

The state of preservation of medieval street-square village in the landscape of northern Poland

Abstract

This article focuses on the preservation of traditional rural cultural landscapes in northern Poland, which were created in the 14th century as a result of the settlement of the Teutonic Knights under Kulm Law. The research covered 21 unique street-square villages in the Vistula Delta and included, among other things, an analysis of the spatial layout of the villages, their social functions, the presence of historical monuments and the persistence of historical plot divisions. The aim of the study was to evaluate the state of preservation of the elements of the medieval settlements and to make a comprehensive assessment of the landscape.

Keywords

Teutonic settlement • Vistula Delta • rural settlements • cultural landscape

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Introduction

Issues related to medieval German law settlement in the Vistula Delta has been the subject of extended analyses by historians, archaeologists and researchers concerned with historical geography or spatial development. The most complete analysis of the transformation of rural settlements from the time of the Teutonic Order in this area was presented before the Second World War by German historians, including Kasiske (1934, 1938) and Bertram (1924). After 1945, there have been additions and corrections by Wenskus (1986) and Wunder (1968). From a Polish perspective, the theme was of particular interest to Biskup (1962, 1991), Labuda (Biskup & Labuda 1968) and Długokęcki (2001, 2003). However, it is relatively often taken up by researchers in a framework when discussing the development of settlements in the whole area of the Teutonic Order state (Mikulski 1996), without taking into consideration the specificity of individual regions or, as in Larczyński (2017), focusing on the territory of the Land of Gdańsk, covering areas only up to the line of the Motława River (including villages of Żuławy: Przejazdowo, Płonia, Gdańska Głowa, Schönwiese, Rokitnica and Chmielniki).

Żuławy in geographical studies

In her geographical studies, Kielczewska-Zalewska (1956), when analysing the origin and transformation of the forms of villages in Gdańsk Pomerania, almost omits the Vistula Delta, focusing mainly on the former counties of Bytów, Chojnice, Kościerzyna, Starogard, Świecie and Tczew. Szulc (1995), who presents the morphogenesis of medieval villages founded under German law, first discusses the settlements of Lower Silesia and West Pomerania. The most recent work by Wójcik (ed. 2020), whose starting point was the Atlas of Historical Villages (Szulc 2002), repeats Szulc's earlier research but does not deal with issues related to the discussed region. Only Lipińska (1986), in her dissertation dealing with the issue of villages in the Vistula Delta from the point of view of landscape, attempts to synthetically inventory and describe model historical landscape units, including those created in the 14th century. Her later book (Lipińska 2011)

and recent articles (Lipińska 2008) are mostly a duplication of the content of the dissertation.

Area of study

The Vistula Delta (called Żuławy) is an alluvial plain located on the northern edge of Poland, lying at the mouth of the largest Polish river, which flows into the Baltic Sea. Its boundaries are spatially delimited along the ordinate of 10 metres above sea level, clearly demarcating areas with different characteristics from the point of view of geomorphological features (ed. Augustowski 1976). Administratively, the area belongs to two voivodships: Pomorskie and Warmińsko-Mazurskie, with a well-established historical division into Żuławy of Gdańsk, located on the left bank of the Vistula, and the Great and Small Żuławy of Malbork, Żuławy of Elbląg and the Szkarpace area, situated on the right bank of the river. The resulting area of almost 1,700 sq km comprises 18 communes, seven of which are partly included in the Żuławy. The terrain is completely flat, with a considerable area of depressions covering almost 28% of the surface, which includes the lowest point in Poland (depression of -2.2m), recently delineated near Marzęcino (ed. Rozkrut 2022). The geomorphology of the area has been influenced by the activity of the sea, and its slow retreat towards the north, and by the accumulation of river sediments and the growth of the inner delta. The formation period of Żuławy, the youngest geographical region of Poland, is estimated differently by researchers. According to Sylwestrzak (1976), it is about 4,900 years old, while, according to Drwal (2001), it is 10,000 years old. Regardless of these discrepancies, it must be stressed that human presence in the Vistula Delta is relatively recent due to the difficult natural conditions. Apart from the prehistoric period, during which, according to the majority of authors (Mielczarski & Odyńiec 1976), traces of human settlement were of a temporary nature and were connected with seasonal hunting, the turn of the 12th and 13th centuries is considered to be the lower limit of permanent settlement in this area. Lipińska (1986), however, believes that it was the Frisian-Flemish and German colonisation, conducted by the Teutonic Order between 1308 and 1400, that

