primary and secondary sources. My intention, however, was not to introduce a new term, but rather to unify and reframe the existing usages and catalogues. Most of the boundary criteria already appear recurrently in secondary sources, with significant differences observable only in the threshold values - specifically, how many dwellings, residents, or buildings are required for a development to qualify as a housing estate. The broadest catalogues generally used a minimum of around 100 dwellings (Preisich, 1998), consistent with contemporary perspectives (Schneller et al., 2012), which consider this number sufficient for a development to acquire urban significance beyond its immediate confines. Similarly, in Budapest, the only Hungarian legal regulation to provide an explicit threshold (PM-ÉVM, 1971) established 90 dwellings as the minimum for HEs. For this reason, I adopted this figure in my definition.

Determining the cornerstones of the housing estate concept made it possible to review and supplement existing catalogues of Budapest housing estates. In this way, I compiled the most detailed dataset to date of estates constructed between 1945 and 1990, adding 14 examples not previously mentioned in the literature. Interestingly, only nine of these can be regarded as genuinely “new” discoveries, since five were already referred to as housing estates in primary sources (design documentation, archival journals). Over time, however, these developments fell

into obscurity, and their recovery and reintegration into professional discourse represents a key contribution of this research.

Since my dissertation examines small-scale HEs in particular, additional delimitations were required alongside the universal definition. For the purposes of my study, I defined the corpus as Budapest housing estates constructed between 1945 and 1990 with fewer than 500 dwellings. This produced a dataset of 102 housing groups (Figure 1), whose physical characteristics I analyzed at three scales:

- **Environment** – the HE as part of the surrounding urban fabric
- **Urban design** – the HE as a coherent physical entity implemented through a unified urban planning and design concept
- **Architecture** – the HE as a cluster of buildings constructed according to coordinated architectural plans

Figure 1. Small Housing Estates of Budapest built 1945-1990



Environmental scale

The description of the physical environment of the 102 small HEs of Budapest can be divided into three parts. First, their locations were analyzed according to various spatial divisions of the city (zones, districts, functional areas). Unlike large housing estates, small estates appear in significant numbers both in the Buda hills and in inner districts, resulting in a relatively even spatial distribution across the city.

Second, accessibility from Budapest's central square, Deák tér, was quantified in terms of public transport travel times. These values show a wider range than those of large HEs, due to the fact that several small HEs were built on the urban periphery, where weaker transport infrastructure reflected their smaller populations and thus limited the justification for large-scale investments (such as rail, metro, or tram lines).

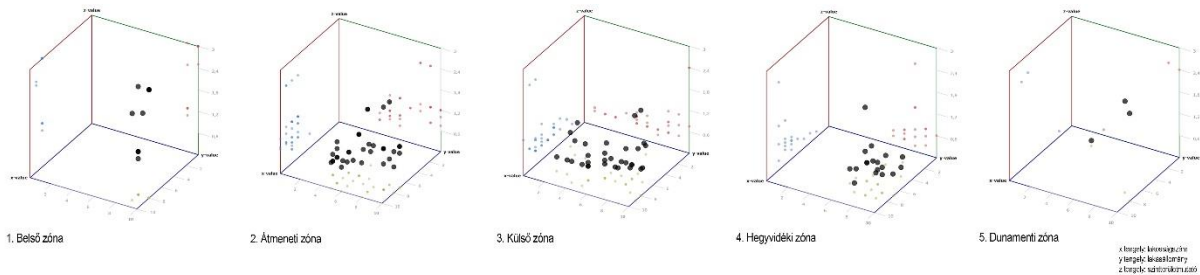
Third, after establishing their broader urban locations and accessibility, I examined the HEs' neighborhoods using twenty official thematic maps. Based on these maps, I delineated areas accessible within 15 minutes on foot or by public transport. I then analyzed the range of functions (healthcare, education, local government, culture, recreation) available within this catchment, as well as the density (number of dwellings, population, floor-area ratios) and diversity (physical, social, and regulatory characteristics) of these environments. The threefold analysis of proximity, density, and diversity indicates that small housing estates are typically embedded in walkable urban neighborhoods with diverse functions and relatively high density.

