

## Article

# “Świdermajer”, the Architecture of Historic Wooden Summer Villas in the Polish Landscape: A Study of Distinctive Features

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**Abstract:** The article covers the results of the study of a historical wooden holiday architectural ensemble called Świdermajer, located on the outskirts of Warsaw in Poland. The fashion for traveling and resting within natural surroundings emerged in the 19th century, contributing to the popularization of a new model of spending free time. It had an impact on the development of a new type of architecture, including the “Swiss style”, today representing an extremely picturesque European architectural heritage integrated into the landscape. The area of Otwock is one of a very few of such places in Poland, where the entire complexes of suburban wooden holiday buildings from the late 19th and early 20th century have survived. This paper aims to show an overview of a development of the local wooden building trend on the “Otwock Line” within its historical and social background. The main goal of the study focuses on identifying the characteristic features of the architectural wooden local style. As a final outcome of the study, the article presents the method applied for the recording and assessment of historic wooden summer villas. The conducted study confirmed the distinctiveness of the phenomenon represented by cultural values and, at the same time, its strong links with the Alpine style of architecture.

**Keywords:** architecture; conservation; features; forest; landscape; mapping; parameters; Świdermajer; timber; values

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## 1. Introduction

The tradition of wooden architecture in Poland, is currently facing a serious threat caused by civilization processes that are occurring at an accelerated pace. The wooden architecture of cities and small towns has been almost completely replaced by brick, steel and glass constructions. Wooden architecture constitutes only 11.1% (over 6000 objects) [1] of the protected architectural objects in Poland. The tradition of such technology is best sustained in rural areas. The resource of vernacular secular and sacral architecture in Poland has been relatively well recognized and described. Its importance is confirmed by numerous regional cultural routes of wooden architecture, as well as by three collective entries on the World Heritage List:

- Churches of Peace in Jawor and Świdnica (2001);
- Wooden Churches of Southern Małopolska (2003);
- Wooden Tserkvas of the Carpathian Region in Poland and Ukraine (2013).

With its relatively young age, in comparison with vernacular buildings, the complex of wooden holiday architecture of the second half of the 19th and early 20th centuries, inspired by the popular Western Europe Swiss style, has not met with such recognition or extensive scientific research.

The Swiss style in Poland, as in the countries of Central and Northern Europe, is present mainly in health resorts and spas, such as Nałęczów, Krynica-Zdrój, Polanica-Zdrój and Międzygórze. The wooden architecture of the Otwock area is an exception in comparison to the typical Swiss style buildings erected in the above-mentioned towns,

and in the whole of Europe. Local social, historical, economic as well as natural and landscape conditions have left such a strong mark on it that distinctive features of the local architectural trend, identified with the term “Świdermajer”, have emerged. The unique historic value of the resource is also determined by the number of several hundred wooden buildings, representing distinctive features of the Świdermajer architectural trend, scattered along the railway line built in the second half of the 19th century along a stretch of several kilometers.

According to the 1999 ICOMOS Principles for the Preservation of Historic Wooden Buildings, developed by the International Wooden Committee ICOMOS, a coherent strategy for regular monitoring and management of the resource in the inevitable process of change is crucial for the preservation of historic wooden structures and their historical significance. There are a number of objectives that need to be defined and prioritized regarding the care and protection of the resource in reference to the concept of management, which aims to ensure the maximum longevity of wooden architectural heritage objects and the values they represent. Dynamic monument conservation understood in this way means planning based on interdisciplinary biological-technical and aesthetic-architectonic knowledge with regard to social sciences, such as ethnography, history or economics, but first of all the local building tradition. The first step towards organizing a system of protection for the resource in question takes the form of the research described in this article, which aims to identify and define the distinctive features of this resource.

### *1.1. Subject and Aim of Research*

The article is based on the results of research conducted in 2019–2020, commissioned by the Mazovian Province Conservator of Monuments [2]. The subject of the research was to identify a location and the distinctive features of the still preserved wooden holiday buildings, called ‘Świdermajer’ in the local architecture style, located in the area of the former summer resorts of the so-called ‘Otwock Line’. By means of historical analyses, the study area was delimited by the former boundaries of the sub-Warsaw summer resorts established along the route of the Vistula Iron Railway completed in the second half of the 19th century.

The aim of the research is to create a substantive basis for the formulation of a strategic program of conservation for the wooden holiday architecture of the Otwock Line as a tool for the management of the historic resource by the Mazovian Province Conservator of Monuments. Despite the existence of articles contributing to the knowledge of this resource written since the 1980s and growing public awareness, the resource has generally remained outside the interest of the regional conservation office. Only a few objects were under conservation protection. The suburban settlements of the Otwock Line are today the subject of increasing investment pressure. Many wooden buildings are being renovated, rebuilt or, in extreme cases, demolished. Another serious threat to wooden buildings is fire. To date, no statistics have been kept on the scale of the transformation of the resource. Apart from a few collections of photographs documenting the general condition of selected objects, no attempts have been made to identify the resource. The present research is the first attempt to identify the resource and determine the scale of the phenomenon.

The research was divided into two phases. Only the first phase has been implemented to date and the main tasks (described in Section 2, Materials and Methods) included:

- The identification and verification of the resource;
- The determination of the extent of the historic building pattern;
- To carry out a typological assessment with an emphasis on the distinctive features of the “Świdermajer” style;
- The indicate, on this basis, the most valuable structures and those requiring the most urgent intervention.



The first stage of research forms the basis for future work, which aims to define the objectives of conservation and protection activities, including:

- The methods of monitoring wooden architecture;
- The promotion of the wooden architecture heritage;
- Indicating the directions for further research related to the topic.

### 1.2. *A State of the Research*

The first collective scientific publication dealing with the issue of the wooden architecture of the “Otwock Line” appeared in 1994 [3]. It was the work of the Regional Research Team of Warsaw and Mazovia at the Monuments Documentation Centre. In the “Mazowsze” annual publication, the team led by Ewa Pustola-Kozłowska attempted to evaluate and capture the stylistic features of the Otwock’s wooden architecture in its landscape and cultural context [4–10]. Robert Lewandowski undertook the task of analyzing the origins of the sub-Warsaw villas in historical terms in his work published in 2011 [2]. Andrzej Cichy’s study of wooden facade shuttering published in 2007 [5] is an invaluable contribution too.

The history of summer resorts near Warsaw is closely related to the development of European tourism. The development of summer resorts near Warsaw is part of a well-described global phenomenon of dynamically developing “leisure” infrastructure, e.g., in 19th century Europe. While traveling for pleasure was already known in ancient times, it was only the social transformations and development of means of transport at the turn of the 19th to the 20th century that made this form of leisure time popular. This phenomenon has been widely described in scientific literature [11–20].

