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## INTRODUCTION

In the scientific journal *Landscape Architecture and Art* of the Latvian University of Agriculture (LUA), where so far, mostly, the findings of the theoretical studies of the landscape space in Latvia have been compiled, the results of international studies appear more and more.

The articles analyse the quality of the environment, ecological issues, the contemporary art and its interaction trends in the Latvian cultural landscape, and the theoretical and practical perspective of the landscape design. The studies show that a more balanced sectoral cooperation of specialists and a more complete landscape planning and development strategy should be searched in carrying out in-depth studies in several directions and in evaluating the landscape architect's role as a mediator in the landscape planning processes. The level of the current theoretical understanding, the mutual cultural landscape and the contemporary art interaction is not enough evaluated by specialists. In the process of creating the cultural landscape, a multidisciplinary collaboration of specialists is missing.

The studies show that landscape architecture projects should include the accumulated experience of artists, reading the landscape as a piece of art and searching for the synthesis, where the elements of the landscape space become like pieces of art.

One of the major Latvian cultural and historical premises is the landscape surrounding the archaeological monument that is closely related to the landscape elements in the surroundings of the archaeological monuments.

Along with the foreign scientists, a new and comprehensive study has been started on the Latvian road landscape development, reflecting the events of the history, changes in the national politics, economy, changes in the structure of land ownership and use. The results of the study call attention to the fact that in the development of the new road infrastructure, picturesque view lines, telling about the cultural and historical landscapes, are gradually being lost. It also applies to the opportunities for the development of tourism infrastructure in Latvia.

"The practical activities in the creation of the landscape space are not feasible without a science-based theoretical framework, so the findings, published in the collection, can be useful for architects, urban planning professionals and the authorities responsible for the conservation and protection of our heritage. It is brightly illustrated by the doctoral theses defended this year, says Agate Eniņa "Architecture of Buildings of the Arts in Latvia" (Riga Technical University), Madara Markova "The Church landscape of Latgale"and Natalija Nitavska "The Identity of landscape of Baltic sea coast Latvia" (LUA).

## PRIEKŠVĀRDS

Latvijas Lauksaimniecības universitātes (LLU) zinātniskais žurnāls *Landscape Architecture and Art,* kurā līdz šim, galvenokārt, apspoguļojās Latvijas ainavtelpas teorētiskie pētījumi, aizvien plašāk tiek apkopoti starptautisko pētījumu rezultāti.

Rakstos analizētas vides kvalitātes un ekoloģijas jautājumu problemātika, kā arī mūsdienu mākslas un tās mijiedarbības tendences Latvijas kultūrainavā, un ainavu veidošanas teorētiskais un praktiskais skatījums.

Pētījumi parāda, ka ir jāmeklē daudz sabalansētāka nozaru speciālistu sadarbība un pilnīgāka ainavas plānošanas un veidošanas stratēģija, veicot padziļinātākus pētījumus vairākos virzienos, un izvērtējot ainavu arhitekta – kā mediatora lomu ainavu plānošanas procesos. Līdzšinējais teorētiskās izpratnes un savstarpējais kultūrainavas un mūsdienu mākslas mijiedarbības līmenis nav pietiekami ievērtēts speciālistu vidū. Patreizējā kultūrainavas veidošanas procesā iztrūkst daudznozaru speciālistu sadarbība.

Pētījumi liecina, ka ainavu arhitektūras projektos jāiekļauj mākslinieku uzkrāto pieredzi, skatot ainavu kā mākslas darbu un meklējot sintēzi, kur ainavtelpas elementi pastāv kā mākslas darbi.

Viena no svarīgām Latvijas kultūrvēsturiskajām telpām ir arheoloģijas pieminekļu aptverošās ainavas, kas ir cieši saistītas ar ainavas elementiem arheoloģijas pieminekļu apkārtnē.

Kopā ar ārvalstu zinātniekiem ir aizsākusies iestrāde jaunam un plašam pētījumam par Latvijas autoceļu ainavu, kurā atspoguļojas vēstures notikumi, pārmaiņas valsts politikā, ekonomikā, izmaiņas zemes īpašumu struktūrā un izmantošanas veidā. Pētījuma rezultāti liek saasināti pievērst uzmanību tam, ka jaunas ceļu infrastruktūras izveidē pamazām tiek zaudētas gleznainas skatu līnijas, kas vēsta par kultūrvēsturiskajām ainavtelpām un reģionam raksturīgo identitāti. Reizē tas ir attiecināms uz tūrisma infrastruktūras attīstības iespējām Latvijā.

Praktiskā darbība ainavtelpas izveidē nav īstenojama bez zinātniski pamatotas teorētiskās bāzes, tāpēc krājumā publicētais var noderēt profesionālajā darbā gan arhitektiem, gan pilsētplānošanas speciālistiem, gan par kultūras mantojuma saglabāšanu un aizsardzību atbildīgajām institūcijām.

Spilgti to apliecina šogad aizstāvētie promocijas darbi – Agate Eniņa „Mākslu ēku arhitektūra Latvijā" (RTU), Madara Markova „Latgales dievnamu ainava"(LLU) un Natālija Ņitavska "Baltijas jūras piekrastes ainavu identitāte Latvijā" (LLU).

**Aija Ziemeļniece**
Editor in Chief

**CONTENTS**

# Archaeological site – environmental element

Māra Urtāne, *Latvia University of Agriculture*

**Abstract. Paper analyzed character of landscape on and around archaeological sites, which were created by natural and human made elements, relating to the historical period and archaeological type of archaeological sites in Latvia, Lithuania, Estonia. Visual landscape room types around archaeological sites were discussed relating to their openness: e.g. open, closed, enveloped, half closed. Spatial planning impact on the archaeological sites were analysed together with visibility and visual amenity of archaeological sites and impacts from surrounding landscape.**

**Keywords: archaeological site, historical landscape, visual borders.**

## Introduction

In this research attention was directed to the description and analyses of the visual landscape around archaeological sites. Archaeological sites were connected with other elements in their surroundings. During their use, for example, settlements were connected to water resources, with woods or fertile soil from which to gather food, and with elements in the landscape, which created defense and comfortable conditions.

Role of landscape is the most important aspect – survival of sites and how to protect archaeological site as environmental object analysed in relation with visual border character and visitors management on sites and around them.

## Materials and Methods

*Irreplaceable elements*

Archaeological sites are sometimes visible as earthworks, as ruins with ditches, ramparts, terraces, grave mounds, or only darker soil composing the cultural layers resulting from settlements buildings, and fair places. Some sites are covered by layer of humus soil so that no features visible at the surface, for example grave fields, settlements, and ancient field systems [1].

The environment of human group forms one of the conditions of its life; this environment consists both of things made or acquired by the people, and of the natural surroundings [2]. As environmental elements, archaeological sites are irreplaceable. They exist today in 3 ways: covered sites, open excavated sites, and reconstructed of sites with conserved objects. Additional visual characteristics are given by vegetation cover, especially bushes and trees. The later may or may not be modified by human activities, but are in any case used and given cultural meanings, so that they function along with human manufactures as part of the culturally defined environment [2]. Archaeological site beginnings come from different periods, but their preservation overlaps with features of later periods, and this overlap is continuing also today. Important aspects of landscape change are also the frequency and the magnitude of the change [3].

One of the central aims for preservation is to explain the visual values and surrounding landscape of ancient sites, relating them to the different measures for preservation available for archaeological sites. These issues reflect a relationship with other professions, and increase the understanding of the professional requirements of the different people involved.

Visual borders of sites show our attention and understanding of value of archaeological remains and archaeological landscape. Visual borders were characterized by 2 factors: distance to the border (close or far) and elements which define the border (vegetation or anthropogenic elements). In current research considered 4 types of visual borders:

Open with vegetation: more than 2 km views in which dominate vegetation and natural elements such as water, valley slopes, forests, etc.

Closed with vegetation: means visual border located close to the site and consist from vegetation.

Open with man made elements: means far views with antropogenic elements in this landscape.

Closed with man made elements: means visual border located close to the site and consists from anthopogenic elements mainly.

Hillfort landscapes are mainly open with vegetation or man made elements or closed with vegetation. Settlements are mainly open with vegetation or man made element borders. Burial site borders are closed in half of sites. And greater amount of cult sites are closed with vegetation borders.

Study shows that sites in an urban landscape have closed borders with man made elements and only several sites closed with vegetation borders. In rural landscapes dominated borders are open with vegetation and closed with vegetation. And studied

sites in forest landscapes are with closed vegetation borders because of mainly flat topography and intensive bush vegetation.

In a predominately open landscape, the vegetation elements that aid the movement and grazing of animals are the same elements that give the landscape spatial definition and aid people's perception of depth. Ulrich [4] speaks of gross depth properties and focally as factors eliciting the very quick initial affective reaction to an environment. Areas to focus on when explaining the high preference for cultural landscapes would be people's conceptions of natural and man made. It has been suggested that preference reflects a desire for balance between two [5].

Monuments are part of our everyday experiences. Their beginnings come from different periods, but their preservation overlaps with features of later periods, and this overlap is continuing today. As environmental elements, archaeological sites are irreplaceable.

**Damage**

In river valleys construction works on reservoirs for hydroelectric power stations caused changes to the local water levels. Erosion along banks cut into slopes of hillforts and other archaeological sites. Erosion is caused as well by damage from visitors footpaths and big trees [6]. Most of damages on sites are caused by erosion and there are possible to localize them, but nonetheless serious threats come from natural erosion as soil movement and peat decay. The management of archaeological resources on the ground, practically if in situ conservation has been selected, requires that aspects of environment be considered, and that a measure of common be applied [7].

Reducing from erosion damage will be done in two ways: direct conservation treatment on slopes, and by planning measures: in some cases we need both [8].

Lambric suggests [9]: "As elsewhere, the archaeologists may be delighted to preserve undisturbed field monuments in rich wildlife habitats, but he is also interested in that vast majority of known sites which are on improved pastures or arable lands, damaged though they may be. To quite a large extent archaeological and wildlife interests do not automatically overlap without assessing the actual degree of overlap interests and it require concerted action to protect the natural and cultural heritage." The potential joint interest in some quite large territories of landscape has only begun to be recognized, let alone studied or publicized [10].

