

# The idea of the garden – city in Polish urban planning thought at the beginning of the 20<sup>th</sup> century



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The principles of constructing a garden city shaped a well-composed, well-connected urban space with public green areas managed by its residents. This concept influenced the development of many cities in Europe. However, not all the features of the ideal were implied in Polish plans, yet they were still often referred to as garden cities.

The idea of the garden city is a response to the rapid growth of cities during the industrial revolution. The dynamic and often uncontrolled development of urban centers led to negative phenomena in the spatial fabric of cities at that time and in the social life of their inhabitants. The mass and sudden influx of people into cities that were unprepared in the 19th century for such a process resulted in overcrowding, a lack of housing resources, rising rents, and land prices. City centers were excessively built up, leading to low quality of life, lack of natural light in living spaces, and dysfunction in public spaces. The newly emerging suburban areas did not meet the quantitative and qualitative demand [1]. These phenomena often led to social tensions, economic disparities, and even the development of pathologies and crime [2].

This period, described by many urban planners as a period of forming the principles of modern urban planning, opened a new chapter in the history of city planning.

During this time, the 19th – century idea of the garden city, which combined modern conveniences with the advantages of rural life in harmony with the surrounding greenery, emerged. The precursor of the garden city was the British "planner – urbanist" Ebenezer Howard, who introduced a new way of thinking about cities in global urban planning. In his publications at the turn of the 19th and 20th centuries [3], [4], he outlined a vision of reforms that were intended to bring about a new quality of space and social life in cities and to address the problem of depopulation of rural settlements. E. Howard's goal was to

merge the town and the country into a cohesive spatial organism that combined the best of both worlds [5]. Town – country combined the positives and eliminated the negatives, aiming for a better quality of urban life in spatial, social and economic aspects.

Howard's garden city principles served as a blueprint for creating an ideal city that should be pursued while taking local conditions into account [6], [7], [8]. The degree of implementing these principles in realized cities and neighborhoods has been studied across various dimensions: spatial, social, and administrative [9], [10]. However, there is limited literature on the examination of Howard's ideas and the extent of their application in the original planning documents [11]. Yet, it is in these documents that the city is initially shaped [3]. This research contributes to the existing literature by analyzing Polish examples of city planning using an author-developed method of graphic representation (tab. 5.).

## Territorial development of Howard's ideas in Europe

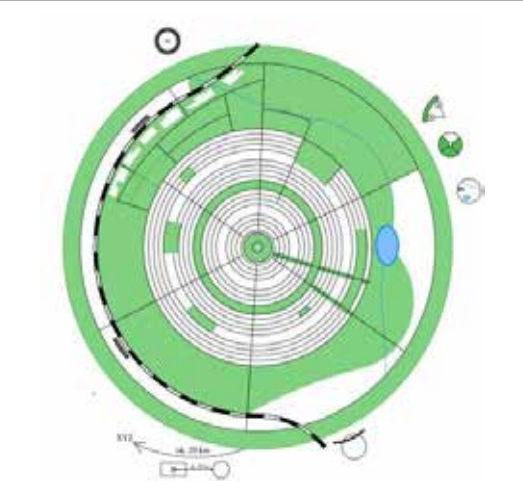







Ebenezer Howard's idea was promoted by the Garden City Association, founded in 1899, and the Garden City Pioneer Company, established in 1901, which was the first to initiate the implementation of this urban concept. The main planners of the establishment were Raymond Unwin and Barry Parker, who presented the master plan for the town of Letchworth in 1904 [12]. After World War I, another city near London, Welwyn Garden City, was developed by the Welwyn Garden City Limited company. The plan

and development of Welwyn, designed by architect Louis de Soissons, can probably be considered the best – executed realization of Howard's concept [8], [7].

The pioneering English garden cities quickly found imitators in continental Europe. As early as the beginning of the 20th century, from 1907 onwards, German interpretations of the garden city concept began to emerge, mainly as workers' settlements on the outskirts of cities. For example, Giszowiec, a suburb of Katowice (1906), Dahlhauser Heide in Essen (1907–1911), and Hellerau on the outskirts of Dresden (1907), are among the earliest continental European implementations inspired by Howard's idea. From a later period in England, there are examples such as Wrexham Garden Village (1913–1917) and Rhwbina Garden Village (1912–1914). Later implementations in Germany include Gartenstadt Staaken near Berlin (1914–1917), Hutenu as a suburb of Blankenstein (1912), Mannheim (1914), and a series of satellite settlements around Breslau (Wrocław), especially Kartowice (1911). In the Netherlands, the garden city idea was implemented in the expansion of Amsterdam (1902–1915) [10].

