Loss of Potential: Large-Panel Housing Estates – Czyżyny Case

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Abstract. Large-panel housing estates are an inseparable element of the city structure, constituting approx. 35% of all housing resources in Poland. At the same time, they are recognised as crisis areas more and more frequently. Their functioning is burdened with a number of ‘genetic’ defects, like monofunctionality, monotony of development, undefined spaces, the lack of integration of the housing estates with the remaining part of the city, etc. However, it is undeniable that they also have their own assets, where the resource of open space and green areas seems to be the greatest potential. Many of the housing estates also exhibit unique spatial values, such as the vicinity of watercourses, greenery, or areas with historic and cultural values. Finding the potential and extracting its characteristic features, spatial values etc. are measures which offer the chance for the creation of a unique housing environment. In the process of revitalisation this potential could become a key element for improving this kind of structures, as well as creating complementarity and continuity of public spaces not only within the estate, but also in the city scale. The problem is that nowadays in many cases this potential is gradually annihilated, which is mostly connected with ongoing changes, dominated by chaotic densification of spaces with new buildings, modifying the initial arrangements of large-panel housing estates, and generating subsequent spatial, functional and social issues. In such a situation, while talking about the revitalisation process, it is necessary to mention that not only making use of the present potential is needed. It is also crucial to protect it, or retrieve it, if still possible. Against such a background of the outlined issues, this paper presents a case of two Cracow-based large-panel housing estates, located on both sides of the former runway of the airport in Czyżyny. This is an example of estates with a huge potential, where one can observe a dramatic process of destroying it. Some chances seem to be irreversibly lost, some seem to still exist. In such a context a question about the future of these housing estates arises.

1. Introduction

Large-panel housing estates constitute ca. 35% of housing resources in Poland. Despite such a frequent occurrence in urban structures, it is still difficult to regard them as elements of the urban environment of full value. They are encumbered with numerous problems, amongst which their monofunctionality definitely comes to the fore. Due to their dominating housing function, these estates serve as mere dormitories of the city; moreover, they constitute enclaves, which are not always sufficiently integrated with the remaining part of the city, existing as solitary entities. Furthermore, they are characterised by undefined spaces between individual blocks of flats, which – amorphous in form – are often referred to as not particularly friendly “no man’s spaces”. On top of that, a low quality of architectural solutions, generating monotony and a low technical condition of buildings are responsible for the fact that such housing estates have won an image which has a strongly pejorative tint. Despite this fact, one could
observe that next to a number of “genetic” defects of such arrangements, they often exhibit a slumbering potential, worth our attention.

The potential consists most of all in many open spaces, and the corresponding possibilities of creating public spaces quite different from the classical urban structure. Therefore, despite an often low quality of such spaces, it is worth appreciating the very fact of their existence. In the era when the pressure exerted by developers resulting from their urge to get as much profit as possible leads to covering as many square metres of surface area of land as possible, such spaces can be quite important in the process of improvement of the quality of urban housing environment. They offer a chance to create housing environment embedded in greenery, which is less and less frequently encountered in the Polish reality. Furthermore, large-panel housing estates are often located in the vicinity of valuable green areas, watercourses, or other elements, e.g. ones with historic and cultural significance, which, if noticed and made use of, may become important generators facilitating revitalisation processes of such housing estates.

It is necessary to perceive a broader context of such measures [1]. In the reality, intervention in the housing estate structures may have a supralocal range and effect in the context of the city. Housing estate spaces, when properly managed, can become complementary spaces, in doing so supporting the creation of diversity of forms of the urban environment. At the same time, they can significantly contribute to strengthening and building of the system of public spaces, especially in the context of municipal greenery systems.

Regrettably, large-panel housing estates in Poland are more and more often dubbed degraded areas. When talking about their degradation, it should be emphasised that it does not result exclusively from the aforementioned “genetic” defects of these structures, but it is strongly associated with a number of currently ongoing uncontrolled processes, which exact their toll on the operation of these housing estates. The expression of this is chaotic densification by means of new buildings with higher technical standards, but unsatisfactory aesthetic values, and, more importantly, coming into being without relevant relations with the surroundings, often fenced. It generates not only spatial chaos and disturbance of the compositional layout, but it also strongly contributes to breaking the continuity of public spaces. Negative effects can be also perceived in the social dimension, as such measures can intensify social polarisation, dividing residents into better and worse off. Unfavourable spatial changes also entail parking spaces, which come into being quite spontaneously, taking over free spaces and adding to the spatial chaos.