In river valley protected landscape reserve also included complex of archaeological sites – hillfort, settlement, church, and castle ruins, grave field. Nature protection in this area without maintenance very much change this cultural landscape decreasing amount and character of historic features visible in the landscape.

**Results and Discussion**

*Analytical approach to design and management*

Sustainable land-use planning requires an in-depth analysis of the existing resources (localization, features, sensitivity to development) and an understanding of development characteristics (resources needs and collateral effects) in order to identify an use for the natural resources that will not prejudice future development [11]. Activities must be developed where the necessary natural resources exist and only when the environment is capable of absorbing the impact of the development [12]. Tourists, farm animals, motorcross-riders, and horse-riders are individual or collectively responsible for considerable erosion on archaeological sites, in areas close to conurbations or in popular areas. For example in England the problems encountered along Hadrian's Wall are especially well known [13]. In Latvia especially great impact has been noted on sites beside urban areas such as Koknese, Aizkraukle (*Kalnaziedi* hillfort) in the Daugava river valley.

On the transition zone between land and water, banks, may be attacked by currents and waves leading to loss of land. The objective is to promote an analytical approach to the design and management of banks to do justice to their multifunctional character. Extra attention is paid to the ecological functions, in particular the habitat and corridor functions. It must be stated that by using a combination of civil and nature engineering techniques it is very well possible to create bank protections that are reliable in a civil engineering sense and valuable from the landscape ecological point of view.

Archaeological sites in current landscapes offer different impacts from their surrounding. More remarkable impacts are in open-field landscapes. There the intents of the impact can be increased if the density of inhabitants in the area rises. In wooded and wetland landscapes archaeological sites are less damaged by impact of human activities directly, but the planting of trees, and the roots of trees and bushes, disturbs cultural layers on sites and change landscape character greatly after some years.

**Historic landscape**

There is need to focus on the historic dimension and character of the present-day landscape while taking account of other (non-historic) attributes of the landscape rather trying to find or reconstruct past landscapes. Later land-uses are transparent, but still

Fig. 1. Hillfort in forest landscape Kartavkalns Latvia [Source: photo from author private archive, 2011].

present. In contrast, areas with 18th century land ownership patterns palaces, park, agrarian field and settlement systems may retain prehistoric and other earlier horizons, but the more recent levels are relatively opaque. It is illustrated at Lielvarde palace and park complex with medieval castle ruins on the ancient Latvian tribes'hillfort, settlement and cemeteries where in historical parkland. We are increasingly aware that site-based conservation is more unlikely to be successful without a wider context. It is recognized that such individual features do not in any case represent the full material remains of the our past [14].

We must take into account the semi-natural, but still strongly humanly-modified, features of our environment. Just as successful country side management, as in the Gauja National Park, Abava Valley, must be based on the concept of multiuse countryside, so too must historic landscape conservation itself be multi-value. The landscape has a complicated set of inter-relations-through time (in the secession of features of different period), through space (in macro-geographical variation or in micro-distribution or patterns of features and landscape components), or through function and process (in terms of interconnecting or multi-functional use).

Because humans generally modify the landscapes in which they live, and because they attach myths, and affective value to features of territory they inhabit, the landscapes of past cultures may also qualify as cultural and environment resources.

Archaeological sites of the Stone Age are generally situated beside lakes or rivers, or on small islands surrounded by water or wet areas. Sites related to the Bronze Age are more typed in areas good for crop production and cattle farming, but close to rich hunting and fishing places.

The Iron Age sites are situated in different landscapes all around the territory of the Baltic States. Mainly, however, they are concentrated in areas of rich soil and along the main trade routes. So the river valleys have the greatest density of archaeological sites from all periods.

Some sites have a great overlap of remains from many periods. Moreover, modern roads are mainly located in the same places where the main Iron Age trade routes ran. So the great deal of archaeological sites is under threat from modern road construction, and also from visitor erosion because of easy access to the site.

Hillfort's landscape have mainly half closed visual rooms but settlements have either enveloped either half closed visual rooms. Burial sites located in enveloped and closed visual rooms. Cult places mainly are in closed visual rooms. Forests have increased both on sites and around them over the last few decades. Urban land, and areas for recreation, are at the same level on sites, but have increased in surrounding areas. Surrounding landscape type and vegetation type very much determinate visibility of archaeological sites. In the investigated districts: far views and site as focal point in area dominated in rural landscapes. Great part of sites was located in closed visual rooms around sites in rural and forest, and in urban landscapes. But very little were in open visual rooms in all landscape types.

Hillfort landscapes are mainly open with vegetation or man made elements or closed with vegetation. Settlements are mainly open with vegetation or man-made element borders. To assess archaelogical sites as environmental element preservation quality needs broad interdisciplinary information, but the amount of information available for individual regions depends largely on the extent of the detailed fieldwork that has been undertaken. Suggested that properly designed projects can enhance the environment of archaeological site and it's surrounding for a variety of fauna and flora if attention is paid to the ecological functions, in particular the habitat and corridor functions.

Visual amenity of sites in different types of landscapes of investigated districts were high or medium in urban areas, because they receive more attention in planning aspects, conservation and maintenance care. In rural areas located sites were medium and in forest landscapes were low level of visual amenity. The reason was rapid vegetation and different types of erosions on site and economical activities around sites. Of course large-scale forest cutting in some places radically change visual landscape.

**Landscape development**

There is need to encourage awareness of all the many ways in which the landscape has been changed over a very long time scale. Historical landscape assessment, by identifying and explaining what is characteristic, fundamental or important in each area, can help to guide decisions on future change so that we build on, rather than destroy, existing historic diversity in the environment.

One of the main assets of Latvia, Lithuania and Estonia is its nature [15]. To elaborate this question there is a need for a constant working dialogue between spatial planning and environment protection, in which the needs and desires of local and sub-national populations are taken into account. The evaluation can highlight such things as economic and cultural values in the landscapes. There are practically no primeval, untouched natural landscapes. The characteristic small-size mosaic pattern of landscape was historically formed. Traditional land-uses and methods of agriculture, forestry and fishing have slowly elaborated and enriched landscape elements over the centuries. During soviet times, when huge collective farms were formed in rural areas, and towns (especially the Riga agglomeration) grew rapidly, traditional landscape structures were destroyed. Industrialized society, with its characteristic standardization rapidly degraded the determining qualities of landscape. The most significant changes were in rural areas, where farmers were detached from their traditional, extended family, small farm style of living and concentrated into new villages built in new areas or directly in historical places.

Towns, like the rural areas around them, have evolved over centuries to reach their present form. They are all therefore historic to some degree, and thought many of the most important historic areas and buildings will usually designated as conservation areas or listed monuments, much of remainder also make important contribution to the character of urban historic landscape ( most of them are preserved by law) and their rural landscape. Since 1977, five areas within Latvia have been declared protected landscapes because of their aesthetic and traditional rural cultural values.

Explores the land-use both on site and around them, looking at changes between the present situation and that 50 - 70 years ago. Arable land and areas for grazing were more widespread landuse types on sites 50 - 70 years ago than now. Forests have increased both on site and around them over last few decades. Urban land, and areas for recreation, are at the same level on sites, but have increased in surrounding areas.

Landscape architects, or those concerned with the designed landscape, will naturally have a different viewpoint to those approaching landscape from an ecological viewpoint. The second is predominate in Latvia, and while integrated

Fig. 2. Archaeological site in Rebala Estonia
[Source: photo from author private archive, 2011].

multi-disciplinary working is now increasingly common these differences are still crucial.

The landscape, its presence everywhere, and its ability to mean all things to all beholders, probably makes landscapes one of the most credible ways that local, non-expert judgment can influence planning. This view of the historic landscape is now being increasingly embedded in official statements, for example in the council of Europe Recommendation on Cultural Landscape [16].

In the landscapes around archaeological sites we must take into account the semi-natural, but still strongly humanly-modified, features of our environment. Successful country side management must be based on the concept of multiuse countryside. The growing changes mean that most of the landscape that can be seen today is recognized as the product of human interference or non interference.

The growing changes mean that most of the landscape that can bee seen today is recognized as product of human interference or non interference.

**Spatial planning impact to the archaeological sites**

Landscape around sites change every day, and changes are also evident at sites themselves. Preservation of such dynamic objects is related to the great difficulties for conservation, and also to optimizing land-use in surrounding areas today. When finding the right solution and better balance for development of an area, archaeological sites must be included in spatial planning systems right at the beginning when the strategic proposals are first worked out. The issues to be addressed must include:

- the design of effective site management plans;
- the design of landscape protection areas;
- the reporting of condition for long-term monitoring of sites.

Of course every study of landscape further transforms its meaning, depositing yet another layer of cultural representations [17]. A landscape is a cultural

image, a pictorial way of representing, structuring or symbolizing surroundings. This is not to say that landscapes are immaterial. Indeed the meanings of verbal, visual and built landscapes have a complex interwoven history. Spatial planning determines land-use, location of roads, settlements. Economy policies and planning made impacts on the archaeological sites through three main activities: intensification of agriculture, construction of water reservoirs, urbanization.

**Conclusion**

Using landscape planning as a tool for environmental management during new development has allowed for the inclusion of archaeological site as part of the environmental base for sustainable development. An historical survey must be carried out to compile landscape planning documentation preparatory to the development of an area. As pointed out by Damell and others, a survey of this kind includes an inventory of prehistoric remains, especially burial sites and settlements, aerial photography of the area, a review of earlier maps, the intention being to arrive at a picture of cultural developments in the area [18].

Pictorial compositions, views and panoramas, closed and open perspectives never come value-free.as mentioned by Green it always caries implicit bundle of aesthetic assumptions and implications [19]. This inhabits possibilities for more effectively historical understanding of landscape.

Surrounding landscape type and vegetation very much determine visibility and aesthetics of archaeological sites.

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**Kopsavilkums.** Rakstā uzmanība pievērsta arheoloģisko pieminekļu aptverošās ainavas aprakstam un analīzei, jo arheoloģiskie pieminekļi ir cieši saistīti ar ainavas elementiem tā apkārtnē.