Thesis 2: From most small housing estates of Budapest, within a 15-minute walking distance one can access well-functioning public transport, a wide variety of urban functions, as well as dense and diverse physical, social, and regulatory environments. At the same time, however, the quality of the immediate environment is primarily determined by the small HE's location within the city. The most favorable small HEs are situated in central urban areas, while the least advantageous are located on the urban periphery. (Bene, 2025a)

The results of the proximity analysis are strongly influenced by the HEs' distance from the city center. In the inner and transitional zones, residents of small HEs can reach the largest areas by walking and public transport, and it is here that the greatest number and variety of urban functions are concentrated. Nevertheless, the average functional provision across all 102 small HEs is relatively high: within the immediate vicinity of a typical case study, approximately 75% of the examined functions are available. The significance of distance from the city center is further nuanced when the HEs' results are grouped by Budapest's functional map. In this comparison, the *housing estate* zone achieved the second-highest score in terms of proximity, surpassed only by the *inner residential* zone. This demonstrates that beyond physical distance from the center, the degree of urbanity in the surroundings plays a decisive role. These findings reinforce both modern and contemporary urban planning theories - namely, the neighborhood unit (Perry, 1929) and the 15-minute city (Moreno et al., 2021) - by highlighting their validity and underscoring the importance of their practical implementation.

Density measures (population, housing stock, floor-area ratio) likewise correlate with distance from the city center (Figure 2). Most small HEs are embedded in compact, small-town-like environments. High-density, metropolitan conditions characterize the inner zone and outer district centers, while the Buda hills and outer southern districts exhibit more suburban or peri-urban, low-density conditions.

Figure 2.: Density of the surrounding environments of small HEs, categorized by zones



Finally, diversity levels within 15-minute catchments are generally high. The HEs' surrounding neighborhoods display significant variation in housing stock, building heights, parcel sizes, and land uses. Complemented by additional indicators (floor-area ratios, plot coverage, building types, purchasing power, property values), the analysis demonstrates a clear gradient: moving away from the inner city, environments become increasingly homogeneous. The least diverse conditions were observed, with some exceptions, in the Buda hills. At the same time, the recurrence of certain HEs at both the top and bottom of various rankings (with Óbuda and Újlipótváros consistently performing well, and Szilassy út or the Csepel Vízmű HE consistently poorly) reveals the deep interconnections between the examined dimensions.

Urban design scale

The urban design of the small HEs constructed in Budapest between 1945 and 1990 is discussed in four subsections: urban form, function, plot structure, and open space. While their design principles largely correspond to those of large HEs, their relationship to their immediate surroundings differs markedly. The massing and internal layout of the buildings were determined by the standardized housing plans of the period (MOT) and the architectural archetypes of residential buildings (point, slab, tower). In more than half of the cases, the placement of building masses resulted in a homogeneous, undifferentiated spatial structure. Nevertheless, most of these developments exhibit a positive urban character, as their smaller scale enabled them to respond more sensitively to their physical context (Figure 3). Konrád and Szelényi (1969) referred to such housing clusters, which seek connection with the existing urban fabric, as urban injections. Fifty-nine small HEs in Budapest meet this criterion: they are either fully or partially integrated into their surroundings, adapt to them, or, through their external spatial design, assume a role as centers that extend beyond themselves. By contrast, the smaller group of examined estates includes those that are alien in appearance, patchwork-like, or peripherally located, thus forming urban borderlands.

Thesis 3: More than half of the small housing estates studied can be regarded as urban injections. The sharp urban boundaries typically associated with large housing estates are much less common in these cases. Their scale allows them to engage with their complex physical and social environments in a more sensitive manner. (Bene & Benkő, 2022; Bene, 2023; Lokas et al., 2023)

Their degree of environmental embeddedness, and with it their ambiguous status as housing estates, is reflected in the types of land-use categories in which they appear in current Budapest development plans, as well as in their building patterns. On the one hand, most are located within Budapest's small-town residential zones, and in nearly 90% of the cases their surroundings fall within the same land-use category as the estate itself. On the other hand, the predominant building pattern for most small HEs is not the *estate-type* but rather the

freestanding building pattern. It is also worth noting that those estates absent from secondary sources often integrate seamlessly into the urban character of their neighborhoods. In other words, they function as such successful urban injections that they have become invisible even to the professionals.