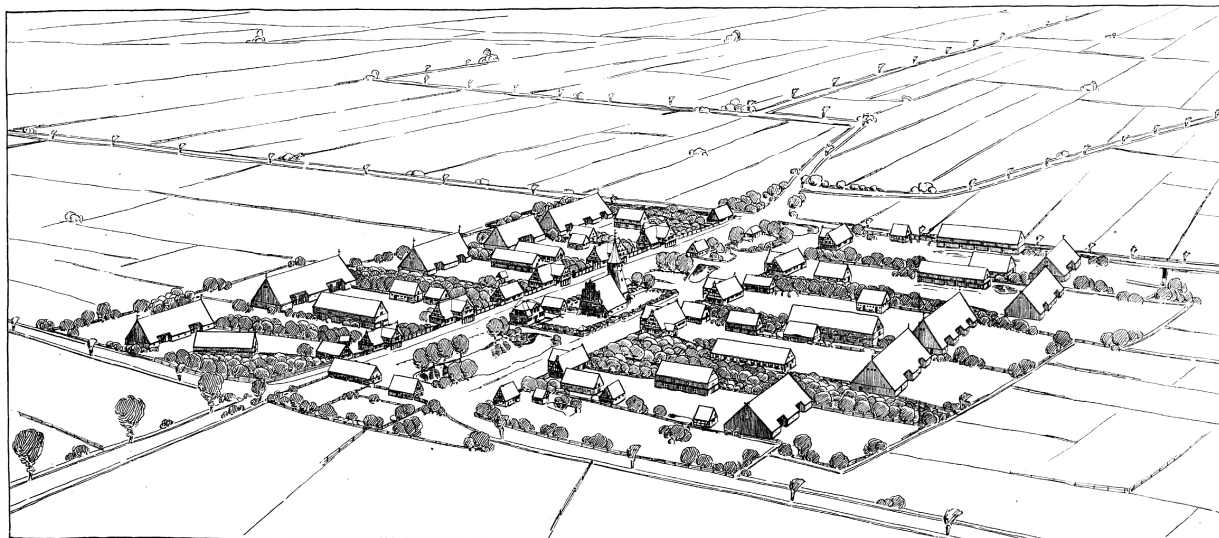


Abb. 111. Gesamtansicht von Wosfß, rekonstruiert auf Grund eines Dorfplanes von 1852 (l. Abb. 17).
Der heute vorhandene Kirchturm ist durch einen der Deutsch-Ordenszeit ersetzt.

Figure 1. Osice. Perspective plan of the street-square village, reconstructed in 1924 based on an 1852 map. Marked central rectangular square (called *nawsie*) with church building and water reservoirs, surrounded by parallel streets. A clear layout of the large habitat plots with subdivisions that date back to the medieval settlement
Source: O. Kloeppel (1924)

brought fundamental changes. At that time, there was a massive location or relocation (in the case of villages that already existed) of villages under Kulm Law, which were organised into a regular settlement network. This covered the area of the Żuławy of Gdańsk and the Great Żuławy of Malbork and was characterised by the occurrence of compact villages (linear, oval or street-planar villages). The next stage of development was the Dutch colonisation: the first was from the mid-16th to the 17th century and the second lasting until the second partition of Poland (Koperska-Kośmicka 2014), manifested by the occurrence of dispersed villages in the landscape. An important event in the history of the Delta was the end of the Second World War and the post-war period when there was a total population exchange. The displaced citizens of German origin were replaced by settlers from central and eastern Poland and present-day Ukraine, who did not understand the local conditions. This intensified the process of degradation of the cultural landscape, which was directly linked to the change in the mode of agricultural production (the introduction of State Agricultural Farms and small private farms of no more than 15 hectares instead of large peasant farms). The lack of identity with the local landscape led to the demolition of historical religious buildings, the destruction of technical infrastructure and traditional folk architecture (Koperska-Kośmicka 2020).

Subject of the research

In the Vistula Delta, there are 272 villages with a rural status, of which it is assumed that 14 of them (5%) were founded as early as the 13th century, 158 (58%) are the result of 14th century colonisation by the Teutonic Order and the rest are examples of later Dutch and 19th and 20th century settlement actions.

