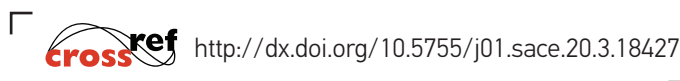


# Trends of Transformation of Historic Small Towns in Landscape

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Since the middle of the 20<sup>th</sup> century the significance of the historic towns has changed in the urban cadastre of Lithuania and in the hierarchy system of visual landmarks of landscape. In general, the landscape characteristics of the localities have an impact on the formation of the general vision of the country. Rural areas have accumulated cultural heritage distinguished by valuable characteristics that are considered to be as greatly valuable material to strengthen the identity of the country and to reveal the uniqueness of it. The active demographic, economic, social processes in the country have caused changes in the situation of those towns. Thus, it is important to predict and control the processes of transformations in those areas in order to support and shape the cultural identity of the local communities at the same time to preserve cultural landscape. The aim of the research is to study and structure the trends transformations of historic towns in landscape to be able to protect valuable rural historic urban structures as well as to suggest measures for their maintenance and management, with reference to the theoretical and practical analysis of the available material and the results of the empirical studies.

**Keywords:** rural landscape, small historic towns.

The objective of the research was to distinguish and analyse the trends of transformations of historic towns in Lithuanian landscape in order to suggest the measures for their maintenance and management, with reference to the theoretical and practical analysis of the available material and the results of the empirical studies.

Research methods applied included: a) the analysis of the scientific publications and written works, analysis of the legal documents and regulations of the Republic of Lithuania and of international documentation; the analysis of the examples available in Lithuania and overseas; b) a sociological survey of experts and community members by the method of questionnaire; c) the analysis of visual characteristics of objects in landscape using J. Bučas's methodology (Bučas, 1988); d) the analysis of historic, iconographic material and current situation and photo fixation.

The working hypothesis of the research includes five statements:

- 1 The communities in rural areas started to be interested in the history and heritage of the locality they are residing in; thus, they started paying greater attention to the surrounding environment, its maintenance and up-keeping and cleaning;
- 2 The historical urban structures in the landscape are perceived by the population of the rural areas as buildings or accumulation of them;
- 3 Each rural locality has a separate object (element), that identifies the particular territory; thus, for the population and visitors it makes the locality more attractive;

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## Introduction



- 4 The object that has received the status of the protected cultural heritage object in the rural area, positively influences the survival and maintenance of historic urban structures and therefore, this initiates the conservation of valuable compositional characteristics of landscape;
- 5 The sharing of functions in rural areas as well as their number has an impact on the characteristics of historic urban structures in the landscape.

The research was carried out in Čekiškė, Kruonis, Bukonys and Kalviai historic small towns. Objects of assessment in the selected Lithuanian historic towns include: a network of streets, layout, height of buildings, the expression of the centre of the settlement in the silhouette, compositional characteristics of the silhouette, size of the settlement. The graphical analysis - the diagrams of urban structures of other analyzed small towns including Kruonis, Višakio Rūda, Paparčiai, Daršūniškis are presented in this research as well.

Since the middle of the 20<sup>th</sup> century, the concept of the significance of historic small towns has changed in the urban framework of Lithuania and in the hierarchy system of visual landmarks of landscape. In the Soviet period the transformations of the spatial structure of small towns and their visual value were determined by the advanced engineering system, new methods of agricultural commodities production, increased domestic and cultural needs and demands. To adequately coordinate and synchronize the application of new functions in the historic urban structure of traditional settlements there the comprehensive scientific approaches were pursued in order to determine the formation of the architectural and spatial structure as well as the cultural-domestic, municipal maintenance needs of the population and the recommendations were prepared (Preparation..., 1970; Recommendations..., 1975; Recommendations..., 1973; Towns..., 1960). The intensions of such studies were the following:

- \_ Compiling a scenic/picturesque panorama of the layout; residential and industrial zones;
- \_ Obtaining an optimal link between the highway or motorway.

When renovating historical small towns into the collective farm villages, their size, visual activity in the landscape, amount of cultural heritage and preservation level of the dynamic composition, depended on the administrative type of the village: central, secondary or not to be developed. The greatest number of new anthropogenic elements survived in these settlements, which were attributed to the category of central (perspective/promising) collective farm villages; the least transformations have experienced in the settlements, which were referred as the group of collective farm villages 'not to be developed'.

When renovating small historic towns, two rather controversial problems were solved (Preparation..., 1970; Recommendations..., 1973; Butkevičius, 1980):

- 1 Small towns had to be modernized and adapted not only to the new requirements of the industrial production of agriculture, but to provide services and conditions of the municipal type;
- 2 Advanced measures of planning and layout arrangement were attempted to match with the traditional architecture to satisfy new requirements.

When adapting small historical towns into the collective farm villages the following elements transforming the plan and spatial structure of small towns had emerged: multi - storied masonry buildings of 2 or 3 storeys height, large volume public buildings (schools, kindergartens, centres of culture, buildings for daily domestic services and etc.), engineering installations (water towers, transformer stations, boiler houses and etc.), industrial – economical /farming complexes.

After the complex research studies of the selected of small towns have been carried out, it is possible to state that new anthropogenic focus points in the composition of these locations most frequently have created a negative effect. In the Soviet period, in small towns and their environment, the newly appeared focus points decomposed the historically created well-knit structure of the layout by the massive and high building volumes.