Ainava ir viens no svarīgākajiem aspektiem – pieminekļu saglabāšana un kā tos saglabāt kā vides elementus analizēts saistībā ar vizuālo robežu raksturu un apmeklētāju menedžmentu gan piemineklī gan ap to.

Zemes lietojuma plānošanā ir iespējams iekļaut arheoloģisko pieminekļu teritorijas tieši kā līdzekli ilgtspējīgai attīstībai. Vēsturiskā izpēte ir šāda plāna pamatā un tā papildina plānošanas dokumentus. Gleznainas kompozīcijas, skati un panorāmas, atvērti un ietverti skati vienmēr ir vērtība, ko sniedz arheoloģijas pieminekļi, bet aptverošās ainavastips un veģetācija ievērojami nosaka redzamību un pieminekļu estētisko uztveri.

# Road landscape development in Latvia up to the 21st century

Kristīne Vugule, Simon Bell and Ilze Stokmane *Latvia University of Agriculture*

**Abstract. With the increasing use of roads for transport in recent decades, people frequently experience road landscapes and they have become a part of the everyday life of many people. The road landscape has developed in close connection with roads and their management. Historical events, life style and the priorities of society are reflected in it.**

**Road landscape design theory was developed in Latvia during the Soviet era, but there are few recent studies on road landscapes and this field needs more attention.**

**The road landscape is influenced by changes in state policy, economics, changes in land ownership and land use. Aesthetically valuable landscapes and landscapes with high heritage value can be lost as a result of these changes. It is necessary to develop a system of road landscape evaluation, to assess the current state of existing road plantings and road landscapes at a wider scale, to define the most valuable and endangered road landscapes and to develop action plans for road landscape planning and management at a state, regional and local level.**

**Research on road landscape development in Latvia can provide new knowledge and a basis for further planning of road landscape development. The main attention is paid to roads outside cities and villages. The study was carried out through analysis of literature, data and materials from the Latvian road museum. It includes photo materials from research on Latvian landscape seen from the road carried out in 2012 and 2013.**

**Keywords: Road landscape, alleé, tree row, roadside plantings.**

## Introduction

With the increasing use of roads for transport in recent decades, people frequently experience road landscapes. Many roads form part of an important cultural environment together with their surroundings. The road landscape in general has developed in close connection with the road itself and all road landscapes have a historical context and background. During the Soviet era, from 1945 to 1991, road landscape design theory was developed and applied in Latvia. Studies into factors influencing road landscapes such as road safety [11, 5], spatial planning [17], impact of roads on the environment [6] have been carried out since 1991 to today. There are few if any recent studies focusing on road landscapes in particular and this field needs more attention.

The aim of the study presented here was to collect and summarise information about road landscape development in Latvia up to 21st century. It consists of a literature review and analyses of data and materials from the Latvian road museum and includes photographic materials of the landscape as seen from several sample Latvian roads collected in 2012 and 2013. Research into road landscape development in Latvia can build new knowledge and provide a basis for further planning of road landscape development.

## The results of the study

*The first unpaved roads*

Many Latvian roads are several centuries old. Old chronicles from the 13th century mention important roads in the territory of what is now Latvia. Today these historical routes can be traced by old trees which served as landmarks along the road, such as the Kaive oak near Tukums or the Zauska pine near Smiltene.

Important post roads crossed Livonia and Courland during the 17th century. 29 post roads are recorded on maps of the Duchy of Courland (Fig. 1). The post system was enlarged in the 18th century after the territory of Livonia and Courland was added to the Russian Empire.

Roads in the modern sense of surfaced routes capable of withstanding traffic all year round first emerged in the middle of the 19th century after the Russian Empire started to build strategic roads from St. Petersburg to Warsaw through Rezekne and Daugavpils and from Pskov to Riga, Jelgava and Taurage [1].

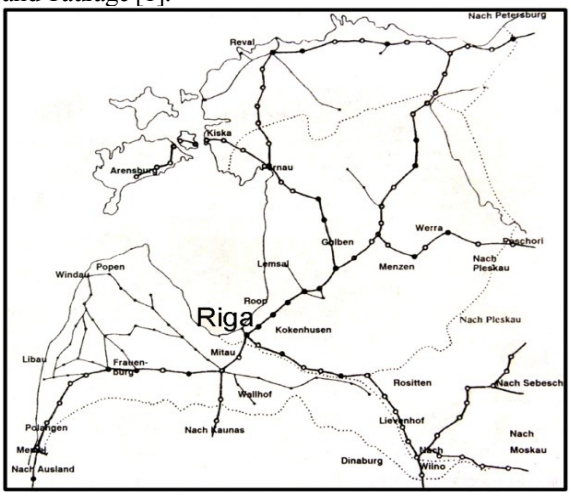


Fig. 1. Map of post routes and post stations in Courland, Livonia and Estonia in 1831 [Source: Latvian road museum].

Old engravings of the period show the beginning of roadside landscape development during the 18th century, when the first alleés or avenues were planted along the entrance roads to manor houses from the point where they left the highway [16].

The first roadside plantings were arranged to protect pedestrians and drivers from the sun, wind and heavy rain. Alleés or roadside rows of trees also performed practical functions. They prevented the roadside soil from drying out and protected the roadbed from the influence of wind and water. Usually the older alleés were planted on the road shoulders and occasionally behind the roadside ditches. Trees were planted close each together and formed crowns with dense foliage [16]. Tree rows also marked the edges of the snowbound roads in winter. Plantings to prevent snow drifting appeared in the 19th century for railway protection and later on similar plantings were located along the main roads.

*The period 1919 –1940*

The foundation of the Road and Building Board in 1919 marks the beginning of the Latvian road industry.

There were few plantings to be found along Latvian roads at the beginning of the 20th century according to the statistical data. After the First World War only 434 km roads managed by the state were planted with trees and bushes. Road landscapes were mainly influenced by the Forest Day activities in 1930s. These were started in Varakļāni in 1928 on the initiative of the district forester Pēteris Purviņš in order to plant a city boulevard [4]. Table 1 shows the number of trees planted during the Forest Days.

Many alleés along roads were planted using different trees species, like alleé along the section from Tukums to Birzule, cherries from the Lithuanian border to Ventspils, birches along the main road from Riga to Jelgava and a 60 km long cherry allée between Rudbarzi to Skrunda and Saldus [16].

At the same time the road engineer Silenieks described the experience of road landscape design in Western Europe and Germany in the journal "Road traffic" in 1930, where alleés were replaced with tree groups because of safety problems associated with the increase in driving speed [13].

Latvian road engineers learned about road planning principles in connection with the landscape from other countries. Attention was also paid to tourism and the way tourists saw the country [3]. Several tourist roads were built, see Table 2.

TABLE 1

Data about the first category state road tree planting
[Source: journal "Road and Traffic" Nr.1, 1930]

| Year | Length in km | Number of trees planted |
|---|---|---|
| Up to November 18 1918 | 434 | 64 000 |
| From November 18 1918 to spring 1935 | 66 | 13 000 |
| 1935 spring | 484 | 78 000 |
| 1936 | 446 | 60 000 |
| 1937 | 283 | 35 000 |
| Total | 1713 | 250 000 |

TABLE 2

Data about tourist roads
[Source: journal "Road and Traffic" Nr.13, 1940]

| Road section | Length, km | Cost, LVL |
|---|---|---|
| To Staburags | 3,5 | 12 000 |
| To Gaiziņkalns | 1,5 | 9 000 |
| To Dēliņkalns | 0,9 | 3 000 |
| Tauleskalns near Krāslava | 1,3 | 2 000 |
| Tietiņiezis (on the right bank of Gauja river) | 1,4 | 4 300 |
| To Zilaiskalns | 1,0 | 500 |
| To Skaņaiskalns near Mazsalaca | 3,2 | 400 |
| To Cesis sanatorium | 1,8 | 10 000 |

*The period 1945 - 1991*

First decade after the Second World War was spent in the reconstruction of destroyed roads and bridges. Many of the road plantings had also been destroyed. In parallel with reconstruction work improvements to the public transport sector were carried out. More than 14 million roubles were spent on road landscape design after the war. In the first years after the war the care of the road landscape was in the hands of road foremen or repairmen [16]. Existing allées were replanted and new decorative plantings made. Many of them are still present along the roads (Fig. 2).

In 1948 Forest Days were re-established. The main organizer was the Council of Ministers of the Latvian SSR. The name was changed to "Forest and Garden Days", but the action was prohibited in 1968, being considered to be a bourgeois remnant [4].

There were different views about road landscape development until road landscape planning theory was developed. The work was planned in several main directions:

- the aesthetic formation of road landscape and the placing of new roads in the landscape;
- improvements to traffic safety in such a way that different road plantings did not disturb visibility

and did not cause accidents, prevented road snowdrifts, protected agricultural land from car exhaust fumes and reduced traffic noise;
- carrying out nature protection measures by solving surface water drainage problems, preventing soil erosion and pollution;
- building bus stops and car parking and resting places [1].
- roads plantings were classified according to their functions and tasks:
- engineering and operational tasks (strengthening of slopes with vegetation cover, protection against snow);
- increasing safety (road visual perception reinforcement, preventing drivers from being dazzled by the sun;
- road aesthetics (screening of unsightly views);
- biological, agricultural and forestry tasks (improvement of microclimate, reducing the risk of forest fire) [14].

Road landscape design principles were summarised for the first time in Soviet literature by Aleksejev, Babkov, and Cokolskij in 1947. The organization of the Latvian republic "Latavtoprojekt" started to design roads in connection with landscape in 1959. Cooperation between engineers and architects helped in spreading landscape ideas among road designers. However, the introduction of landscape design principles into road planning was delayed because of missing instruction materials and the prevailing opinion that landscaping was too expensive and over-beautified the road. Landscape principles were reflected in Soviet normative literature for the first time in 1950 mentioning that "The road has to blend with relief forms. The road axis should be perceived as a line the placement of which depends on surrounding landscape". These design regulations were included in SNIP II-D.5-72 „Roads: Design regulations" as recommendations [2].