Bertram (1924) states that in the 13th century, when the delta had completely formed, first attempts were made to introduce settlement in the area. It was then that the Teutonic Knights, among others, began to colonise the Great Żuławy, which was under their control. Their efforts gained momentum after the

Order took over the whole of Gdansk Pomerania after 1308. The colonisation of this period consisted, on the one hand, of the establishment of villages on 'raw roots' and, on the other, of the reorganisation of the existing Polish-Pomeranian settlement (Długokęcki 1992). This took place within the framework of the so-called location under the conditions defined in the location contracts, which were concluded on the basis of Kulm Law. The contracts were signed between the Order and the leaseholders (or tenants), who were responsible for attracting settlers, collecting the feudal annuities in the form of money and presiding over the local courts. The medieval villages in the area of Żuławy were an example of compact settlements due to the terrain, especially the constant danger of flooding (Chilczuk 1970). They are dominated by linear villages (including waterline villages, specific to the Delta, where the axis of communication is a watercourse), oval villages and street-square villages. Lipińska (2011), who characterises the settlement in these areas, suggests distinguishing a special, local group of street-square villages and emphasising their distinctiveness using the regional name. According to her, the street-square villages of Żuławy are the most common type of local medieval settlements and represent a characteristic feature of 14th century rural development in northern Poland. They are characterised by a large square called a 'nawsie', in the shape of an elongated rectangle, where common functions were located: a church with a cemetery and water reservoirs that were used, among other things, for firefighting. Another important feature of these villages was the parallel streets that surrounded the square and the large plots of land that lay side by side in a very regular way along the longer sides of the square. A detailed scheme explaining the spatial functioning of such a village was drawn on the basis of an 1852 map of Osice village and was included in the book on regional architecture by Kloeppel (1924) [Fig. 1].

