Directions of Transformations of Postindustrial Greenery in the Silesian Agglomeration

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1 ABSTRACT

The industry was a major factor of the urbanization of the Silesian conurbation. The industrial forms, such as mining and manufacturing plants, workers' housing, transport infrastructure and greenery, are essential components of the Upper Silesian cities structure. The technological restructuring processes of economic and spatial industry are associated with abandoning production areas and forming postindustrial zones. It is necessary to redefine their role, to determine their value and indicating its place in a city and an agglomeration structure. This also applies to - still insufficiently analyzed industrial heritage - so called postindustrial greenery areas- parks attached to factories and allotment gardens. The author, in her research, is trying to demonstrate the historical, cultural and natural values of these open areas as well as to determine their impact on the contemporary landscape and to study the process of changes of the intended use of these areas in city spatial politics.

2 POSTINDUSTRIAL GREENERY IN INDUSTRIAL REGION TRANSFORMATION

2.1 Silesian Agglomeration

Upper Silesian Agglomeration, also known as the Katowice Agglomeration and Upper Silesian Conurbation is a polycentric conurbation occupying the central part of Silesia Voivodeship in southwestern Poland. The heart of the agglomeration is, established in 2007, the Upper Silesian Metropolitan Union[1]. It occupies an area of 1,218 km2 with a population of about 2 million people. [Dulias R., Hibszer A., 2008]

Driving force of development of cities in Upper Silesia in the XIX and notably in the XX century was, acting within its, coal mining and metallurgical industry. Obvious consequence of this is shaped by the industry the structure of spatial urban development of agglomeration cities. This structure is formed in most cases, functionally unrelated, industrial and residential groups. These groups were created by "overgrow" of industrial plants by workers' settlements and the necessary socio-technical infrastructure.

Today we are witnesses of enormous changes in the economic structure of the region. Upper Silesian Agglomeration is entering a post-industrial phase. The consequence of changes is the appearance of a number of postindustrial areas. Simultaneously with starting the process of industrial restructuring and liquidation of many manufacturing plants follow changes and the disappearance of the relation between the plant and its nearest surrounding. Expired patronage of plant over the housing estates and social facilities. Former industrial areas both disused terrain, workers' housing, landfills, heaps, infrastructure and greenery, are require now modernization, subsidizing or redefining the function.

2.2 Postindustrial greenery

Green, postindustrial areas were developed by the industrial factories in the Upper Silesian Agglomeration mainly for representative, recreational, host and insulating functions. Popularized in the period of the largest industry's grow, types of greenery such as alleys, squares, parks, mining, smelting parks, gardens, garden plots (and even company cemeteries) were an integral part of a typical, efficient, functional complex (institutional work areas + residential and services facility + green areas). Often present a high environmental and aesthetic value [Dyraga A., Gasidło K., 2009]. The primarily aim of introduction of greenery in patronage residential areas was improving social and living conditions of the working class. Green parts of settlements in the form of parks and gardens strengthen family ties, decreased the cost of food, heightened struggle with alcoholism, and gave the opportunity to combine recreation with activities on the fresh air. One of the first working class housing estates in Silesia, in which social elements with greenery were introduced, was housing founded by Albert Borsig - the owner of the steel mill and mine “Ludwigsgluck” in Biskupice

[1] Upper Silesian Metropolitan Union is a union of 14 cities with an administrative law of: Katowice, Gliwice, Zabrze, Bytom, Piekary Śląskie, Świętochłowice, Chorzów, Ruda Śląska, Siemianowice, Mysłowice, Sosnowiec, Dąbrowa Górnicza, Jaworzno, Tychy.