The following diagrams below (Fig. 1 - 4) demonstrate how compositional characteristics in the

## Transformations of compositional characteristics of urban structure in landscape of historic small towns since the middle of the 20<sup>th</sup> century

Fig. 1

Transformational diagram of urban structure of Kruonis small town with a specific regular network of streets. Compiled by Gintarė Vitovaitė

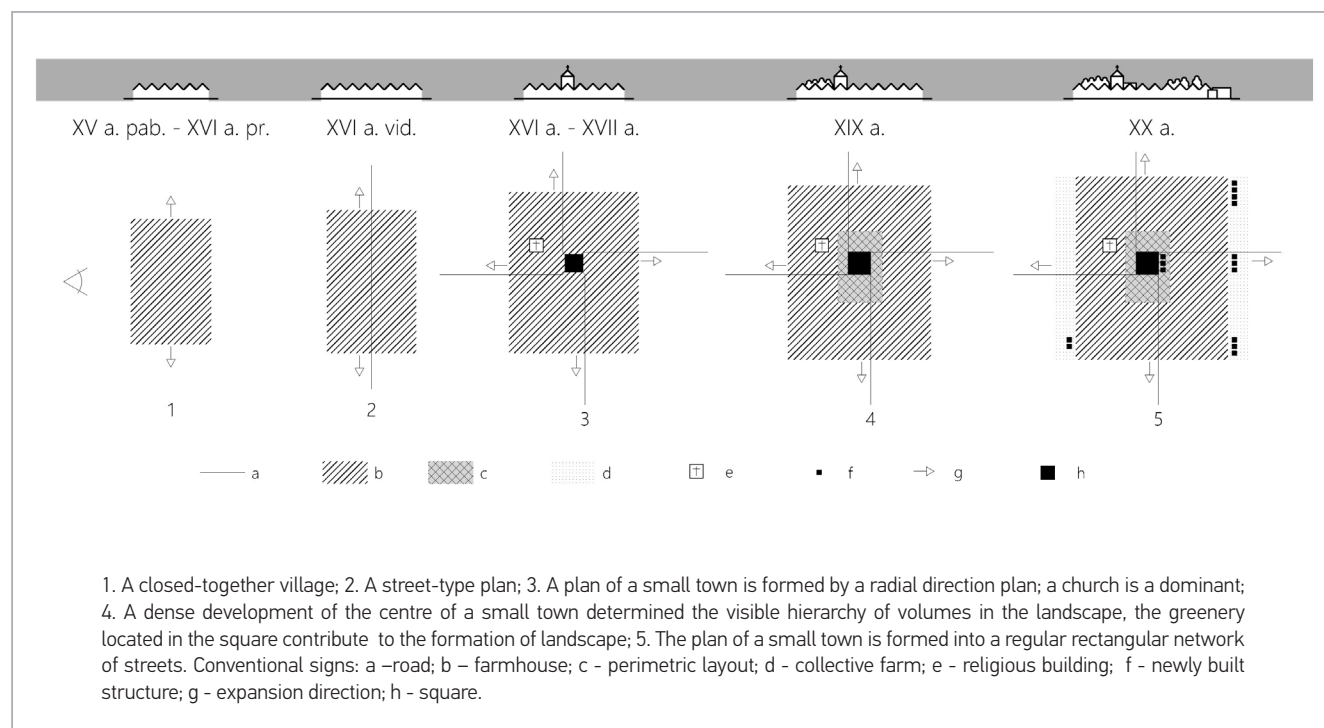


Fig. 2

Višakio Rūda diagram of the transformations of urban structure with a typical radial plan. Compiled by Gintarė Vitovaitė