### 1.3. *Historical Context*

In 1880, Michał Elwiro Andriolli, a well-known illustrator, a graduate of the Imperial Academy of Fine Arts in St. Petersburg and a student of St Luke’s Academy in Rome [21], bought almost 202 hectares of land at the Świder river bank near Warsaw in order to build a summer resort colony. It was named Brzegi in 1883. In 1885, he bought materials and dismantled wooden ornaments from the pavilions of the Agricultural and Industrial Exhibition. Then, he built fourteen wooden villas for summer visitors with the help of the inhabitants of the Urzecz region (Olenders), who were well acquainted with carpentry techniques and lived in the nearby Świdry Wielkie colony. The buildings were lavishly decorated in line with Andriolli’s idea. In addition to the rich ornamentation, he also applied new, locally unknown technical solutions inspired by the timber frame constructions popular in Western European countries [22]. He covered the wooden skeleton construction inside and outside with patches (battens) and filled the empty space with clay mixed with wood chips and finely chopped branches. When the outside and inside filling dried, the buildings were covered with sawn formwork. Unfortunately, none of the buildings has survived to the present day. Information about these summer houses comes from scarce iconography and press articles, where Andriolli boasted of his “ingenuity and inventiveness in construction” [23].

The location was not accidental. The terrain conditions affecting the formation of ideal conditions for the establishment of the climate station (health resort) were defined by Andriolli’s friend, Dr. Henryk Dobrzycki, in numerous publications including “Śławuta—Klimatyczna stacja leśna oraz zakład kumysowy” (“Śławuta—a climate station and a kumis plant”) According to the medical knowledge of the time, the climate was of cardinal importance for the treatment of not only pulmonary diseases, but also general nervous exhaustion. The landscape of pine forests by the Świder River abounding with sand dunes, as well as the pine forest healing facility of Śławuta town, renowned since 1876 (currently located in Ukraine), met all the hygienic requirements for a climate station and summer resort.

According to Dobrzycki’s guidelines, an area located at or near a medium-sized river between pine forests was an ideal place for treatment and rest from urban nuisance, as in

large forest areas, day and night temperature changes do not rapidly change as in open areas, as tree crowns retain heat, and the amplitude of day and night temperatures is smaller than in a forest-free area. The beneficial properties of pine resin ethers and pollen are considered an additional advantage of coniferous forests. In addition, forest air contains more ozone, the forest protects against strong winds and, according to Dobrzycki and contemporary hygienists, it is similar to the marine climate prevailing in northern Italy or southern France, popular destinations for consumptives in the 19th century. The occurrence of permeable grounds, light hills and terrain folds allowing for quick drainage after rainfall is also very important [24]. The wooden buildings designed and erected by Andriolli in the 1880s are considered the prototype for the characteristic summer houses of the Otwock Line. However, attributing the authorship of the style of the Vistula River to Andriolli, despite his involvement in the execution of individual details, is unjustified [25]. Even then, the pattern books were widely used, e.g., the model book of woodcarving details by B. Liebold (Figure 1) was published in 1893 and known all over Europe [26].

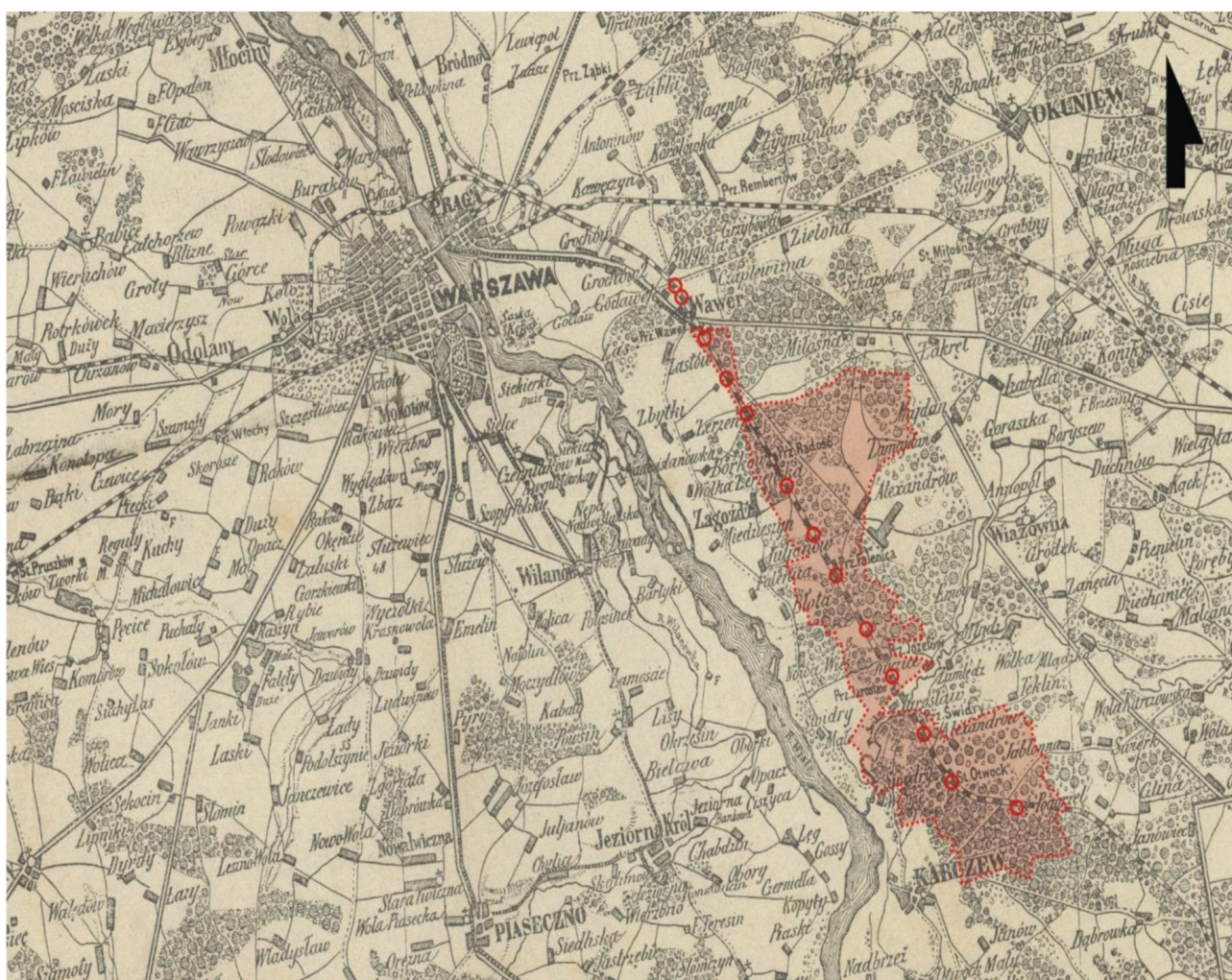


**Figure 1.** A card from the pattern book of B. Liebold (1893) presenting an example of a decorative wooden gable and decorative roof over the entrance to the Gurewicz Pension (1906) in Otwock; photo: W. Lach, 2009.