This relative invisibility is due not only to their urban form but also to their functional composition: more than half of the estates are monofunctional. Only a quarter of the Buda sites contain any functional units beyond housing. The sub-center functions and public spaces that are typical of large HEs appear only in a handful of cases. Moreover, compared to contemporary residential projects, the number of community services is lower. While public institutions are present in only one out of every ten small HEs, they are found in almost all HEs with more than 500 dwellings. By contrast, among contemporary market-based residential projects, not a single example contains educational or healthcare institutions designed to serve the local population.

Figure 3. Urban characters of small HEs



The open spaces of the 102 small HEs are in many respects similar to those of larger HEs, but due to their scale they are characterized by more limited and restrained design repertoires. Their street networks are, in most cases, insignificant. Parking is typically arranged along the peripheral boundary streets and internal service roads, though in a few cases innovative solutions were introduced at the time of construction (for example, underground garages were built at two sites, and in four cases subterranean garage rows were created that also functioned as landscape elements). The exterior spaces were primarily designed for leisure and playground use, but alternative solutions are also observable (private or semi-private spaces, community gardens). Beyond a few unique sculptures and sgraffiti, the small-scale architectural elements mostly consist of widely recognized industrial designs—for instance, the well-known “Városliget” type bench. The outdoor areas are often unstructured, yet today they clearly

display spatial quality dimensions already familiar in urban design discourse, such as neglected spaces, appropriated spaces, and reinvented spaces.

While their built structures largely mirror those of large HEs, and their functions and open-space architecture fall short of the diversity (and extremes) of larger HEs, in terms of plot systems and ownership relations the small HEs constitute a uniquely complex layer of Budapest's HE developments.

Figure 4. The plot structure of small HEs



Thesis 4: The plot structures of small housing estates built in Budapest between 1945 and 1990 display a degree of diversity that is unique, and entirely uncharacteristic of either larger housing estates or contemporary residential developments. Among the examined case studies, small HEs built on multiple plots, on a single common plot, and on floating plots surrounded by public space were all represented in significant numbers. More than one-tenth of the small HEs even combined two different plot systems. Their diverse plot structures are further complicated by the fact that the perceived accessibility of space - whether enclosed or not - does not necessarily correspond to actual property relations. Nearly half of the small HEs located on private land were built without fences, allowing their open spaces to function as pseudo-public spaces. (Bene, 2023)

Housing estates are most often associated with the narrative of the floating-plot system. In contrast, the plot structures of small housing estates form an astonishingly varied and complex system (Figure 4). Of the examined estates, 61 were constructed on private common plots already at the time of building—similar to the majority of contemporary residential developments. In 19 cases, individual houses of the HEs were built on separate private plots, while only 36 developments adopted the floating-plot solution. In 14 instances, two different plot systems coexisted within a development. A recurring feature of these developments is that their open spaces rarely reveal their underlying parcel structures, since fences were not typically built along shared property boundaries. Moreover, even where HEs shared the same plot system, the presence or absence of fencing was inconsistent. The number of unfenced estates was more than double that of those built on floating plots. Altogether, 31 privately owned estates had “borderless” external spaces. Despite private ownership, the spirit of the period did not demand enclosure, and as a result these areas remained open to a broader public beyond the community of residents.

Architectural scale

The environmental and urban design analysis of small housing estates was followed by an examination at the smallest scale: the architecture of their residential buildings. The dataset under study is not homogeneous; estates were constructed in nearly equal numbers across all the four decades, featuring a wide variety of housing types (cube, slab, tower), layouts, and construction technologies. While they can be categorized according to architectural styles, small housing estates are generally characterized by greater diversity than large estates (Figure 5).

Thesis 5: The architectural character of Budapest’s small housing estates built between 1945 and 1990 is highly diverse, and these developments readily adapted to the prevailing architectural styles of their time. This rapid capacity for adaptation also meant that multiple stylistic features often appeared within a single estate, pointing to the permeability of stylistic boundaries and to the enduring, cross-stylistic value of architectural and urban design principles. (Bene, 2024)