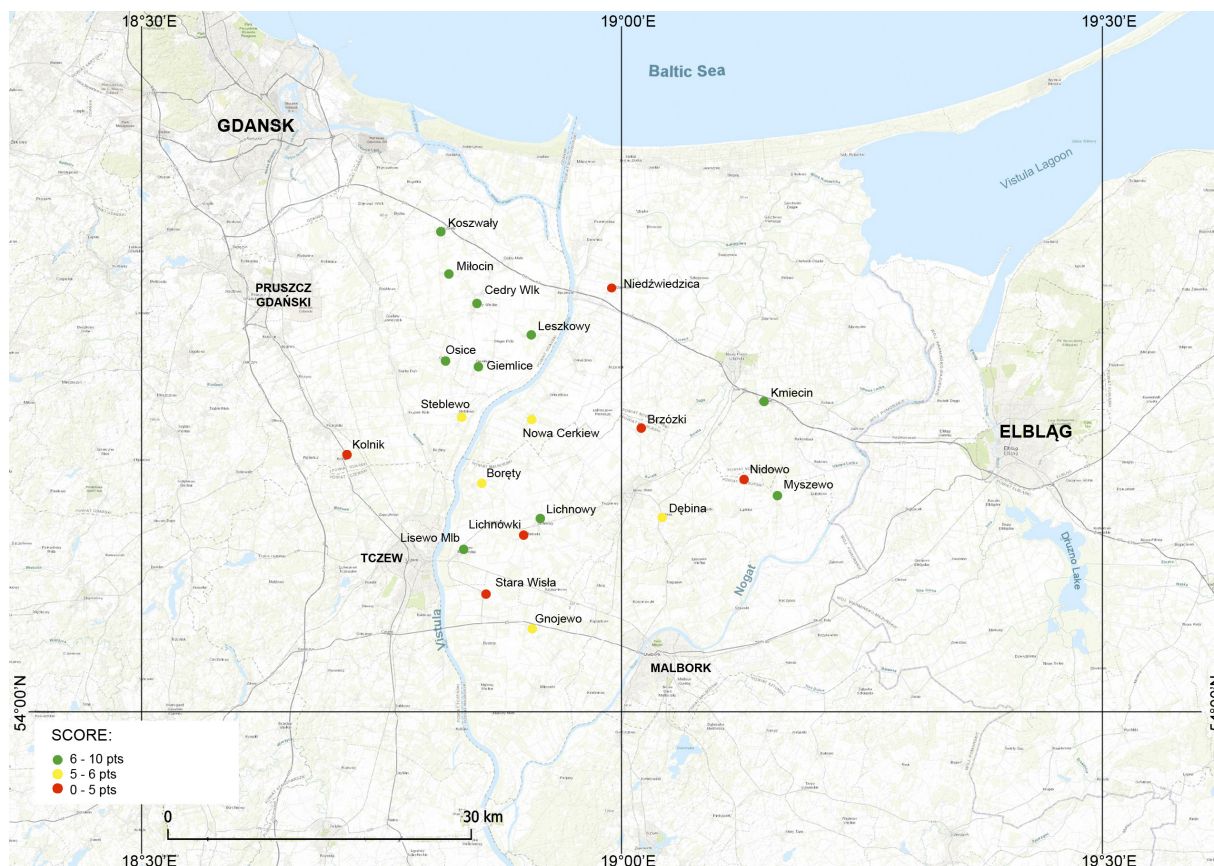


Figure 2. Distribution of street-square villages in the Vistula Delta and their valorisation score

Source: own study based on QGIS Geographic Information System

Aim/Methodology

Recent work on the transformation of the village cultural landscape has been carried out on a national scale (Niedźwiedzka-Filiak 2009; Wójcik 2016; Staszewska 2018), mainly covering central and southern Poland (voivodships: Łódzkie, Mazowieckie, Kujawsko-Pomorskie, Świętokrzyskie, Wielkopolskie), while works directly addressing the area of interest (Myga-Piątek 2012; Pliś 2016) focus on evolutionary and typological aspects. It should be noted that Myga-Piątek's valorisation of the Vistula Delta area focused only on the elements of the Dutch settlement, which, according to her, were the 'main cultural landscape creative force' in the region (Myga-Piątek 2012). Thus, the omission of the period of the Teutonic Knights from this work justified taking up the theme of the valorisation of historical elements of the rural settlement of Żuławy of earlier – medieval – origin. The aim of the research, which started in October 2022 within the framework of the Landscape Audit of the Pomorskie Voivodship, was to identify and evaluate the preservation of traditional rural cultural landscapes of the Vistula Delta with origins in the 14th century.

Conducting a study of the subject literature allowed for the selection of sites with significant landscape values for a detailed field inventory, which, according to the definition by Sołtys (2016), can be distinguished on the basis of significant features allowing these resources to be considered rare – namely, those that occur in several or more areas but are not common.

The starting point for the selection of villages for analysis was the regional dissimilarity of morphogenetic type – namely, the classification of a given village by Lipińska (2008) into the street-

square type of the Żuławy variety. On this basis, 21 villages were included in the study [Table 1].

The basis for the valorisation was a settlement evaluation form, which examined the selected villages in terms of the following elements:

- (1) the preservation of the spatial layout of the settlement, including the visibility of the organisation of the street grid with a rectangular village square ('nawisie') in the centre. The assessment included the convergence of the contemporary layout with its origins (stability, development, regression) [1 pt];
- (2) the clarity of the preservation of the village square as a public space – the preservation of its utilitarian and social functions – namely, leaving part of the square as an undeveloped area accessible to all residents as a meeting place [1 pt];
- (3) the presence of a historical religious building in the square [1 pt]. It should be noted that, during the Protestant period, additional temples appear in some locations that belonged either to Lutherans or Mennonites;
- (4) the location within the square of water reservoirs, formerly used for firefighting purposes [1 pt];
- (5) the preservation of the original layout of the habitat plots around the site, in terms of traditional subdivision and size [1 pt]. The habitat plots demarcated during the medieval village layout were rectangular in shape with a ratio of 1:2, resulting from the historical method of land division. When the habitat plots were laid out, squares of 3x3 cords (today approximately 140x140 m) were first laid out and then

