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Quality of Social Space in Selected Contemporary Multifamily Housing Complexes in Poland's Three Biggest Cities

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Abstract. The investment boom in multi-family residential buildings observable in Polish metropolises at the turn of the 20th century seems to have slowed down. Due to the growing difficulty in obtaining and repaying mortgages, potential customers have become more demanding. Users' needs come first once again, including the need to dwell in beautiful surroundings. Developers implementing projects of multi-family housing estates in different scales more and more often pay attention not only to the floor area, but also to the aesthetics of new buildings. Many housing estates put into use in Poland in recent years are as good in this respect as their contemporary western counterparts. Quality of workmanship and finishing standards of buildings and their immediate surroundings increase, too. This study covers examples of new housing investments, regarded as prestigious, from Poland's three biggest cities (Warsaw, Cracow, Lodz), implemented in 10 recent years. The goal was to verify by means of a comparative analysis whether their architectural quality has changed compared to previous years. Does it mean that beautiful residential architecture comes into being? Is it a common phenomenon? Is life comfortable in beautiful, prestigious housing estates? Do they form real, efficient habitats, or only bedroom communities, or are they another type of investment? What are the relations of contemporary multi-family estates with the urban tissue in light of the growing spatial chaos in Poland's biggest cities? According to the study results, in recent years Poland saw more and more multi-family housing estates, attractive in their contemporary form, furnished with well-tended and carefully arranged social – predominantly green – spaces. Alas, due to a limited number of services they are usually closed enclaves, often fenced. Frequently they lack sufficient services necessary for proper functioning of the housing environment: trade, education (nursery and primary schools), healthcare, basing on the existing overloaded city infrastructure. Therefore, their contribution to building of sustainable spatial structures is limited, not to mention such obvious drawbacks as lack of continuity of the public domain in the form of public greenery systems, pedestrian routes, or squares. Responsibility for this situation goes not only to designers and investors of such complexes, but mostly to local authorities, whose goal should be to maintain spatial order in cities. These are still, however, single islands on the sea of mediocre dense residential architecture. Growing transport-related problems result from scarcity of appropriate road infrastructure and limited municipal investments in public transport and education / sports services, which do not balance the increase of developers' residential investments. One of the basic causes of this situation is the aforementioned crisis of spatial planning, observable in the three cities included in the study.



1. Introduction

Cities and metropolitan areas unavoidably become a natural environment for residence and life of contemporary man. The 21st century has already been dubbed '*the century of cities*', and since 2006 more than 50% of the globe's population live in cities [1]. In this respect Poland (population 38.42m¹) seems to fall within the range of the European average. Nevertheless, when comparing it to states with similar populations from the area of the European tradition of building cities (e.g. Canada – 36.5m; Spain – 46.4m; or Ukraine – 45.1m residents in 2015²), one can see that in Poland the share of mid-sized cities (with populations up to 100,000 – 393) and small towns (with populations up to 10,000 – 504) in the total urbanised areas is much bigger³. Only in 5 biggest cities the population exceeds 500,000, and only in the capital, Warsaw, it is higher than 1 million. Cracow is Poland's second biggest city, with the population only slightly above 765 thousand in 2016⁴, whereas populations of comparable cities in the states referred to above (the second largest cities) are definitely higher⁵ and usually exceed 1.5m residents [1]. In Poland's third biggest city, Łódź, which was also included in the study presented herein, the population reaches 700,000. Despite this, it is estimated that nearly 70% of Polish households are located in cities⁶, with nearly 20% of all apartments in the scale of the country situated in Poland's five biggest cities⁷ - these are usually apartments in multi-family buildings. It is so despite the observable outflow of some residents of big cities (e.g. Poznań, Warsaw, Cracow) to adjacent communes, where they find residence predominantly in typologically diversified one-family buildings.

After the fall of communism in 1989 Poland faced a housing crisis. During the first years of the free-market economy many new apartments in multi-family buildings were put into use in numerous towns and cities. At the turn of the 20th century the demand and supply were so high that in most cases attention was paid predominantly to the economic account and quick profit for the investor, rather than to the quality of the housing environment, or correct functional solutions in apartments.

2. Spatial and Legal Situation of Housing Investments in Big Polish Cities

Over the last 25 years the space of Poland's three biggest cities⁸ has seen a considerable number of all sorts of investments with the housing function, implemented mainly by private investors on plots of land differing in terms of size, dispersed nearly all over the administrative territories of the cities. Definitely better visible and economically more profitable for investors are intense multi-family projects, or in the

¹ In July 2017 according to the Central Statistical Office of Poland <http://stat.gov.pl/podstawowe-dane/> - access on 28 Dec. 2017.

