

SPATIAL AND LANDSCAPE CHANGES IN THE HOUSING DEVELOPMENT OF GDAŃSK SUBURBAN VILLAGES

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ABSTRACT: In the article the specificity of development of Gdańsk suburban villages is considered. The data from recent years concerning demographic changes in communes will be analysed. The analysis of four selected villages will show the settlement changes and contemporary non-rural types of buildings. Spatial processes, which in terms of an extensive rural economy have already led to the change and depreciation of qualities of their current order and landscape, will be described.

KEYWORDS: villages, suburban landscape, landscape changes, housing development, urban sprawl

Introduction

The phenomenon of intensive urbanisation of rural areas began in Poland at the end of the past century. Since then, the spatial and landscape border between the city and the countryside has been blurring. The rural border area becomes suburban, and it usually takes on its character; sometimes even a metropolitan one. At the administrative border of Gdańsk, there are villages that have now become almost its districts, although they still have administratively the village status. Such changes have particularly intensified in the recent years.

It turns out that ill-considered urbanisation activities and expansive development of residential construction do not create favourable conditions for preserving rural and landscape values. Rather, they become the cause of their irretrievable destruction.

Is it possible to still stop this process?

The purpose of the article, the research area and selection criteria

The article indicates inappropriate ways of shaping rural areas and the dependence of the created landscape on the types of building development. The way of dealing with the space should be changed, starting from a spatial policy to the architectural and aesthetic activities of a commune.

In the research, the directions of the spread of new residential buildings located as they were in the buffer zone of Gdańsk were checked. The development of all villages located there was analysed. Examples of the most intensively developed villages were used to assess the types of new construction and its impact on the shaping of the rural landscape.

Villages in sołectwo ('sołectwo' is a subdivision of a rural municipality) situated on a strip of land with a width of about 2 km, located along the administrative border of Gdańsk, were taken

into account. All the communes directly adjacent to Gdańsk are located in the functional zone of the Gdańsk-Gdynia-Sopot Metropolitan Area (G-G-S MA).

The set of towns and villages selected in this manner included five communes: one urban-rural commune – Żukowo, and four rural communes: Kolbudy, Pruszcz Gdański, Cedry Wielkie and Stegna. Twenty-three villages were included in the entire research belt. Thirteen of them are located in the Gdańsk Highlands of the Kashubian Lakeland, whereas the other ones are located in Żuławy (Marshlands).

From the western side of Gdańsk, there are villages of the Żukowo commune, that is: Chwaszczyno, Nowy Świat, Rębiechowo, Banino, Czaple, Leżno and Sulmin. Chwaszczyno is an important transport junction of Żukowo-Gdynia (road No. 20) and Gdańsk-Wejherowo (road no. 218), whereas Rębiechowo and Banino are located in the vicinity of Gdańsk Lech Wałęsa Airport.

In the Kolbudy commune, on the south-western side of Gdańsk, there are three villages: Otomin, Kowale and Jankowo Gdańskie.

From the south, Gdańsk is adjacent to the Pruszcz Gdański commune, in which three villages are located: Borkowo, Straszyn and Rotmanka belonging to the Kashubian Lake District. The rest of the villages of the Pruszcz Gdański commune, Mokry Dwór, Krępiec, Dziewięć Włók, Przejazdowo, Bogatka and Wiślinka, are located in Żuławy. There are also, from the south-east of Gdańsk, two adjoining communes. One is the Cedry Wielkie commune with the Trzciniak village and the other is the Stegna commune, including Żuławki, Drewnica and Mikoszewo villages. In total, 10 of the surveyed villages are located in Żuławy.

Test method

In the preliminary surveys for selected communes, the changes in the population that took place every 10 years since 1998 until the end of 2019, were analysed. The population density for the communes in the period 2008–2018 was also examined.

The next stage of the work was the analysis of change in the population in 23 selected villages (with subdivisions based on affiliation to

communes) that occurred in the period 2008–2018. Information for the tabular list was collected from various sources available – Statistics Poland, commune data. There was no uniform data set for rural areas. The number of apartments completed and put into use in the period 2008–2017 (private, as well as those for sale or rent) was also examined. The information collected allowed for the selection of four villages in which, for the past 10 years, more than 1,000 inhabitants have arrived and, consequently, more than 1,000 flats have also been built.

The second part of the research describes the most distinctive villages. Their examples are used to analyse the historical and spatial development and the changes in the landscape resulting therefrom.

The Table 1 data show that within the period of 20 years (2008–2018), the population more than doubled in the Żukowo, Kolbudy and Pruszcz Gdański communes. At the same time, the population of the Cedry Wielkie and Stegna communes was rather stable, and it did not increase significantly. The population increase for the years 2008–2018 was recorded in the Kolbudy commune, whereas the highest population level occurred in 2018.

The mentioned data concern not only the suburban belt, but also other communal areas. Undoubtedly, the data concerning 23 individual selected villages may prove to be more valuable for the study (Table 2). These data will enable identification of the largest increase in the number of inhabitants that was recorded in the period 2008–2018 in the surveyed population.