Debates for and against roadside trees and avenues, their impact on road reconstruction and possible actions continued in the 1970s. One of the recommended solutions was to design a new road leaving the original tree rows to one side of the new road, as was widely practiced in the Democratic Republic of Germany.

Techniques for the replanting of large trees were successfully used in road reconstruction (Fig. 3). Trees from previous railway protection plantings were often used. They were dug up in late autumn shortly before the frost and replanted when the soil around the roots was frozen. Trees with roots up to 3m diameter and those which grew three or four together in a clump were transplanted this way. This technique was used in the reconstruction of the road between Riga and Bauska where planting of tree groups was planned.

Fig. 2. Decorative apple trees along the road Jelgava – Eleja [Source: photo by author, 2012].

Fig. 3. Tree planting in the road section Pļaviņas – Madona – Gulbene, 1960. Roadside with spruce hedge in backround. Foreman Madona CER 10 Kārlis Āboliņš and Osvalds Tauriņš [Source: Latvian road museum].

Large trees were replanted from alleés (Fig. 4) using a variety of techniques, for example holding tree rootballs together in covered boxes or replanting them when the root balls were still frozen. In cases when it was necessary to widen the road, trenches were made and trees were moved away from the road by 3 to 5 metres. It was necessary to get permission from the Ministry of Forestry for tree cutting or replanting [14].

Fig. 4. Digging out trees from alleés, 1970 [Source: Latvian road museum].

Fig. 5. Bus shelter type "Б-1", 1960ts, architect V. Reinfelde and engineer Gunārs Binde from the institue "Ceļuprojekts" are sitting on the bench [Source: Latvian road museum].

Fig. 6. Bus shelter near Baltezers on the road Riga - Tallin, built in the beginning of 60th, photo of 70th [Source: Latvian road museum].

In the 1960- and 1970s special attention was paid to the appearance of the road and road user comfort. Work on the refurbishment of bus stops was planned and carried out by the road administration. It was possible to choose from a variety of centrally offered solutions that minimized individuality of road design features.

The design institute „Ceļuprojekts" developed different individual projects for rest areas, and bus shelters (Fig. 5 and 6).

One can see the scope and course of development of these activities from an overview of results achieved in the 70ts (Table 3).

In several road maintenance and construction departments local tree and flower nurseries were set up in order to implement the road landscape improvements in the Soviet era [16].

After evaluation of experiences from other countries, Latvian specialists reached the conclusion that small rest areas along main roads and tourist routes were necessary every 10–30 kilometres. Rest areas were classified as:

- places with a view point and wide panorama;
- places with facilities and attractive landscape;
- parking places – rest areas with raised areas for car inspection [5].

In addition the following techniques were also used in allée reconstruction:

- trees endangering road safety close to the road and those on the inner side of road curves were felled;
- new groups of mixed trees were planted at the beginning and the end of the allée;
- breaks in allées were made in winding and hilly sections of roads;

An important aspect of road plantings were the hedges designed to protect the road from snow drifting. Spruce trees were mainly used. These plantings were extensive in open areas and in places were the road went into cuttings (where snow drifts could easily block the road). The first plantings were placed crosswise in 2 rows spaced 1 to 1,5 m apart, 17 to 20 m from the road and they were cut at 2–3 m in height. Such hedges could last for 50 years [16]. Technical regulations for snow protection plantings were developed which envisaged several types of hedges, mixing rows of different trees with various types of bushes [4].

TABLE 3

Data about the refurbishment work for road users [Source: Andrejsons V. Laikmeti un ceļi. Latvijas autoceļu nozare vēsturiskā skatījumā. Rīga: AGB, 2004]

| Built | Year 1971, number of elements | Year 1979, number of elements |
|---|---|---|
| Car parking places | 46 | 221 |
| Rest areas | 20 | 126 |
| Bus shelters | 826 | 1 260 |
| Enlargements of bus stops | 1 884 | 4 270 |
| Benches at bus stops | 5 967 | 9 060 |

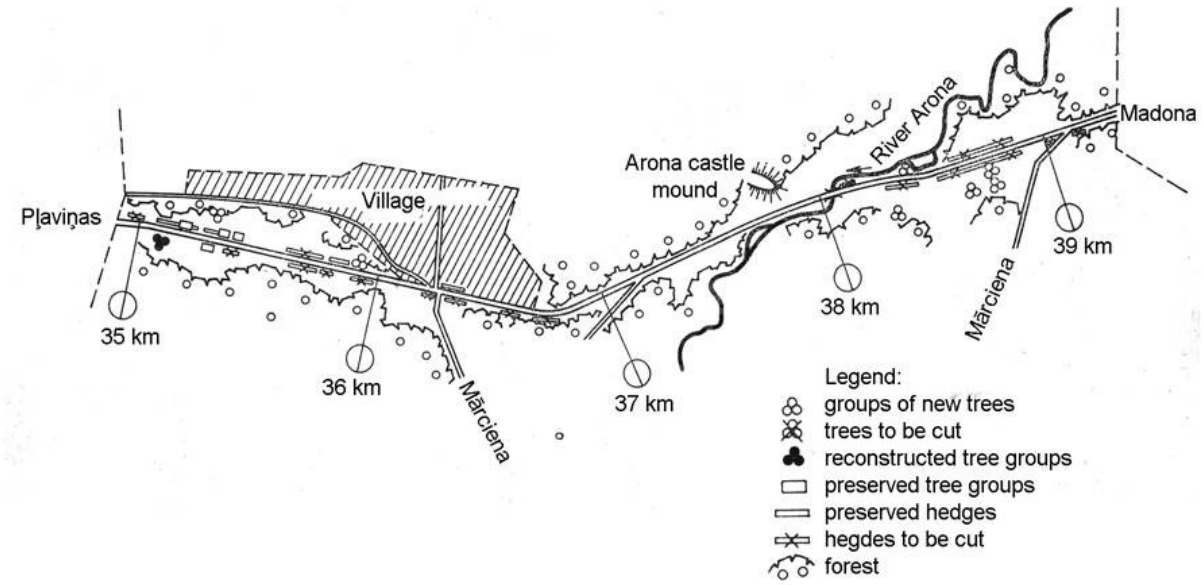


Fig. 7. The reconstruction project for the Arona river valley landscape in a section of road Pļaviņas – Madona – Gulbene [11].

Complex road and landscape design projects were carried out during road reconstruction. The first experimental project was for the 60 km long road between Pļaviņas and Madona (Fig. 7). Several other projects in the sections of the main roads between Rīga and Jūrmala and the Rīga- Pleskava road close to Rīga, were carried out after the experience gained elsewhere.

The main tasks were:

- to remove bushes that restricted landscape visibility, taking care of trees of great value;
- planting new decorative plants in farmyards
- to maintain existing avenues, to cut out dead wood and plant new trees of the same species
- to rehabilitate former quarries as agriculture or forest;
- to demolish derelict buildings, to cut down orchards which had lost their practical and decorative value,
- to improve the visual flow of the road by planting groups of trees or shrubs
- to tidy up the bus stops, make decorative plantings , erect bus shelters ;
- to build rest areas with tables and benches, fire places, toilets etc.;
- to carry out roadside forest maintenance cutting down dead wood;
- to maintain the elevations of buildings close to the road.

*The period from 1991 to the present*

The Ministry of Transport currently plans, organizes and co-ordinates road development policies nowadays. The state joint stock company „Latvijas Valsts ceļi" administers the road network. Roads are managed by their owners – the State, municipalities or other owners. Design, construction and maintenance work is carried out by private contractors.

The road landscape is influenced by road law, which regulates road use, administration, protection and development [19]; laws concerning protection zones [18] and rules about the regular maintenance of state and municipality roads [21]. These laws regulate actions along roads, limiting new road planting and tree cutting over a 100 m wide zone from the road centre line. The wider-scale road landscape can be influenced by the territorial plan.

The economic situation of the state and finances allotted to the road sector have influenced the road landscape since 1991. One of the main priorities of the road industry is road maintenance, while the technical conditions of many roads are poor [8].

Checking of the technical conditions of the road and monitoring elements along the roadside is carried out once a year, roadside grass is regularly cut, but trees are maintained only in the cases when they interfere with electricity lines close to the road or when trees fall and disturb the traffic (see Table 4). There are very few new plantings.

Changes in the structure of land ownership resulting from land reform of 1990 have also affected road landscape development. Many rest areas have been removed and not renewed during road reconstruction due to property rights. Uncoordinated activities by land owners, conflicts and lack of action is reflected in the road landscape. Particularly noticeable is the situation on minor roads, where roadside ditches are often overgrown with shrubs decreasing landscape visibility and roadside aesthetic quality [1].

TABLE 4

Data about the refurbishment work for road users
[Source: State joint stock company "Latvijas valsts ceļi"; unpublished materials]

| Type of work - cutting of bushes in ditches, on slopes and between the road lanes: | Unit | Amount |
|---|---|---|
| cutting of bushes with hand tools | ha | 98 |
| bush cutting with tractor mounted cutter | km | 20 839 |
| bush cutting with mechanical hand held cutter | ha | 201 |
| mechanized bush cutting and shredding | ha | 7 |
| Grass cutting: | | |
| grass cutting by hand | m2 | 284 193 |
| mechanized grass cutting | km | 59 763 |
| mechanized grass cutting along the roads with posts | km | 15 899 |
| mechanized grass cutting between the road lanes | ha | 774 |
| cutting of Siberian hogweed (Heracleum sibiricum) | ha | 284 |
| cutting separate Heracleum sibiricum plants | pieces | 12 |
| Maintenance of roadside plantings: | | |
| cutting of hedges | m2 | 24 635 |
| cutting out branches using hand tools | tree | 1 734 |
| removal of individual trees | tree | 8 571 |
| removing or chipping stumps | stump | 764 |

Road landscape since 1991 has been influenced by road reconstruction work. Traffic safety measures have played an increasingly mportant role in road reconstruction since 2000, after the adoption of the First Road Traffic Safety Programme 2000-2006. For example single level road junctions have been changed by adding flyovers and safety barriers are placed along roads with high traffic volumes [9]. Taking into account regulation of spatial planning set by Latvian State Standard [20], means that many small winding roads are straightened for safety reasons and better visibility.