In continental Europe during the interwar period, attempts to create garden cities primarily involved the development of "garden suburbs," which were residential settlements on the outskirts of cities. In the 1920s, Germany implemented green suburbs in Essen, including Margaretenhöhe and Alfrédshof, as well as the Perlach neighborhood near Munich. In France, projects inspired by the "city garden" concept of Letchworth resulted in satellite cities around Paris. These

Table 1. Ideogram of a garden city in terms of location. Own elaboration.

		A satellite city with a significant proportion of green areas.
		A city separated from other larger cities by an extensive green belt.
		City located in proximity to railway tracks.
		Satellite city situated approximately 20 kilometers from the center of a larger city.
		An area with landscape, topographic, or hydrographic values.
		The railway line is distant from the central square. Warehouses, wholesalers, dairies, sawmills, and industrial plants are located alongside it. The railway line serves as a clear boundary between the urbanized area and agricultural land.
 <p>Legend: [1] green areas, [2] surface waters, [3] railway areas, [4] road areas.</p>		

initiatives are associated with the name of Henry Sellier, under whose guidance several urban layouts were created, including Suresnes, Lilas, Drancy, Vitry, Vanves, and Boulogne. The idea of the garden city also found supporters beyond Western and Central Europe. It reached Finland, leading to the redevelopment of Turku (formerly Abo) and Meurman-Wyborg (formerly Wiipuri), as well as Norway, where cities like Mo, Tromsø, Narvik, Bodø, and Hamar were influenced by it.

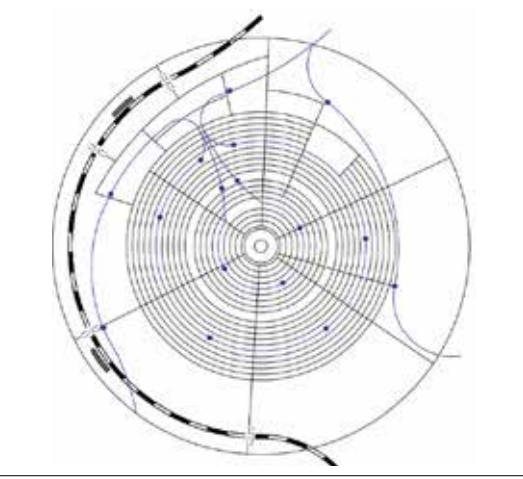




In Poland, the idea of the garden city was popularized even before World War I. The first implementations of garden cities in Poland were located near Warsaw: Żąbki (1912), Młociny (1914), and garden districts like Sadyba (1915) in Warsaw, as well as in Bydgoszcz: Bielawy (1904–1905) and Sielanka (1912–1914). In Poland, on the eve of independence, Howard's idea was also

realized under the slogan of "garden residential districts," proposed as a program for the expected reconstruction of cities damaged by wartime activities.

During the interwar period, Howard's idea found reflection in numerous plans and subsequent implementations in Poland. It was applied in the creation of garden cities, mainly in the Warsaw area and its vicinity: Żoliborz (1925) and Bornerowo (1932), Czerniaków (1919/1924), Ostoja Pęcicka (1926), as well as near Gdynia, particularly Mały Kack (1929), in the vicinity of Łódź: Sokolniki garden city (1929), Kolumna forest city (1927), Łągiwniki urban estate (1925), Grotniki, Lućmierz forest, Wiśniowa Góra, Tuszyn forest, and Zabrzeźnia – Głowno, among others. The degree of implementation of these principles varied, from forest cities and functional cities to residential districts in large cities [9].

Not all of these plans fully adhered to Howard's principles [11]. The concepts of urban development and management in Polish garden cities took on a different dimension than in Western cities. In the early 20th century, Poland's territory was divided among occupiers, which hindered the proper development of Howard's ideas. However, the underlying ideological foundations were the same as in other European countries. Attention was given to improving the living conditions of residents, seeking solutions to sanitary, health, and hygiene problems, recognizing existing pathologies, and caring for the aesthetics of the built environment [12]. However, different financial possibilities and policies, which made land sales and real estate transactions more difficult, resulted in a different development of garden cities in Poland compared to Western countries.