The data in Table 2 indicate that during the past 10 years, Banino has gained the greatest number of inhabitants (4,508 more people). It has actually tripled its population since 2008. In the set of 23 villages adjacent to Gdańsk, this town became the undisputed record holder in this respect. It was followed by, respectively: Borkowo (3,330 more people) with an increase in the number of inhabitants by more than five times and, Straszyn (2,099 more people) and Kowale (1,626 more people) where the population almost doubled. A large increase in the population was also recorded in Rotmanka and Chwaszczyno.

During a period of 10 years (2008–2017), in the Kashubian Lake District, there was an intensive development of the construction industry

Table 1. Population and population density in communes.

No.	Com-mune	[1] Popula-tion on 31.Dec.1998	[2] Popula-tion on 31.Dec.2008	[3] Popula-tion on 31.Dec.2018	[4] Popu-lation change in years 1998–2018	[5] Population density. Population per 1 km ² on 31.Dec.2008	[6] Population density. Population per 1 km ² on 31.Dec.2018	[7] Data difference. Change in pop- ulation density (people per 1 km ²) in years 2008–2018
1	Żukowo	14,771	21,337	32,368	17,597	134	203	69
2	Kolbudy	8,191	13,147	17,417	9,226	159	211	52
3	Pruszcz Gdański	14,021	18,592	30,232	16,211	129	210	81
4	Cedry Wielkie	6,044	6,347	6,947	903	51	56	5
5	Stegna	9,709	9,622	9,779	70	57	57	0

[1–3] – Statistics Poland 1998, 2008, 2018; population in communes.

[5, 6] – Statistics Poland 2008, 2018; population density in communes.

[4, 7] – own calculations.

Table 2. State of the population in the villages.

No.	Commune	Region	Village	[1] Population on 31.Dec.2008 (data from 1. Jan. 2009)	[2] Population on 31. Dec. 2018	[3] Difference Population change from 2008 to 2018
1	Żukowo	Kashu- bian Villages	Chwaszczyno	2,937	3,781	844
2			Nowy Świat	-	319	-
3			Rębiechowo	561	847	286
4			Banino	2,395	6,903	4,508
5			Czapple	329	641	312
6			Leżno	1,450	1,688	238
7			Sulmin	469	563	94
8	Kolbudy		Otomin	631	973	342
9			Kowale	2,535	4,161	1,626
10			Jankowo Gdańskie	518	846	328
11	Pruszcz Gdański		Borkowo	829	4,159**	3,330
12			Straszyn	5,738 3,057*	5,156**	2,099
13			Rotmanka	lack of data 2,255*	3,229**	974
14			Żuławy Villages	Mokry Dwór	214	213**
15	Krępiec	102		103**	1	
16	Dziewięć Włók	140		145**	5	
17	Przejazdowo	637		643**	6	
18	Bogatka	150		172**	22	
19		Wiślinka	1,130	1,268**	138	
20	Cedry Wielkie		Trzciniśko	210	187	-23
21	Stegna		Żuławki	612	450	-162
22			Drewnica	947	879	-68
23			Mikoszewo	765	741	-24

[1] – Statistics Poland 2008, population in the villages.

* – represents data for Straszyn and Rotmanka (Public Information Bulletin of Pruszcz Gdański Commune Office 2008).

The 2008 data for Straszyn obtained from the Universal Electronic Population Register System (Polish – PESEL) seems doubtful (5,738 persons). In this case, the 2002 population figures available on the website of the commune of Pruszcz Gdański have been taken into account.

[2] – data from communes' resources.

** – represents data for the Commune of Pruszcz Gdański (Public Information Bulletin of Pruszcz Gdański Commune Office 2018).

[3] – own calculations.

14	Pruszcz Gdański	Żuławy villages	Mokry Dwór	-	-	-	-	-	-	[2+0] 2	[3+0] 3	[2+0] 2	-	-	-
15			Krępiec	[1+0] 1	[0+0] 0	[0+0] 0	[0+0] 0	[0+0] 0	[0+0] 0	[0+0] 0	[0+0] 0	[0+0] 0	[0+0] 0	[1+0] 1	[2+0] 2
16			Dziewięć Włók	[1+0] 1	[0+0] 0	[1+1] 2	[0+0] 0	[1+0] 1	[0+0] 0	[2+0] 2	[0+0] 0	[2+0] 2	[1+0] 1	[1+0] 1	[7+1] 8
17			Przejazdowo	[4+0] 4	[1+0] 1	[4+0] 4	[3+0] 3	[1+0] 1	[1+0] 1	[2+0] 2	[3+0] 3	[2+0] 2	[3+0] 3	[3+0] 3	[27+0] 27
18			Bogatka	[1+0] 1	[1+0] 1	[1+0] 1	[0+0] 0	[0+0] 0	[2+0] 2	[0+0] 0	[1+0] 1	[0+0] 0	[0+0] 0	[2+0] 2	[8+0] 8
19			Wiślanka	[21+0] 21	[14+0] 14	[12+0] 12	[8+0] 8	[15+0] 15	[11+0] 11	[7+0] 7	[9+0] 9	[5+0] 5	[5+0] 5	[9+0] 9	[111+0] 111
20	Cedry Wielkie		Trzcينisko	-	-	-	-	-	-	-	-	-	-	[1+0] 1	-
21	Stegna		Żuławki	[4+0] 4	[3+0] 3	[3+0] 3	[3+0] 3	[1+0] 1	[1+0] 1	[0+0] 0	[2+0] 2	[0+0] 0	[0+0] 0	[3+0] 3	[20+0] 20
22			Drewnica	[3+0] 3	[6+0] 6	[2+0] 2	[2+0] 2	[1+0] 1	[1+0] 1	[1+0] 1	[2+0] 2	[1+0] 1	[3+0] 3	[1+0] 1	[22+0] 22
23			Mikoszewo	[8+0] 8	[5+0] 5	[7+0] 7	[10+0] 10	[3+6] 9	[7+0] 7	[5+0] 5	[2+0] 2	[5+0] 5	[0+0] 0	[5+1] 6	[52+7] 59