(1863 - 1871). An integral element of the complex was a foundry park (1880) and small gardens used to farming vegetables and fruits. [Bożek G., 2005]

3 STATE OF RESEARCH

The phenomenon of the appearance of exploited land, often unwanted, moreover, analyzed from many sides and broadly described, entails the problem of industrial heritage. Discussions, concerning the topic of its usefulness, scope and value are carried out as well as numerous conferences are organized. However, this phenomenon is usually associated with elements of "lifeless" (built) of industry such as: facilities and industrial buildings, engineering, residential and service areas. Identification works are done and methods in terms of their adjustment to the functional and cultural side are developed. Patronage workers' settlements and industrial plants are quite well researched. Researches and projects of transformation of postindustrial areas are conducted. The "alive" legacy (undeveloped) is less known and poorly explored. One of elements of this is the postindustrial greenery, including working class gardens and companies parks (metallurgical, mining, manufacture) [Gasidło K., 2007].

4 PARKS AND ALLOTMENT GARDENS IN THE UPPER SILESIA AGGLOMERATION- INVENTORY AND IDENTIFICATION

Nowadays, in the Upper Silesian Metropolitan Union (including the cities: Czeladź, Będzin, Knurów) we have about 400 allotment gardens[2] (approximately 2,850 ha), about 130 parks (approximately 2,500 ha) and about 180 major industrial plants, of which 42 recently had been liquidated. Per one inhabitant of seventeen cities, there are about 14 m^2 of allotment garden and 12 m^2 of park. These areas are evenly distributed in the urban area.

The largest number of home gardens and parks in urban areas have been identified[3]:

- Gliwice - 67 garden plots (401.81 ha), including 27 franchise, 5 parks (670 hectares) total number is approximately 22m2 per 1 citizen.
- Katowice - 48 garden plots (217.85 ha), including 18 institution ones, 12 parks (666.9 ha), including 8 of patronage; total amount is around 28m2 per 1 citizen.
- Tychy - 37 garden plots (140.77 ha), including 18 institution ones, 15 parks (234 ha), including two institution ones, together approximately 28m2 per 1 citizen. [Wiatr A., 2009]

A significant part of the total amount of development land: **25%** of parks and **57%** of an allotment gardens are founded by industrial companies. A characteristic feature of the location of these sites is their focus in the vicinity of compact development. This is due to the natural process of urban grow and the "including" of greenery in the urban structure. The area was once located on the outskirts of the industrial districts, now is located in the most urbanized cities centers. Analyzing the location of postindustrial green areas (Fig. 1) can be observed two types of situation of these areas in reference to the industrial factories:

- **“Neighborhood location”.** Parks and allotments are in the close vicinity of the company (eg. site at liquidated Coal Mine “Saturn” in Czeladź, liquidated Coal Mine “Sosnowiec” in Sosnowiec, Coal Mine “Murcki” in Katowice).
- **“Peripheral location”.** These areas do not interfere in the close environment of the plant. Largely, these are areas located in another district (eg. former coal mine areas, "Szombierki" in Bytom, “BHH Mikrohuta” in Dąbrowa Górnicza, “Mostostal Zabrze” in Zabrze), or in another city (eg. Coal Mine "Piast" in Bieruń, Coal Mine "Wesoła" in Katowice, Coal Mine "Wujek" Ruch Śląsk in Ruda Śląska) [Dyraga A., 2010].

Discussed parks as well as allotments are included in the urban green system in the Upper Silesian Metropolitan Union; are enhancing human living conditions in urban areas and improving environmental standards in the region. Located within residential districts meet the recreational and leisure needs of local communities. As one of the characteristic elements of industrial and settlement areas are an attractive for integration of population and manner of time off spending. Mentally, these are often associated with several

[2] Allotment gardens on the board of the Polish Association of Allotment.
[3] Statistical Office in Katowice www.stat.gov.pl and data provided in the Silesian Board of the Polish Association of Allotments in Katowice, 2007.

generations of mining families. Despite the bankruptcy of many companies and an unemployment increasing are still very popular areas for active and passive recreation[4]. The high number of gardens located in the agglomeration area, in the most urbanized and industrialized region of Poland, provoke questions about the actual causes of popularity and prospects of development of this land use form, especially in the context of patronage factories liquidation.