The beginnings of the popularity of the wooden holiday architecture style on the banks of the Vistula River can be traced back to the social changes in the lifestyle of city dwellers and the development of railway public transport in the 19th century. At the beginning of the twentieth century, more and more Varsovians were looking for a place where they could spend summer outside the city, within natural surroundings, just as the richest among the landed gentry did in foreign resorts. One of the key criteria, however, was the price and the proximity to the city. While the family rested at the summer resort, the father could commute to them at weekends or even, owing to the development of the railway network,



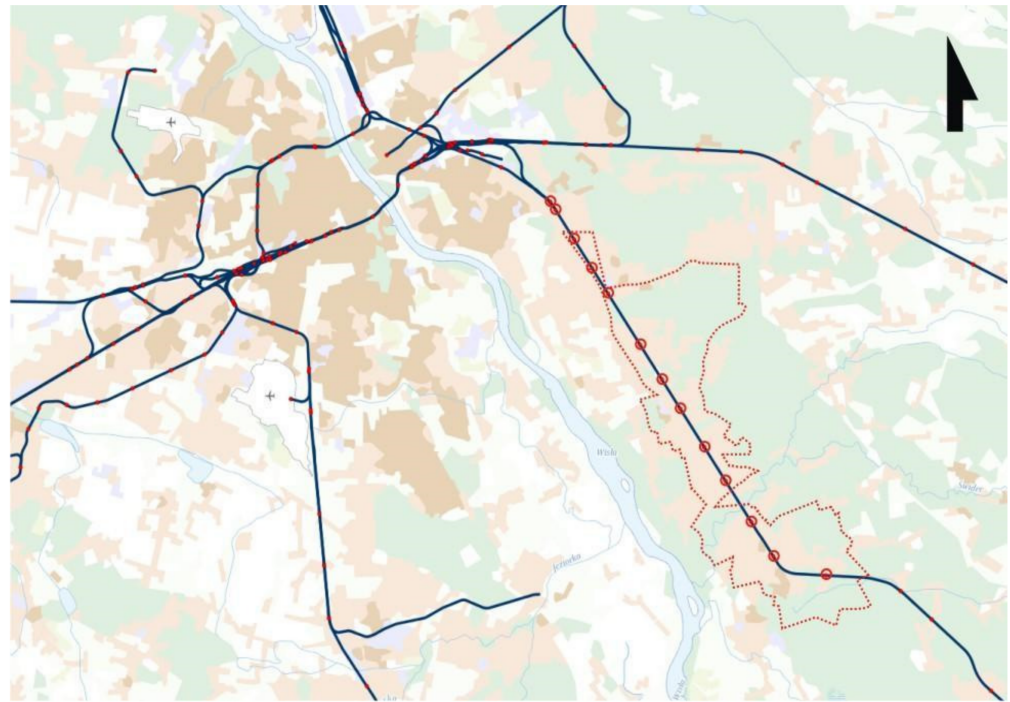
after work. August 1877 saw the opening of the Vistula Iron Railway line (Figures 2 and 3). Otwock was the first station in the eastern direction after Prague (the district of Warsaw). In the following years, new stations were built along this section, giving rise to new summer resorts: Świder, Anielin, Jarosław, Józefów, Emilianów, Michalin, Falenica, Miedzeszyn, Miedzeszyn Nowy, Radość, Zbójna Góra/Daków, Międzyzlesie, Anin. The Vistula River also provided transport opportunities, with passenger ships traveling from Warsaw. In the early 20th century, a narrow-gauge railway line running parallel to the Vistula Railway provided an additional convenience. The building movement, which mainly boiled down to the construction of more and more wooden holiday villas, concentrated around the established railway stations, determined the creation of a characteristic linear settlement structure, called the Otwock Line.



**Figure 2.** A map of summer resorts near Warsaw from 1905 with a railway network. Red dots mark historical railway stations, and a red dotted line demarcates the area of former summer resorts on the Otwock Line, by M. Górski.

In 1868, Ernst Gladbach's first publication describing the "Swiss style" was released [27]. It contributed to the popularization of Swiss architecture in the entire Europe as well as to the establishment of the notion of the "Swiss style" [28]. Wooden villas inspired by the first designs of Andriolli, built in a style echoing the Swiss style, popular among European resorts, were enchanting with the rich ornamentation of wooden openwork. Exotic to the Mazovian landscape, they were usually placed in wide, deep gable eaves, decorated with story verandas, lambrequins and balusters. The majestic character of the buildings with high knee walls, allowing the attics to be adapted for residential purposes, competed for

their place in the forest landscape of Otwock and its surroundings with lofty pine trees and more and more dense new residential and commercial buildings in that area. The first half of the 20th century was the peak period of the development of the summer architecture of the Otwock Line, which lasted until the outbreak of the Second World War. In one of his poems, Konstanty Ildefons Gałczyński jokingly referred to the style of the wooden architecture by the Świder river, arranged for the new bourgeoisie, as “Świdermajer” [29]. The name was adopted and has remained a local identifier of the wooden architecture of the Otwock Line until today.



**Figure 3.** Contemporary spatial layout of Warsaw with the railway network. Red dots mark historical railway stations, and a red dotted line demarcates the area of former summer resorts on the Otwock Line, by M. Górski.

In 1916, Otwock was granted municipal rights, and at the beginning of 1924, it received the status of health resort, which significantly translated into the popularity of the summer resort among Varsovians. Based on a guidebook of the time [30], in 1925, in Otwock, there were 2 hotels, 40 guest houses, 1300 villas, 3 restaurants and 5 eating places with the number of rooms amounting to 4480. The establishment of the first hygienic and dietetic institution for Jews, founded by Władysław Przygoda in Otwock in 1895, was an important event for the development and the cultural landscape of the Otwock summer resort. The Jewish population grew systematically from that time until World War II. In 1916, Otwock obtained town rights and the Jewish population grew to approx. 20% of the town’s inhabitants; in 1939 the number rose up to 55% [4]. The tragic events of World War II and the later political changes caused most of the wooden buildings to be taken over by the communist state.