Table 2. Ideogram of a garden city in terms of communication. Own elaboration.

		Access to convenient and fast rail transport in the form of a circular railway and tram lines. Stops are located in a way that allows for quick and easy transfers between different modes of transportation.
		Underground tunnels for road traffic beneath the rail transport tracks. Grade-separated intersections.
		The optimal size of the city is 6000 acres, which is approximately 2430 hectares. Good transportation accessibility.
	<p>In a garden city, road transport relies primarily on tram and railway transportation. Tram stops are strategically planned to allow residents to reach every corner of the city. Furthermore, a railway serves outskirts of the city and neighboring towns. Due to a proximity of stops, it is easy to transfer from trains to trams, and vice versa. Thanks to such solutions, residents can navigate the city efficiently without the need for cars.</p>	
 <p>Legend: [1] railway tracks, [2] railway station, [3] underground crossing, [4] road areas, [5] tram lines with transfer stops.</p>		



## Principles of planning a garden city

Garden – cities had a particular form, and their construction principles were clearly defined by E. Howard. These principles related to the functioning of the city, its administration, finances, and management, as well as its spatial, social, and communication structure. The city had to be located near a major urban center, typically on undeveloped, open agricultural land. The area where it was established had to possess high landscape, topographic, and hydrological values (tab. 1.). The existing railway network nearby was crucial in the selection of the location (tab. 2.). The city's surface area could not exceed 6000 acres, approximately 2430 hectares, and the population was limited to no more than 30 people per acre. Social diversity and land ownership structure were also significant factors. The garden city was founded by a cooperative society that represented the residents and served as an administrator. The food needs of the residents were to be met by the surrounding agricultural areas. Howard emphasized that the garden city was meant to be a self-sustaining unit with a rich social program that fostered interpersonal relationships and satisfied their needs [12], [13]. Garden cities also featured a distinct functional-spatial form (tab. 3.) and had clear principles for the location of buildings (tab. 4.).

### Research on urban planning

The aim of the research was to assess the extent to which Polish urban planning principles incorporated the original principles of Ebenezer Howard's garden city concept. The conclusions indicate the degree of implementation of garden city principles in early 20th-century planning documents. The study subjected to comparative assessment the most important spatial elements, such as location, structure, functional division, area, development, greenery, and transportation. The selection of cities for study was primarily based on the date of their establishment and their location. In Poland, there are many examples of garden cities. Most of these cities are located within the influence zone of Warsaw, but the study selected centers from different regions of Poland that represented different types of garden cities (tab. 6.). The characteristics of the forest city of Sokolniki, the residential district of Giszowiec in Katowice, the border railway settlement of Zbąszynek, and the planning of the town of Ząbki, which initiated the development of the garden city concept in Poland, were compared.

The analytical – point method was employed in the research. For clarity, it was visually represented through diagrams

illustrating the scope of Howard's principles implementation. The diagrams were graphically linked to the previously identified key assumptions of the garden city (tab. 1–4.). The starting point was the historical analysis of iconographic materials, archival records query, and on-site inventory. Valuable sources of information included data obtained from locals and local enthusiasts. The research was conducted at the Institute of Architecture and Urban Planning at the Lodz University of Technology, in the Urban Structure Revitalization Team.

### Howard's idea in Polish urban planning between the wars

Research has shown that the principles defined by E. Howard in Polish urban plans were selectively applied (tab. 5.). The principle that the city should function as a satellite to a larger urban center was adhered to, but the assumed distance from it varied (Chart 1.). The demographic size of the cities did not reach the initially planned figures (Chart 2.), as the planned centers were designed to be smaller both in terms of the intended population and surface area (Chart 3). Additionally, World War II resulted in many of the compositional layouts never being completed in their entirety (Ząbki), or they were partially demolished to make way for block housing during the period of the People's Republic of Poland (Giszowiec). Rail transportation was rarely integrated into these solutions, and railway access was primarily utilized in cities located as bedroom communities near production centers (Zbąszynek).

Howard's principles can be observed more clearly in the planned city structure and its development. Landscape and topographical



Chart 1. Comparison of the Commute Distance from Studied Garden Cities to the Nearest Major City with the Distance Envisioned by Howard's Idea. Own elaboration.



Chart 2. Comparison of the Planned Population of Garden Cities with the Population Envisioned in Howard's Idea. Own elaboration.