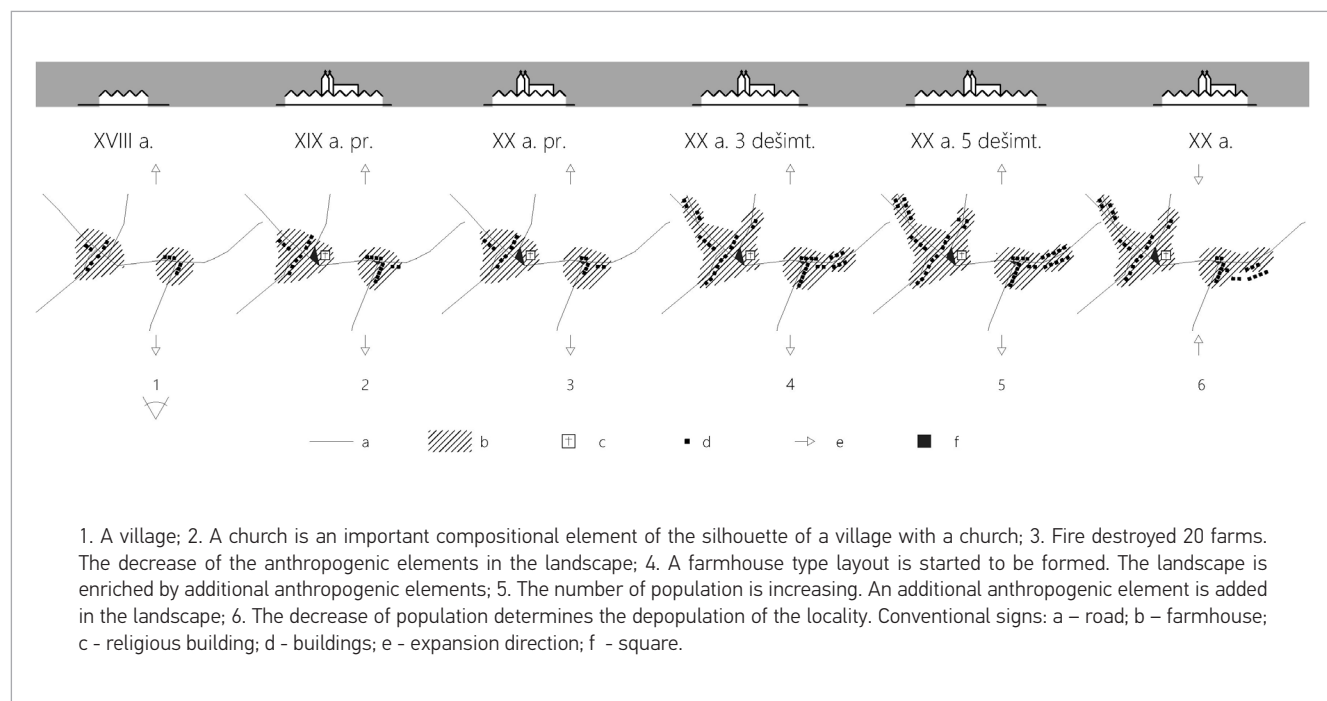


Fig. 3

Diagram of the transformations of the urban structures in Paparčiai with a combined/mixed plan. Compiled by Gintarė Vitovaitė

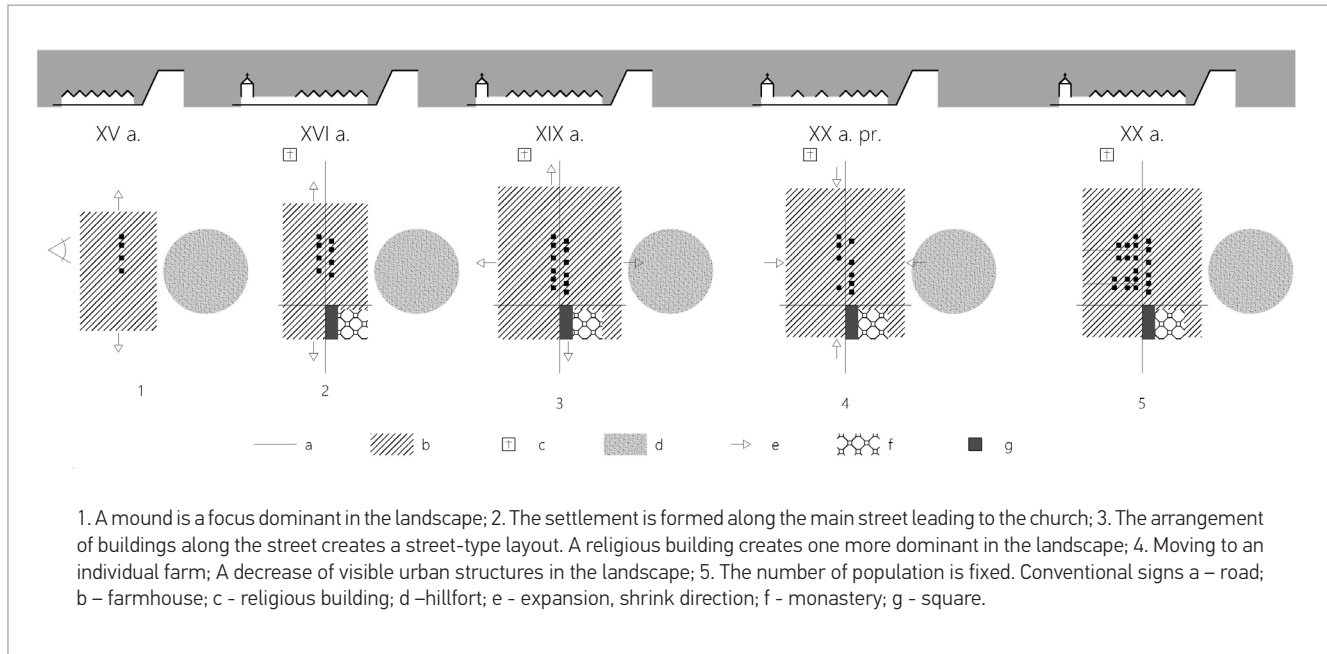
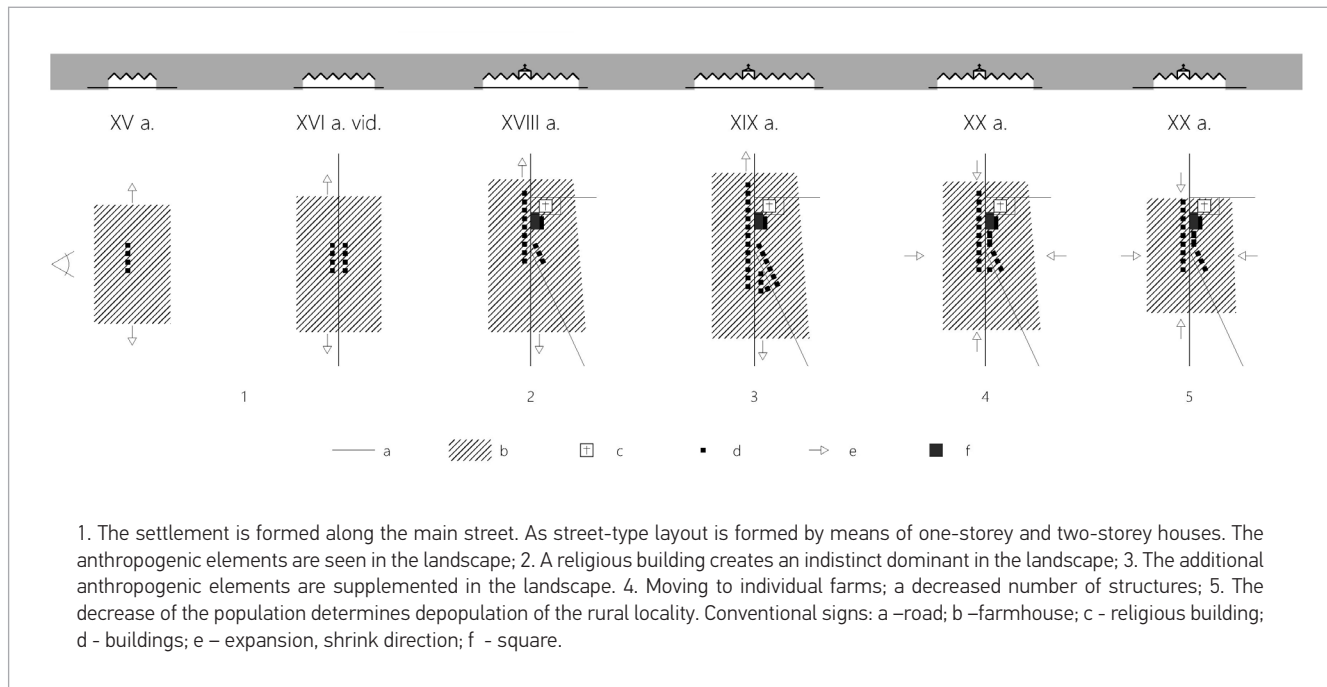