The scale of such destructive and uncontrolled actions, especially in the second decade of the 21st century, is considerable and constitutes a serious threat leading to wasting the potential of housing estates and to the degradation of these areas. Simultaneously, the chance to create complementary spaces, significant in the scale of the city, is being annihilated. In light of the situation described above, one cannot help but quote the potent words by Abraham Lincoln, who once said: “You cannot escape the responsibility of tomorrow by evading it today.” And yet, for many housing estates, their future is in question now.

2. Case of Czyżyny-based housing estates

2.1. Genesis and initial development visions of Czyżyny in Cracow

An example of housing estates with a special potential, but also exhibiting signs of drastic decay, are Cracow-based housing estates: 2. Pułku Lotniczego housing estate, and Dywizjonu 303 housing estate, erected during the period since 1978 until the end of the 1980s. They are located in the north-eastern part of the city, ca. 7 km away from its centre, and they belong to the 14th District – Czyżyny. Their construction, similarly to many other housing estates located in this part of the city, was associated with the second stage of the extension of the metallurgical combine in Nowa Huta and the need to increase housing resources. Nevertheless, their genesis is directly connected with closing down of the Rakowice-Czyżyny airport in 1963, which had been operating since 1912 and had been successively extended, becoming Poland’s second largest airport right before the World War II [2]. Releasing these grounds left a vast, empty area, equipped with all utilities, with a nearly 2-km-long runway. Consequently, it
opened up new investment possibilities. The total general plan from the second part of the 1960s for the territories assumed to allocate most of them to residential housing, and some of them to the construction of university campuses and a huge park.

In consequence, more detailed urban planning concepts were developed. The first of them, selected in a competition in 1968, focused predominantly on areas in the eastern part of the runway and it comprised construction of housing estates (Figure 1). The former runway was the main element influencing the form and urban layout of the housing estates, becoming their backbone and their main compositional axis. The Dywizjonów 303 and Kościuszkowskie housing estates were planned to the north from it, and to the south – the 2. Pułku Lotniczego housing estate was to be built. The runway itself, on the other hand, along with the areas surrounding it, was to constitute the key recreational public space filled with greenery. On both ends of the runway certain landmarks were planned: on the eastern side a dominant was to be created by means of tall tower blocks, on the western side a stadium was to be built. Residential buildings, longitudinal in shape, were to imitate the direction of the runway [3]. Another concept, developed in the first half of the 1970s, referred to areas located to the west of the housing estates and it constituted an urban planning proposal for the campus of the Cracow University of Technology along with dormitories for students and recreational and sports areas and facilities (Figure 2).

The investments of housing estates were commenced only in the second half of the 1970s following the guidelines from the competition, although with numerous modifications and in an incomplete form. The concept of the runway as the main public space was maintained, but it was never attractively arranged and developed, but instead was left as an open space. The only implemented intervention which was to contribute to introducing compositional order and to the identification of a centre for the entire project was the construction of St. Brother Albert church, designed by W. Cęckiewicz.

Despite this, the former runway is permanently and strongly inscribed in the identity of residents of the housing estates, although the current quality of these spaces leaves a lot to be desired in terms of its arrangement. Theoretically, it is a protected area – together with the former aircraft hangar located to the south from it, it is listed in the register of historic monuments of Cracow. It is worth mentioning here that the document currently in force, Study of Spatial Development, recommends the creation of a “Lotnisko” (Airport) Culture Park, which could be a form of protection of the landscape (of the Cracow Fortress) and of the cultural heritage [4].

![Figure 1](image.jpg)

*Figure 1.* Model presenting the concept of the Czyżyny Housing Estate (1968) by W. Cęckiewicz with his team (S. Deńko, A. Wyżykowski, K. Bieda, W. Seruga); [5]
2.2. Potential of Czyżyny-based housing estates

Location of the housing estates within the perimeter of a former significant airport may offer an enormous potential, the essence of which reaches not only the layer of identity, but is associated with great possibilities resulting from spatial conditions; see figure 3. The change of the function and rearrangement of the land of the type along with giving it a new character and meaning is a chance for a considerable improvement of the quality of the housing environment of the estates, which in light of problems characteristic for such estate structures would be incredibly important.
Figure 3. Yellow area – approximate area of the former airport Rakowice-Czyżyny with a specified runway; black buildings\(^1\) – structures erected before 1989, mostly within the scheme of the construction of the Czyżyny housing estate; white buildings – structures introduced after 1989; compiled by the Author on the basis of orthophoto (www.google.com/maps).