Table 1. A list of street-square villages in the Vistula Delta region

NO.	NAME	GERMAN NAME	ESTABLISHED	COMMUNE	DISTRICT	VOIVODSHIP
1.	Boręty	<i>Barendt</i>	1321	Lichnowy	Malborski	Pomorskie
2.	Brzózki	<i>Bröske</i>	1313/1361	Nowy Staw	Malborski	Pomorskie
3.	Cedry Wielkie	<i>Gr. Zunder</i>	1350	Cedry Wielkie	Gdański	Pomorskie
4.	Dębina	<i>Eichwalde</i>	1342/1351	Nowy Staw	Malborski	Pomorskie
5.	Giemlice	<i>Giemlitz</i>	1292	Cedry Wielkie	Gdański	Pomorskie
6.	Gnojewo	<i>Gnojau</i>	1338	Miłoradz	Malborski	Pomorskie
7.	Kmiecin	<i>Furstenberg</i>	1332	Nowy Dwór	nowodworski	Pomorskie
8.	Kolnik	<i>Kohling</i>	?/1570	Pszczółki	Gdański	Pomorskie
9.	Koszwały	<i>Gottswalde</i>	1334	Cedry Wielkie	Gdański	Pomorskie
10.	Leszkowy	<i>Letzkau</i>	1384	Cedry Wielkie	Gdański	Pomorskie
11.	Lichnowy	<i>Gr. Lichtenau</i>	1254/1321	Lichnowy	Malborski	Pomorskie
12.	Lichnowki	<i>Kl. Lichtenau</i>	1321/1341	Lichnowy	Malborski	Pomorskie
13.	Lisewo Malborskie	<i>Liessau</i>	1316	Lichnowy	Malborski	Pomorskie
14.	Miłocin	<i>Herzberg</i>	1364	Cedry Wielkie	Gdański	Pomorskie
15.	Myszewo	<i>Gr. Mausdorf</i>	1332	Nowy Staw	Malborski	Pomorskie
16.	Nidowo	<i>Niedau</i>	1356	Nowy Staw	Malborski	Pomorskie
17.	Niedźwiedzica	<i>Bärwalde</i>	1342	Stegna	nowodworski	Pomorskie
18.	Nowa Cerkiew	<i>Neukirche</i>	1342/1345	Ostaszewo	nowodworski	Pomorskie
19.	Osice	<i>Wossitz</i>	1300/1310	Suchy Dąb	Gdański	Pomorskie
20.	Stara Wisła	<i>Alte Wiechsel</i>	1338	Miłoradz	Malborski	Pomorskie
21.	Steblewo	<i>Stubblau</i>	1300/1340	Suchy Dąb	Gdański	Pomorskie

Source: own elaboration based on Lipińska (2011)

divided in half. The length of the shorter side of the habitat adjacent to the road was therefore about 1.5 cords (about 70 m) and the depth was 3 cords (140 m). During the survey, the extent to which the modern cadastral divisions retain the former proportions and sizes was investigated;

- (6) the preservation of homestead buildings of high architectural value, associated with the traditional production function of the village – agriculture. The assessment focuses on the preservation of the traditional layout of the farmsteads, with the dwelling building located on the side of the road, the barn enclosing the yard on the side of the fields and the livestock buildings on the sides [1 pt];
- (7) and (8) the exposure of the village from the perspective of the surrounding fields – visibility of the panorama with dominant church tower. The assessment of the exposure refers to the coherence of the village in the horizontal layout – the compactness of the rural settlement and clear, delimitable boundaries without ‘sprawling’ buildings [1 pt], and the vertical layout, characterised by the presence of the dominant church tower surrounded by tall greenery [1 pt];
- (9) the retention of mature trees [1 pt] – both in the form of church/cemetery greenery and former domestic orchards;
- (10) the retention of the cadastral division of the adjacent agricultural land – namely, the clear layout of the fields belonging to the village, historically reinforced by the outline of ditches and drainage channels [1 pt].

Each element was assessed in terms of its degree of preservation by awarding points. The study was carried out using the chamber method, which involves the comparison of preserved historical cartographic material (cadastral plans, historical maps) with contemporary spatial data, and the field method, which is carried out in parallel with the ongoing Landscape Audit of the Pomorskie Voivodship (October 2022 – June 2024). These activities are part of the qualitative landscape assessment.

The evaluation of the qualities were converted into a three-stage scale:

- 0 pts – no value or no evaluation possible (element does not exist or exists in a residual form);
- 0.5 pts – value partially preserved;
- 1 pt – value fully preserved or of high importance for the assessment.

Each selected village was assessed individually and the points from the detailed assessments were added up. This formed the basis for the evaluation and made it possible to indicate which localities should be covered by additional measures for the protection of the rural landscape in the Vistula Delta region.