[1-10] – apartments handed over for use in the years 2008-2017 (Poland in figures 2017).

[11] – own calculations.

I – individual apartments.

S/R – apartments for sale/rental.

T – total number of apartments handed over for use in particular year.

Explanation of colors:

- 300 apartments and more handed over for use
- 200-299 apartments
- 100-199 apartments
- 0 apartments
- lack of data

The term 'apartment' in this statistical context is understood to mean both apartment and house. The terminology used is consistent with that used by 'Statistics Poland'.

(Table 3). The largest number of flats put into use in the surveyed villages was noticed in *Straszyn* (1,798 flats), where 33.0% were individual flats, 66.2% were intended for sale/rental, and 0.8% were communal ones. *Banino* (1,698) stood out in the second place, with the result of 40.3% of individual flats and 59.7% – forsale/rental ones. Only in 2017, 275 new flats were built in the village, which means that 85.70 flats per every 1,000 inhabitants were completed. At that time, the index for Pomeranian Voivodeship was 6.80 flats, whereas for the whole country, it was 4.64. The third village, in terms of the number of completed flats, was *Borkowo* (1,696) with 12.4% of individual flats and 86.6% of other ones. The fourth place was taken by *Kowale* (1,128) with: 12.8% of individual flats and 87.2% – for sale/rental.

It should be noted that within 10 years, in these four villages alone, more than 59% of all apartments built were for sale or rent. In the remaining villages, the number of individual flats prevailed significantly. Only in the *Czapple* village, the ratio of the number of individual flats to those for sale/rental was more balanced; the proportions were 55.5–44.5.

In the period 2008–2017, the situation of the villages in *Żuławy* was completely different (Table 3). At that time, most flats were put into use in *Wiślinka* (111). However, eight apartments each were completed in *Dziewięć Włók* and *Bogatka*, and in *Krępiec*, only two apartments were completed.

Description of the selected villages

Out of the whole set of towns directly adjacent to *Gdańsk*, four villages turned out to be



Fig. 1. Comparison of the spatial arrangement of Banino from (a) 1917 (map of Banino 1917) and (b) the contemporary one (map of Banino 2019). The blue circle indicates the oldest part of the village and the orange line indicates the main road through the village.

the most interesting and have been developing most intensively. *Banino*, *Borkowo*, *Straszyn* and *Kowale* are settlements with the highest population growth rates and the highest number of completed apartments in the recent years. The next part of the work presents a short history of socio-economic changes, contemporary development conditions and the size of newly developed areas for each of these villages.

These aspects will allow assessing the development potential of these towns. The types of buildings implemented in *Banino*, *Borkowo*, *Straszyn* and *Kowale* and their impact on the landscape will also be shown.

Banino

The first documented note about the village was a record of 1283, when *Banino* was one of the estates granted by the Duke of *Mestwin II* to the Cistercian monastery in *Oliwa* (Wikipedia: The Free Encyclopedia, *Banino*). At that time, it was a peasant settlement founded under Polish law. It was a village with a scattered layout. At the beginning of the 20th century, there were two manor houses in *Banino* (Fig. 1), so the village had the manor status. After the end of the Second World War, both estates were parcelled out amongst other farmers from the village. In the period 1936–37, *Banino* was inhabited by 574 people. At that time, in the commune, there were hunting companies with an area of 360 ha. Immediately following the war, a health centre, a ‘*Ruch*’ Press and Book Club was established in *Banino*, and the post office in 1953. The village was electrified and there was also wired radio. New homesteads were built. This probably

indicates a desire to provide better living conditions in the village. The town was developing rapidly at that time. People took care of social issues themselves – in Banino, there was a Union of Rural Youth in the village, a farm housewives association and an agricultural club.

The first housing estate of single-family houses in Banino was established in 1963. At that time, the village consisted of 501 people (Wikipedia: The Free Encyclopedia, Banino), that is fewer than before the outbreak of the Second World War. In 1982, the construction of the Church of The Immaculate Conception of the BVM started in the village. It is also known that, at the turn of the 21st century, there were 942 inhabitants living in Banino. At that time, the settlement had an area of 779.91 ha and many companies were established there, for example Ice Cream and Frozen Products Plant 'ALGIDA' (Unilever Polska SA concern), Furniture Factory 'ELJOT' and 'EKOFINN-POL' Company (producing, installing and servicing environmental protection equipment) as well as small craft workshops. At the beginning of the 21st century, there was

a good economic situation for the construction industry in Banino. Single-family housing estates built by individual investors, and terraced houses as well as multi-family houses developed by construction companies started to be created in the village (Fig. 2). At present, there are still about 20 farms in Banino.