² Ibidem.

³ Altogether in Poland, according to statistical data, there are 923 towns and 2176 villages http://eteryt.stat.gov.pl/eTeryt/rejestr_teryt/udostepnianie_danych/baza_teryt/uzytownicy_indywidualni/wyszukiwanie/wyszukiwanie.aspx?contrast=default – access on 28 Dec. 2017.

⁴ http://www.krakow.pl/biznes/1140,artykul,liczby_o_krakowie.html- access on 05 June 2017.

⁵ For the sake of comparison: in Canada – Montreal – 1,620 thousand; in Spain – Barcelona – 1,605 thousand; in Ukraine – Kharkiv – 1,450 thousand; in Germany – Hamburg – 1,680 thousand. Similarly, to the Polish cities referred to above, this concerns cities within their administrative limits, these data do not take into account actual agglomerations or urban functional areas [1] – cf. also: <http://ville.montreal.qc.ca>; <http://www.bcn.cat>; <http://www.hamburg.de>; <http://www.city.kharkov.ua>- access in June 2017.

⁶ Out of the total pool of housing resources, in 2016 over 67% of apartments were located within city limits. Data after the Central Statistical Office of Poland - <http://stat.gov.pl/obszary-tematyczne/infrastruktura-komunalna-nieruchomosci/nieruchomosci-budynki-infrastruktura-komunalna/gospodarka-mieszkaniowa-w-2016-r,7,12.html> – access on 28 Dec. 2017.

⁷ That is in Warsaw, Cracow, Łódź, Wrocław, and Poznań, where the construction industry is still experiencing a real boom in terms of multi-family projects. A similar situation can be observed in several cities within the Upper Silesian conurbation in the Province of Silesia, which consists of the total of 19 cities and towns, with the capital in Katowice (total population over 2.1m); as well as in Tricity – Gdańsk, Sopot, and Gdynia (total population ca. 750 thousand).

⁸ Especially in Warsaw and Cracow.

case of smaller plots – single multi-family buildings, sometimes combined with services. Such buildings, as well as complexes of buildings and single one-family houses, are most often built based on administrative decisions. A true tender spot of most big cities in Poland is the legal situation in terms of planning, which leads to growing spatial chaos⁹. Most building permits referring to multi-family buildings and complexes issued after 2003 are based on administrative decisions on conditions for construction. According to the common practice they do not have to respect the terms of valid Studies on Spatial Development Conditions and Directions¹⁰, and only provisions of the construction code, which are far from perfect.

Once the quality of the housing environment in the People's Republic of Poland was influenced by – besides spatial development plans – the so-called 'urban planning standards'¹¹[2]. And although the quality of the architecture of prefabricated large-panel housing estates implemented in compliance with their requirements left much to be desired, the standard of apartments, accessibility to basic services, including educational ones, and recreational areas were most often provided quite correctly. Even today projects implemented at the time are still regarded as attractive, especially by families with children, which is demonstrated in numerous studies [3,4,5] and property offers on the so-called secondary market in Cracow, Warsaw, or Łódź.

Whereas urban planning and architectural issues, including complicated problems of shaping of the housing environment, urban recreational zones, and public spaces have been present in the public debate in western countries for decades now (most of all in Scandinavia, Holland, Switzerland, France, or Spain), in Poland these problems are still perceived through the prism of particular interests of residents and pressure groups [6,7,8,9].

Sometimes newly erected multi-family residential projects create composed units or constitute harmonious complementation of earlier – today historical – architectural and urban complexes. At times they have no compositional relations whatsoever with the existing context, or they even disturb composed spatial layouts, existing for decades (which is particularly well visible in residential or residential / service investments which add to multi-family housing estates from the second half of the 20th century). In years 2003-2012 tens of buildings and small multi-family projects were implemented this way. Their urban composition (or rather outlines of their buildings) resulted only from the shapes of available plots and the minimum permissible (according to the then valid regulations) distances from their limits and from neighbouring buildings [10,11]. Residents' comfort [12] was irrelevant, as due to enormous deficits on the housing market nearly all projects had buyers, including also banks and capital groups, which regarded such properties as an investment. Such projects, deprived of appropriate relations with the context and the desired spatial relations inside the estate, are still implemented. Many of them remain outside urbanised development zones, amongst greenery, in agricultural areas, or within territories of former villages, which today are located within administrative limits of cities. On one hand, it has a positive effect on residential conditions – thanks to contact with nature. On the other, however, in the course of their use it turns out that housing estates deprived of basic services of commerce, education, or healthcare, as well as transport links with the city centre, become satellite towns,