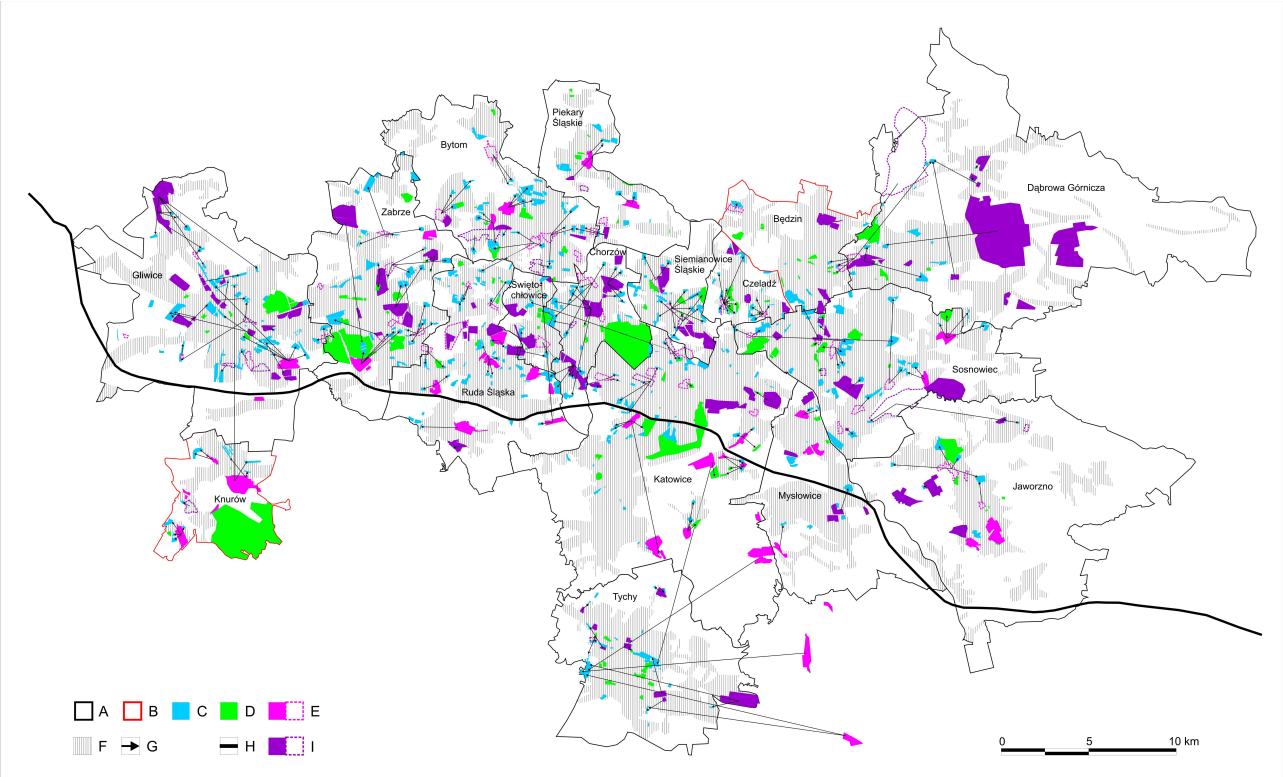

Fig. 1: Spatial relation between industrial companies, parks and allotments in the Upper Silesian Metropolitan Union. A - cities boundaries of the Upper Metropolitan Association; B - the boundaries of cities not belong to the Upper Silesian Metropolitan Union, C – allotment gardens, D - parks; E – operating, non-operating mines; F – urban areas, G - relation: industrial company- greenery. H – speedway, I - operating, non-operating steel mills and other industrial plants. Source: own created.