Results of the survey

The inventory of the elements found in the field and their subsequent evaluation revealed a number of regularities in the

Table 2. Valorisation of the street-square villages of Vistula Delta in terms of preservation of selected elements of medieval development. Source: own elaboration based on field surveys 2022-2024

		STREET GRID	SOCIAL FUNCTIONS OF SQUARE	NUMBER OF CHURCHES ON THE SQUARE IN THE PAST	CHURCH ON THE SQUARE TODAY	WATER ON THE SQUARE	LAYOUT OF HABITAT PLOTS	FARM BUILDINGS	HORIZONTAL COMPACTNESS	PANORAMA WITH DOMINANT	OLD TREES PRESERVED	HISTORICAL CADASTRAL DIVISIONS PRESERVED	TOTAL POINTS
No.	LOCATION	1	2		3	4	5	6	7	8	9	10	
1.	Giemlice	1	1	+	1	1	0.5	1	1	0.5	1	0.5	8.5
2.	Leszkowy	0.5	1	+	1	1	0.5	0.5	1	0.5	1	1	8
3.	Cedry Wielkie	1	1	+	1	1	0.5	0.5	0	0.5	1	0.5	7
4.	Osice	0.5	1	+	1	1	0.5	0.5	0	1	1	0.5	7
5.	Myszewo	0.5	0	+	1	1	0.5	0	1	1	1	0.5	6.5
6.	Kmiecin	1	0	+	1	0.5	0	0.5	0.5	1	1	0.5	6
7.	Koszwały	1	1	+	1	1	0.5	0.5	0	0.5	0.5	0	6
8.	Lichnowy	1	1	+	1	1	0	0	0	1	1	0	6
9.	Lisewo Malborskie	0.5	0.5	++	0.5	1	0.5	0.5	0	1	1	0.5	6
10.	Miłocin	1	1	+	0	1	0	0.5	0.5	0.5	1	0.5	6
11.	Boręty	0	0.5	++	1	1	0	0	1	0.5	1	0.5	5.5
12.	Dębina	1	0.5	-	0	1	0	0.5	1	0.5	1	0	5.5
13.	Gnojewo	0.5	0.5	++	1	1	0	0	0	1	1	0.5	5.5
14.	Nowa Cerkiew	0	0	++	0.5	1	0.5	0.5	0.5	1	1	0.5	5.5
15.	Steblewo	0.5	0	+	1	0	0.5	0.5	0.5	1	0.5	0.5	5
16.	Nidowo	0.5	0	-	0	1	0.5	0.5	1	0	0.5	0.5	4.5
17.	Brzózki	0	0	-	0	1	0.5	1	1	0	0	0.5	4
18.	Kolnik	1	1	+	0	1	0	0.5	0	0	0.5	0	4
19.	Lichnówki	1	1	-	0	1	0	0	0	0.5	0.5	0	4
20.	Niedźwiedzica	1	0	++	0.5	0	0	0.5	0.5	0.5	0.5	1	4
21.	Stara Wisła	0	0	-	0	1	0	0	1	0.5	0	0.5	3
AVERAGE VALUE		0.64	0.52		0.57	0.88	0.26	0.40	0.50	0.64	0.76	0.43	5.62

area. The average score for all settlements was 5.62 points, indicating that the former medieval villages in the Vistula Delta have a slightly above-average preservation of traditional landscape values. This is confirmed by the results of individual villages. More than 10 of them (47%) scored above average. The result of the four villages with the highest scores are between 8.5 and 7 points. They are: Cedry Wielkie, Giemlice, Leszkowy and Osice. The group with above-average landscape values, characterised by a score above 6 points, also includes Kmiecín, Koszwały, Lichnowy, Lisewo Malborskie, Miłocin and Myszewo [Table 2].

One of the most important values of the villages, which distinguishes them morphologically, is the street system, from which the village type takes its name. It is closely connected with the preserved social function of the central village square. It should be noted that only in four villages (Boręty, Brzózki, Nowa Cerkiew, Stara Wisła) was the street system completely destroyed. In the above-mentioned cases, the second road was removed, leaving only one road running through the village. In another seven cases, the layout of two parallel roads was partially preserved (Gnojewo, Leszkowy, Lisewo Mlb., Myszewo, Nidowo, Osice, Steblewo) [Fig. 3].