⁹ None of the big cities has a comprehensive development plan. For example, in June 2017 only 50% of the area of Cracow was covered with local spatial development plans, which should translate directly into building permits issued in the city. The lack of coordination between many adjacent plans has nearly become a standard. In other cities the situation is similar, the coverage of cities with valid masterplans is different and variable, due to developing subsequent planning documents, as well as to appeals from and consequently annulments of the documents in force - http://planowanie.um.krakow.pl/bpp/strona_mapy.htm; - access on 30 Jun. 2017; also: <http://architektura.um.warszawa.pl/studium>; <http://www.mpu.lodz.pl/page/511,studium.html?id=7> – access on 29 Dec. 2017

¹⁰ Which do not constitute the local law, unlike the plans. Currently, valid studies (which mainly theoretically are to contain guidelines for the plans) have been resolved for Łódź – 2010; Cracow and Warsaw – 2014 – *ibidem*.

¹¹E.g. Regulation No. 9 of the Minister of Local Economy and Environmental Protection dated 29 January 1974 on Indicators and Guidelines for Residential Areas in Cities. Building Journal No. 2 dated 2 Feb. 1974, item 2.

unwillingly inhabited, where the value of properties drops. Consequently, interest in apartments in buildings erected this way has been slowly going down.

3. Infrastructural Issues of New Housing Investments

Municipal administration still does not keep up with the need to provide basic services, utilities, roads, good public transport connections (most of all rail transport), and public spaces, including recreational green areas, far from city centres¹². Results of many scientific studies [13,14,15] show that these elements are necessary for appropriate shaping of the housing environment in the contemporary world. Investors arrange having their investments connected to the municipal grids on their own account, which prolongs the procedures, but eventually it increases the costs, as well. It also leads to excessive growth of access roads and utility grids in adjacent investments erected independently; thus grounds which could have been allocated to recreational areas dedicated to residents serve other purposes, and their functions are doubled. Due to the lack of sufficient public transport services in locations more distant from city centres, it is necessary to increase, usually only during their utilisation¹³, the surface area of car parks servicing sprawling housing estates. Most often it is at the cost of green areas planned at the stage of initial concepts of the housing estates, the only ones which have not been covered yet¹⁴. In many European countries the situation is quite different. Individual car traffic is perceived as dispensable and increasing costs (as well as non-ecological), most of all by people who purchase or rent apartments. It is also stimulated by costs of car insurance and road taxes, much higher in cities than elsewhere. Many city residents can do without cars on the everyday basis, taking advantage of a diversified offer of public transport (including e.g. city bikes). This brings about no need to secure parking spaces for all apartments in new investments¹⁵.

4. The Search of Comfort

Sustainable development principles and paying attention to ecological and pro-health aspects of the urban housing environment underline many concepts of designing new and revitalising existing housing resources in cities¹⁶. Everybody would like to live amongst greenery, in an area free from car traffic and noise, with good accessibility to parks, playgrounds, services, education, and public transport. Best as close to a historical city centre as possible, or in other city districts regarded as prestigious ones [16]. In light of the study results quoted above, architects, urban planners, municipal officials, and developers should aim to create such living conditions for as many residents as possible. Obviously, it is impossible, and life in the city in multi-family buildings stands for many compromises.

The growing awareness and changing needs of residents are also pointed to by the results of surveys evaluated by M.Gyurkovich¹⁷. The study was carried out amongst people visiting the Cracow Housing

¹² For example, the city of Cracow owns only 8% of areas within the city limits, including the entire complex of Wolski Forest and many streets and roads; therefore, it has limited options of organising share spaces – msip.um.krakow.pl – access on 29 Jun. 2017.

¹³ Which is a common practice due to the disproportion between parking spaces and the development intensity, imposed by the conditions for constructions specified in administrative decisions (unfortunately, improvement of public transport near investments falling under such decisions is not able to keep up with it).

¹⁴ It is so also in existing housing estates from the time of communism, where – e.g. in Cracow – the accessibility of public transport has been constantly improving.

¹⁵ Due to the spatial problems presented, but also due to cultural habits in Poland, where a car is still perceived as a token of luxury; as of today it still seems impossible, which is also demonstrated in the results of surveys and earlier observations of E. Stachura [6].