Fig. 4

Diagram of the transformations of the urban structures in Darsūniškis with a characteristic linear plan. Compiled by Gintarė Vitovaitė



landscape of small towns have been transformed, because of the nature of the above-mentioned reconstructions. The diagrams of urban structures, such as Kruonis, Višakio Rūda, Paparčiai, Darsūniškis are presented in the Fig. 1 - 4.

In the example in the fig. 1 the structures of new forms in the landscape create new sub-dominants; neglected plantations in the square put into the shade the dominant.

In the example in the fig. 2 the landscape is not supplemented by new urban forms. The anthropogenic elements are reduced in the certain places.

In the example in the fig. 3 the majority of the population had settled in the building that was constructed in the Soviet period; it destroyed the characteristics of the integrity of the landscape and made it monotonous.

In the example in the fig. 4 the landscape is not supplemented by new urban forms. In some places the decrease of anthropogenic elements can be observed.

### **The applied methodologies and the selection of the criteria for the investigated objects**

Sociological research studies assist in revealing the position of the community towards the theme of the research studies. To execute a sociological research, there have been structured two types of questionnaires for the survey: for the communities and for the experts of architecture. The survey prepared for the community has been directed towards the needs of the population in the residential environment and for the assessment of the present state of the objects to be investigated and the changes that have taken place in the transformation of the residential rural areas. The questionnaires prepared for the experts of architecture included questions related to those prepared for the community members, in order to compare diverse opinions both of the experts and community members.

The sociological survey of the society was expected to figure out the following: 1) historical urban structure in the landscape identified by the society; 2) the way the society apprehend the identity of rural locality and with the help of what function and urban structures; 3) from the point of view of the society who has to regulate and look after the historic urban transformations in the landscape of the rural areas; 4) with what historic urban structural maintenance problems the society faces ; 5) the demands and needs of the society when trying to protect historical urban structures in the landscape; 6) what elements of the historic urban structures in the landscape are assessed positively, what are assessed negatively; 7) what is the relationship of the society with the cultural heritage objects in their rural environment in which they reside.

The survey conducted with the experts was expected to reveal the following: 1) what element could be applied for creating the identity of historic small towns, villages with a church; 2) what urban structural transformations in the historic small towns are proceeding and the way their changes are transforming the compositional characteristics in the landscape; 3) what are possible priority trends for the expansion and maintenance in the historic small towns in order to improve the compositional characteristics of the historic urban structures in the landscape; 4) what elements of historic urban structures in the landscape are valuable, what objects can be identified as the objects of visual pollution; 5) the way the maintenance of the cultural heritage objects could affect the functional and urban development of historic small towns.

The research on site was expected to determine the problems of a small town such as: a) urban structure predominance in the landscape; b) valuable compositional characteristics of the urban structures in landscape; c) the density of the urban structure layout in the plan and height of development (type of layout ) and the way it is reflected in the silhouette of the settlement; d)

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**Results of the research on the trends of transformations of urban structures of historic small towns in landscape**

compositional characteristics of the urban structure in the hierarchy of landscape components; e) compositional function (phonic, prevailing) of the greenery of the settlement in the landscape; f) the ratio of public and individual spaces of the settlement in the plan and functional structure.

Criteria of selection of historic small towns for the analysis included: 1) distance from the largest cities; 2) homogenous, undivided urban structures; 3) evident stages of the development of the urban structure; 4) visibility of the rural location, visible silhouette of the rural location; 5) diverse natural situation: on the plains, hilly terrain; 6) rural area next to the developed habitat of the country (according to the General Plan of Lithuania); 7) existence/absence of cultural heritage objects; 8) the position of the manor of not being involved in the urban structure development. Five small towns selected are presented in the table 1.

**Table 1**

General research data of the objects. Compiled by Gintarė Vitovaitė

Name	District	Population	Cultural heritage in rural area
Čekiškė	Kaunas	682 (2011)	Historic part of Čekiškė town (register code 17075); St. Trinity Church of Čekiškė, St. Trinity Church building complex (register code 1369); Building of Čekiškė synagogue (register code 33462); Building complex of Čekiškė Parsonage (register code 32440)
Kruonis	Kaišiadorys	726 (2001)	The town's historic center (register code 17092); Church (register code 1362); Kruonis castle called The castle ruins (register code 5002); Artists Vladas and Barbora Didžiokai tomb (register code 10501)
Bukonys	Jonava	657 (2001)	Former manor fragments of Bukonys (register code 114)
Kalviai	Kaišiadoriys	248 (2001)	The church and bell tower (register code 969)

### Research of visual characteristics in landscape of the historic small towns using J. Bučas method

The results of the analysis of visual characteristics of objects in landscape using J. Bučas's method (Bučas, 1988) are presented below in fig. 5 to 8 and tables 2 to 5.