Although in most small HEs a dominant architectural style can be easily identified on the basis of well-known characteristics, this does not imply either sharp boundaries between different HEs or entirely homogeneous estates. In several cases, buildings within the same estate represent different styles. The main reason for this is that during the construction process the prevailing architectural style (and the corresponding political directive) changed, and later-built houses had to adapt to the new orientation - for example, at Béke Square in Csepel. A more

general observation is that while certain features of the buildings (e.g., façade design) bear the hallmarks of one style, other characteristics (e.g., urban form) correspond to another. The decade and a half following the Second World War, from 1945 until the first 15-year housing development program of the 1960s, can be regarded as a period of experimentation. The rapid political shifts of the era were mirrored by urban planning and architecture, resulting in stylistic diversity. Consequently, within a single decade, estates were built in post-war modernist, socialist realist, and socialist modern styles. For small-scale HEs, the 1960s can be described as the consolidation of socialist modern architecture. While certain design practices - such as the repetitive placement of point, slab, and tower block prototypes - became routine, a smaller number of experimental estates were also realized. In the 1970s, the formulaic character of socialist modern developments continued, yet, in response to international critiques of modern architecture and mass housing, a renewed demand for innovation emerged. Structuralist solutions appeared, and from the 1980s onward postmodernism began to revive traditional urban and architectural forms. In the decade preceding the political transition, as in the 1950s, architectural and urban development was again marked by a spirit of experimentation. While socialist modernism primarily sought technological renewal, structuralist examples explored diverse siting strategies and formal variations, whereas postmodern housing groups emphasized the transmission of traditional values and favored more conservative approaches to building composition.

Figure 5. Examples of small HEs in different styles



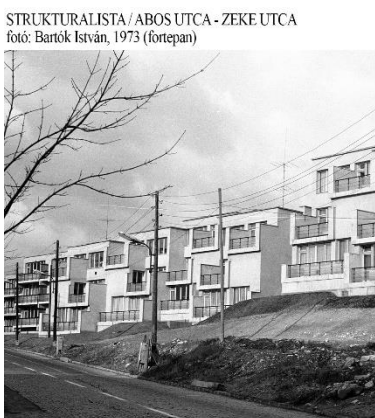
HÁBORÚ UTÁNI MODERN / LEHEL TÉR
fotó: Ráth László kb. 1950 (Prakfalvi, 2009)



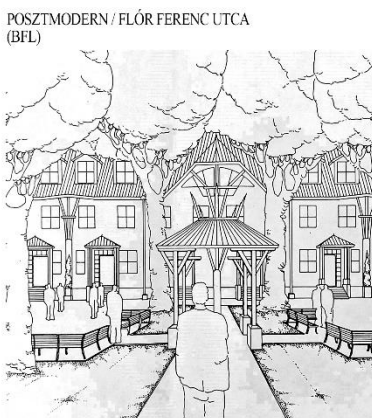
SZOCIALISTA REALISTA / VIHAR UTCA
fotó: UVATERV 1956 (fortepan)



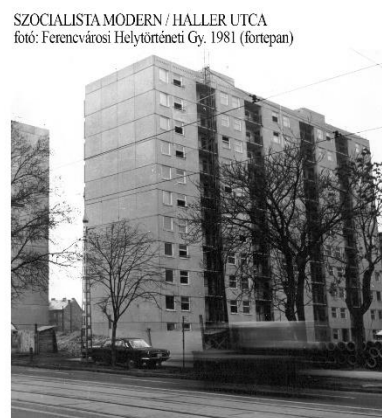
SZOCIALISTA MODERN / EPRES SOR
(Rátonyi, 2013)



STRUKTURALISTA / ABOS UTCA - ZEKE UTCA
fotó: Bartók István, 1973 (fortepan)



POSZTMODERN / FLÓR FERENC UTCA
(BFL)