¹⁶ From amongst Polish scientific studies, one should mention the works cited in the references, by G. Schneider-Skalska, H. Skibniewska et al., H. Zaniewska et al., J. Gyurkovich, M. Jagiełło-Kowalczyk, as well as collective works edited by Z. Bać or M. Gyurkovich.

¹⁷ Compiled as a result of cooperation between the Faculty of Architecture, Cracow University of Technology, and one of all-Poland's developers (implementing big housing complexes, mainly in Cracow, Wrocław, and Silesia). The survey was conducted in spring 2017, and its results were evaluated in June 2017.

Fair in 2017. Most respondents declare their willingness to live near playgrounds, parks and forests, as well as public transport stops. The majority, irrespective of the age group, declared their willingness to settle in the north-western part of the city, for years now perceived as more attractive and prestigious due to good access to green areas (Błonia Park, Wolski Forest, as well as the Cracow Valleys Landscape Park, located a bit further), or in the vicinity of the historical city centre (2nd district). All these areas are covered with a constantly extended dense network of efficient public transport¹⁸. Nevertheless, the respondents usually do not wish to give up extended car parks in the direct vicinity of their apartments, although probably most of them will not use a car on the everyday basis in the future (which also appears in the surveys and is consistent with trends observable in developed countries). It could be also a reflection of the fact that many young people aged 20-40 (and such people were mostly respondents in the surveys) looking for accommodation in Cracow come from rural areas and a car is a necessary mean of transport for them, securing contacts with their families. Future residents also want to decide about the surrounding green areas and other types of public spaces, which is consistent with examples of good urban planning practice in many European countries [17].

Another issue observable in the survey was safety, which constitutes a subject of scientific interest of numerous architects and urban planners [18]. The problem is closely connected with the topic of open areas, fencing cities, appropriate functioning of the public domain, sequences of green areas, and accessibility of services. Whereas it could be assumed that the social space inside residential quarters (of some part of the space between blocks of flats arranged in lines) should be accessible exclusively to residents of the complex (housing estate), when one decides to live in the city (and not in the countryside), one should observe the need to not dedicate the entire area of housing estate to their residents. This leads to pushing necessary services to temporary structures arranged in rights-of-way or in *nobody's zones*, as well as to the loss of public spaces testifying to the *'urbanity of the city'*¹⁹, which should be connected with buildings furnished with shops, services, workplaces, and dwelling places at the same time. Such solutions seem to be supported by survey respondents²⁰, as well as by researchers engaged in problems of the process of contemporary shaping of cities and housing environment, who also refer to previous theoretical studies and manifestos and to examples of well-functioning foreign and Polish projects.

5. Positive Examples of Implemented Multi-Family Residential Projects in Poland's Biggest Cities

In recent years, users' needs, including the aesthetic ones, have taken the first position once again. Developers implementing new multi-family residential projects in different scales more and more frequently pay attention not only to the floor areas capable of bringing measurable profits, but also to the aesthetics of the new buildings. The study covered examples of new housing investments regarded as prestigious ones from Poland's three biggest cities (Warsaw, Cracow, and Łódź)²¹, implemented over the last decade. The objective of the study was to verify whether the quality of the housing environment

¹⁸ In terms of efficiency of the public transport, Cracow is one of the leading cities in Poland, and even in Central-Eastern Europe; so is Warsaw, which has two underground lines and a rapid urban railway; a bit worse situation is in Łódź.

¹⁹ Cf.: works by such authors as J. Gehl, J. Gyurkovich included in the list of references.

²⁰ Wishing to live a 5-10-minute walk away from all services, public spaces, and recreational services, as they declare in the surveys.

²¹ Among them, Warsaw, mainly due to the fact it fulfils the function of the capital, as well as a large business, trade, industrial, cultural and scientific centre, still attracts crowds of new residents from the entire territory of Poland (1.754m residents); in Cracow the outflow of residents to the neighbouring communes is roughly balanced with the inflow of newcomers connected with IT, higher education, and scientific institutions (765,320 residents); Łódź is the only big city in Poland which after the fall of communism observed a considerable drop in its population, caused largely by closing many industrial plants (696,520 residents); population as of 1 Jan. 2017 - <http://stat.gov.pl/obszary-tematyczne/ludnosc/ludnosc/powierzchnia-i-ludnosc-w-przekroju-terytorialnym-w-2017-r-,7,14.html> – access on 28 Dec. 2017.

and the aesthetics of buildings and shared spaces had changed compared to the previous period. Indeed, in this period more housing estates with attractive contemporary architectural forms were built in the examined cities²², equipped with well-tended and carefully composed social spaces – most of all green ones [19]. Investors realised that securing a high-quality urban, architectural, and landscape design and its best execution possible would contribute to the creation of high-quality housing environment, more and more often looked for by customers. Consequently, it would multiply the profits, as prices of apartments in the new housing estates are much higher than on average in individual cities.