Extensive public discussions take place where old allées are under threat by road reconstruction. Allées are considered to be dangerous by road engineers due to road safety reasons. Society, especially local inhabitants are often against fellingold trees. 60 old allées are protected by law [22], but there are many which are not protected. In cases where it is possible to do so, old allées are left on one side of the road, as along the road section between Rīga and Salacgrīva (Fig. 8).

Measures to reduce noise influence road landscapes close to populated areas (Fig. 9). Strategic noise maps for sections of state roads with traffic intensity over 3 million vehicles per year have been developed. Local municipalities are responsible for preparing action plans for noise reduction and more noise barriers may appear in the landscape in future.

Fig. 8. Road Rīga- Salacgrīva, where new lane for one way traffic was built during reconstruction in 80ties and widened during the reconstruction work 2005–2007, moving main traffic away from the allée [Source: photo by author, 2012].

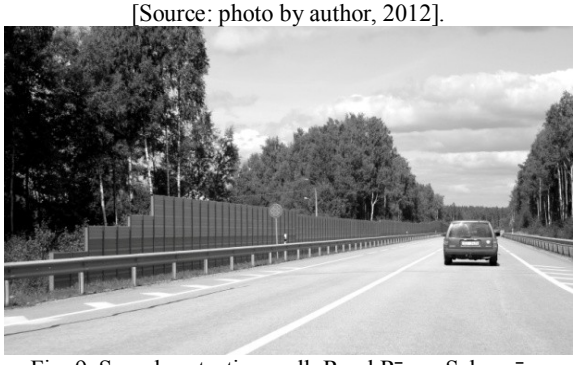

Fig. 9. Sound protection wall, Road Rīga - Salacgrīva [Source: photo by author, 2013].

Future development of the transport system is influenced by various planning documents at different levels and described in the Basic Statements of Transport Development 2014–2020 [10]. Large transport corridors influence landscape structure even at a national scale. Landscape quality is an important tourism resource and its preservation should be supported according to the Sustainable Development Strategy of Latvia 2030 [15].

**Conclusions**

Road landscape design theory was developed during the Soviet era, but it is not applied in practice at the present time for a variety of reasons, one of which is the limited financial situation of the state. Road design projects from the Soviet era have the potential for further research into road landscape development. Roads have developed over the centuries and the oldest ones should be regarded as part of the cultural heritage.

The road landscape has been influenced by changes in state policy, economics, changes in land ownership and land use type. Aesthetically valuable landscapes and landscapes with high heritage value can be lost due to these changes. It is necessary draw up a system of road landscape evaluation, to assess the current state of existing road plantings and road landscapes at a wider scale, to define the most valuable and at risk road landscapes and to develop action plans for road landscape planning and management at state, regional and local levels.

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**Kopsavilkums.** Pēdējā laikā, pieaugot ceļu izmantošanas intensitātei transporta vajadzībām, cilvēki bieži vēro ceļa ainavu, un daudziem tā kļūst par ikdienas dzīves sastāvdaļu. Ceļu ainava ir attīstījusies ciešā saistībā ar ceļiem un to apsaimniekošanu, kurā atspoguļojas vēstures notikumi, sabiedrības dzīvesveids un prioritātes.

Padomju laikā tika izstrādāta ceļa ainavas projektēšanas teorija, bet mūsdienās ir maz pētījumu šajā jomā un ceļa ainavas attīstībai nepieciešams pievērst lielāku uzmanību.

Ceļa ainavu ietekmē pārmaiņas valsts politikā, ekonomikā, izmaiņas zemes īpašumu struktūrā un izmantošanas veidā. Līdz ar to, mēs varam zaudēt kultūrvēsturiskas un estētiski vērtīgas ainavas. Latvijā ir nepieciešams attīstīt ceļa ainavas novērtēšanas sistēmu, izvērtēt ceļu apstādījumu un ainavas pašreizējo stāvokli, noteikt vērtīgākās un apdraudētās ceļa ainavas un izstrādāt rīcības plānu ceļa ainavas plānošanai un apsaimniekošanai valsts, reģionālajā un vietējā līmenī.

Latvijas ceļa ainavas attīstības izpēte var sniegt jaunas zināšanas un pamatu turpmākai ceļa ainavas attīstības plānošanai. Pētījuma mērķis bija apkopot informāciju par ceļu ainavas un tās pārvaldības attīstību Latvijā līdz 21. gadsimtam. Pētījums tika veikts analizējot un apkopojot informāciju no literatūras avotiem un Latvijas ceļu muzeja materiāliem. Tajā iekļauti foto materiāli no iepriekš veiktas izpētes par ceļa ainavām 2012. un 2013. gadā.

# Harmony of Rehabilitation Garden, Architecture and Interiors in the Brukna Manor Complex after the Functional Transformation in the 21st Century

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**Abstract. The Brukna Manor complex, built in Classicism in the 18th century that was almost destroyed and used for keeping stock in the Soviet times, but renewed and functionally transformed in the 21st century for the needs of a rehabilitation centre's needs, has been analyzed in the study. In the 21st century, more and more attention is being paid to the result of the mutual influence between human beings and the nature. Nowadays rehabilitation with the use of a garden is being used near hospitals, care pensions, churches, kindergartens, schools, and prisons. Gardens, developed by specialists, help people to dispose of mental and physical suffering by ensuring expression of creative energy and activity that often has not been available to these people before, or they have known little about it. Basic principles of rehabilitation and therapeutic gardens hide not only in the esthetically enjoyable natural landscapes, but also in things that are material and to be felt by soul. The mutual harmony of rehabilitation garden, architecture and interior, developed there, allows people to clear their thoughts, communicate with each other, and participate in creation of their lives. The Brukna Manor complex and the cultural landscape makes a part of Latvian national identity that shapes inheritance of mental values from generation to generation through link to the past.**

**Keywords: architecture, interior, rehabilitation gardens and park, the Brukna Manor.**

## Introduction

The environment we live in, grow up in and spend our free time in is the one that improves our personality, gives an impression of relationship, mental and tangible values. Professor of psychiatry Kulberg in its works reflects social instability, on changes in the world in general, on termination of rituals and norms that often lead to use of harmful substances [14]. In this way the conflict of human's inner and outer feelings reflects, as a result of which human find escape from the pressure and concern in various addictions. Rush and the lack of time in the 21st century have left a definite influence also on the inhabitants of Latvia. People are tired and full of stress. Very often there is no time to listen to yourself, no talking about to listen to the other person. Rehabilitation of gardens functions in various levels that makes it as a very powerful and flexible means for improvement of health and life's quality. But it is still unexplored in depth and aimed at reinforced studying and use, at high quality, harmonious life for humans worldwide.

The World Health Organization defines heath as complete physical, mental and social well-being. It predicts increase of mental health problems globally. Probably depression will serve as the second highest cause for bad health up to 2020. But in the West, excessive adiposity, heart and blood vessel diseases, and cancer will be of the factors, affecting health [17, 37]. Recently the governments, communities and health care specialists in may places worldwide have paid more attention in order to act more actively, prevent and cure mental diseases, often causing physical illness. Harmony of the environment, architecture and interior is a body of positive attributes that may improve mental health for definite persons or society.

In the 21st century, more and more attention is being paid to the result of the mutual influence between human beings and the nature. Nowadays rehabilitation with the use of a garden is being used near hospitals, care pensions, churches, kindergartens, schools, and prisons. Gardens, developed by specialists, help people to dispose of mental and physical suffering by ensuring expression of creative energy and activity that often has not been available to these people before, or they have known little about it.

Such rehabilitation in Latvia is being provided in Bauska District, Dāviņu Parish, the Brukna Manor. Basic principles of rehabilitation and therapeutic gardens hide not only in the esthetically enjoyable natural landscapes, but also in things that are material and to be felt by soul. The mutual harmony of rehabilitation garden, architecture and interior, developed there, allow people to clear their thoughts, communicate with each other, and participate in creation of their lives.

*Aim of the paper:* to summarize aspects of rehabilitation garden, architecture and interior's (indoor/outdoor) mutual harmony in the Brukna Manor complex that as a result of functional transformation from the 18th century Baltic German

family's dwelling house was transformed in the 21st century rehabilitation centre. To define priority factors for outdoor/indoor harmony of objects of such type in Latvia in order to get closer to general principles in outdoor/indoor harmony with inductive study method. To create description of the Brukna Manor garden, park and interior's description for the current situation after the transformation of the 21st century. *Tasks:*

- to study and define stylistic features of the Brukna Manor architecture by comparing it in history and nowadays; to define factors of architectural harmony;
- to study and define stylistic features of the Brukna Manor interior by comparing it in history and nowadays; to define factors of interior harmony;
- to create analysis of the current scenic park complex, based on historical materials of the Brukna Manor garden, by defining the bodies of philosophical, architectural, esthetic aspects and ecological aspects of landscape that appear after the 21st century transformation;
- to define factors and priorities of manor's garden and park, building architecture, and its interiors mutual harmony.

**Materials and Methods**

For the study the Brukna Manor complex, built in Classicism in the 18th century, that was almost destroyed and used for stock keeping in the Soviet times, but in the 21st century – renewed and functionally transformed for the needs of a rehabilitation centre was chosen. Since 1995 *Kalna svētību kopiena*, registered as a non-governmental organization in 2001, has been working in the historical manor complex. It was set up and is run by the dean of Roman Catholic church Andrejs Mediņš. Already for 17 years community's volunteers arrive in Brukna from various Latvian cities, seeking for shelter and hope to begin a life of full value again, who wish to get released from narcotics, alcohol and gambling or just settle their lives [8]. In the framework of rehabilitation process reconstruction works in manor building and territory improvement works have taken place, as well as construction of new buildings is being continued.

As the main method for studying of architecture and interiors was the comparative method that expresses as informative, archivary and photo analysis. While inspecting the object in nature, photo images of architecture and interior were made with digital camera Sony X Peria C6603. Stylistic features of building architecture and interior (composition, coloristics, proportions – massiveness, filigreeing, glazing fields, level of emotionality), harmony in mutual interaction of garden, architecture and interior were analyzed.