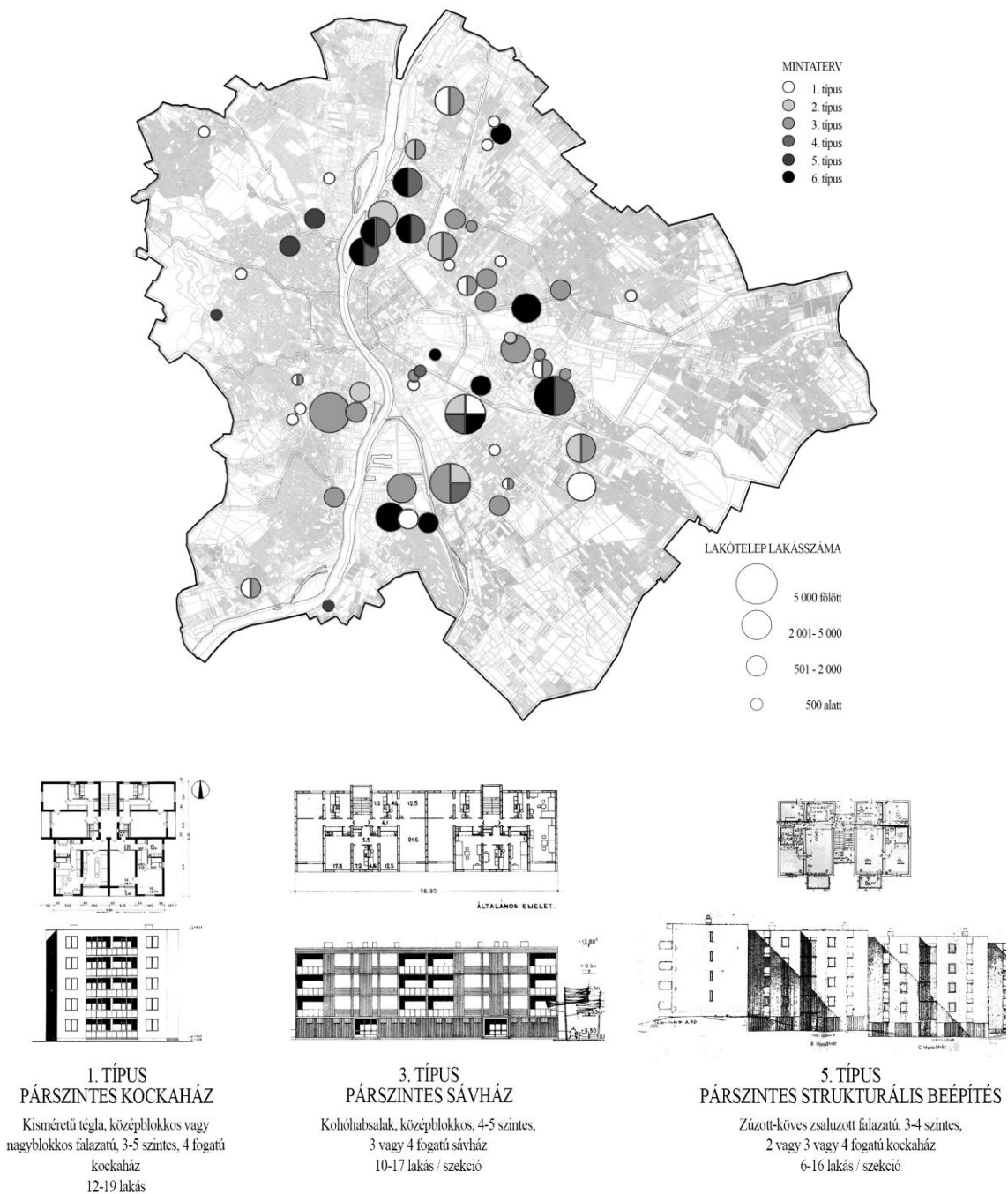
SZOCIALISTA MODERN / HALLER UTCA
fotó: Ferencvárosi Helytörténeti Gy. 1981 (fortepan)

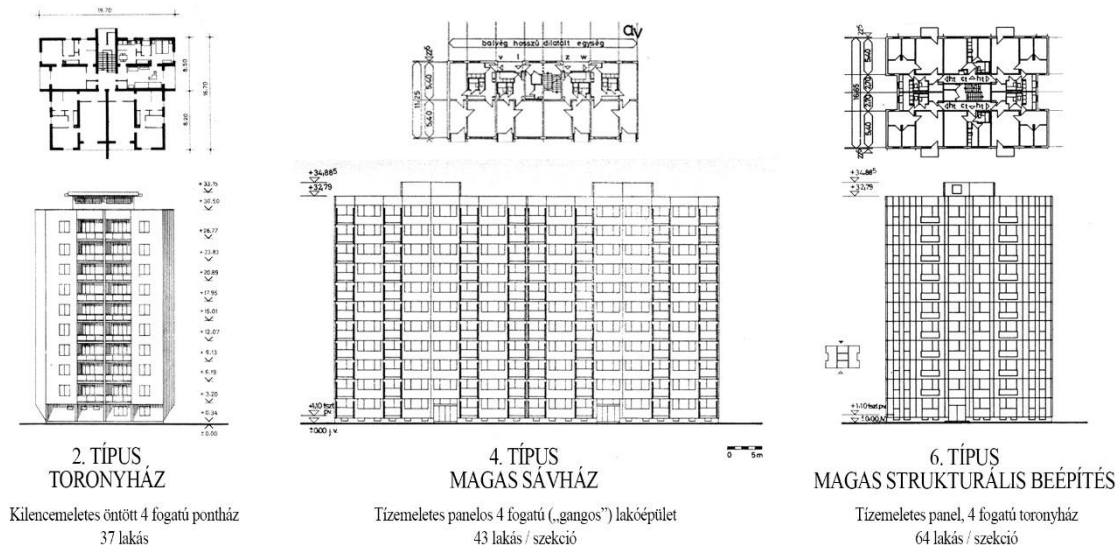
Across architectural styles and historical periods, standardized building plans have played a significant role in Hungarian housing developments. The practice of mass, planned, and centralized housing construction often mandated the use of proto-designs, which is why typical residential buildings based on these plans can be found from the earliest small-scale HEs