Chart 3. Comparison of Planned Areas of Garden Cities with those Envisioned in Howard's Idea. Own elaboration.

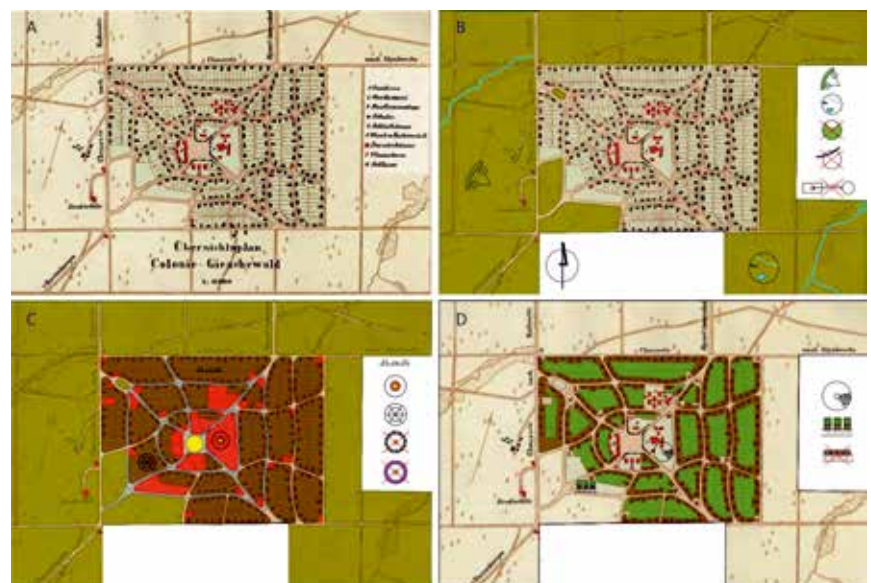


Fig. 1. Example of a Garden City Analysis: Giszowiec. A – Giszowiec Plan from the 20th Century. Source: "Gieschewald ein neues oberschlesisches Bergarbeiterdorf," Hermann von Reuffurth, Katowice, 1910 (accessed on October 12, 2021); Graphic analyses of the garden city of Giszowiec regarding: B – location, C – spatial structure, D – development. Own elaboration.

Table 3. Ideogram of a garden city in terms of functional – spatial structure. Own elaboration.

		A central garden surrounded by public utility buildings, including a strip of city lawns with the "Crystal Palace."
		On the outer side of the "Crystal Palace," a residential zone with single or compact comprehensive service buildings.
		The central avenue, "Grand Avenue," with a width of 420 feet (128 meters), serving as a green belt dividing the city into two functional zones.
		A ring layout with radial boulevards extending outward, dividing the city into functional sections.
		A public park of 2.2 hectares in the city center with a civic hall.
		The railway line (distant from the center) with industrial areas, warehouses, production halls, and sawmills located directly alongside it.

conditions were considered significant locational factors, often planning the layouts on wooded slopes with access to flowing waters. In the city compositions, ring and radial patterns were employed, with a centrally located public space, although not always in the form of a city park, but often with trade and recreational functions. Single-family housing dominated on plots with sizes conforming to standard dimensions in garden cities (600 m<sup>2</sup> – 1200 m<sup>2</sup>). Different types of development were planned, partly in the form of street – front layouts, but more commonly, they were situated in layouts creating forecourts in front of the houses and gardens at the rear.

Heights did not exceed the stipulated two stories, with exceptions in the form of spatial landmarks.

Garden cities were not planned comprehensively. There were no clearly designated work zones or sufficient food zones in the form of agricultural areas. Research has shown that in Polish planning, cities were rarely designed as self-contained spatial units; more often, they were given recreational functions or designed as residential areas accompanying employment centers.

In the studies of garden cities, urban and architectural elements were analyzed, but there was no analysis of social and

administrative correlations. Therefore, there is no answer to what extent the principles of economics and management proposed by E. Howard were implemented in Polish planning during the interwar period.

### Conclusions

The studied cities vary in terms of location, spatial structure, and sometimes architectural form, yet each of them, to a greater or lesser extent, draws inspiration from the concept of garden cities. They do not fully adhere to all the principles derived from Howard's ideas, nevertheless, they are still referred to as garden cities to this day. This term has

Table 4. Ideogram of a garden city in terms of development. Own elaboration.