Silos towers prevail in the silhouette of the historical small town (Fig. 5, Table 2). The hierarchy system of the exponents formed by the impact of historic urban structures is missing. The silos towers are as dominants and sub-dominants and also are the elements of engineering networks. New dominants including water towers, communication towers break the hierarchy of the already formed exponents, the focus points prevail.

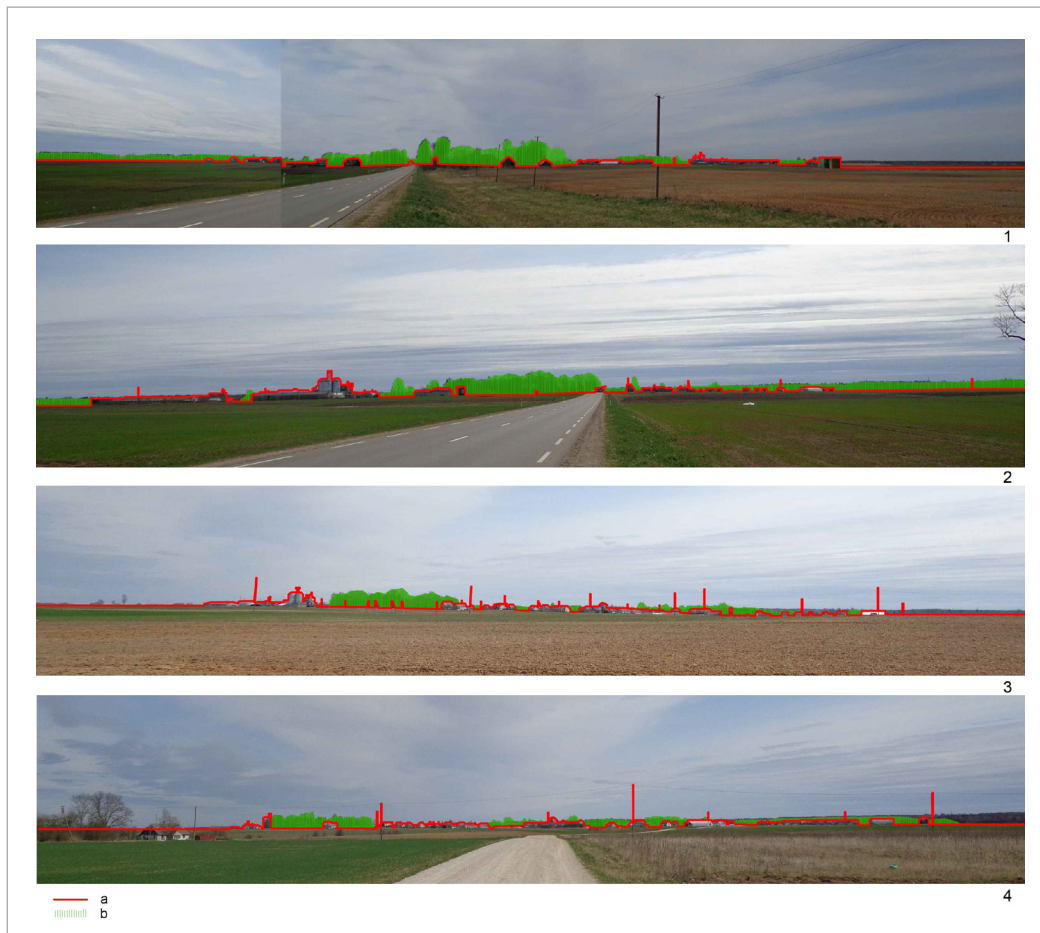
Several dominants from the diverse viewpoints were identified in this case (Fig. 6, Table 3), one is active, the hierarchy of the exponents has not been changed. The complexity of the terrain and situations of nature reduce the visibility.

New dominants including water towers, communication towers, break the already existing hierarchy of exponents, focus points prevail (Fig. 7, Table 4). Several dominants from several viewpoints were identified; only one of them is active.

New dominants were identified including water towers, communication towers, they break the hierarchy of the formed exponents, focus points prevail (Fig. 8, Table 5).

When summarizing the findings and results of the research study on the visual characteristics in landscape of the historic small towns using J. Bučas assessment method, the following transformations of the urban structures of the historic small towns were taking place during the period of the restoration of Independence of Lithuania: the street network was expanded and increased, the new residential neighbourhoods were constructed of one-storey and two-storey farmhouses. In the landscape that was reflected by the compact expansion of the territory, by the appearance of new anthropogenic landmarks such as water and communication towers. The same historic

urban structures (formed until the middle of the 20<sup>th</sup> century) have not changed at all or only insignificantly, however their impact on the compositional characteristics of panoramas and silhouettes have reduced their force due to the urban structures that have been formed later. The expected tendency is in the villages where the communities are active, that the urban structures still tend to preserve their conditions and state; in those locations where the local population manifests less activity, the tendency is observed that the urban structure tends to decay or disappear (the disintegration is reflected in a poor physical state of the buildings; there the network of streets has remained but the decay of the building has the impact on to the loss of the characteristics of the spatial structure of the street layout, inner spaces lose the peculiarity and specific character of the locality). The other reason for transformation of the characteristics to occur



**Fig. 5**

The analysis of Bukoniai visual characteristics in landscape from different viewpoints. Conventional signs: a - the silhouette formed by the anthropogenic elements; b - the background plane. Compiled by Gintarė Vitovaitė

