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## EMPTY SPACES IN THE FUNCTIONING OF CITIES

### PUSTE PRZESTRZENIE W FUNKCJONOWANIU MIAST

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**ABSTRACT:** The article presents different approaches to identifying the concept of empty spaces. The difficulty in defining them lies in the fact that one should look for “nothingness”. But what does it mean that a space is empty? Are there such spaces in cities? If so, what role do they play?

The aim of the article is to define and indicate the characteristics of a special type of space, the so-called empty space. The results of the research concerning determination of the empty spaces in the City of Świętochłowice were presented, during which observations and unstructured interviews were used. In addition, the city spatial planning documents and its investments plans were analysed in order to define the functions that these spaces perform in the city.

**KEY WORDS:** empty spaces, spatial planning, functions in the city, urban voids

**STRESZCZENIE:** W artykule przedstawiono różne podejścia do identyfikacji pustych przestrzeni. Trudność w ich zdefiniowaniu polega na tym, że należy szukać „nicości”. Ale co to znaczy, że przestrzeń jest pusta? Czy są takie miejsca w mieście? Jeśli tak, to jaką rolę pełnią?

Celem artykułu jest zdefiniowanie i wskazanie cech charakterystycznych dla szczególnego rodzaju przestrzeni, jakim jest tzw. przestrzeń pusta. Zaprezentowano wyniki badań polegających na wyznaczeniu pustych przestrzeni w Świętochłowicach, podczas których przeprowadzono obserwacje i nieustrukturyzowane wywiady. Ponadto przeanalizowano dokumenty planistyczne miasta oraz jego plany inwestycyjne w celu określenia funkcji, jakie te przestrzenie pełnią w mieście.

**SŁOWA KLUCZOWE:** puste przestrzenie, planowanie przestrzenne, funkcje w mieście, pustki miejskie

## Introduction

By definition, the physical space is infinitely large and has no boundaries. However, the environment of human life (including cities) is divided into smaller fragments of space, taking into account various criteria of division, such as functions, types of land use, space perception of people, etc. Selected fragments are assigned certain features,

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the distribution and mutual relations of which allow interpreting many socio-economic phenomena (including those taking place in the city).

In the context of these considerations, it should first be stated that the city space is a social space. According to B. Jałowiecki and M. Szczepański (2009: 316-319), this space is identified by the following four dimensions of meaning:

- it is defined depending on the physical location of people with specific characteristics;
- space is social because it is produced by man;
- its character depends on the type of activity carried out by people (e.g. space designed for work, leisure or consumption);
- it is a certain value for a man (economic, symbolic or other).

In connection with the above, there are numerous types of urban space within a city; however, the biggest area of it is covered by public space (i.e., the space every resident can use freely, respecting established rules of use) (Szatan 2012: 92). In the currently valid Act on spatial planning and development, public space is defined as “an area of special importance to meet the needs of residents, improve their quality of life and promote social contacts on account of its location and functional and spatial characteristics” (The Act 2003). This space, accordingly, includes streets, avenues, squares, parks, etc. When characterizing the public space, one should look at it from two perspectives: material and social (Frysztański 2005: 151-158). In the physical aspect, this space should be accessible and open to every user, while in the social sense it is “appreciated”, socially accepted and giving a sense of security. For this reason, the public space can fulfil various functions: from communication, by symbolizing existing divisions, to meeting places with other people in order to express their views (Miciukiewicz 2006: 214-215).

Currently, there is a slow disappearance of the identity of public spaces, which is the result of progressive metropolisation. Jałowiecki (2007: 15-16) notices three phenomena that limit it:

- expansion of international corporations, transforming the city centre into office spaces (or building new, peripheral business districts);
- moving trade to specially arranged buildings (usually outside the city centre);
- unwillingness and an increased sense of threat in relation to “strangers” (which results in the creation of closed housing estates).

Nowadays, the deficit of free space is increasingly recognized. It is pointed out that for space saving reasonable space management (in accordance with the policy of sustainable development) are crucial because space is treated as a limited good. In relation to the above, the purpose of the article is to identify a special type of space which is the so-called empty space and to define the functions it performs in a city.