The oldest part of the village was swallowed up by the new development. Today's plan of the village shows that there is a chaotic division of land into housing estates, between which there are still arable fields (Fig. 1). The new service buildings are located along the main road of Banino – Lotnicza Street. In this part of the village advertising causes the greatest disorder (Fig. 3).

Banino is located approximately 6 km away from the International Airport in Rębiechowo and about 9 km away from Tri-City Ring Road (E28). Near the village, there is a junction of the Pomeranian Metropolitan Railway (PKM) line and stops that provides the residents with quick access to Gdynia Główna, Gdańsk Wrzeszcz, Kartusy or Kościerzyna. It seems that the location of the village and the possibility of



Fig. 2. Open view from the side of Lotnicza Street on the development at Halna and Rolnicza Streets: (a) a zoom on multi-family buildings and (b) a close-up on terraced houses. Buildings in the background, behind the arable field (starting from the left-hand side of the photos): farmstead, multi-family houses (behind them are single-family semi-detached houses) and terraced houses.

Photo by J. Poczobut, 2019.



Fig. 3. Land development on the main road in Banino (Lotnicza Street). Large standing advertising banners covering the church tower – a dominant landscape of the village.

Photo by J. Poczobut, 2019.

using various means of transport make Banino an attractive place to live in.

Unfortunately, the social situation in Banino is not so positive. This was proven by a team of sociologists who, in 2013, published a study entitled 'The Social Capital of the Pomeranian Village' (Knieć, Goszczyński, Obracht-Prondzyński 2013). They recognised the situation of Banino, a suburban village, where they noticed a rapid influx of people in the recent years. It turned out that in the village, there was a noticeable division of inhabitants into native and foreign ones. These two groups show reluctance to interact with each other. Usually, they are limited to using the same shops and participating in church services. Researchers noticed divisions in the socio-cultural sphere, which is somehow translated into spatial-architectural actions in rural areas.

There are more modest former village buildings as well as richer ones such as new residential and terraced houses in the village. In Banino, the phenomenon of uncontrolled urban sprawl is no longer questioned. The team of sociologists also observed the lack of identification of the inhabitants with the public space of Banino and the lack of care for it. They called the village a land of high fences. Fencing seems to be something very important here. It was also found that the social activity of the incoming population was poor and that these people were very claiming preoccupied with their individual needs. The research was summed up with depressing conclusions that Banino had lost its unique identity as well as its social capital, which resulted from the influx of the large number of an urban population.

Borkowo

The first note of contemporary Borkowo dates back to around 1300. 'In 1413 the village received a new location document from the Teutonic Order. In 1454 it became a part of the Gdańsk village patrimony and was rented by the City Council. (...) After the establishment of the Free City of Gdansk, Borkowo became a part of it.' (Pruszcz Gdański Commune Office, Borkowo).

The rapid development of the town began at the beginning of the 21st century (Fig. 4). In August 2016, the construction of a retention reservoir was commenced in the village, which was put into service in the following year (Wikipedia: The Free Encyclopedia, Borkowo). The reconstruction of Akacja Street was commenced in 2018 and Kasztanowa Street in 2019. There is no church in Borkowo. The village belongs to the parish of St. Jacek Odrowąż in Straszyn.

In the oldest part of Borkowo, single-family houses – detached, semi-detached and terraced – were built (Fig. 5) and on the north-western outskirts, complexes of multi-family houses were erected. Four-storey blocks of flats were also built up there. One of such non-rural housing estates is Nowy Horyzont, which was designed as an independent residential complex with its own service outlets, shops, and sports and recreational facilities (Fig. 6).

At present, in the vicinity of Borkowo, there is the 'Gdańsk-Południe' road junction and two ring roads – Tri-City S6 and south S7. Residents of the village also have access to provincial road No. 222.