through to the end of the socialist era. As a consequence, the same prototype plan was sometimes implemented in up to 20 different districts of Budapest, across varying topographical, social, and built environments (see Figure 6). This is one of the main reasons why the most enduring architectural values of these housing estates are not to be found in the formal qualities - either interior or exterior - of individual buildings, but rather at the scale of urban design: in the urban form, plot structure, open space systems, and their relationship to their environment.

Figure 6. Buildings constructed in Budapest based on six different prototype designs

Source: MOT 1966, MOT 1967, TTI 1966, TTI 1977





THESIS 6: The most influential architectural shaping force in the small-scale housing estates constructed on Budapest’s between 1945 and 1990 was the architectural standardization characteristic of the given era. More than half of the examined residential buildings were built according to prototype designs, standardized plans, series of type designs, or sectionalized versions thereof (Bene & Szabó, 2025).

Although in public discourse prototype designs have often been associated with the socialist modernist style and, in particular, with industrialized panel construction technologies, they were already instrumental in shaping post-war modernist and socialist realist housing estates. In 60% of the 102 small-scale housing estates, I found residential buildings constructed according to standardized plans. I was able to identify a total of 44 prototypes, the majority of which can be regarded as scale-neutral, appearing in both small- and large-scale housing estates. For this reason, prototype designs can be seen as a connective tissue across various housing developments of the era. A recurring pattern is that, within a single housing estate, several - sometimes up to four - different standardized plans were employed in order to articulate the layout and diversify the housing stock. At the same time, small-scale HES also served as experimental grounds for architectural and technical innovation. Numerous prototypes that were never repeated elsewhere are known (e.g., the experimental estate at Budafok), as well as widely used standardized plans whose first experimental applications occurred in small HES (e.g., the point block on Kelemen László Street). It is also noteworthy that, despite the prioritization of standardized designs, some buildings were built using unique, partially unique, or repeatedly reused individual plans.

Transformations

By examining the location, urban context, and urban design and architectural characteristics of small HES built in Budapest between 1945 and 1990, it becomes possible to analyze how these factors have evolved from their construction to the present day (Figure 7). The most comprehensive transformations occurred prior to the political transition of 1990. During this period, the built environment of several sites changed significantly due to the construction of large HES and infrastructure developments, as well as the expansion of existing estates through the addition of new residential buildings or the extension of existing ones with extra floors. Following the political transition, the fragmentation of ownership through privatization played

a major role in shaping the physical characteristics of these small HEs in diverse and often uncoordinated ways. Examples include the territorialization of open spaces by residents, and the emergence of parking-related issues due to changing mobility patterns - resulting in parked cars occupying open spaces in approximately one-third of the housing estates under study. Furthermore, renovations of buildings on common or floating plots have typically taken place at the individual building (condominium) level, rather than at the scale of the entire estate. The transformation of ownership structures and lifestyle is most visibly reflected in the appearance of “Private Property” signs at 30 locations and the installation of fences around 13 estates.

Figure 7. Physical transformations of small HEs



ÚJ SZOMSZÉDSÁG / ZILAH UTCA
fotó: fentrol.hu 1972



ÚJ ÉPÜLET / KELEMEN LÁSZLÓ UTCA



TETŐTÉR BEÉPÍTÉS / VILLÁNYI ÚT 18.