## Empty spaces

In opposition to public spaces, which are anthropological places that have their identification, relational and historical connections, there are the so-called “non-places”

defined by Bauman (in Polish “*niby-miejsca*”), described by Augé (in French “*non-lieux*”), or the so-called “third places” specified by Oldenburg (2007: 163-169). They are characterized by the lack of connections, recognizable for anthropological sites, so they are unfriendly, inhospitable and are not conducive to establishing interpersonal contacts (Bauman 2006: 147-162). These can be spaces dominated by modern architecture, the so-called “dead public space” described in more detail by Sennett (2009, 27-30), but also previously mentioned closed housing estates or the specific location of streets and public functions (e.g. schools, shopping centres) that favour car transport. The specific architecture and conditions result in more frequent interaction of people with texts (e.g. through placed information boards, signs with enjoined actions, etc.) rather than with other people. “Non-places” are, therefore, transit spaces, intended for existing, not “living”. These are public places that characterize the schematic behaviour (conditioned by the pressure of the moment, haste, rules of use), as a result of which the identity of individual persons is lost. These are places that do not favour an exchange of various opinions and views, users are usually reduced to the role of a passenger, driver or client (Szatan 2012: 97).

The notion of “empty spaces” is the opposite of meaningful spaces that play a specific role in society. According to J. Kociatkiewicz and M. Kostera (1999: 43), they are spaces that are not given any meaning. They can be both non-colonized places and undeveloped spaces in a city. In the mental context, they are spaces that do not function in the consciousness of a given person and are unknown (Bauman 2006: 160-161). Inhabitants of a given city usually move within their chosen areas and identify them through their familiar places (work and shopping spaces, habitual routes, etc.), whereas other spaces do not impact their image of the city as a whole. Such unknown places, spaces that are “invisible” from the point of view of the inhabitant, are exactly mentally empty spaces.

In the geographical or urbanized aspect, empty spaces in the city are undeveloped, i.e. open areas that are covered only by nature. The term “open areas” has been used since the middle of the previous century and in its meaning refers to “green areas” (Sutkowska 2006: 184-186). Urban open spaces fulfil important sanitary and hygienic as well as acoustic and climatic functions in the city. Furthermore, they constitute an important element of the public space system. In the practice of urban development and management, it is crucial to designate protected and open areas that are free from building structures. These spaces can be secured using available planning tools (local land-use plans or a study of conditions and directions of spatial development – in Polish “*Studium uwarunkowań i kierunków zagospodarowania przestrzennego*”, hereafter abbreviated “*SUiKZP*”) by defining the designation of specific areas and then controlling their development. Open areas do not have to mean empty spaces, they can be full of natural structures and connections, performing recreational and tourist functions in the city.

It is also worth mentioning here that in the real estate management practice the category of “wasteland” is fairly clearly defined. Wasteland covered by nature are empty spaces in the anthropogenic sense because they do not have users, but from the ecological point of view, they can be very attractive places for flora and fauna. Pursu-

ant to the Ordinance of 29 March 2001, on the land and building records, wasteland is the land that is not classified as ecological land. It can be defined as an area that has no utility value or has lost it in consequence of man's activity or by natural causes. This often applies to: swamps, dunes, areas unsuitable for agriculture or areas which have an unfavourable landform (in the case of natural areas) and waste landfills, heaps, lands devastated by industry (in built-up areas). Due to often costly and difficult reuse of wasteland and its high natural value, it is frequently transformed into ecological land (Sajnog and Wójcik 2013: 156-158). For example, in coastal areas, beaches or dunes belts, which are not necessarily empty spaces in the mentality of residents or tourists, are qualified as wasteland.

In the context of the above definitions and deliberations on empty space, it is easy to conclude that it is primarily excluded from the mental map of the city constructed by its inhabitants not only, constituting an inaccessible, dangerous, unused or unknown space, but also covering free open areas, usually undeveloped (from an anthropological point of view). So empty space will be considered from this point of view in this article.

## Methodology and steps of research

The research was carried out in the city of Świętochłowice, which is located at the heart of the Silesian Agglomeration. It neighbours on large cities like Bytom, Chorzów and Ruda Śląska. Świętochłowice is a city with a relatively small area (about 13.2 km<sup>2</sup>), but densely populated – registering 50,385 residents in 2017.<sup>1</sup> The dynamic development of industry (mining, metallurgy) in the first half of the 19th century had the greatest impact on the present shape of the city spatial development. As a result, the number of inhabitants grew rapidly, housing construction and new public spaces developed. Economic reforms of the 20th century led to the liquidation of large enterprises, which resulted in a decrease in the number of jobs and numerous problems in the social and technical sphere, which the city is facing today. Currently, the city consists of five districts: Centrum, Chropaczów, Lipiny, Piaśniki and Zgoda, with very visible differences in the sphere of residents' identity and culture (Świętochłowice Development Strategy until 2030: 5-9).