Despite the destruction caused by World War II and the changes in the ownership structure due to political developments during the communist period, several hundred wooden buildings representing the local architectural trend, commonly referred to as ‘Świdermajer’, have survived to this day.

## 2. Materials and Methods

The resource assessment was based mainly on quantitative methods. The first phase of the study consisted in marking out over 400 buildings (Figure 4) with stylistic features within the boundaries of the former summer resorts and in their surroundings, and placing



them in the graphic documentation attached to the study. Each object was given an individual identification number preceded by the letter O (for Otwock), J (for Józefów), and W (for Wawer). The historical boundaries of the summer resorts that belonged to the Letnisko–Falenica community established in 1924 were marked on a contemporary map base.




**Figure 4.** Historical boundaries of summer resorts (red line) with the location of wooden buildings (414) identified during the survey (red dots) on the “Otwock Line” together with the marking of railway stations. The distribution of buildings has a clear linear character stretching along the railway line; graphic by M. Górski, based on [2].

The second phase consisted in identifying the basic stylistic features represented by the holiday architecture of the Vistula River and determining the intensity of their occurrence for each object on the basis of the author’s model identification card. The conservation and architectural characteristics of the objects were registered in the form of a database, in separate cards for each object containing a tabular part and photographs (Figure 5). The open formula of the catalog, consisting of separate, editable cards, makes it possible to easily correct the information resulting from the current monitoring of the condition of the objects. The information in a card was divided into three blocks:

- Basic registration data with photographic documentation;
- Data on the distinctive features of architectural and landscape;
- Data on the transformation of the site and its surroundings.



KARTA IDENTYFIKACYJNA OBIEKTU DREWNIANEGO		3. Numer ewidencyjny	1
NADŚWIDRZAŃSKIEJ ARCHITEKTURY LETNISKOWEJ 'ŚWIDERMAJER'		O-007	
1. Nazwa	przedszkole	2. Czas powstania	przed 1939 r.
4. Miejsowość	Otwock		
12. Lokalizacja			
13. Otoczenie			
5. Adres	ul. Waleriana Łukasińskiego 38		
6. Przynależność administracyjna	6.1 Powiat: otwocki		
6.2 Gmina	Otwock		
7. Oznaczenie w ewidencji gmu. i bud.	nr dział. 86/10; obr. 17		
8. Własność	Gmina Otwock		
9. Funkcja pierwotna	mieszkalna		
10. Użytkowanie obecne	mieszkalna		
11. Forma ochrony	brak		
12. Informacje źródłowe	wizja lokalna - (08.2019r.)		

KARTA IDENTYFIKACYJNA OBIEKTU NIERUCHOMEGO		3. Numer ewidencyjny/2	2
NADŚWIDRZAŃSKIEJ ARCHITEKTURY LETNISKOWEJ 'ŚWIDERMAJER'		O-007	
Identyfikacja cech typologicznych			
1. Otoczenie	2. Bryła	3. Detal	
1.1 Zieleni wysoka	N	2.1 Kondygnacje	3
1.2 Tradycyjna zabudowa	N	2.2 Poddasze użytkowe	N
1.3 Ogród w parterze	C	2.3 Symetria	Z
1.5 Ekspozycja od ulicy	Z	2.4 Osie elewacji	5
1.6 Element zespołu	N	2.5 Ryzality	0
1.7 Orientacja południowa	N	2.6 Werandy	2
inne	N	2.7 Wieże	0
		2.8 Ganek wejściowy	2
		2.9 Lukarny	1
		3.1 Szalunek prosty	N
		3.2 Szalunek ozdobny	Z
		3.3 Ornament laubzegowy nadokienniki	N
		3.4 Ornament laubzegowy podokienniki	N
		3.5 Ozdobne naroża	Z
		3.6 Ornament laubzegowy pas koronujący	Z
		3.7 Ornament laubzegowy pasy pośrednie	Z
		3.8 Ornament laubzegowy balustrady	N
		3.9 Ornament laubzegowy werandy	N
		3.10 Ornament laubzegowy - inne	N
		3.11 Tradycyjna stolarka okienna	C
		3.12 Okap szczytowy nad jętką	N
		3.13 Sterczyzna	N
		3.14 Ozdobne końcówki krokwi	Z
Współczesne przekształcenia			
4. Otoczenia	5. Bryły	6. Detalu	
4.1 Nowa zab. gospodarcza i techniczna	N	5.1 Nadbudowa	N
4.2 Nowa zabudowa użytkowa	N	5.2 Rozbudowa	N
4.4 Zieleni inwazyjna na działce	N	5.3 Termomodernizacja	N
4.5 Zieleni inwazyjna (destrukcyjna)	N	5.4 Rozbiórka	N
4.6 Zmiana charakteru leśnego terenu	N	5.5 Zabudowa werandy	Z
Wartościująca ocena typologiczna			
Historyczna	Naukowa	Artystyczna	
statystyczna	wysoka	przeciętna	

Z - zachowane

C - zachowane częściowo

N - nie stwierdzono

© festgrupa sp z o.o.

Figure 5. A sample of a completed object car: page 1 and page 2.

A total of 414 cards were prepared, covering all selected buildings and their surrounding development. The cards were prepared on the basis of local inspections, archival materials, including photographs, press articles, and records of historical buildings made available by town offices. The main limitations hindering the research included:

- The small amount of archival material;
- No overall identification of the resource in the past;
- The necessity to search for dispersed objects over a wide area;
- Limited access to buildings that are almost 100% privately owned;
- The forest character of plots making the photo documentation difficult.

### 3. Analysis of the Resource Value

Recreation and entertainment in summer resorts, at the turn of 19th to the 20th centuries, were only an addition to the therapeutic role that was played by staying in an appropriate and beneficial climate. The specific function of the villas near Warsaw required a special architectural setting. As a result of the construction movement, at the end of the 19th century, a local architectural style emerged, drawn from both Western and Eastern patterns. Its special feature was the arrangement of utility functions, adapted to the requirements of the summer function, which is reflected in the characteristic shape of the wooden buildings.

Already in his first small three-axis house, Andriolli used details known from the “Swiss style”, popular in Western summer and health resorts. Although Andriolli’s workshop itself is undecorated, the houses moved and built from the exhibition pavilions are more ornamented, although the technology of wall construction differs significantly from the later frame-based villas. Exhibition pavilions were quite ornate and architecturally refined, as companies ordered them also from famous architects (e.g., the Jung brewer’s pavilion designed by Witold Lancer) [31]. The Alpine style was popular and well-known in Warsaw and was associated with entertainment in the largest open-air salon of Warsaw at that time, the Swiss Valley opened in 1827 in Ujazdów, with its numerous pavilions and cafés decorated in Alpine style. Apart from the medicinal and social needs, it should also be noted that the popularity of the Romantic movement among Warsaw’s bourgeoisie resulted in nature and wilderness no longer being perceived as a sinister, threatening force, but being appreciated as a space for relaxation and rest from the hustle and bustle of the city. The press, describing the journeys of the “exquisite company” traveling to fashionable European resorts, generated the need to relax in lesser-known places, but closer to the capital, i.e., located no more than an hour’s train ride away.