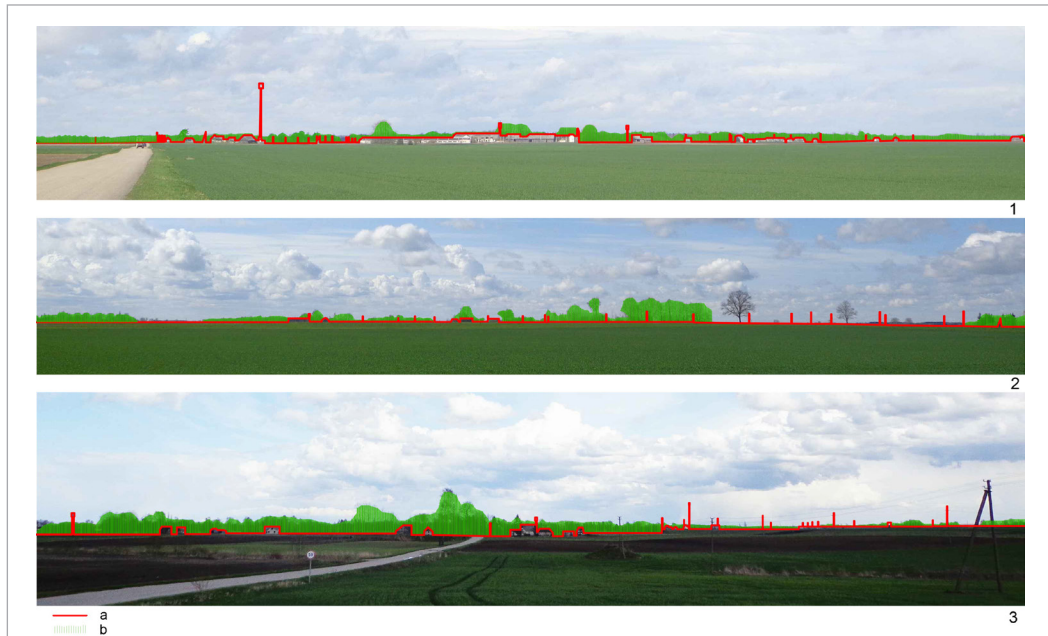
Assessment criteria	Photo-fixation points			
	1	2	3	4
Visual closure	64 %	68 %	35 %	50 %
Impact of forests and agro-plantations	Imposing restrictions		Breaking /Disintegrating	
Dominants	Silos towers, hangars	Silos towers, hangars	Silos towers, hangars	Silos towers, hangars
Overlapping of the elements of visual impact zones (3.5 km)	identified			

**Table 2**

Landscape visual characteristics of Bukoniai. Compiled by Gintarė Vitovaitė

**Fig. 6**

The analysis of Čekiškė visual characteristics in landscape from different viewpoints. Conventional signs: a - the silhouette formed by the anthropogenic elements; b - the background plane.  
Compiled by Gintarė Vitovaitė



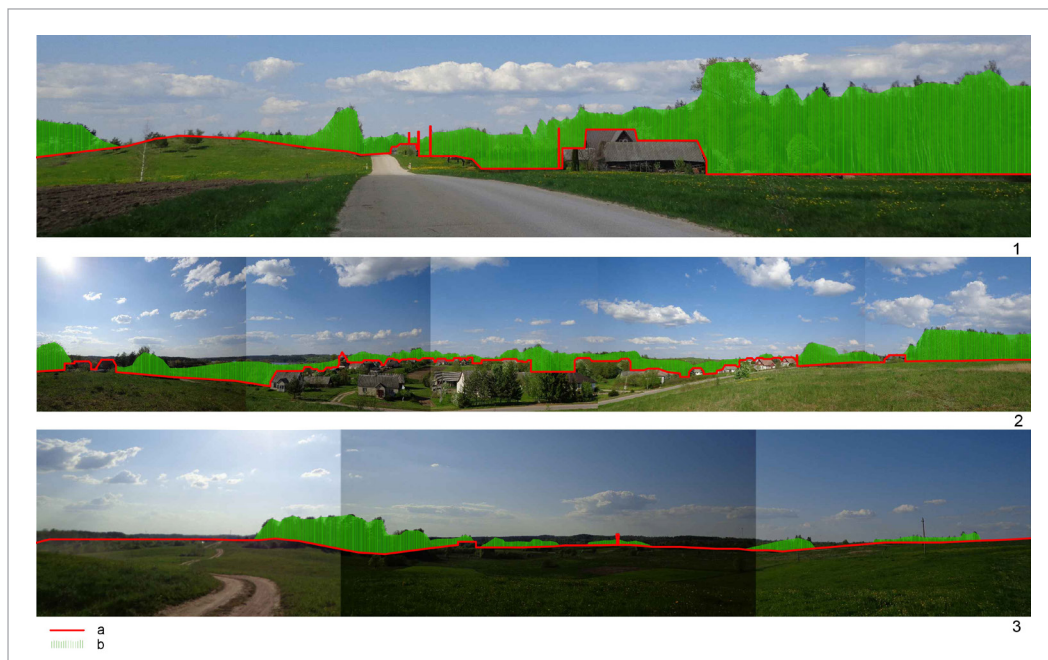
**Table 3**

Landscape visual characteristics of Čekiškė. Compiled by Gintarė Vitovaitė

Assessment criteria	Photo-fixation points		
	1	2	3
Visual closure	64 %	75 %	95 %
Impact of forests and agro- plantations	Imposing restrictions	Breaking / Disintegrating	Imposing restrictions
Dominants	Connections and water towers, church	Water tower	Connections and water towers
Overlapping of the elements of visual impact zones (3.5 km)	identified		