In order to identify empty spaces in the city of Świętochłowice, it was decided to conduct research in the induction case study model, i.e. in the form of an uncertain hypothesis, which is clarified in the research process (Eisenhardt 1989: 532-550). The working hypothesis assumed that empty spaces exist outside built-up areas, in areas covered mainly by nature.

In connection with the above, the general structure of the city was analysed in the first place. The topographic map (Open Street Map) and orthophotomaps (satellite maps available on the Internet) were used for this purpose. As a result, places that can be

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<sup>1</sup> Statistics Poland (bdl.stat.gov.pl)

empty spaces, i.e. undeveloped urban areas, covered mainly by green areas (including, among others, small areas of estate greenery) were singled out.

Next, nine places were identified that represented various settlement units of Świątchłowice, where the unstructured interview with residents was carried out (Figure 1). The following issues influenced the selection of the research method:

- an easy way to conduct an interview, the open nature of questions, focused only on the research problem;
- high cognitive value of the interview, enabling to get to know opinions and phenomena that are the product of human consciousness;
- the open nature of questions and the possibility of asking additional questions (controlling the discussion in order to obtain desired data);
- the possibility of an interview conducted with the aid of a map.

Due to the applied form of the study, the collected material has a completely qualitative character. Interviews were planned in public space, in nine places representing various settlement units in Świątchłowice. In each of the places, two to four interviews were conducted with randomly chosen inhabitants (of different ages). During the interviews, the data obtained during the ortotopographic map and orthophotomap analysis were used as well as the following set of questions:

1. What areas do you usually use?
2. What unused places in the district do you know? Which of them do you use, and why?
3. What can you say about this<sup>2</sup> space? Is it known to you? Who can you meet there?

What type of activity do you perform there?

In addition, they were asked about the types of activities to make sure that spaces actually indicated by residents can be classified as empty. During the interviews, the respondents were likewise asked about the reasons for not using a given space in order to exclude personal, specific reasons.

The next stage was to observe the behaviour of residents in selected empty spaces and if necessary, repetition of in-depth interviews in these places or their immediate vicinity. At each stage of the analysis, the area of empty spaces was reduced. After the final determination of their boundaries, designated empty spaces were plotted from paper maps onto a vector map (using QuantumGIS software) – Figure 1.

The next stage of the analysis was the recognition of planning documents. For this purpose, all local land-use plans (17) and maps included in the SUIKZP (in particular ecological conditions) were positioned on the maps. Then, the coverage of the area overgrown by local plans, as well as wasteland and non-arranged greenery indicated in the SUIKZP were plotted on vector maps. Additionally, the location of the investment plots for sale currently issued by the City of Świątchłowice was indicated<sup>3</sup> (access: 10/06/2018).

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<sup>2</sup> The previously singled out places on the printed maps were indicated.

<sup>3</sup> Data on issued plots for sale were obtained from the internet portal ([swietochlowice.pl/oferty-inwestycyjne/](http://swietochlowice.pl/oferty-inwestycyjne/)).

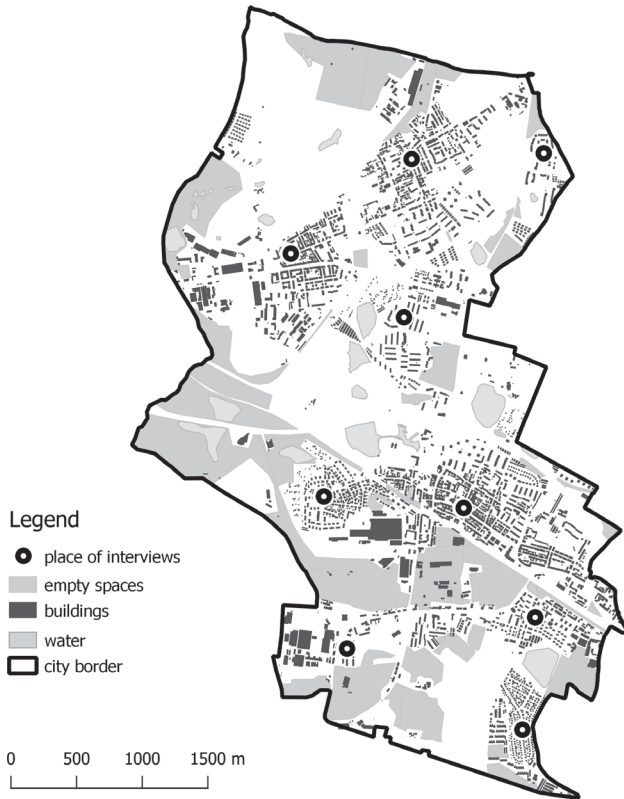


Fig. 1. Empty spaces designated by residents

Source: Own elaboration based on research results of the interviews.