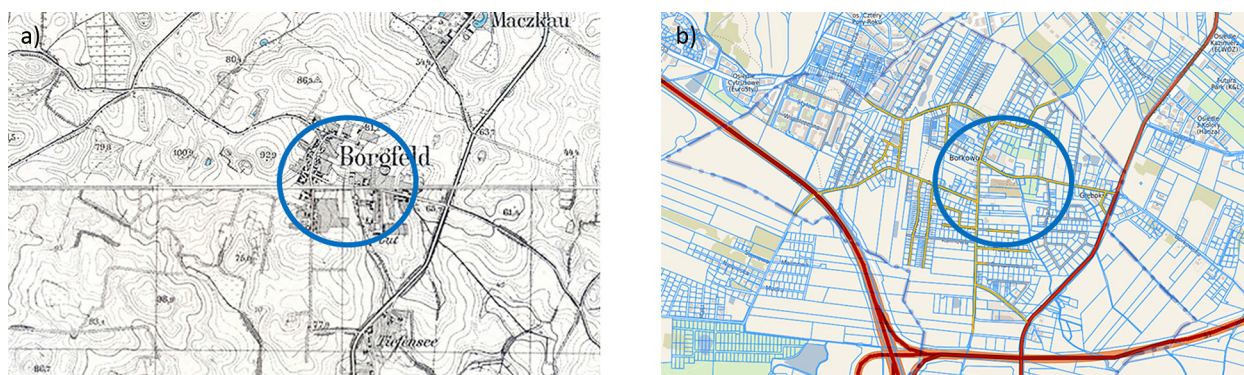


Fig. 4. Comparison of the spatial arrangement of Borkowo (a) in 1925 (map of Borkowo 1925) with (b) the contemporary one (map of Borkowo 2019). The oldest areas of the village are marked with the blue circle, the red line indicates its main road (with Tri-City ring road S6 and south road S7).



Fig. 5. Single-family semi-detached houses at Bratkowa and Kwiatowa Streets in Borkowo. Open view in the south-western direction. In the distance: construction of a bridge over Tri-City ring road S6 (communication node with south ring road S7).

Photo by J. Poczobut, 2019.



Fig. 6. Urban development of the Nowy Horyzont estate in Borkowo.

Photo by J. Poczobut, 2019.

Straszyn

Straszyn was first mentioned in the 14th century. In 1574, a paper mill with two water wheels was built in the village (Wikipedia: The Free Encyclopedia, Straszyn). In the first half of the 17th century, a mill, an inn and a water smithy were built (Pruszcz Gdański Commune Office, Straszyn). In the 18th century, the village was inhabited by 98 people, whereas in 1840, its population reached 108. At the end of the 19th century, there were 20 houses in Straszyn, an Evangelical school and two windmills. It is also known that in 1885, there were 272 people living there. At the turn of the 20th century and during the interwar period, the town's economy grew rapidly. A restaurant and a hotel were then established in Straszyn (Pruszcz Gdański Commune Office, Straszyn). In 1910, the first water power plant on the Radunia River (with a capacity of 2,411 kW) and a retention reservoir (modernised in 1935) were opened. Five years before the outbreak of the Second World War, there were about 200 people living in Straszyn, whereas after the war, there were only about 60 people.

In the 1970s, there were holiday resorts on Lake Straszyńskie.

The first post-war development of Straszyn was connected with the sale of 58 building plots on which the first housing estate was established in 1975 (Wikipedia: The Free Encyclopedia, Straszyn). Mainly for this reason, four years later, there were more than 1,050 inhabitants. In 1982, the parish of St. Jacek Odrowąż was founded in Straszyn (St. Jacek Odrowąż parish in Straszyn, Straszyn). In 2008, two deteriorating mills were demolished in the village. New roads started to be built there in 2009. A school sports hall was also opened at that time. Four years later, an integration park with a playground, a skate park, a climbing wall, a boulevard and an outdoor gym were opened in Straszyn (Wikipedia: The Free Encyclopedia, Straszyn). In the rapidly developing village, another bicycle path and road projects were completed in 2015, and a year later, a mediathèque was established in the building of the former railway station (Wikipedia: The Free Encyclopedia, Straszyn). Nowadays in Straszyn, there is a drinking water intake for Gdańsk. The Mielnik bakery is now located in the former

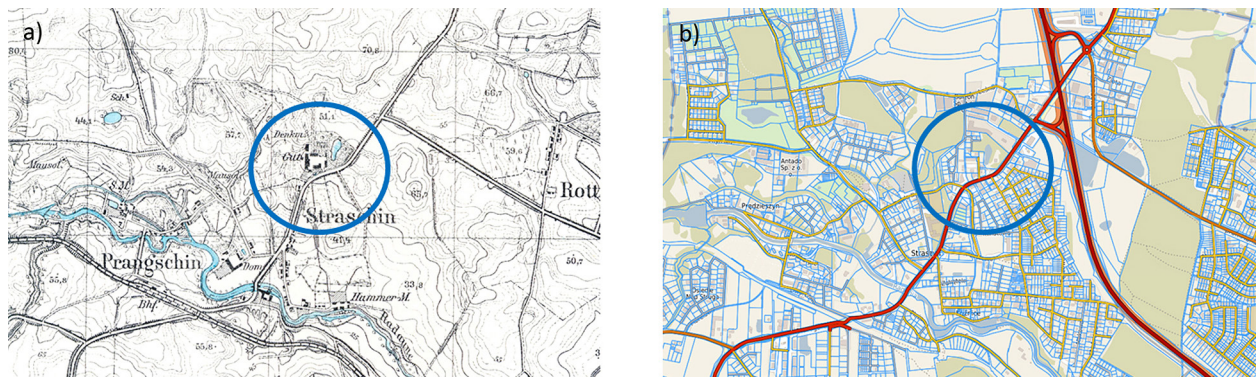


Fig. 7. Development of the spatial layout of Straszyn: (a) 1925 (map of Straszyn 1925), (b) the contemporary plan (map of Straszyn 2019). The blue circle indicates the oldest part of the village and the red line indicates the main road.