The rapid development of summer resorts required the use of cheap materials that would allow for a quick construction and comply with the increasingly common hygienic requirements. This material was commonly available and took the form of cheap wood coming from the forests cut down in the landed estates impoverished as a result of the post uprising repressions. The Anielin-based Kurtz family from Otwock Wielki, as well as the Wiąz and Glinianiec, became such estates for the Otwock Line. The allotment of land for summer resorts was initiated by Elwiro Michał Andriolli.

According to Henryk Dobrzycki, in his draft of the sanitary legislation for health resorts [32], the rooms for summer visitors should be at least three-square fathoms (about 6.4 m<sup>2</sup>). The villas were also supposed to be well lit, equipped with verandas, which made it possible to rest outdoors on a rainy or too hot day. The rooms of villas and guest houses were also to be perfectly ventilated to ensure access to healthy “climatic” air. Additionally, the “ethers” of fresh pine wood, from which the outer walls of villas and pensions were built, was of great importance at a time when inhalation and aromatherapy were becoming popular. Thus, all the advantages of the villas built in the summer resorts near Warsaw on the Otwock Line were the answer to the inconveniences of living in Warsaw tenement houses. The differentiation from the local rural housing, creating the illusion of a journey to distant lands, was a great advantage.

As a result of the popularity of Andriolla's "Brzegi", other colonizers appeared within time. Initially, the villas were built on the Świder River. One of the first is "Bojarów" founded in 1883 by Konstanty Moës Oskragiełło; although the main "mansion" is made of brick, there are also two wooden houses. There was already a high increase in investment interest from the mid 1880's. Around the station in Otwock, until 1893, around 60 villas had been built for summer visitors and as villas owned by the Warsaw intelligentsia. Among others, Władysław Marconi had four apartments in two wooden houses to be let for holidaymakers. The kitchen was located in a separate building. This applied to most of the villas. This changed in the period after the Great War, when, with the increase in prices by about 50 percent, a drop in the value of gold by half and an increase in the number of summer visitors from poorer strata, the most sought-after rooms were those equipped with their own kitchen.

Villas built in the way known as the Swiss style were popular in summer resorts, captivating with the rich ornamentation of wooden openwork, usually placed in wide, deep gable eaves, with their decoration of floor verandas, lambrequins, balusters, and the majesty of buildings elevated with a high knee wall, allowing for the future adaptation of the attic for residential purposes.

Each villa had its own name and often a decorative accent distinguishing it from other buildings. The rich ornamentation decorating the tops of houses, verandas and windows of resorts throughout Europe had to appear on the Świder river as well. There was competition for openwork decorations. Excellent local carpenters of Olender (Dutch) origin used thin blades to make ornaments with floral, geometric and even symbolic motifs. The geometric rhythm of the profiled shuttering boards arranged in various patterns completed the whole. Fully nutritious wood of shuttering boards profiled in dozens of ways, impregnated with linseed oil, even after a hundred years, has retained its technical and functional properties. The formwork of one profile was used within one villa, usually for pragmatic reasons. However, there were structures with a greater variety of profiles, as in the case of the Gurewicz Spa, where during the restoration research, five different profiles of shuttering were identified. The profiles used, due to the pattern, thickness and width of the shuttering board, can be helpful in dating the buildings [25]. The shuttering boards occur in a vertical arrangement, protecting the gable walls from the wind, and in a horizontal arrangement referring to traditional buildings with a log construction. Moreover, as in other regional styles derived from Alpine architecture, the boards are fixed directly on the supporting elements of the structure [19]. An important technological contribution, which made the widespread use of openwork decorations possible, ought to be mentioned. In the second half of the 19th century, with the development of metallurgy and the production of resilient saws on an industrial scale, ornaments cut with a hacksaw appeared.

It is worth mentioning that they were not designed by architects. The analysis of the preserved architectural projects and field inventories leads to the conclusion that, in almost every case, the ornaments were either not included in the design or were left to the free interpretation of carpenters using their own ideas and templates. Therefore, the influence of high-class carpenters of Olender origin (e.g., the Jesiotr family from Górki) on the architecture of summer resorts located in the Vistula valley should not be overlooked.

Along the Otwock Line, a unique style of erecting holiday villas appears. While the character of large boarding houses is similar to that in other health resorts and summer resorts, resulting from their functional requirements, Line a characteristic style can be distinguished within the territory of the Otwock, subordinated to the specific Warsaw metropolitan clientele, looking for recreation with their friends in smaller structures. Despite preserving a large number of designs (only for Otwock), it is difficult to unequivocally attribute specific works to well-known architects, as the search revealed that the designs were created in Warsaw ateliers of lesser-known authors and teams.

One of the identified buildings, which can be attributed to a famous architect, is the villa of Odo Bujwid (Figure 6), located at number 19 Kościelna Street in Otwock, designed by Stefan Szyller in 1888 [33,34]. The building is a typical example of a single-story villa,



which was eagerly copied in the summer resorts of the Otwock Line. This one-story, five-axis villa has a symmetrical layout, with a pair of shallow front risalitis and a veranda on the axis and two smaller verandas on the outer axes facing the yard, evidently situated in the center of the forest garden. The gables and verandas of the villa are richly decorated with fretwork with floral motifs. The interior layout is not typical of other one-story buildings, because it has a two-line system with a hallway on the axis. Usually, in later designs made for renting to summer visitors, and not as own villas, the main veranda on the building's axis is connected to a living room or a day room. Two verandas are attached to the gable walls. On the north side, there is mostly an entrance to the vestibule, usually covered by a small canopy. This was due to the need to provide a veranda for each set of rooms intended for summer visitors, commonly a bedroom and a living room.