The development also covers Kościuszkowskie housing estate, which consists of few buildings located in the north east corner and constitutes an integral part of the analysed project, even though administratively it belongs to another district; this note applies to all plans of Czyżyny-based housing estates presented in this paper.

The former runway along with its surrounding areas, arranged as an open space with the dominating recreational function, unique in its form and function, would have had a chance to become the main public space of a special nature. For the housing estates situated on its both sides it would have complemented and enriched the residential function. Acting as the backbone, or the main compositional axis, it could have also significantly strengthened the legibility of the entire urban layout and become a starting point for the creation of valuable sequences of the public spaces system in the scale of the housing estates, introducing order in terms of their composition and order of precedence. The park or the aforementioned historic hangar situated within the perimeter of the housing estates, as well as many other spaces, would have had a chance to create an integral system of public spaces in a continuous and attractive way.

The existence of a linear recreational space could have become a key element building the identity of these housing estates, which in the case of large-panel housing estates, contemptuously dubbed “blokowisko”, which in Polish means a drab or bleak housing project, could be of utmost importance. An additional advantage is the location in the direct vicinity of the Lotników Park and the Polish Aviation Museum, which additionally strengthens the significance of this place and its cultural values. Each of these elements constitutes a separate value, but functioning together their significance and attractiveness are higher [6].

It is worth pointing out that when talking about the potential of the runway, its significance should be considered not only in the scale of the housing estate, but in the scale of the city. Due to its spatial, historical, and cultural values it offers a potential to create a public space of a citywide significance. Through its size and form it could enter the awareness of Cracow residents as one of easily recognisable
elements, becoming a certain landmark of the city, easily identifiable just like others, already engraved in the awareness of residents of the city (Figure 4).

![Map of landmarks](image.png)

**Figure 4.** Existing landmarks: Błonia Park (1), Old Town with Planty Park (2), the territory of the new town of Nowa Huta (3); a new potential landmark: the former runway of the Rakowice-Czyżyny airport (4) in the vicinity of Czyżyny-based housing estates; compiled by the Author.

It should be pointed out that not only the runway itself offers a great potential, but also the area adjacent to it, along it as well as located to the south-west from it. An appropriate and comprehensive arrangement, next to open spaces, also introducing new functions in a balanced manner, used to have a chance to overcome monofunctionality of the housing estates. The former hangar could have played its role in this respect, which – being offered a new life – could have become an attractive element, boosting the value of these spaces.

The linear character of the runway also stands for the possibility of creating an essential connector strengthening the system of public spaces in the eastern part of Cracow. On one hand, it acts as a seam combining the two housing estates, on the other it leads the user beyond their territory. Appropriate space arrangements, particularly in places of overcoming urban planning barriers, could provide a chance to include the space of the housing estates in the network of public spaces of the city. Continuation of the public space towards the east could create favourable links with the key space in the part of the city – Nowa Huta – an urban planning project that came into being under the communist rule in the first half of the 1950s as a separate workers’ town, erected along with the metallurgical plant as an element of the so-called Six-Year Plan, implemented within the scheme of the policy of industrialisation of the country. Towards the west, on the other hand, it could stand the chance to lead towards the city centre, running through the area in the vicinity of the technology park, the university campus and student dormitories, as well as of the aforementioned Polish Aviation Museum, albeit indirectly, as it is not located right at the runway; see figure 5.
Considerable possibilities resulting from the existence of an open space after the former airport and the potential slumbering in them, as well as the improvement of the quality of the housing environment of the estates brought about this way, constituted the stimulus for undertaking this topic numerous times and for searching for optimal urban planning concepts for these areas by students. Such attempts were undertaken within the scheme of course projects of the Faculty of Architecture and Landscape Architecture at the Cracow University of Technology [7], as well as in the workshop formula during international student workshops Eco Rehab, held in 2012 [8].

2.3. Degradation process and loss of potential

The 2. Pułku Lotniczego and Dywizjonu 303 housing estates alike, along with numerous other Cracow-based housing estates, have been qualified as areas intended for rehabilitation in the spatial policy of the city in force. It has been decided that one of the crucial elements of rehabilitation is “humanisation as a complex social process relating to the entire housing estates, consisting in complementing the social infrastructure and stimulating organisational forms of life and activity of residents in a way that will allow them to regard the housing estate as a friendly place of residence, integrally connected with the city” [9]. Nevertheless, activities carried out at the moment are completely against it. In the second decade of the 21st century Czyżyny has become a place of considerable investments, which are examples of developers’ aggressive policy, but also of a defective planning policy. This results in the emergence of pathological parts of the city, which in the context of the sensitive relation with the adjacent Czyżyny-based large-panel housing estates assumes a special meaning.