**Fig. 7**

The analysis of Kalviai visual characteristics in landscape from different viewpoints. Conventional signs: a- the silhouette formed by the anthropogenic elements; b - the background plane.  
Compiled by Gintarė Vitovaitė





Assessment criteria	Photo-fixation points		
	1	2	3
Visual closure	88 %	55 %	91 %
Impact of forests & agro- plantations	Imposing restrictions	Breaking / Disintegrating	Imposing restrictions
Dominants	-	Water tower	Church
Overlapping of the elements of visual impact zones (3.5 km)	identified		

Table 4

Landscape visual characteristics of Kalviai. Compiled by Gintarė Vitovaitė

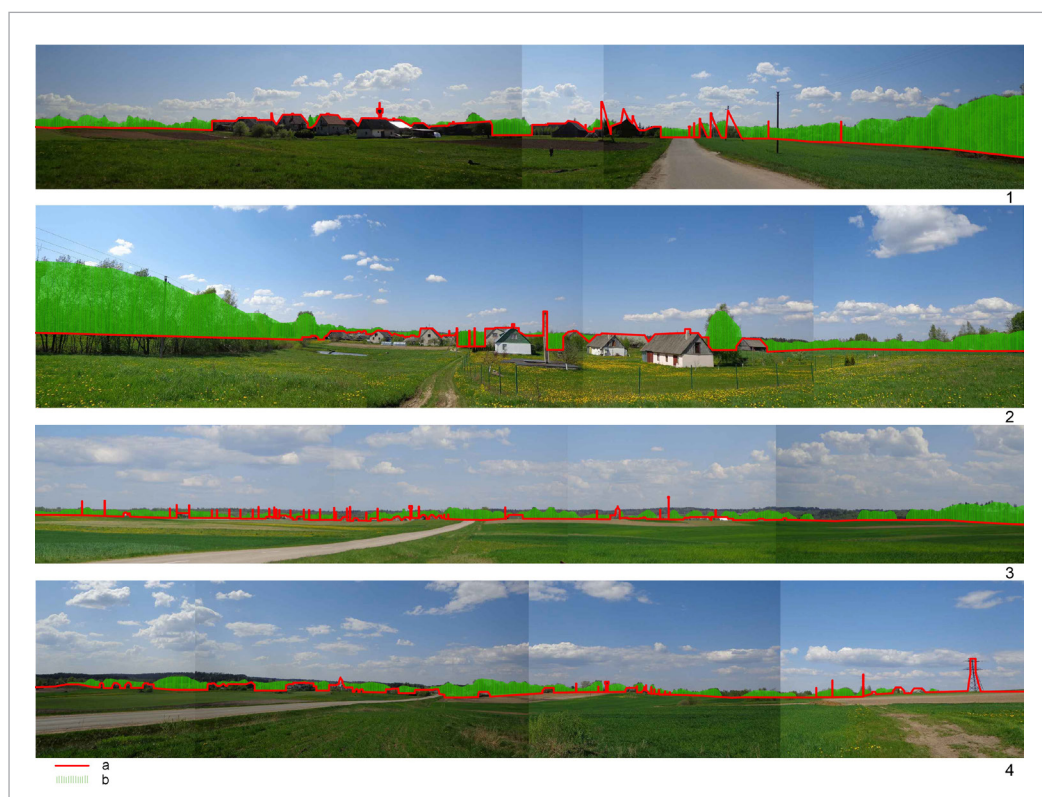


Fig. 8

The analysis of Kruonis visual characteristics in landscape from different viewpoints. Conventional signs: a - the silhouette formed by the anthropogenic elements; b - the background plane

Assessment criteria	Photo-fixation points			
	1	2	3	4
Visual closure	71 %	79 %	89 %	76 %
Impact of forests & agro- plantations	Imposing restrictions			
Dominants	Water towers	-	Connections and water towers, church	Water towers, church
Overlapping of the elements of visual impact zones (3.5 km)	identified			

Table 5

Landscape visual characteristics of Kruonis. Compiled by Gintarė Vitovaitė

in silhouette and panoramas of the landscape, is the increased range of unattended greenery zones; their abundance tends to reduce the activity of landscape urban structures.

The impact of the cultural heritage status has been assessed by the continued existence of the urban structures of the historic small town. The label of cultural heritage assigned to the objects

help to preserve the authenticity and the most valuable peculiarities of the condition that the objects are used. But the buildings without the modern and contemporary functions prescribed for them tend to decay. The maintenance of the cultural heritage has to be related with its usage, then the protection of the characteristics of urban structures as well as buildings is ensured.

### **Sociological survey results**

With the reference to the opinion of both the community and the experts who participated in the sociological survey, the church could be considered the symbol of the historic small town.

The experts and communities associate the historic small towns with different functions; the experts find links with historic, residential and cultural identity, the communities link them with agriculture, recreational/ relaxation, religious functions. However, their opinions coincide on the expanded or developed function or recreational /relaxation functions. Although, the experts have been oriented towards the rural locality in general: historical small towns and villages with churches, but the community have been oriented towards its residential area, both sides of the respondents have perceived the potential of recreational / relaxation function.

The church by the opinion of both the community and the experts in the silhouette of historic small town is assessed as a positive object. Therefore, when providing measures to improve the compositional characteristics of the urban structures in the landscape of the historic small town, one of the attempts has to be related to the highlighting of the church in the silhouette. By the opinions of both the experts and the community, the objects having negative impact in the silhouette are called by different names. The majority of the respondents from the community participating in the survey have not indicated any object or mentioned the individual objects, it means that the transformations which proceed in the silhouette, have been perceived as processes naturally taking place, they do not see any significant adverse effect of it, while the experts evidently have pointed out several objects, namely such as power transmission lines, poles, industrial farming buildings of the former collective farms (manufacturing premises, animal farms) and engineering structures (water towers and etc.). Thus, an attention has to be paid to the process of putting in order the above mentioned objects or measures have to be foreseen to reduce their negative impact on their compositional characteristics of the silhouette, panoramas.