Due to the application of data on one map, it was possible to juxtapose them with designated empty spaces (Figure 2 and Figure 3). Using the QuantumGIS software, it was possible to calculate the area of the relevant territory, read the functions designated in the planning documents and notice the relationships.

### Empty spaces according to Świętochłowice residents

While conducting the unstructured interviews, it was noticed that at first residents had different opinions about empty spaces. Some people pointed to places where they would expect changes, i.e. destroyed playgrounds, abandoned buildings, densely overgrown paths. This is due to the fact that they treat empty spaces as investment areas for potential new development. However, upon further conversation or closer observation, it turned out that the inhabitants knew the area they indicated very well, which is contradictory to the definition of empty spaces. Abandoned buildings are often characteristic places in the district, and people who walk dogs

use undeveloped grasslands. Indicating these places by the inhabitants means that they treat them as problematic, but from the point of view of the adopted definition, they are not empty spaces because they function on the inhabitant's mental map or even are used.

The second type of interlocutors were people who could not indicate any empty space (usually autochthonic residents). These people often have the impression that they know each "corner" of their district well and it is difficult for them to define small empty spaces. In this case, the materials from the topographic map and orthophotomap analysis were very useful to ask about specific spaces on the map. Many areas (especially around ponds), which were initially classified as potentially empty spaces, proved to be used by residents (many well-trodden paths were found in their area).

Figure 2 shows the result of the conducted unstructured interviews in the form of empty spaces indicated by the residents of Świętochłowice. These areas represent about

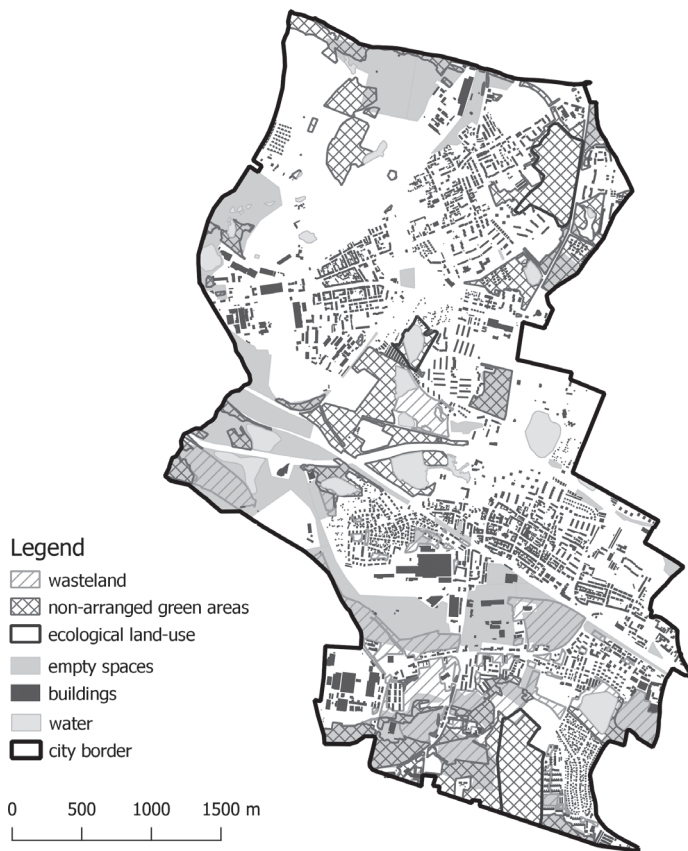


Fig. 2. Empty spaces and ecological conditions (chosen land use)

Source: Own elaboration based on *Study of conditions and directions of spatial development city Świętochłowice*, 2014, attachment 3.