Fig. 8. A complex of service buildings in the centre of Straszyn at Starogardzka Street (road No. 222). Photo by J. Poczobut, 2019.

manorfarm house. At present, many companies and industrial enterprises have their headquarters in this town. For the past 100 years, the rural space has changed radically (Fig. 7).

Straszyn has a very good access to wheeled transport. It is located at the intersection of provincial road No. 222 (Fig. 8) with express road No. S6. A few years ago, the junction of S6 and S7 roads was built, on the northern side of the Straszyn area.

Kowale

The Kowale village was first mentioned in 1398 (Kolbudy Commune Office, Kowale). In the Middle Ages, it was a servant village of Gdańsk, probably inhabited by blacksmiths, who until the 13th century worked mainly for magnates and princes (Wikipedia: The Free Encyclopedia, Kowale). In the second half of the 15th century, the village was often destroyed by wars and sieges. The original spatial layout of the village was of the square type. The village was located on the Kościerzyna-Gdańsk route that

supported communication and trade. It is also known that at the end of the 19th century, there were 295 people living in the village (Kolbudy Commune Office, Kowale).

Since the end of the 1990s, new housing estates have been established in Kowale. The village started to develop very dynamically (Fig. 9). At that time, the Olimp estate was also built. In 2006, the construction of St. Kinga's Church began. On the other side of the village, there is now a branch of the parish, – St. Faustina's Church. In 2012, the Kowale Centre (Wikipedia: The Free Encyclopedia, Kowale) was opened in the village with retail, service and office space (more than 6,000 m² in total). At that time, the construction of the Cytrusowe Housing Estate, that is a complex of four-storey multi-family buildings with service premises, was commenced (Fig. 10). In 2018, a primary school was opened.

In the recent years, in the north-western part of Kowale, building-material warehouses, wholesalers, production, transport and courier companies have been built. The large-area buildings of the Logistics Centre, which are located

in the southern part, are the largest objects in its vicinity (Fig. 11).

Near Kowale, there is a road junction of Tri-city ring road S6 and provincial road No. 221. About 2 km away from it, on the north-western side, in Szadółki, there is the Gdańsk Waste Treatment Plant. For this reason, residents of nearby housing estates have been complaining about unpleasant odours from the landfill for years. By 2022, a waste incineration plant is expected to be built on the premises of the plant, which is to contribute to the improvement of the situation. Its construction will cost about

PLN 450 million (of which more than PLN 350 million were granted by the European Union). The processing capacity of the incineration plant will amount to approximately 160 thousand tons of waste per year. Waste not suitable for recycling will be delivered to the plant.

The four selected villages are conveniently situated in terms of access to public transport. They are located in the vicinity of the Tri-City ring road (S6) that connects Borkowo and Straszyn with the southern ring road (S7). Until recently, the location of a new apartment in the vicinity of the city's ring road used to be

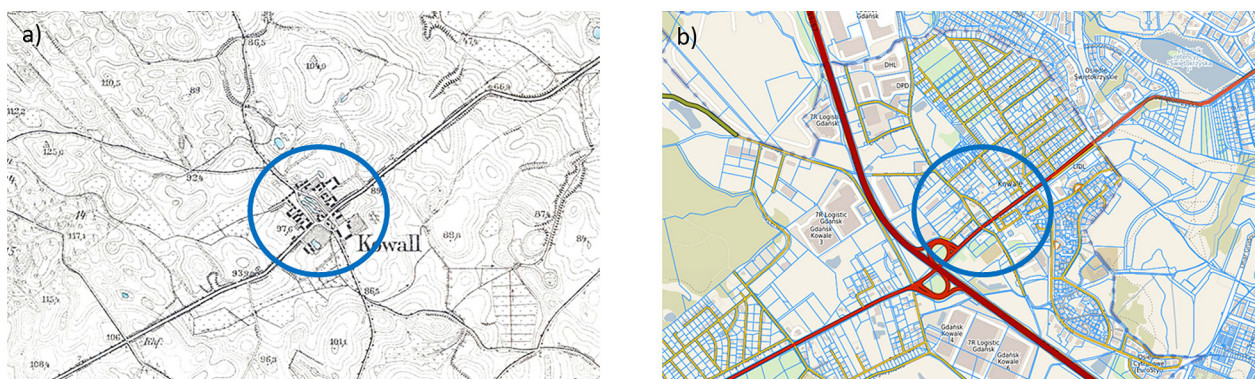


Fig. 9. Spatial arrangement of Kowale village.
(a) 1918 (map of Kowale 1918), (b) contemporary (map of Kowale 2019).



Fig. 10. Metropolitan buildings of the Cytrusowe Housing Estate at Zeusa Street in Kowale.
Photo by J. Poczobut, 2019.



Fig. 11. Buildings of the Logistic Centre 7R Gdańsk Kowale. View from Zeusa Street.
Photo by J. Poczobut, 2019.

considered an important question during purchase thereof. However, it has ceased to be of that important since the rush hour traffic jams started to appear on the road. It can be assumed that this will change with the construction of the planned Metropolitan Bypass that is to run along the western border of Gdańsk, in the G-G-S MO functional zone, in the territory of the following communes: Żukowo, Kolbudy and Pruszcz Gdański. The route will connect Gdynia with Tri-City and the south ring roads junction.