The transformations in the historic small towns were continued to be registered since 1990 up till now: the central parts are not changing much, the residential part of the collective farms is declining or did not change, the industrial farming part of the collective farm was reduced, new residential neighbourhoods were formed or if they were not formed, they were expanded. Taking into account, that neither economic nor demographic situations undergone radical changes during the period of 10 years, the transformation itself could be named as a tendency; in cases when the particular conception was not suggested for those areas to be developed and maintained, there was observed the tendency of decrease of the urban structures.

The survey included the question asking to express respondents their own opinion on the most acceptable measures for management the territory of the historic small towns or villages with a church. The majority presented the idea of reconstructing the territories. The experts had to enumerate the urban measures which could assist the improvement of the compositional characteristics of silhouettes and panoramas in the landscape. The implementation could give the following results of maintaining the integrity, cleaning and managing public spaces, regulating the height and layout, preservation of the historical network of streets or revival, reorganization of engineering structures, preservation / maintenance of the cultural heritage objects, greenery management, functional application of objects, spaces, eliminating the visual pollution objects or management of them, highlighting of important objects in the silhouette, determining the direction of the development. Both the experts, and the community did not want to develop or sup-

plement the current urban structures with new buildings; the principal measures were oriented to the general maintenance of the current environment. However, if there was a demand for the construction of new buildings, the experts expressed the approval of the occurrence of them, by enumerating only certain architectural measures in order to preserve the integrity and uniqueness of the historic small towns.

The survey for the community members revealed the priority of cleaning and managing the central part of the village with a church, to be able to uncover the uniqueness and exclusiveness of the locality.

Both the communities and the experts accept the responsibility for maintaining the surrounding environment together with the local governmental institutions. The experts consider the maintenance of cultural heritage to be the sphere of responsibility for the representatives of governmental institutions or even the professional experts having the required qualifications, responsibility and education. Therefore, the answers indicate the complexity of the issue, because the prescribed laws and regulations determine that only the owner is responsible for those objects. The opinion of the experts indicates the lack of public interest in terms of cultural heritage protection and guidelines for managing them, although, the communities approve the usage of cultural heritage objects.

The sociological survey provided the priority direction and mode of the maintenance process as well as the measures to be applied for the modes to be implemented. The measures have to be applied in compiling a model of landscape change possibilities regarding the tendencies of the transformation of the urban structures in historic rural areas. The sociological survey suggested the idea that the church could serve as the symbol of both the historic small town and a village with a church; the function of the recreational / relaxation potential has been determined as well.

The model of the possibilities of the transformational tendencies of the historic urban structures in landscape has been provided. The available priorities have been determined: the expansion of the central part of the settlement; the significance of a church and the recreational/relaxation function. The type of measures and means for the maintenance have been provided: retention of integrity, maintenance and management of the public places, the exposing of significant objects within the silhouette, maintenance and management of the cultural heritage objects, preservation /sustaining of the historical network of the streets. The goal determined the directions that maintenance and management should improve not only the compositional characteristics of the panoramas and silhouettes in the landscape, but the social vitality as well, which is necessary as a precondition for the survival of the mentioned above locality.

1 If deliberately to compare the development of urban and rural localities, the rural areas cover a considerable greater part of Lithuania. The landscape bears the witness of the statement that larger habitats of the landscape embody the specific characteristics of the rural locality, equivalent network of small towns and individual scattered farms. The sources of scientific publications widely present the social and economic problems of these areas such as the decrease in number of the local population, the shortage of jobs and etc. The landscape exhibits the mentioned above changes, because there have been noticed the increase of the elements of unattended spatial structures.

2 The problems of the historic urban structures of the rural localities in the landscape have been determined by the destroyed compositional characteristics of the historic urban structures in the landscape, which have been formed by constructing buildings under the standard scales and volumes of the Soviet period, by incompatible for the particular location buildings, by the decomposed hierarchy system of dominants and subdominants, very specific for the landscape of the rural territories of Lithuania, visual assimilation and equalisation in the landscape of different rural vicinities.

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## Conclusions

3 The findings of the empirical studies indicate that the most relevant transformations of the urban structures took place before the period of restitution of Independence of Lithuania. The tendency of the urban structures to be transformed has been perceived and presented i.e. the disappearance of the spatial structures, the destruction or loss of the valuable compositional characteristics in silhouettes and panoramas in the landscape, especially in the localities, where there are missing active local communities, which have not been formed yet.

4 The results of the sociological survey conducted with the rural communities and experts in their professional fields, indicate that to reveal the landscape and cultural identity of a historical small town or a village with a church, there has to be applied the exposed emphasis of the local church as an architectural monumental structure that could be very specific for a particular locality. The survey determined the potential or the need and requirement for the function of recreation /relaxation in the rural community, when supplementing the locality with provided catering services and adding some other functions.

5 Taking into consideration the judgments and attitudes of the community, the most adequate and rational way to improve the territories of the central part of the historic small town is the attempt, which has to be executed in reviving / reconstructing / restoring the centre or installing and fitting-out / furnishing the public spaces there. The respondents of the sociological surveys have singled out the valuable objects in the landscape to be protected, such as a church, historical residential buildings (constructed until the middle of the 20<sup>th</sup> century), and greenery. The respondents of the survey from the expert groups enumerated the objects considered to be as visual pollutants. They are the installations of engineering communications and buildings, which were constructed during the Soviet period.

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