The most extensive intervention in the area of the housing estates is the nearly completed investment under the name of Nowe Czyżyny, which is to provide ca. 3500 apartments for ca. 10,000 new residents. It consists of densely located 7-15-floor multifamily buildings situated towards the west from the 2. Pułku Lotniczego housing estate, right at both edges of the former runway, mostly to the south from it. The investment has taken over areas which used to be a public space, together with a part of the former runway, which has been partially fenced and opened only to residents of the new investment, and partially allocated to a parking lot; see figure 7.

Areas which are so important in historical and cultural terms and which could have become an impulse for the development of the large-panel housing estates located on both sides of the runway and helped build their identity, have been taken over by just a group of people. This way the possibility of
creating a unique space, enhancing the identity of this part of the city, has been destroyed. On top of that, the continuity of public spaces gets constantly fragmented instead of being strengthened, leaving residents of the large-panel housing estates beyond the limits of an enclave for the rich.

The Nowe Czyżyny investment also contributes to strengthening the monofunctionality of these areas, as it is nearly completely dominated by the residential function – only some ground floors are occupied by service outlets. In the context of the large-panel housing estates located there, which grapple with the problem of insufficient infrastructure supporting the residential function, this means further exacerbation of the problem. In rehabilitation, one of the most important measures should be complementing any deficits relating to functional diversity and introducing elements stimulating their development, whereas new residents of New Czyżyny must use the old social infrastructure operating in the housing estates. Even today one can observe social conflicts arising in this context, resulting from overloading of and hindered access to facilities, mostly schools and healthcare centres, which is confirmed by the press. The road traffic infrastructure is likewise insufficient. All spaces are dominated by cars, often parking on pavements.

Besides the New Czyżyny investment, the situation in the eastern part of the former runway also raises concerns. This strategically important place, which on one hand could have been an important spatial landmark at the end of the runway, and on the other could have opened up the space for its further continuation towards Nowa Huta, has been covered with residential buildings, with partially fenced ground floors and very few service outlets. Other examples of densification inside the housing estate, as well as at its edges, also introduce spatial chaos, contributing to its fragmentation and breaking the continuity of public spaces, including the key ones, like the one between the estate park and the former runway.

When analysing the case of Czyżyny-based housing estates in the context of their potential, one could state that certain changes have brought about its irreversible loss. Intense and dense development of the areas to the south from the runway and in its direct vicinity has squandered the possibility of creating a comprehensive, complex urban project, maintaining an appropriate balance between built-up and green areas, as well as completing and enriching the existing residential infrastructure. Similarly, the chance to create an attractive public space which would be a continuation of the linear space of the runway leading further on to Nowa Huta has been lost, too. Nevertheless, there is still a physical link within the territory of the housing estates, albeit not particularly attractive, but its continuation is not favoured by the local spatial development plan drawn up for the neighbouring areas, which does not provide for the creation of such a connection [10]; see figure 6.

In the context of newly erected buildings, which are permanent structures, it is difficult to talk about coming back to the previous situation. Hence if their coming into being caused the loss of the potential, one can speak of a irreversibly lost chance. With reference to less permanent measures, such as building fences or arrangement of spaces of parking lots, assuming a very optimistic attitude, one can see a chance to reclaim these areas and, in doing so, to recover the potential. In such a case logic would point to a still existing chance, which is the creation of a complementary public space, although much reduced in form, in the citywide scale within the perimeter of the former runway. It would call for, however, comprehensive activities aiming at changing and rearranging the former runway and rendering it accessible to all residents.
Figure 6. Map presenting densifications within the perimeter of the Czyżyny-based housing estates; compiled by the Author.

Figure 7. Bird’s-eye view of the Nowe Czyżyny investment and the 2. Pułku Lotniczego housing estate, located on both sides of the former runway; [11]

3. Conclusions
Large-panel housing estates, besides numerous deficits associated with their functioning in the urban environment, also have a potential, which – if perceived, extracted, and well-used – can contribute to creating complementary public spaces and strengthening the continuity of the public spaces system of
Unfortunately, intense processes of chaotic densification with new buildings may contribute to a complete loss of this potential. The housing estates located in Czyżyny, Cracow, referred to above constitute one of many examples illustrating this problem. In light of the current situation, it is necessary to undertake relevant activities which will hinder further uncontrolled densification process and will allow to undertake a rational revitalisation process, during which the potential will be protected, used, or recovered, if possible.

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