In study of the Brukna Manor complex's garden and park landscape, inventarization has been used, taking into consideration the preserved historical materials. The landscape of manor's garden and the park's landscape was studied by field study method – by studying the current situation in the summer and autumn in order to define more precisely perspectives of sights and changes of landscape, colority, emotions and general harmony in various seasons. While inspecting the object in nature, photo fixations of the garden and park were made with digital camera Fujifilm FinePix S7000.

The community serves also as the cultural centre *The Brukna Manor* that in the territory of the manor organizes concerts, summer camps for Christian children and teenagers, workshops for painters and ceramists, music workshops, conferences, Bible classes; every year Renaissance music and garden festival takes place.

*Kalna svētību kopiena* is a place for mental and physical rehabilitation for people with addictions. The community's structure comes from the model of drug addicts' community *Senacolo* that is located in Međugorje, Bosnia-Herzegovina, mental supporter being Mother Teresa of Calcutta. Her photo decorates the wall of the manor's main entrance. Through prayers for God's blessing *Kalna svētību kopiena* helps people who have lost hope and by failing to find the reason of living, have fallen into drug addiction, alcohol or other addictions. Nature, season change, rhythm of liturgical time, prayers, field works, care of reconstruction and maintaining of the Brukna Manor give an opportunity to people clear themselves both physically and mentally, and come back to normal life [27, 2]. Jesus is in the centre of the community's life. Problems in human souls are being cured through prayers. The length of rehabilitation and social adaptation in the Brukna Manor is individual – from 1 to 3 years. The main problem of these people do not cover narcotics, alcohol, gambling or other addictions, but the lack of willingness to live and lack of aim for life that have to be found through mental harmony and work therapy.

**Results and Discussion**

*Features of the Brukna Manor complex architecture and interior after the 21st century transformation*

With the spread of enlightenment ideas (in the 2nd part of the 18th century and the beginning of the 19th century), Classicism became the leading style in the whole Europe. In the territory of Latvia, Classicism appeared in the third quarter of the 18th century due to the influence of intellectuals of Baltic Germans. It reflected principles of town planning, construction of dwelling houses, public houses and household buildings. Also in countryside, in big manor centers at that time

outstanding ensembles were created that successfully became part of the surrounding landscape. As an example Eleja Manor, built by the project of the architect from St. Petersburg Dz. Kvarengi has to be mentioned here. Laconic, strict and monumental constructions are characteristic to the building. Sides of the facade are developed in majestic restraint, only central part of the building is decorated by portico of six columns with fronton. This architecture gained a significant appreciation and inspired many followers. For example, on the basis of aforementioned project J. Berlics had made stylistically close ensembles in Kazdanga and Mežotne. Also in other places in Latvia, manor complexes in Classicism, balanced in forms, perfectly proportioned manor complexes the only decorative accent of which was symmetrically placed portico of various columns in facade of the building.

Classicism reflected itself also in construction of household buildings; those were barns of manors, stables, barns for keeping corn, and other buildings [5]. The Brukna Manor Castle is located in Bauska District, Dāviņu Parish, in the shore of the River Iecava. In the opposite of the manor, there is the Brukna castle mound. Its building has taken place since the 3rd quarter of the 18th century, rebuilt in the 2nd quarter of the 19th century; it was owned by von Korfu family. Initially the castle was built in Classicism. That is one-floor building with two-floor central scope of the building to which in both facades flatten flat porticoes with Ionic order pilasters and two side blocks that project along the yard, by creating double T-type plan in the park side.

A part of the wooden decoration, some shutters of window apertures, and brass pivots with acorn woodcut are preserved until nowadays. Wooden winding stairs, leading to the second floor of the manor, are authentic. From 1927 to 1931 repair works took place in the manor house, but already in 1935 rebuilding was being discussed in order to adapt it for the needs of a school and pupils. From 1919 until 1966 primary school was located in the manor house, in the castle a primary school of 4 forms with five teachers, and the government building were established there [24].

After closing of the school, rebuilding works of the manor house relate to construction of a number of door openings, enclosed with walls, and partition walls in order to make separate apartments in the building. Near the big hall of the castle, stage and room for cinema operator were created [27]. In the manor complex, manor house, two barns and cattle-shed have preserved until nowadays. Buildings have been set up around the parade yard, from one side covered by the barn, but in the opposite – by the cattle-shed.

The distance between Brukna and Bauska is 25 km. When driving 15 km from Bauska on the dusty Aizkraukle road (P87) that still awaits for the asphalt cover, the turn to left has to be taken in order to arrive in the Brukna Manor [3]. A surprise awaits the drivers today on side of countryside road, traditionally distant and low-populated: perfectly renovated manor in Classicism with set garden (Fig. 1). To the building of the manor, simple and clear stereometric scope of the building, closely one on another and one behind another set elements, peace, definiteness and nobility are characteristic that are highlighted by order system based on four white Ionic pilasters (flat porticoes) on background of main facades, colored in yellow. In the plannings of the building dominance of right angles and lines prevail by giving out laws of eternal harmony and beauty the roots of which may be found already in the Ancient world [11].

After the collapse of the Soviet occupation regime, the Brukna Manor was in miserable condition. In the dwelling house of baron von Korfu, as if stock was being kept. In the place of the current kitchen, there was a countryside shop. But by looking through the roof of the smashed up inner rooms, it was possible to count stars (from personal communication with Penders, A. 13.02.2014. – community's participant for many years). The dean Andrejs Mediņš, when serving in Talsi, faced a necessity to create a rehabilitation centre. An opportunity appeared to privatize the Brukna Manor, which at that time was uncared-for. The geographic location of the Manor also turned out to be suitable – proper distance from centers of social life, motorways. The silence and peace, prevailing around, gently sloping mounds, overgrown with woods that are supplemented by the calm flow of the River Iecava, create picturesque environment that architecture of the Manor and idea of the creation of a rehabilitation centre perfectly fits in.

Currently the building of the Manor has been renovated in its initial look that due to the monumental features of the Classicism form harmonic interaction with the surrounding natural landscape (Fig. 1; 2), garden in Renaissance style. The compositional harmony has been achieved by using axis of central symmetry that begins from the highway, crosses front yard, by etching the central fountain in the middle of the field. By breaking through the planning of the building, the central axis enters into the garden by organizing its structure around it. Various sculptures and the central fountain of the garden (Fig. 2) have been set in accordance to the central axis that ends at pedestal of monumental sculpture.

Fig.1. View on the Brukna manor complex from the drive
[Source: photo by author Aija Grietēna personal archive, 2014].

Fig. 2. View on the brukna manor from the garden
[Source: photo by author Aija Grietēna personal archive, 2014].

The elegant architectural proportions of Classicism, historically approbated, softly resound to the garden by creating mutual harmony and transition. The yellow coloring of the facade, enriched with white architectonic details in the facades of the building (window frames of elongated glazing bars, light grey socle, Ionic pilasters, cornices, etc.), witnesses about Classicism in everything, including the coloristic aspect. The nobility is reflected by the entrance motives – four angel sculptures and the edge of stairs, decorated with four classic flower vases in the main facade of the building from the road leading to the Manor (Fig. 1), two lion sculptures and the edge of stairs, decorated with flower vases from the garden (Fig. 2) and the edge of stairs, decorated with classic flower vases in the side facade that currently serves as the main entrance in everyday life.

The above-mentioned central symmetry axis of the complex is crossed by the other axis, defined by the planning of the Manor's building in longitudinal direction. The initial decoration of the interior has been lost. Today the linear planning is characteristic to the interior, creating halls of various size, linked consecutively with double doors. To this style, spatial depth of visual perspective is characteristic due to the etched location of inner donors between the halls.

The Manor's interior has a unique, inimitable aura, as with the history merging with the contemporary art an environment, suitable for living, is achieved without the smell of naphthalene and formal atmosphere of a museum.

For the decoration of premises, features characteristic to Classicism have been used: profiled cornices and decoration on the ceiling of gyps, framing the paintings on the ceiling and walls (Fig. 3). These works have been made in the 21st century, and the wreaths of leaves, flowers, blossoms, ribbons and clouds, reflected in them, are painted in more realistic manner, not so much in stylistic that is characteristic to Classicism [16]. Premises have been furnished mainly with furniture of Ancient Classicism or of style, derived from it, and household objects: chandeliers, candlesticks, etc. Also the decoration for the fireplace, made in nowadays, is corresponding to the style. The premises and their walls are decorated with paintings of various centuries and sculptures.

According to the historical drawings of the library that were found, nowadays the Manor's library furnishings were made of massive wood (Fig. 3), although with slight changes – resigning from the back of the double bookcase system that at some point of time most probably was used for keeping valuables and securities. The library furnishings that occupy all the room, including the only window in it, has been made in strict architectonic manner, characteristic to Classicism. The furnishings have rectangular shape with order system that imitates shape of a classic temple [16]. The sash-door of the bookcases are decorated by round columns the traditional place of pedestals and chapiters of which is marked with turned balls of massive wood. They support cornice of massive wood that is impressively profiled and round ends of the roof, decorated with medallions. The ceiling has been painted in pastel tones, reflecting cloudy sky with silhouettes of flying swallows. There are no authentic evidence of interiors of other premises; nowadays they have been furnished similarly to the analogues of that time.

For example, the dining-room is decorated with wallpaper, printed with green, stylish motives of flowers and plants, and paintings, reflecting the Holy way of the Cross of Jesus Christ. Above the long dining-table, on the ceiling, two big chandeliers that perfectly supplement the mantelpiece of massive wood, decorated with Ionic chapitels and made nowadays, show off (Fig. 4).

The main accent in the dining-hall that is connected with festive hall is the painted ceiling that are enclosed, as a frame for the painting, white, richly profiled ceiling cornice with ornaments of golden color. The ceiling painted with fine garlands of flowers, leaves and ribbons on background of light blue sky and white clouds correspond to the features of Classicism. Fine proportions of architectonic forms add solemnity and harmony to the hall. Here the row of oblong windows with decorative ledges along one wall of the hall that opens up a view to Renaissance garden in the frame of curtains by creating continued festival outdoors has to be especially mentioned (Fig. 5). Undoubtedly harmonic dialogue between the interior and the garden may be felt.