Few inhabitants of the developed towns work in their place of residence. Most of them go, every day, to schools, universities or work in the city. Car traffic is also generated by trips to Tri-City for shopping purposes or to visit so-called high culture facilities – including theatres and cinemas.

In 2017, Zawadzka checked how the principles of shaping the spatial order were included in the local spatial development plans in the selected resolutions of the communes of the Tri-City agglomeration functional area (Zawadzka 2017: 97). Within the framework of this research, the following communes were included: Kartuzy (with Banino), Kolbudy (with Kowale village) and Pruszcz Gdański (with Borkowo and Straszyn). In total, 36 resolutions were the subject of analyses carried out in these communes. It turned out that the rules for the location of advertising media were recorded in 16 cases, the rules for the location of fences were recorded in 15 cases, and the type of finishing materials and colours of objects were recorded in four of them. Elements of landscape composition, so important for spatial order, were included only in two resolutions (both in the commune of Kolbudy). Seven documents did not contain any provisions concerning these issues.

Spatial and landscape aspects of selected villages

In rural planning, after the recognition of the original historical layout of the village, the most important action is to supplement the plan with new homesteads and to make it more legible. The ill-considered – in terms of rural planning and architecture – extension of the village may have begun in the 1960s and 1970s. Nowadays, it is often impossible to maintain the legibility of the old plan, although the historical rural layout and large homesteads may still stand out in space (as in the case of the four selected villages). Aggressive housing development, definitely contributes to the destruction of historical and spatial clarity (Fig. 12). If a village development area is enlarged several times, it becomes impossible to protect its historical layout. Unfortunately, attempts to make compromises rarely result in a successful planning.

Rural areas intended for new buildings are usually excluded from agricultural production and are changing the status of land from agricultural land (usually rectangular in shape) belonging to individual owners. They have often nothing to do with the historical layout of rural development. Rural planning often results from the existing ownership arrangement of territories that is not conducive to the proper shaping of the rural plan. This is also visible in the diagrams of the four selected localities. It seems that it is easier to revamp the landscape on an architectural scale (i.e. individual objects) than rural planning, where ‘spatial division, fixed by ownership changes, is basically eternal’ (Lipińska 2002).



Fig. 12. Panoramic view from Rolnicza Street in Banino (at the exit of Lotnicza Street) in the south-western direction. Different types of buildings: terraced houses and a solitary farmstead.

Photo by J. Poczobut, 2019.

As a result of the emergence of new architecture in areas recently reclassified from agricultural to construction functions that are often very extensive, it has become necessary to increase the technical infrastructure. Unfortunately, at a very intensive work pace, the latter does not always keep up with the former. Intensive development can quickly cause difficulties, for example in water supply, especially during drought. New water treatment plants are becoming necessary. It also happens that the already inhabited settlements, lack adequate road infrastructure and rainwater drainage (Banino) several years after the construction thereof was completed. After a heavy rainfall, because of rainwater accumulation, the internal access roads of the new housing estates become impassable.

The size of new plots of land and the character of the buildings under construction in the countryside seems to be another planning problem. In the new division of the area, they are usually much smaller than the oldest homesteads. A farmstead (if a new one is still needed) and a building plot for detached houses are governed by different spatial needs (Fig. 12). On a small property (e.g. 600 m²), there is a place for a dwelling house with a garage, but for additional larger farm buildings, a large yard or a garden, there is usually a lack of land on the plot (example of serial plots in Banino). Polish law does not directly define a minimum plot of land for detached houses; this is regulated by the local spatial development plan. Unfortunately, it also happens that the geodetic divisions of land into the smallest possible property with a narrow road lane do not provide future residents with the comfort of living. As a result, the construction of high and tight fences is becoming commonplace – a matter of fast separation from the road and being too close to neighbours.

The areas designated for non-agricultural purposes are considered to be those where no reference to local historical architecture (Banino, Borkowo, Kowale) is necessary for new buildings. Sometimes the only limit taken into account is the height of the building, and the accepted maximum is two or three storeys (and not always). The detached residential houses built next to each other are cubic in different sizes and shapes, with different types of roofs and slope angles. This is the only way to create chaos and a sense of lack of spatial order. Apart from terraced houses and a few-family houses, there are also multi-family houses, with even more than four storeys, following... metropolitan standards. Negative reception is intensified by the location of such buildings in the vicinity of cultivated fields.

It should be noted that in Poland, architectural design, taking into account the characteristic features of architecture of a given region, has been out of fashion for a long time. In every corner of the country, the same types of buildings are offered, because they are still popularised by colourful magazines. In the study on the landscape and architecture of the village, Niedźwiecka-Filipiak wrote about the necessity of eliminating the 'thoughtless race for what is new and urban' and also about avoiding creation of open-air museums, but rather encouraging to 'emphasize and expose in the new, what is the old characteristic of a given place' (Niedźwiecka-Filipiak 2009: 17).