In recent years a place that has become one of the most prestigious ones in Warsaw is Powiśle. Squeezed in between the Vistula Embankment and the Old Town, and gradually renovated river boulevards, it is located within the limits of the very city centre, close to the most important state, cultural, and scientific institutions, in the vicinity of historical parks and residences. It is filled with the tissue deriving from different epochs of Warsaw's difficult urban heritage. More and more often one can encounter the latest edifices of culture and science²³, as well as residential and service buildings and complexes. There is no doubt that they stand out with their standards and aesthetics amongst satellite housing estates mushrooming in the suburbs²⁴. Two complexes designed in Powiśle by the Kuryłowicz & Associates Studio deserve special attention: Nowe Powiśle²⁵, and Powiśle Park²⁶.

The 'Nowe Powiśle' housing complex [19] fills the development quarter between Copernicus Science Centre²⁷ and the Library of the University of Warsaw, in one of the most exposed places in this district, most often visited by residents and tourists alike. It offers its residents luxury apartments with different floor areas, located in seven-floor buildings composed as quarter ones, with elegant modernist architecture. A lot of glazing, terraces, and loggias open towards the Vistula river, the prestigious edifices referred to above, and towards quarter interiors with carefully composed greenery, located on an underground garage. Ground floors facing the streets house service outlets.

The complex 'Powiśle Park', on the other hand, is located in the context of a large complex of municipal green areas²⁸. It constitutes a part of a new residential and service project, complementing a group of several condos from the times of communism at the junction of Ludna and Herling-Grudziński streets. It is definitely a more private and peaceful location. Five detached residential buildings accompany an oval office building dubbed 'Black Monolith'²⁹. The buildings with large glazed areas correspond with their layout to the residential condos located nearby, albeit the standard of the offered apartments, as well as the aesthetics of the buildings and of the shared green space are on a very high level. The finishing materials are glass, stone, concrete, and timber, and asymmetrical compositions of the elevations along with the vertical divisions applied make the buildings seem much slenderer than they really are, corresponding to enormous park trees. A public square facing the office building leads to the housing estate, which is also accessible from the side of the parks and the neighbouring residential complexes. Hiding car parks underground allowed to secure the sense of continuity of green areas between the parks that surround the complex.

²² As well as in many others.

²³ Such as Copernicus Science Centre, or new edifices of the University of Warsaw and the Fine Arts Academy.

²⁴ Although true gems can be found among them, too.

²⁵ The investor of this one, implemented in 2007-2010, is Menolly Homes Poland, <https://www.apaka.com.pl> – access on 03 Jan. 2018.

²⁶ Implemented in 2009-2013 by Mazowiecka Spółka Gazownictwa along with a small office building – the company's new seat; Investment awarded with the title 'Construction of the Year 2013' - <https://www.apaka.com.pl> – access on 03 Jan. 2018.

²⁷ Winners of many awards, Copernicus Science Centre nominated to the Mies van der Rohe European Award.

²⁸ Located at the Vistula Embankment at the back of the National Museum and the Studio Buffo Theatre, Gen. Rydz-Śmigły Park, Janina Porazińska Park, and Jerzy Janicki Square – from the side of the Vistula river.

²⁹ <http://sztuka-architektury.pl/article/4157/czarny-monolit> - access on 02 Sep. 2014.



Figure 1. Prestigious housing estates: a), b) ‘Novum Apartments’ in Cracow; c) ‘Powiśle Park’ and d) ‘Nowe Powiśle’ in Warsaw; e), f) lofts and new housing in Księży Młyn former factory in Łódź – photos by M. Gyurkovich

Similar principles governed the construction of the ‘Novum Apartments’ residential complex, located in the context of a large green area at Rakowicka street³⁰. It is a renewal of former military grounds, located in the very centre of the city, between the Cracow Transport Centre, the University of Economics, and the largest green area here, the historical Rakowicki Cemetery. It is one of many residential investments implemented recently close to the historical city centre [20], within the UNESCO protected zone. Some former army structures on the neighbouring plot, erected already at the times of the Imperial Royal Austria, house the Home Army Museum. This prestigious and exposed

³⁰ 1st stage implemented in 2010-2014 according to the design by IMB Asymetria; 2nd stage since 2014 - <http://imbasyetria.pl> – access on 03 Jan. 2018, also [19].

location contributed to the selection of designers, and consequently to buildings exhibiting high aesthetic values. The first stage of the housing estate comprises four buildings, which form semi-open quarters.