Whereas an opposite, meditative character is expressed by the chapel, set in the basement, the lightened up and painted ceiling vault, and the walls of which create the feeling of light and peace, helping to find dialogue with God.

The walls of the chapel's anteroom have been painted, the painting's decorative edges in flowing manner pass over to painting on the ceiling due to the rounded connection between walls and ceiling. The volunteers of the Manor with the help of piece of glass renewed the wooden stairs that lead down to the chapel in the vaults. The entrance in the chapel is decorated by contemporary sculpture of Jesus (Fig. 6). Stairs lead down to the chapel and the entrance to it is protected by heads of angels of plaster, attached to the ceiling in the door openings (Fig. 7). In the whole interior of this building, the presence of angels may be felt that materializes in various forms of sculptures and paintings. The Egyptian hall with topically corresponding

painting on the ceiling and wall decoration that serves for classes of art therapy in the framework of the rehabilitation has to be especially mentioned.

By studying the stylistic features of the Brukna Manor's interior and comparing it to the history, it may be concluded that the interior, just as the scope of the building corresponds to the Classicism and forms stylistic harmony. The coloristic, emotional and functional variety of the premises, rich saturation in details is low-keyed in principles of the Classicism. This method has formed an environment that quite successfully join the majestic character of the Manor's premises with cosy comfort. Environment as a living organism, located in continuous changes, has been created for living, not for the sterile needs of a museum. Currently the inner rooms are in the formation process and witness about the search for harmony.

Currently the construction of The Brukna St. Apostle's chapel is being continued due to the donation, collected during the charity concerts [28]. The chapel is planned similar to the Karsa Cathedral, built during the time of Bgratid dynasty under the aegis of King Aba approximately from 929 to 940. According to Armenian historian Stepfan Asogik 'the cathedral is built of stone blocks, covered with steel planes. On the upper part, there was a round dome, similar to sky vault'. Its name Svēto apustuļu was registered in the 19th century and testifies that the cathedral was decorated by 12 apostle figures on the cathedral's cylindrical part. The chapel that is currently being built in Brukna is from claydite blocks, for the decoration dolomite stone blocks, forged on the spot are being used, but in the future it is planned to place figures of apostles on ground level the total number of which would reach 14, to commemorate those apsotles who joined Jesus in the misison that started later. The works are being done by the inhabitants of the community Kalna svētību kopiena who are the participants of the rehabilitation program for fighting addictions under supervision of an experienced master. In the surroundings of the Manor building, pavement works are taking place, in the southern facade of the building, a circle with a fountain has been paved, benches and arches are being placed in the garden.

A special attention is being paid to the creation of an attractive landscape; it is a part of the Brukna Manor's 'long-term development strategy, being implemented by the community *Kalna svētību kopiena* by attracting financing of European Union Structural Funds', informs the project manager Terezija Lasmane. In 2012, society implemented the next in turn project of the European Agricultural Fund for Rural Development (EAFRD) for the improvement and availability measures of the Brukna Manor. The assigned financing in amount of more than 8'000 lats was spent for purchase of 50 garden benches, 8 arches, a water pump that was placed in the Renaissance garden.

Fig. 3. Interior of the Brukna manor library [Source: photo by author Aija Grietēna personal archive, 2014].

Fig. 4. Fragment of the mantelpiece of the Brukna Manor dining-hall [Source: photo by author Aija Grietēna personal archive, 13.04.2014].

Fig. 5. View from the interior to the graden [Source: photo by author Aija Grietēna personal archive, 2014].

Fig. 6. Anteroom of the chapel [Source: photo by author Aija Grietēna personal archive, 2014].

Fig. 7. Decoration over the entrance in the chapel [Source: photo by author Aija Grietēna personal archive, 2014].

This year a fountain was placed in the garden, shed for soup pot and bell stand were built that was beyond the framework of the project. The EAFRD projects, programs of the Environmental Protection Fund and Hipotēku banka have been implemented. A new financing has been assigned for creation of a new, spacious potter workshop with skylights and heat-insulated walls. The Manor's household building will be renewed by rebuilding it as dwelling of the community's inhabitants. It will provide with an opportunity to welcome in more short-term guests to the Manor that simply wish to recover from the everyday stress and rush, to revive mentally. Volunteers regularly come to help in the community's work, donate funds, materials, agricultural produce, says Terezija Lasmane [29]. In total, 5 development projects have been implemented in the Manor, and this year the 6th will be implemented.

In January, 2012 10 year anniversary was celebrated since the community *Kalna svētību kopiena* functions in the Brukna Manor (personal communication with Penders, A. 13.02.2014 – participant of the community for many years). Every summer, summer camps for Catholic teenagers and children, pilgrimages, recollections, concerts and Bible lessons take place here [19]. In the Brukna Manor already traditionally annual Renaissance festival, concerts, theatres are being organized participants of which are the participants of the community itself, artists, popular in Latvia and in the world. The dean Mediņš says – 'We are unique in that we do not have neither medicine, nor psychotherapy, only the Rule of Saint Benedict who established the Order of Saint Benedict that is based on two principles – prayers and work. It is a lifestyle that helps to release oneself from everything that human destroys or wounds oneself with. But the most important is communication, as family forms the basis for everything, which is why we all pray together in the community, work together, relax together. These people who look for help have faced the lack of family. An incomplete family, a wounded family or family without love is in the basis of a misfortune [8]. The participants of the rehabilitation program do not use media, cell phones in order to seek for God in silence – all pray to Jesus Christ, independently of the confession. The agenda is strict and the day begins at 6 a. m., and it follows like this – at 7:30 – morning prayer, at 8:00 – breakfast which is followed by work, at 12:00 – tea pause, at 14:00 – lunch, afternoon work, at 19:00 – night prayer, at 20:00 – supper, which is followed by cleaning of premises. Everyone who seeks for help is being helped. No one is questioned before the broken-hearted person begins the discussion himself. A person is not legally bound in the community, he/she is free to come and leave again when feels ready to continue its way independently.

## Features of the Brukna Manor's garden and park complex after the transformation of the 21st century

*Historical review on arts of gardens for mental rehabilitation*

The founder of l'Arche community Jean Vanier has worked with defected people throughout the world. In his works, he describes the inner essence of a human that hides the mix of light and dark, confidence and fear, love and hatred. There a hidden world of darkness and sadness in every human being that is ready to appear with greater or less great power. As a Christian adviser, he highlights the idea that a human heart is fragile and vulnerable. The contemporary world makes a person to forget about his inner world, but it exists and does not fade away with all wounds of life. It dominates over and influences substantially the inner and outer harmony of a person during the lifetime, by not acknowledging it himself [31]. While not revealing their fears, pain and emotional experiences, people shrink into theirselves, and they try to fulfill the inner emptiness with addictions. But independently from the outer shallowness of the world, the garden rehabilitation, harmonic architecture and interior has the ability to awake hope and willingness to understand who I am, what is MY reason to live in people.

Rehabilitation is based on one of the basic human needs – mental and physical harmony – short-term relaxation from the rush. It expresses more truly through nature, religion, communication and pleasant occupation the basis of which is determination – the main feature of human activity [32].

The nature is peaceful and harmonic which is why there is less stress in it. Throughout the whole world garden is being reflected as a confined and safe place to be found shelter in from the sadness and pain [18]. This assertion only intensifies the

positive influence on the rehabilitation process. By being more in fresh air and in nature, the length of the rehabilitation period decreases [25, 26]. Rehabilitation through work is being applied in practice in so many countries. The use of garden landscape in curing and rehabilitation has a long history.

Already in 1699 Leonard Meager in its paper English Gardener suggests people to spend more time in a garden. There is no better way of preserving one's health that by digging, planting or weeding in the garden [15]. Textures, smells and colors of plants create harmony in a person, allowing to clear thoughts and find peace.

Also in 1810 in the book by Goethe Theory of Colors studies on influence of optics on person's psyche may be found, in which the author highlights significance of emotions and experience in the process of color perceiving by humans. The surrounding environment influences not only the way of thinking but also the intellectual development of a person. [10]. Also the psychiatrist and signer of the United States Declaration of Independence Dr. Benjamin Rush in one of his first descriptions in American medicine declares that 'digging in the garden' and 'cutting wood', to be helpful to 'sufferers of mania' [21].

Plants, trees, light, water and other elements of the surrounding nature and environment are able to produce different feelings,and the curing power of these elements has been used already in previous centuries by creating gardens near Medieval monasteries, hospitals, pavilion system hospitals of the 19th century, homes and sanatoriums of the beginning of the 20th century.

Starting from the middle of the 20th century, the curing rehabilitation gardens of the medical institutions in the Western countries gradually disappeared. It may be explained by the rapid development in medicine and other technologies. The balconies and terraces for ventilation were replaced by modern ventilation systems. As a result of influence of the rapid development, the medical institutions lost the beautiful views through windows. A rapid grow of urban landscape took place by forgetting about the green nature and its curing power. After the Second World War, the hospitals were built like buildings of many floors, not like buildings of pavilion style by paying more attention to comfort of hospital staff, not to comfort of patients [9]. Gardens near the medical institutions were created by basing on medical equipment of high value in technological sense, ignoring emotional needs of patients, families, employees for mental recovery in outdoors [6].