TERRITORIZÁCIÓ / SZENT LÁSZLÓ TÉR



BELÉPNI TILOS! / DAYKA GÁBOR UTCA



ELKERÍTÉS / KALAP UTCA



Similar patterns can be observed not only when analyzing changes at individual sites but also when comparing post-transition small-scale housing developments - so-called gated communities - with their state-socialist predecessors. Differences in location, zoning classification, building height, residential density, and transportation infrastructure all indicate that contemporary housing developments prioritize profit maximization to a far greater extent than earlier ones. Pre-1990 small housing estates demonstrate a more deliberate approach to location, urban form, transportation networks, architectural quality, and public amenities. Their open spaces, plot structures, and spatial use patterns were more accessible to the public and served a broader community.

THESIS 7: Due to their open and inclusive urban design, the small housing estates could serve as positive symbols of a liveable and lovable urban residential environment. However, the physical transformations that have taken place since the political transition of 1990 have increasingly undermined this potential. The fencing of plots, the proliferation of “No Trespassing” signs, and individualized building and apartment renovations are

progressively transforming these estates into closed territorial units, fragmenting them into isolated buildings. (Bene, 2025b)

The gated and inward-looking nature of new residential developments, along with the processes observed in small housing estates, highlight the unique value of the seven estates where, despite being situated on privately owned land, open spaces remain fully accessible to the public even today.

SUMMARY

In my doctoral dissertation, their physical characteristics of small-scale housing estates (HEs) built in Budapest between 1945 and 1990 was examined. My aim was to contribute to a broader understanding of the housing narratives of the period by exploring an often-overlooked alternative: the small housing estates. Although my research investigated buildings from the past century, these developments may also serve as relevant precedents for contemporary housing projects. In this manuscript, I defined the concept of HE and compiled the most comprehensive catalogue to date of Budapest HEs from this era. My case studies were analyzed across three scales—environment, urban planning and design, and architectural. The 102 case studies are inherently diverse, including peripheral HEs, suburban secondary centres, central high-rise buildings, workers’ and elite HEs, former military barracks, cooperative developments, experimental estates, and developments representing a range of architectural styles such as post-war modernism, socialist realism, socialist modernism, structuralism, and postmodernism. Despite their differences, these HEs share common traits: a small scale and a human-centred design. These qualities offer valuable counterpoints to both the often dehumanized, prefabricated large HEs and the overly stylized, enclosed, and spatially inefficient contemporary residential projects. Globally, there is an urgent need to develop sustainable, innovative, and affordable housing systems. Small-scale HEs may serve as particularly effective tools and precedents in this regard. They were constructed in a wide variety of locations across Budapest, including areas that were not targeted for large-scale HEs. As a result, they are embedded in diverse natural, built, and social environments. My analysis revealed that the spatial quality of their neighborhoods is primarily shaped by their location and proximity to the city centre. Due to their modest scale, these HEs did not drastically alter their surroundings. Most of the examined HEs functioned as urban injections, integrating organically into the existing urban fabric. While their architectural forms were largely determined by standardized designs, commonly used in large HEs as well, their thoughtful urban planning and design allowed them to evolve into more liveable and beloved residential environments. Their urban character, master plan, plot structure, open space systems, and—most notably—their scale, enabled the creation of high-quality urban living conditions. Especially exemplary is their openness and inclusive design approach, best demonstrated through the diversity of plot structures (e.g., multi-plot, single-plot, floating-plot) and their general lack of enclosure. Despite the widespread use of prototype architectural plans, their urban forms remain varied. A wide range of architectural styles can be found among these HEs—many even combining them. Their architectural quality is further illustrated by the low proportion of one-room apartments and the prevalence (over 90%) of dwellings with balconies or loggias. Due to their integration into the urban fabric and their architectural and urban design qualities, the small HEs have successfully established sensitive, affordable, adaptive, and resilient models of mass housing in various parts of the city. However, the changing attitudes of recent decades have not only shaped the physical form of new residential developments but have also significantly eroded

the open and inclusive characteristics of small HEs built between 1945 and 1990. Increasingly, small HEs are becoming gated, fragmented entities. This underscores the urgency of recognizing and preserving the values and potential embedded in these housing groups, to ensure their relevance and adaptation for 21st-century urban living.

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