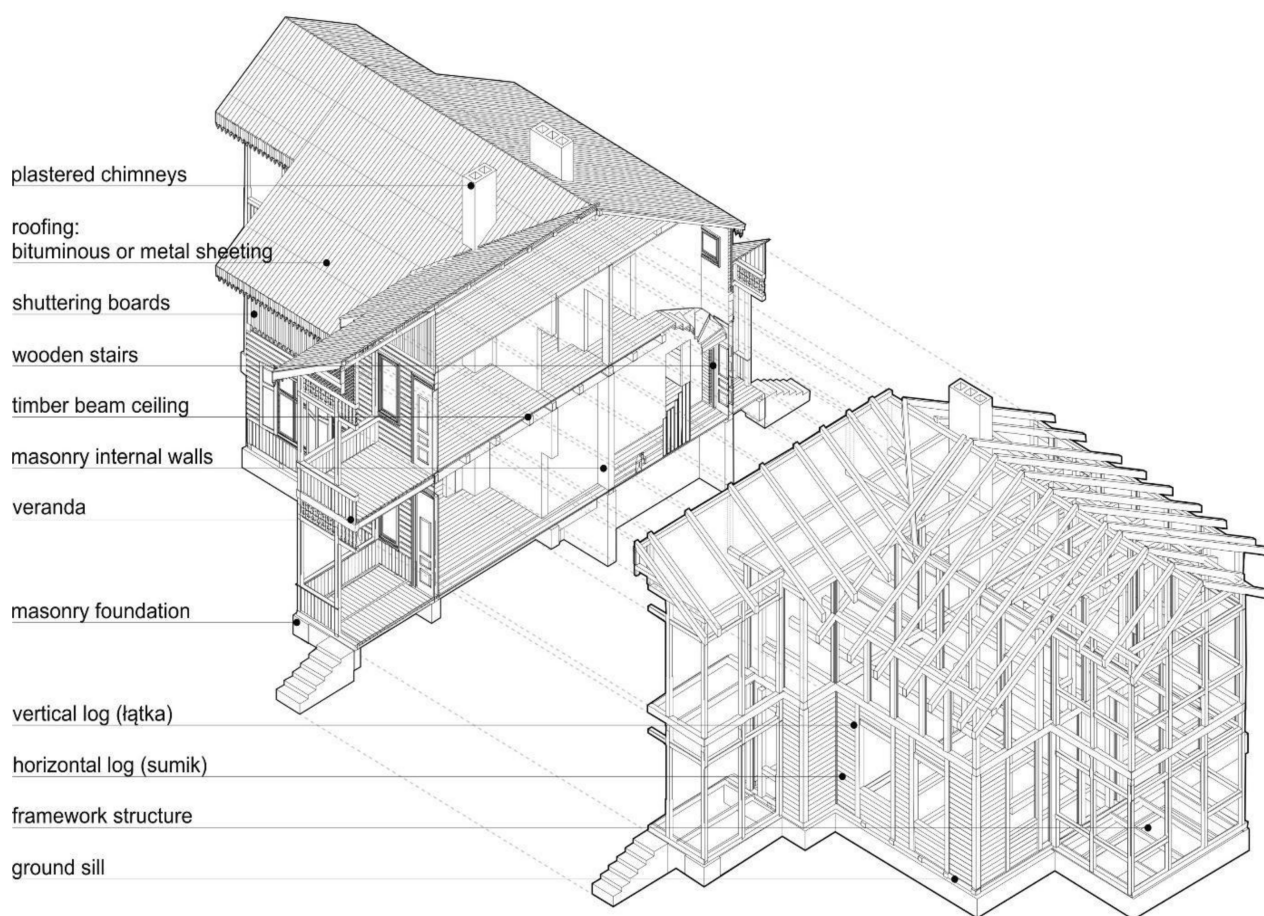


**Figure 6.** Otwock, Kościelna Street 19, Odo Bujwid villa, Stefan Szyller (1888); photo: W. Lach, 2011.

In the buildings occurring in Western summer resorts and in the Alps, erected in the Swiss style due to the availability of material, the main body is made of stone or brick. In German, Galician and Silesian boarding houses, cloister or balcony terraces usually surround the building on the side of the gable wall, hidden under the overhang of the wide gable eaves, protruding considerably behind the wall face. Additionally, this part of the building is oriented in the south or south-west direction. Leisure villas on the banks of the Vistula River were oriented in the south-west direction with the front wall usually having five or more axes in order to provide access of light to verandas surrounding the building from three sides. This is a procedure that cannot be replicated in large western guest houses with more than eight apartments.

The type of villa, most commonly represented in the summer resorts of the Otwock Line near Warsaw, is the two-story version of the described five-axis villa, with two-story verandas and a representative staircase in the extended hallway (Figure 7). In both

presented types, there is a high knee wall, which allows for the usable adaptation of the attic and to enlarge the villa in the future by adding rooms in the attic by breaking window openings in the roof and insulation of knee walls and the roof. In the discussed area, there are also numerous villas with a two-story main body and one-story wings, with a tile roof, where the gable walls of the main body form the front of the villa enriched with a balcony or a two-story veranda. Villas echoing the style of Italian villas, equipped with a tower, which was an extension of the staircase, were also popular. The tower allowed people to admire the landscape and sometimes had only decorative function or provided light for the staircase. This is a group of buildings with the most varied shape and layout, which can also be found in many other summer resorts in the country.



**Figure 7.** Typical wooden structure layout of a Świdermajer-type building, by M. Górski and D. Wojciechowska.

What is worth mentioning is the importance of railway architecture in the development of summer resorts. Richly decorated wooden railway stations in Otwock, Świder, and Józefów were built on the wave of the popularity of the Swiss style as a proposal for railway architecture along rapidly developing lines. The railway had to reach the summer health resorts, both in Prussia and Austria, as well as in the Russian annexation, although here railway stations were popularly located outside the urban fabric for strategic reasons. Summer resorts developed around the stations took the form of a showcase of the resort and a kind of gateway to the town. It is therefore impossible not to consider the influence that the architecture of the train stations may have had on the appearance of the surrounding villas.

The relationship between the architecture of wooden villas and the landscape of a pine forest located among forest dunes on dry ground cannot be overlooked either. Although walking paths (usually oval in shape) or flowerbeds (commonly in the immediate vicinity



of the villas and boarding houses) were created, the gardens surrounding the villas created an impression of naturalness.

While analyzing wooden villas that are unique to Mazovia, attention is usually paid to their specific formal features (shape, ornament, and surroundings), or the historical figures associated with these buildings. It is worth noting that they represent not only values recognized individually for each object, but, as a set, they document the processes of social changes occurring in Poland at the turn of the 19th to the 20th centuries, focusing, as if through a lens, in Warsaw and its surroundings. These processes had a direct or indirect impact on the development of the characteristic features of the wooden “Swidermajer” buildings and can be divided into contextual factors, including historical, social, economic, artistic, landscape, technical, sanitary, and even ethnographic (e.g., the presence of Olender carpentry workshops/teams located on the border of the emerging summer resorts).