21% of the city's area (about 2.78 km<sup>2</sup>). The size of the designated areas is very diverse. These are both territories with a large area, as well as small areas close to the existing buildings. The characteristics of the designated empty spaces include:

- low availability – designated areas often have natural or architectural barriers, e.g. dense thickets, fragments of fences, road and rail networks, land-shape. As a result, residents, embracing regular daily-used places, are unable to “see” what is over there.
- low recreational values – some of the designated areas have a bad reputation, are considered unknown, uninteresting, and also dangerous. It should be noted, however, that the danger resulted from ignorance of the inhabitants of the given area – its potential users and the land-shape.

The majority of designated empty spaces are not located in the immediate vicinity of residential buildings. Most often they are located along railway lines and large communication routes or are associated with industrial areas (they are located in brownfield

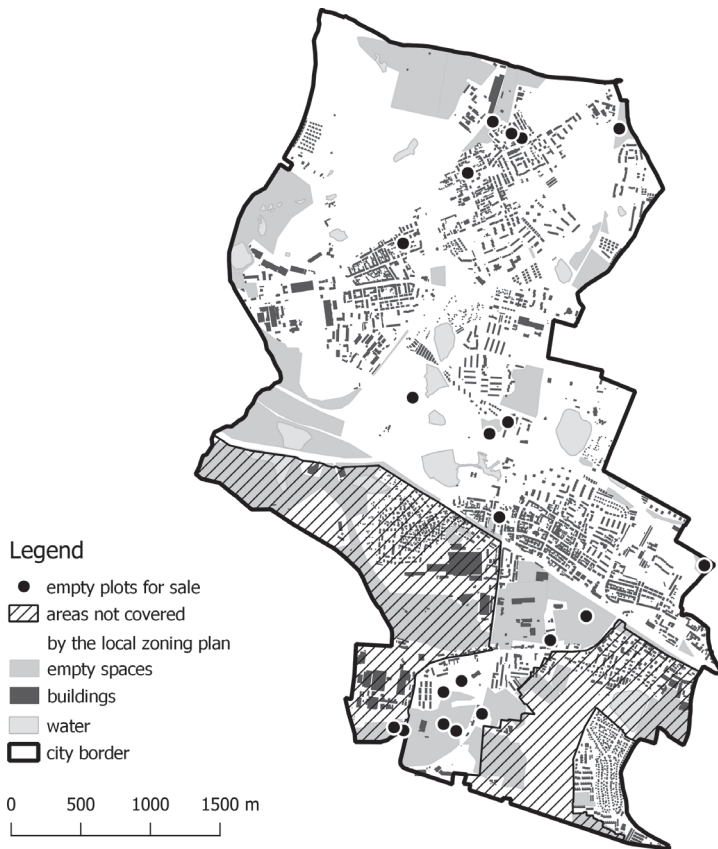


Fig. 3. Empty spaces, local zoning plans and plots for sale by the municipality

Source: Own elaboration based on local zoning plans and plots for sale by the municipality [25.06.2018: [swietochlowice.pl/oferty-inwestycyjne/](http://swietochlowice.pl/oferty-inwestycyjne/)]



areas or behind existing industrial areas). Empty spaces in the vicinity of residential buildings have a smaller area and are most often inaccessible to human sight through dense thickets.

## The empty spaces and city's plans

After comparing the empty spaces with the provisions of the study of conditions and directions of spatial development, it turned out that 22.59% of the designated empty spaces are described as wasteland and 21.75% as non-arranged greenery. This means that about 56% of the designated empty spaces in the mentality of the residents have not been defined as wasteland or non-arranged green areas in the SUIKZP.

On the other hand, over 62% of the areas considered to be wasteland in the SUIKZP and only about 31% of non-arranged greenery represent empty space understood by the inhabitants. In addition to this, all ecological uses indicated in the SUIKZP (three areas) are known and used by the residents. It turns out that the residents know the areas described in the SUIKZP as non-arranged greenery rather than wasteland. The results of the observation can lead to the conclusion that the so-called "wasteland" is often an open space, occupied, for example, by a meadow which residents use by walking with dogs. Furthermore, some wasteland with a small area located in the Center district are empty squares, well-known to residents. In contrast, a non-arranged green area, as it can often be observed, is perceived by the inhabitants as a forest park, with well-trodden paths (e.g. Chropaczowski Forest, Hugon's Hill, or the so-called 'Uroczysko').

Then, the empty spaces with local land-use plans and the location of empty plots (undeveloped real estate) put up by the city for sale (as investment offers) were compared with each other.