5 FUTURE OF COMPANY PARKS AND WORKING CLASS ALLOTMENT GARDENS IN THE LIGHT OF REGISTRATION OF STRATEGIC DOCUMENTS ON THE EXAMPLE OF KATOWICE CITY

Katowice is the voivodeship city, and thus an important industrial, scientific and cultural center. As the village was mentioned in the XVI century. The city rights it received in 1865. Within the current boundaries include (in addition to the main Katowice city, formed since the middle XIX to early XX century) a few neighborhoods and settlements, which are used to separate administrative units. XIX century and the interwar years were for Katowice, thanks to the mining industry and metallurgy, the period of intensive development. The provincial industrial center former Prussia has become the biggest economic center in Poland, the capital of the richest Polish region. Registered area of the city is 164.67 km^2, inhabited by 308,883 residents, which gives a population density - 1,876 people per km^2.[5]

In the Katowice city, 8 of 15 public parks were set up by industry. Moreover, the work allotment gardens are 25 of 48 all gardens throughout the city. Postindustrial areas of Katowice greenery, formerly located on the outskirts of cities and industrial districts, now generally located in the most attractive places – in the cities centers. Therefore, are very attractive terrain for developers and investors. Then, it is not surprisingly, that there is big pressure to transform these areas into residential and service sites (Fig. 2). Records of current

[4] According to the Polish Association of Allotments in Poland there are currently about 5000 of Family Gardens Allotments, with 965 000 individual gardens, occupying an area of approximately 44 000 ha. In Silesia voivodeship are 688 gardens, 107 255 sites with an area of 4 487 ha.
[5] Statistical Office in Katowice, www.stat.gov.pl, 31 December 2008.

Study on Conditions and Directions of Spatial Development[6] of Katowice city, show slow decay process of large areas from the city center, under which:

- **48 of 48** allotments can change the function to: greenery areas - 153.28 hectares (70%) residential development - 27.76 ha (13%) services area - 28.41 ha (13%) production areas - 4.67 ha (2%) public roads - 3.73 ha (2%). It follows, that the **217.85 - 100%** of the allotment gardens can change the function, of which 64.57 ha - 30% on sites other than the green areas. As far as parks are intended to preserve the function, it is 99%. Only 1% of the parks (which is exactly 2 parks) can change the function to the residential and service.
- **18 of 18** working class allotments can change the function to: greenery areas - 53.2 ha (72%) residential development - 4.85 ha (7%) services area - 8.98 ha (12%) production areas - 4.67 ha (6%) public roads - 2.4 ha (3%). It follows that the **74.1 ha - 100%** of working class allotments can change the function, of which 20.9 ha - 28% on other than the green areas. For patronage parks is 10% - about 3.5 ha (exactly 1 park) – it can change the function to the service development areas with greenery.

Summary: **217.85 - 100%** of all gardens can change the function, of which **34%** are the working class allotments. **28%** of the working class allotments can change the function to areas other than the greenery.