The scale of the social phenomenon involving the development of summer cottages near Warsaw resulted in the fact that, despite the numerous losses of the resource due to war damage and post-war negligence, the resource may still be perceived as a dispersed historic complex of the wooden building pattern.

## 4. Results and Discussion

### 4.1. *Distinctive Features in Evaluation the Architectural Heritage*

Each physical object is characterized by a set of attributes that distinguish it from others in the set. In general, only a subset of features called “distinctive” is sufficient to distinguish objects [35]. Through the definition of a certain set of distinctive features, we can create sets of objects with similar characteristics. Taking this assumption into consideration, the basic goal of the evaluation of the wooden holiday architecture of Otwock, which was created from the 1880s to the end of 1930s, was to identify those formal characteristics that can confirm the stylistic distinctness of the “Świdermajer” trend of architecture.

The study area was divided into working sectors. Each sector was inspected by members of the research team, in terms of selecting objects for further research. In the first phase, the only criteria were the material (wood) and age of the building. Wooden buildings visually indicating that they were built in the last 30 years were excluded from the analyses. The individual features of the heritage were determined on the basis of historical research (summarized in Section 3) and local inspections, revealing a set of distinctive features. The obtained serves to verify the individual objects in terms of the features that give them the character of the local “Świdermajer” style. The basic assumption was that none of the selected traits individually constitutes distinguishing mark and can be identified in other objects. What makes the summer resorts near Warsaw unique is the sum of many complementary features shaped under the influence of the contextual historical conditions discussed in the previous section.

The data on distinctive architectural and landscape characteristics, described on the second page of the object card (Figure 5), were divided into three blocks: surroundings, spatial form and detailing.

The following were defined as distinctive parameters of the environment:

- 1.1 Location on a plot of land covered with pine forest, resulting from:
  - Hygienic trends that emerged in the 19th century;
  - The presence of dry sand and mid-forest dunes on which pine forests grow, associated with beaches and relaxation;
  - The influence of Romanticism, emphasizing the experience of the contact with nature, traveling and the picturesque landscape as a new aesthetic value.
- 1.2 Traditional service buildings, such as kitchen pavilions, distinguishing holiday housing from residential villas (with their own kitchen facilities inside the building). Functional and economic factors generated a need for buildings that could accommodate apartments for several families or couples (trips together), with one external kitchen served by a servant employed by the host of the facility.

- 1.3 An arranged garden in the parterre of the forest plot, equipped with alleys, flowerbeds, springs, and fountains. The extended program of the garden was generated by the need to create solutions to the high requirements of the rich bourgeois class and landowners.
- 1.4 South-west orientation of the villa, which was the best to provide light for three or four rental units with one level, the most common type of wooden holiday villa.

The distinctive parameters of the spatial form were dictated by the adjustment of structural solutions to the technical possibilities of wooden constructions. The focus on construction in the wooden structure resulted, among others, from:

- The large quantities of cheap and diverse materials after the parceling out of manorial forests and landed estates;
- The short time limit within which the wooden buildings needed to be erected;
- The seasonal use of facilities.

The characteristic features of the spatial form included:

- 2.1 Symmetry of the shape on the projection of a rectangle allowing to accommodate four living units;
- 2.2 One-story height with a knee wall and an attic, adjusted to:
  - Simple wooden structures;
  - The forest character of the plot without interfering with the shape with the high crowns of the pines.
- 2.3 A composition of six or eight axes of the front facade, corresponding to the most popular use program of summer villas;
- 2.4 Front risalita with triangular gables, stressing the axuality of the shape and allowing the additional lighting of the attic rooms;
- 2.5 Entrance porch enhancing the least sculptured, veranda-less north façade;
- 2.6 Verandas, an indispensable element of holiday architecture;
- 2.7 Post and plank construction, often combined with timber frame construction, ensures the most optimal use of the wooden material and insulates the buildings using a mixture of sawdust and needles;
- 2.8 A simple gable roof allowing use of attic space and lighting in the gables of the building;
- 2.9 Tower used in the most representative buildings;
- 2.10 Dormer windows provide light to the usable level of the attic.

The distinctive features of architectural detailing are among the most recognizable characteristics of ‘Świdermajer’ architecture. Decorativeness was perceived as a value responding to bourgeois aesthetic needs. The search for and reception of forms for the needs of Warsaw’s clientele were adapted to:

- The growing popularity of Alpine-style architecture identified with leisure and entertainment in the 19th century;
- The presence in the Middle Vistula Valley (Urzec) of a large Olender population with a high level of carpentry skills;
- The spread of spring steel in the second half of the 19th century, allowing local carpentry workshops to use a hacksaw (laubzega, fretsaw);
- The appearance of large grain mills equipped with steam mills in the mid-19th century forced the watermill owners in the Świder valley to switch to a seasonal board production. This process resulted in an easy access to cheap material for cladding the building.

The identified distinctive features of the detailing are:

- 3.1 Profiled formwork;
- 3.2 Laubzega ornament of the dripstones;
- 3.3 Laubzega ornament of windowsills;
- 3.4 Laubzega ornament of the coronation band;
- 3.5 Laubzega ornament of the intermediate belt;

- 3.6 Laubzega ornament of balcony railings and stairs;
- 3.7 Laubzega veranda ornament;
- 3.8 Laubzega ornament of the gable eaves over mayflies;
- 3.9 Decorative corners;
- 3.10 Pinnacles;
- 3.11 Decorative rafter ends.

All of the aforementioned distinctive features make it possible to place the wooden architecture of the Vistula River region as an artistic and cultural phenomenon originating from the general trend of the European (and to some extent Asian) architecture of summer cottages, but having its own distinctive features that give it a local style.

#### 4.2. Summary

Recording information concerning the architectural and landscape features of the wooden holiday architecture of the Otwock Line called “Świdermajer” in the form of a database made it possible, among other things, to carry out statistical comparisons of the distinguished features. The statistical outcome illustrates, for example, the intensity of occurrence of selected architectural distinctive features. Particular attention was paid to verandas. This is one of the most impressive and still strongest attributes of the wooden architecture of the ‘Otwock Line’ in the landscape of towns near Warsaw. A quantitative evaluation was used in order to confirm the scale of this phenomenon:

- As many as two out of three have at least one veranda;
- Nearly two thirds of the sites analyzed have at least one veranda, with around one in ten of the resource being particularly lavish sites with three or more verandas;
- As many as three out of five of the resource are objects with decorative shuttering;
- Two out of three of the buildings are located on forest plots, which is one of the characteristic features of Świdermajer architecture.