		Buildings located along the street, forming a continuous urban frontage.
		Private gardens integrated with residential development. Garden function: recreational or vegetable.
		Residential buildings set back from the street.
		Predominance of single-family residential housing; multi-family housing was the exception.
		Plot sizes for construction varied from 600 square meters to 1200 square meters. No possibility of mutual blocking between houses on adjacent plots.
		The city's demographic size is approximately 30,000 inhabitants, divided into six functional units.

Table 5. Evaluation of the Implementation Degree of E. Howard's Garden City Principles in Selected Polish Urban Planning Concepts Presented in Graphic Form. Own elaboration.

city	Zabki					
location/ neighborhood						
communication/ accessibility						
development/ arrangement						
area/ structure						
city	Giszowiec					
location/ neighborhood						
communication/ accessibility						
development/ arrangement						
area/ structure						
city	Sokolniki Las					
location/ neighborhood						
communication/ accessibility						
development/ arrangement						
area/ structure						
city	Zbąszynek					
location/ neighborhood						
communication/ accessibility						
development/ arrangement						
area/ structure						


 [1] Legend: [1] Principles not applied in the spatial arrangements of analyzed Polish garden cities.

Table 6. Location of studied urban centers with characteristics of garden cities in Poland, indicating places subjected to detailed analysis. Own elaboration.

		<b>Ząbki</b> A recreational town in the Warsaw agglomeration. Designed in 1912 by Tadeusz Totwiński.
		<b>Giszowiec</b> A mining settlement in the southeast part of Katowice, designed in 1907 by Emil and Georg Zillmann.
		<b>Sokolniki-Las</b> A Forest City in the Łódź region, established in 1928 on forested land from the parceling of Baron Alexander Rostocki's estate.
		<b>Zbąszynek</b> A railway town realized according to F. Veil's (an employee of the German Railways) design on the outskirts of the former Third Reich of Germany.
<p>Legend: [1] Poland's border during the interwar period, [2] contemporary Poland's border, [3] contemporary provincial boundaries, [4] cities analyzed in detailed studies.</p>		

become so deeply ingrained in the public perception of such urban developments that, despite not meeting many of the principles, these cities are still seen as places with a high quality of life and abundant greenery. Even though there was sometimes a lack of finesse in shaping the landscape layout, a clear ring composition was absent, or the intended functions deviated from the original idea, these shortcomings were compensated for by other spatial elements stemming from Howard's vision. The value of this multifaceted concept, despite the selective application of its principles, remained significant and was applied in the realization of various urban designs in Poland.

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### PRAWIDŁOWY SPOŚÓB CYTOWANIA

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**Abstract:** The term "garden city" is a response to the uncontrolled development of 19th – century cities. It is an idea that combines urban conveniences with the advantages of rural life. In Polish urban planning at the beginning of the 20th century, it took the form of garden cities, green neighborhoods, or cities designed for recreation. Garden cities had a particular form, and their construction principles were clearly defined by the "planner – urbanist" Ebenezer Howard. Not all of these principles were applied in Polish solutions, and only some of them replicated British solutions, yet these cities were already called garden cities at the time of their creation. The degree of implementation of the original principles in Polish urban solutions was examined using selected examples implemented in the interwar period.

**Keywords:** garden city, Howard, master plan, interwar period

**Streszczenie: IDEA MIASTA OGRODU W POLSKIEJ MYŚLI URBANISTYCZNEJ NA POCZĄTKU XX WIEKU.** Miasto ogród to odpowiedź na niekontrolowany rozwój miast XIX wieku. To idea łącząca udogodnienia cywilizacyjne z atutami życia na wsi. W polskiej urbanistyce na początku XX wieku przyjmowała formę miast lasów, zielonych osiedli czy miast służących rekreacji. Miasta ogrody miały szczególną formę, a zasady ich budowy zostały czytelnie sprecyzowane przez „plannistę urbanistę” Ebenezera Howarda. Nie wszystkie z nich były jednak stosowane w rozwiązaniach polskich, a tylko w niektórych powielano rozwiązania brytyjskie. Mimo to miasta te już w momencie powstania nazywano miastami ogrodami. Stopień implementacji pierwotnych zasad w polskich rozwiązaniach urbanistycznych zbadano na wybranych przykładach realizowanych w okresie międzywojennym.

**Słowa kluczowe:** miasto ogród, Howard, plan zagospodarowania przestrzennego, okres międzywojenny