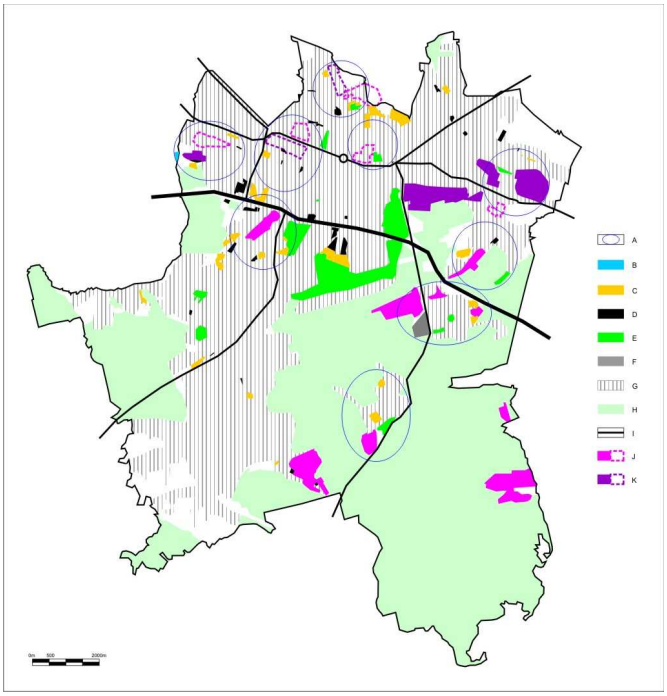

Fig. 2: Transformations of green spaces in Katowice. A - functional arrangements (industrial company + housing estate + greenery), B - allotment gardens, C – allotments, provided to change the function of green areas; D - allotment gardens, provided to alter the feature other than the green areas; E - parks; F - parks designed for change the functions to other than green areas, G - urban areas; H - forests; I - main roads; J – operating, non-operating mines, K - operating, non-operating foundries and other industrial plants. Source: Own created.

On the basis of the available literature and maps illustrating settlement system in the early XX century in Katowice, the author distinguishes nine functional complexes, for which the basic element is an industrial factory. In most of cases, greenery, which exists within these complexes alter the function to the residential or service areas. Nevertheless, tend to enlarge the existing park areas adjacent garden plots of land (at Kosciuszko Park, Katowice Forest Park) was observed.

[6] Study of Conditions and Trends of Spatial Development is an important formal and meritorious document defining the substantive rules and directions of long-term development of cities and municipalities. Establishments of Study are used to conduct community spatial policy, including the determination of local development rules and are obligatory for the municipal authorities during preparing Local Plans.

6 SUMMARY

Nowadays, agglomeration due to industrial restructuring and local government actions aimed at improving the quality of the environment is becoming more green and efficient overthrow the "black hole" myth on the map of Poland. However, it is worth to consider, how in the light of these changes, the development of the new approach to the revitalization of postindustrial sites and the issue of protection of cultural heritage presents an approach to former working class allotments and companies parks in our region.

The relevant questions are as follow:

- Do the spatial relations between housing estates/ former industrial working class and the postindustrial greenery are preserved, or go into history as an closed place of employment?
- Do districts, which lose employer, would be deprived of postindustrial green areas - open green spaces-places of the meetings?
- Do the idea of functional systems, with decline of industry and advent of the new reality formed during the years, is losing its relevance?

Accumulation of postindustrial greenery sites in urban areas of cities in the Silesian Agglomeration is a questionable issue for growing cities. First of all, it concerns allotments. Currently, these sites are recognized by a large group of people as a barrier to the development of the urban structure, or as a reserve for future investments. Infrequently, it is considered in the context of urban green systems or as elements enriching the spatial structure of highly urbanized postindustrial and industrial areas. It is obvious, that part of the allotment gardens and parks will be liquidated or transferred to an expanding urban infrastructure. However, these transformations should be planned with taking into account the economic, natural, cultural, scenic, historical and social aspects of those sites. It is also important, that this issue has been considered within co-operation of municipalities and cities across the conurbation. It should depend on the improvement of local programs and the creation of regional concepts considering the trends of greenery postindustrial changes.

The example of Katowice city and the directions of postindustrial greenery areas development indicate the absence of a well thought concept, defining the future of these areas in the structure of the city and the region, their place and role. Certainly, they should be different than those before the decades. The lack of noticing of the problem of these sites on the background of the old functional complexes (an industrial factory + residential areas + green areas) can cause loss of valuable space located within residential areas, and loss of identity. In Katowice case, can be seen not very optimistic view of the disappearance of many sites of greenery arranged from the city center and transformation of them into residential and service areas. Disturbing is the lack of interest in an adaptation of allotment gardens to the parks district. Nevertheless, they are, despite the collapse of the industry, an important component of quality of urban space and life quality in a compact urban structure.

Produced over the years, the emotional relationship between the local community and its environment should be one of the main tasks designed to build "small homelands". In this context, the presentation of the unique value of postindustrial green sites both, in the city and region scale, will be the basis for building an optimistic image of Silesia, and thus its development and promotion beyond its boundary.

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