The construction of new housing estates requires an increase in the number of services in the village. Such premises are created on the ground floors of multi-family houses (Borkowo, Kowale); however, there are also – large-format new shopping centres and supermarkets (Fig. 13) such as Biedronka or Lidl (Banino, Straszyn)



Fig. 13. Lotnicza Street in Banino and a new shopping centre – large-area stores (*Lidl* and, close behind, *Biedronka*). Photo by J. Poczobut, 2019.

which, with their cubic capacity and sales methods, do not fit the village's rural image. Such a situation proves that it is easier to build a 'ready' large commercial facility of a well-known company than to design and build a kind of a service centre – a complex of shops with a modern and interesting architecture that precisely fits with the scale and character of a given town (somehow a 'tailor-made project'). Such projects for villages were the subject of the didactic process at universities in Gdańsk. Architects published catalogues on rural development typical of a given region. This helped investors to choose the right solution. Unfortunately, even such a potential – which could at least show and start discussion on the good development of rural space – is not used. It is a shame that because of the financial and economic conditions of municipalities, we irretrievably lose our spatial and visual values as a society.

Greenery is an important aspect of rural planning. Former farm buildings were usually accompanied by plant compositions such as home plantings of trees, orchards, gardens, vegetable gardens or flower beds. Similarly, on the scale of the whole village, the planned greenery patterns, such as roadside avenues, rows or green buffer zones emphasising the specificity of the village establishment, were the distinguishing features of the rural system. At present, despite the necessity to meet the condition of a biologically active area, the idea of green composition for new development of a rural housing estate is not always properly implemented. There are also no plans for the so-called common social spaces – favourable for neighbourhood meetings or home recreation (Banino).

The conducted analyses show a clear trend of migration of inhabitants from large cities to rural areas. This is caused, largely, by the proximity of villages to Tri-City, good communication, the rapid development of suburban housing estates, as well as the possibility to buy land and own home at lower prices than in the city. However, there are also reverse, small tendencies of migration of young inhabitants of rural areas to the city. They want to become independent, find a job or get a better paid one. Such phenomena were observed by Bobrowski when he wrote, in 2012, that the majority of people living and working in Polish rural areas at that time had no connection with agriculture (Bobrowski 2002). He stressed out

that such a situation ought to be taken into account in regional development plans. He stated that the demand for housing outside large cities is currently growing because the availability of Internet makes it possible to work from home. In addition, the possibility of using technical infrastructure, such as public transport, shops, schools and post offices, has significantly increased in rural areas. He also pointed out farmers' problems in competing with foreign capital and selling their products, for example in supermarkets.

Summary

The spatial and landscape values of rural areas are wasted by activities at different stages of design. The first seems to be the inappropriate spatial policy of the commune or actual lack thereof. The next is such 'spatial planning' that is treated as a record and legitimisation of unsuccessful changes in space and has little to do with proper planning. Another problem is the allowance for the urban development in rural areas, (exaggerated) maximisation of development density, lack of greenery composition in the general context of the whole assumption or the lack of consideration of areas supporting residential functions because of excessive savings.

The issues of social and economic development definitely affect the shaping of the landscape of contemporary villages. It is not good when financial issues have the greatest impact on spatial decisions.

New non-rural housing estates (terraced houses and multi-family blocks of flats) or large-size commercial buildings contribute the most to the destruction of the previously preserved spatial and landscape values in rural areas.

The villages presented in the article should become a warning against a chaotic and ill-considered way of their development, against the loss of the so-called rural scale, which is more and more rare now. At present, for many people, the modernity of a village means only a high intensity of development and the implementation of multi-family housing estates.

Communes should use landscape architects and have more influence on the spatial order in their area (which at present, e.g. for financial reasons, seems to be impossible). The basic problem

is that when selecting offers for the preparation of a spatial development plan for new land designated for non-agricultural purposes, the communes are obliged to choose rather the team putting in the cheapest offer instead of the best one. Another problem is that, for example, on a narrow and long strip of land that has been sold to a developer for residential development purposes, the designer has limited possibilities of adapting an interesting solution. It would definitely be better if the commune could acquire land from several farmers in the neighbourhood, consolidate it, find interesting rural solutions and establish a new housing estate (on a rural scale). The proper shaping of the landscape should begin with the arrangements in the commune's spatial policy.

At present, intensive urbanisation does not concern suburban villages only. It seems that this phenomenon is of rapid expansion in small communal villages, independent of large urban centres and located far from them.

The resources of open areas in the villages in question are drastically decreasing. It is rare to see wide openings and enjoy panoramic views of the landscape there. The views scenery is becoming more and more urban.

It seems that there are still too few guidelines for the shaping of landscape and spatial order in the applicable documents. It is also known that designing should not be limited to measurable indicators. Spatial policy should also be guided by aesthetic considerations, whereas planning should become a form of dialogue (Górka 2016).

It is puzzling whether spatial order and preserved cultural values, supported by the use of landscape elements such as: viewing lines and axes, spatial dominants and accents or composition closures, will still be important in the creation of new suburban areas in the future.

Undoubtedly, our regional landscapes (not only the open ones) should be valued and respected. After all, one can contribute to the protection of the most valuable elements of the landscape and pass them on to posterity, not to destruction by a properly carried out spatial policy in the commune, planning, rural design, use of interesting and contemporary architecture or even by the very intentions and actions aimed at preserving the aesthetics, order and beauty of the space (at various scales).

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