Although the frontage is far from the street, the ground floors house shops and cafés, as well as other smaller service outlets. Access to public transport stops and the railway and coach stations are great advantages of this location³¹. Nearby there is a primary school and a church, as well as a healthcare centre and public administration buildings. Corresponding to the remains of the army structures and 19th-century complexes still existing opposite the barracks and the university, the designers decided to use brick. They applied a graphite brick juxtaposed with light timber panels near windows and loggias and large surfaces of white plaster. This clearly places this project in our contemporary times, far from historicising postmodern pastiche. This purpose is also served by simple forms of the buildings, although the very concept of organising the quarters, which does not make a direct reference to the linear layout of the former army barracks, is absolutely postmodernist. High-quality finishing and a carefully developed design of green areas, leaving out a considerable group of trees growing here, make this complex remind one of an oasis of peace in the context of the nearby noisy quarters in the vicinity of the railway station.

The example of Łódź referred to herein is also a revitalisation, but this time of one of no longer used 19th-century factories, peppering the entire territory of the city, dating back to its golden age. The project comprised an adaptation of a historical sewing room in the Księży Młyn complex along with the extension with a few new multi-family residential buildings situated around a small waterhole. The entire Księży Młyn complex³², surrounded by vast green areas (e.g. Źródlińska Park), is located to the south-east from the very heart of the city. This specific ‘city within the city’ for several years now has been covered with a broad revitalisation programme. New business investments, connected with the function of a technology park, are implemented in its vicinity. This time the designers³³ also applied a noble material continuing the postindustrial tradition of this place – red brick combined with black metal and glass. Consequently, in terms of materials the new parts of the old sewing room (loft apartments) and the newly erected buildings correspond directly to the renovated, historical, monumental sewing room³⁴. Slightly historicising, but geometricised details clearly help to distinguish between the old parts and the newly designed ones. The aesthetics of the buildings and the climate of the land development correspond to contextually similar English or Scandinavian projects, with high-quality housing environment. It is quite a rare practice in Łódź, which is definitely less affluent than the other big Polish cities and which grapples with big social and demographic problems.

6. Conclusions

To conclude, it should be stated that an improvement in the quality of architectural forms of buildings and social spaces can be observed in complexes of multi-family residential buildings regarded as the most prestigious ones (Figure 1). They are still, however, single islands on the sea of mediocre all too dense residential architecture, coming into being in Poland’s biggest cities. Most often they are implemented in central, prestigious locations in close vicinity of public spaces, the most important cultural institutions, universities, or parks. Along with top-quality finishing of buildings and green areas, it offers a possibility of quoting very high prices, which makes these projects not available to everyone. Unfortunately, due to limited numbers of service outlets and incorrect forms of edges of the complexes, most often they are closed, even fenced, enclaves. They are, however, equipped with small service

³¹ Just like the vicinity of the University of Economics and the Cracow University of Technology.

³² The ‘Księży Młyn’ complex, consisting of several dozen residential and industrial buildings, was founded as a factory housing estate by Karol Schleiber in the 1870s, 80s, and 90s, following the model of similar colonies in Germany, England, or Spain - <http://www.kultura.lodz.pl/pl/poi/1223> - access on 28 Dec. 2017.

³³ Locally based office: Marciniak & Witasiak Architekci- <http://mwarch.pl/realizacje.php?cat=53&subcat=64> – access on 10 Feb. 2018.

³⁴ Adapted to trade, service, office, catering, but also residential needs – on upper floors. Along with the new buildings the complex offers diversified apartments in terms of size and character, as well as many car spaces in underground garages, all connected with pedestrian bridges on different levels.

outlets or offices facing the main traffic routes. In terms of the services of trade, education (pre-schools and primary schools), and healthcare, they rely on the existing overloaded urban structure. Hence only to a limited extent do they contribute to building a sustainable spatial structure of the city, let alone such obvious disadvantages as the lack of continuity of the public domain, in the form of municipal greenery systems, pedestrian routes, or municipal squares.

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