Apart from statistical analyses, within the analytical possibilities of the database, a set of buildings with the highest saturation of stylistic features was distinguished. Other important features assigned to the algorithm, helping to designate the most valuable heritage assets, except for at least two verandas, are:

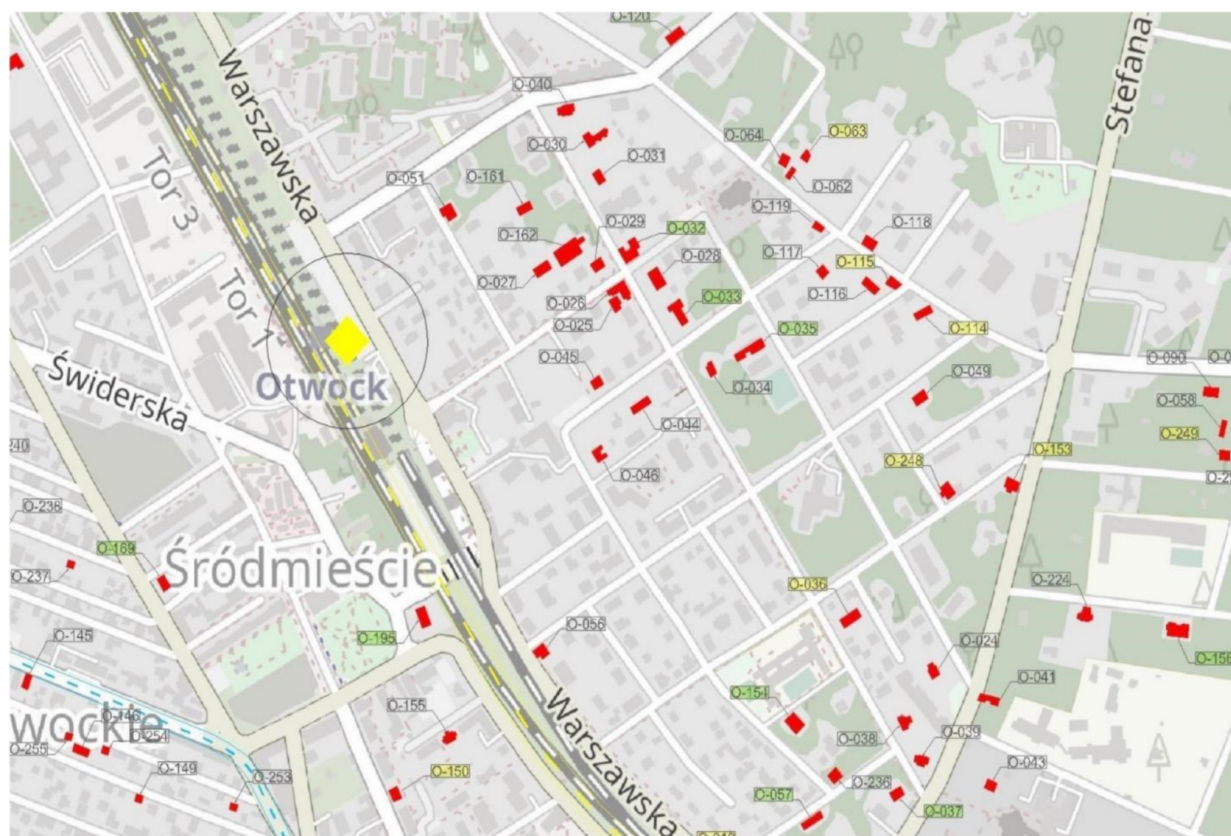
- Location in surroundings of high green areas/forest;
- Maintaining the authentic layout of the plot (no new commercial or utility development);
- No transformation resulting from the superstructure, extension, thermal modernization, or demolition of part of the building;
- Furnishing with decorative shutterings;
- The fitting of at least one type of preserved ‘laubzega detail’ (Label 3.2–3.9);
- Preserved or partially preserved traditional window woodwork.

The selection includes the most valuable objects in terms of their architectural integrity and representative features of the wooden summer architecture of the Otwock Line, called “Świdermajer”. The assessment of architectural features was one of the elements of the evaluation process carried out for all identified objects. A simplified valorization included the determination of the historical, scientific and artistic value on a three-level scale: high, average, and statistical. The objects with at least two high values and those with one high value were then selected from the whole resource. Objects from both sets were marked on the charts attached to the documentation (Figures 8 and 9).





**Figure 8.** The examples of ‘Otwock Line’ buildings; photo: M. Górski.



**Figure 9.** A fragment of the map of Otwock, indicating buildings of high scientific, artistic and historical value: at least two high values (green), one high value (yellow), based on [14].

## 5. Conclusions

This research enabled us to identify the scale of the phenomenon of wooden buildings of the ‘Świdermajer’ style on the Otwock Line and allowed some general conclusions to be drawn. The collection is dispersed over a large area along the railway line over a distance of ca. 14 km. The resource is highly diversified. It ranges from simple wooden structures without distinctive features to structures of exceptional value. The state of preservation of the objects also varies, from objects that were significantly transformed, modernized in a way that has deprived them of their aesthetic value, e.g., through the demolition of verandas and insulation with foamed polystyrene, to well preserved objects. When dealing with individual objects, it is difficult to understand the significance of the wooden heritage of the Otwock Line in the landscape and the destructive processes occurring on the scale of the entire resource.

The conducted study confirmed the distinctiveness of the phenomenon, which represents cultural values and an unprecedented accumulation of wooden architecture in Mazovia. The conducted studies made it possible not only to select particularly valuable objects requiring individual protection. The maps also show areas where these objects form whole complexes. Future efforts, amongst others, should be directed towards the selection of such special sites and the introduction of area-based landscape protection.

The historical recognition of the presented phenomenon indicates the need for more comparative research in relation to the international examples of Swiss-style architecture and a deeper recognition of the research already carried out, e.g., [36,37]. Attention should be also paid to the inseparable connection between the architectural features of the Świdermajer type of buildings and the pine forest occurring in Otwock and the surrounding area. Only the combination of these two elements creates the unique *genius loci* of the place. An important research conclusion in the context of extending the knowledge of this historic resource is the need for interdisciplinary studies on the relationship between the architectural features of the resource and the specific characteristics of the local pine forest and their mutual influence.

Throughout its history, the style of Swiss architecture has gained both admirers and opponents. It gained many local variations, such as the described ‘Świdermajer style’. Nevertheless, it unquestionably left its mark on the landscape of many European countries and deserves to be considered as a common European heritage. The conducted research referred to the local recognition of the ‘Świdermajer’ heritage resource. Nevertheless, it showed the need for a broader view of the still rich resources of European wooden architecture inspired by the Swiss style. Apart from the aesthetic issue, the aspects of old technologies and modern methods of conservation as well as contemporary architecture continuing these traditions seem to be particularly interesting.

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