Figure 3. Steblewo, an example of the disappearance of one of the roads surrounding the square. Red arrows indicate the place from which the photo was taken

Source: A – before 1924, O. Kloeppel (1924); B – contemporary, own photo. Maps: own study

There is also a strong correlation between the loss of the social functions of the main square and the change in the street layout. Only in the case of Leszkowy and Osice, two of the eleven settlements mentioned above, did the disappearance of one of the roads surrounding the square not lead to the complete 'privatisation' of this common, central space. In the other nine cases, the square was largely subdivided into plots for housing development. In villages where the utilitarian function of the square, accessible to all inhabitants, has been preserved, sports fields or playgrounds with open-air gyms are often introduced alongside the sacred space.

Water proved to be an exceptionally durable element in the space of the central square. Only in two villages, Niedźwiedzica and Steblewo, were the ponds that had existed before the Second World War removed. In many villages, they still serve as fire reservoirs and, in two (Cedry Wielkie and Lisewo, which are communal villages), this function was extended by the construction of volunteer fire brigade buildings in the vicinity [Fig. 3].

The same applies to the presence of a church in the centre – only in Kolnik, Koszwały, Miłocin, Niedźwiedzica and Nowa Cerkiew were these buildings destroyed after the Second World War. It should be noted, however, that in the case of Nowa Cerkiew, a second Evangelical church remained in the village, which took over the functions of the half-timbered Catholic church after its demolition, while, in Koszwały, a new building was erected on the site of the former temple. Moreover, the situation where two churches – Catholic and Protestant

(Evangelical or Mennonite) – functioned in one village before the war was quite common in this area. Two such buildings have been preserved in Boręty and Gnojewo and, before the Second World War, there were also two churches in Niedźwiedzica and Lichnowy.

It is worth noting that among the aspects analysed, the persistence of the traditional layout of the habitat parcels and the consequent degradation of the farm buildings received the lowest scores. After the Second World War, the historically large estates of the wealthy farmers of Żuławy were divided up for political and economic reasons. After the German owners fled at the end of the war, two, three or sometimes more settlers were placed on one farm, sharing the house and outbuildings. It was common for two or three families to live in one house (Stankiewicz 1956). Today, the process of habitat division is intensified by the phenomenon of urban sprawl and the migration of urban dwellers to rural areas. This phenomenon brings with it another threat – a change in the way villages function. New residents are not interested in constructing or maintaining farm buildings because they are not professionally involved in agriculture. As a result, the traditional layout of the habitat is disappearing. The neighbourhood of the habitat is also changing. The old home orchards, gardens and front yards are being replaced by lawns and conifers, which are culturally alien, and plots are being fenced off with prefabricated concrete or steel fences. This contributes to the rapid degradation of the cultural landscape [Fig. 5].



Figure 4. Examples of the transformation of the central square: A – slowly disappearing road and privatisation of the public square – Nowa Cerkiew; B – introduction of a fire station building next to the water reservoir – Lisewo Malborskie; C – change in the use of the space to a car park – Cedry Wielkie; D – preservation of the former character of the square – Osice
Source: own elaboration



Figure 5. An example of the harmonious preservation of village skylines: A – Nowa Cerkiew; B – Lisewo Malborskie. an example of the negative impact of new developments: C – Cedry Wielkie: a large sports hall as a sub-dominant for the historic church tower; D – Kmiecin: contemporary field development, which obscures the historic silhouette of the village
Source: own study

Conclusions

Research into the identification and valorisation of historic elements of medieval villages in the Vistula Delta has revealed, in particular, the continuing and intensifying process of the disappearance of historic rural farmsteads and their associated domestic greenery. The deteriorating state of conservation of traditional forms of settlements has a negative impact on the identity of the landscape and results in the loss of value of a selected group of villages.

In addition, the pressure of investment in the vicinity of the Tri-City conurbation (Gdańsk–Sopot–Gdynia), associated with the phenomenon of urban sprawl, disrupts the compact character of the villages and negatively affects the horizontal continuity of the settlements. The lack of a spatial development concept results in the emergence of patchwork developments

that ignore the medieval heritage and introduce spatial chaos. Coherent forms are replaced by haphazard spatial development, manifested in a variety of modern architectural solutions.

It is worth noting that the most enduring feature of the rural layouts studied is the system of communication and the utility function of the main square that has been preserved. In the majority of the cases discussed, the space corresponds to the original layout and functional purpose. Only in a few villages has the street grid been so transformed that it is impossible to identify the characteristics of the original layout.

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