It transpires that as much as 34.5% of the areas not covered by local plans are the empty spaces. At the same time, the vast majority of space designated by the residents

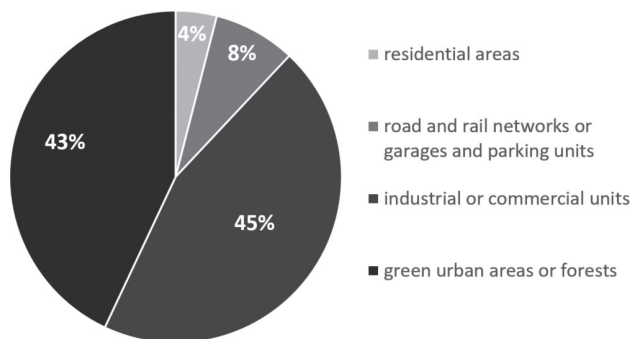


Fig. 4. The intended use of designated empty space in the local land-use plans

Source: Own elaboration based on local land-use plans.

as empty (over 63%) is located in areas covered by local plans. It should be noted here that 78% of the City of Świętochłowice area is covered by local land-use plans.

These empty spaces, which are covered by local land-use plans, are most often designated for industrial or commercial zones (45%) or for widely understood greenery – both green urban area and non-arranged as well as sports and leisure facilities (43%). The remaining 8% is planned to be allocated for communication services (road and rail networks, parking lots and garages), and 4% for residential buildings.

In order to determine whether empty spaces have development potential, it was decided to investigate the location of the currently undeveloped real estates for sale by the commune. As much as 91.85% of the area of empty plots put up by the municipality for sale is located on areas marked as wasteland or non-arranged greenery in the SUIKZP. Whereas, 34.32% is located on the empty spaces designated by residents. It may seem like little, but one should consider the total area of plots for sale, which is only about 2.5% of the city's general area. Taking into account that half of the investment offers issued by the city concern plots located in the area of designated empty spaces, it is assumed that empty spaces may be the development potential of the city.

## Conclusions

Between the empty spaces designated by the residents and indicated in the SUIKZP, wasteland and areas of non-arranged greenery can be noticed. An example is an area between Chorzowska Street and the cemetery, which in the planning documents of the city is intended for as a space for extension of the cemetery. However, it is now an empty space in the minds of the inhabitants.

Another example can be an area located in the Piaśniki district (in the central part of the city), commonly called "Uroczysko". This area according to the conditions described in the SUIKZP is covered mostly by wasteland and non-arranged greenery, and in the planning documents of the city is intended for industrial or commercial areas (services and logistics). At the end of last year, when the city's work on acquiring an investor in these areas was noticed by the residents, local society expressed opposition. It turned out that the residents willingly use this area for walking, doing picnics and resting in the bosom of nature.

Almost 56% of the empty spaces designated by the residents describe the study of conditions and directions of spatial development as wasteland or non-arranged green areas, which accounts for almost 42% of all the areas described in this way in this document. This means that most of the empty spaces are described by ecological conditions (in SUIKZP). However, more than half of the areas described in this document as wasteland or non-arranged greenery are not empty spaces in the minds of the inhabitants (in most cases they are non-arranged green areas).

Empty spaces in the city serve as building reserve areas, non-arranged greenery, post-industrial areas (wasteland) or the surroundings of communication networks (mainly railways and expressways). The city's planning documents usually envisage

new forms of development in the empty spaces: the deployment of industrial and commercial zones, communication networks or residential urban fabric (57% of the empty space located in the areas included in the local plans). Therefore it can be concluded that empty spaces have the development potential of the city. This is also confirmed by the location of investment plots currently issued by the commune for sale. However, it should be highlighted that the remaining 43% of the empty space located in the areas covered by local plans is provided for maintaining the existing greenery function. This applies not only to green urban areas, sports, and recreation services, but to maintaining bioclimatic functions as well.

When conducting a similar type of research, it is recommended to consider the level of their detail and take into account the difficulties associated with determining the exact borders of empty spaces. This study assumes that empty spaces are usually limited by topographic objects (e.g. road) or the delimitation of two types of land use (e.g. forest border, residential buildings). It should be noted that the above studies are of a pilot nature and were carried out in the area of a city with a long-standing industrial tradition and the results obtained will not necessarily coincide with the designated empty spaces in other cities. Therefore, it seems reasonable to extend the research with examples of cities with different specificity and history.

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