**The Brukna Manor garden and park after the transformation of the 21st century**

The Brukna Manor complex and its surrounding cultural landscape is a part of Latvian national identity forms inheritance of mental values from generation to generation through a connection to the past. It may not be denied that in the new socially economic conditions the majority of the fragile, architectonic and historical landscape spaces face significant changes in respect of property relations that bring also distinct interests of property running that in rural municipality territories sometimes have character of elemental development [35]. After the land reform, that was not fully implemented until summer of 1940 the alienated manors were often used for state needs as buildings of administrative institutions, general schools and schools of vocational training, sanatoriums, societies and cultural institutions. The premises of different management, cultural and other institutions did not have such requirements in respect to the type of the usable premises and the level of improvement as it was later and especially in the beginning of the 21st century [13]. The choice for construction of the Brukna Manor in a landscape, rich of waters, witnesses of aristocratic countryside lifestyle, rich of English traditions, deeply linked with sentimentality and romantically esthetic sound, rooted from Rousseu's ideas in Latvia [23]. The Brukna Manor park, as near the all Classicism manors in Latvia at that time, has been made as exquisite background for buildings [36] that mutually form values of architecture and environmental landscape. The garden near the castle was made in the end of the 18th century that even nowadays is still decorated by rows of lime-trees, planted in terraces in slope of the garden to the River Iecava side [33].

Although the Brukna Manor complex with heritage value that was almost destroyed in the Soviet times and even used for keeping stock, it was renewed and transformed functionally for the needs of a rehabilitation centre in the 21st century. By managing this valuable environment preservation and enrichment of harmonic Manor's with heritage value and identity of landscape space has been reached that provides the whole society with an opportunity to enjoy preserved manor of cultural inheritance with the surrounding landscape space also nowadays. The scale and feeling of proportion in the Manor's park reflect the positive attitude of people to features of local and regional landscapes, architecture and art. Transformation processes, taking place after the 21st century in the Brukna Manor, have preserved and taken into consideration harmony between the scope of the Manor's building and the common context of nature basis, silhouetted from the very roots.

The Castle gradually returns into its previous shape, the lost interior is obtaining new solutions that are being implemented by the inhabitants themselves. The first addicts arrived here for the recovery already in 1995 and then several premises of the Manor were renovated, including the big hall with magnificent decorations on the ceiling. Above the entrance of the chapel, one of community's volunteers who is being cured from alcoholism, has created bright paintings of water landscapes in harmonic blue and green tones that match the distant view above the water landscape. Sight lines have been renewed in the landscape space of the Manor, symmetry made in the geometric-style garden, relief and the old road's bed preserved, and water landscapes put in order (Fig. 8).

The earth owed by the Brukna Manor is 13.6 ha. The park's territory is 6.7 ha that currently may be slightly wider, as the territory of the prospective church is to be added. The complex of the Manor is functionally in united respect located in landscape where the main building is placed in the highest point of the surroundings. A typical feature in Latvian historic manors' landscape parks was use of natural landscape. Just as other manors, also this one is located on a hill with perspective views on natural and artificial water reservoirs [7]. Like to many other manors, the main road Brukna-Baltiņi-Bārbele leads to the Manor house of the parade yard or to the front of the Manor leads from the side (Fig. 9) through alley of old linden-trees (*Tilia cordata L.*), in direction west-east. From the road the parade yard is being decorated by a round fountain, and plantings of green hostas (*Hosta L.*) and roses (*Rosa L.*) in a form of circle around the fountain (Fig. 10).

Unlike parks of other manors, developed in low-land, the coulisses and closings of outgoing view perspectives of the landscape of the Brukna park are natural. It is rich of waters and meadows that makes this place as a harmonic and relaxing oasis for everyone who comes here. Blue and green views of water landscapes with bushes of silver willows (*Salix alba L.*) harmonically resounds with the wall paintings (Fig. 6) near the entrance to the chapel.

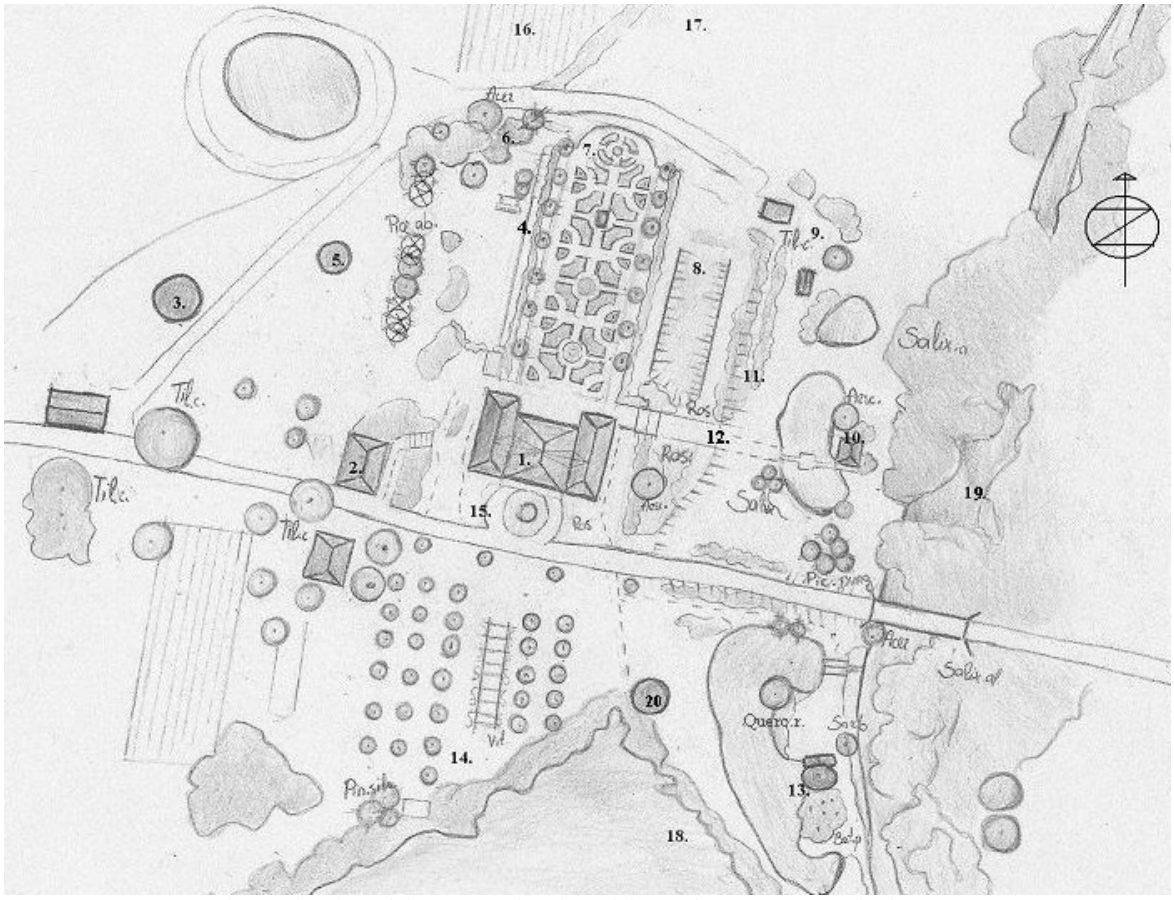


Fig. 8. Planning of the current situation of the Brukna manor complex in 2014
[Source: plan designer Linda Balode's, 2014].

1 – The Brukna Manor; 2 – The Household building; 3 – St. Apostles Chapel; 4 – Herb bed; 5 – Limekiln; 6 – Grotto; 7 – The Renaissance geometrical garden; 8 – Labyrinths of *hawthorn*; 9 – Cattle-shed; 10 – Sauna; 11 – The historic place of linden alley, offshoot of lindens; 12 – Stairs of Rose garden; 13 – The island with the chapel of the Christ's revelation; 14 – The Garden of fruit and berries; 15 – The Parade yard with the fountain; 16 – The arable land; 17 – The pasture land; 18 – Foalted, swampy lake; 19 – The River Iecava; 20 – Kitchen in the garden.

Fig. 9. View on the Brukna Manor from the road Brukna-Baltiņi-Bārbele [Source: photo by author Linda Balode's personal archive, 2013].

Fig. 10. The fountain in the southern facade's side [Source: photo by author Linda Balode's personal archive, 2013].

Fig. 11. The pool with the fountain in the Renaissance geometric garden [Source: photo by author Linda Balode's personal archive, 2013].

Fig. 12. View perspectives from the second floor of the Brukna Manor on the geometric garden [Source: photo by author Linda Balode's personal archive, 2013].

The garden near the Castle has been made in the end of the 18th century, in which there were terraces with lanes of clipped lindens (*Tilia cordata L.*) [33] that after cutting down with new browses may be felt even today. Near to the lane of lindens, in the hollow of hillside, a labyrinth of hawthorn *(Crataegus L.*) hedgegrow has been made, the cultivation of which is inconvenient.

Starting from 2002, the community *Kalna svētību kopiena* has begun the creation of a garden in Renaissance style in front of the northern facade of the Brukna Manor; in 2011 due to the project *Renewal of the Renaissance Garden*, financed by the bank *Hipotēku un zemes banka,* the garden has achieved even brighter looks. The idea for garden planning has come from the Italian monasteries' gardens of the 15th and the 16th century. The flourishing period of the regular gardens began with the Renaissance in Italy already in the 14th century. They are called gardens of Italian style. Already in the ancient history, the promoters of Renaissance was the clergy of the Catholic church [20, 4]. The garden shows off and attracts attention with fine elegance, order and complexity. The main features of them are the following: the cooling effect of water, refreshing shadow of leafages, and the strict architectural and symmetric planning that corresponds to the proportions and symmetry of the Manor's building. The regularly axial composition of the Brukna Manor's garden has been created form boxwoods (*Buxus sempervirens L.*), decorative vegetables and herbs. Carrots (*Daucus carota sativu*, *L.*), beet (*Beta vulgaris L.*), cabbage (*Brassica oleracea L.*, *var. Capitata*) are being planted in geometric stalls, cultivated and harvested by the community in autumn for communal meals. Cultures are being changed every year by symbolizing changeability in the world. Fields of plants and vegetables in various green tones are mutually linked in harmony and they highlight the maginificent mobility of the renovated Manor. Nowadays the regular beds with big fields with some plant groups have become less popular in comparance to landscapic irregular beds, however the regular ones create an immediate and impressive effect. A symmetric axis is in the centre of the geometric garden where crossings, created from grass, are highlighted by round beds and a fountain with 3 levels, domes of cascade type, above which the water flows into the concrete pool of a rectangular form (Fig. 11).

Architectonic elements – decorative flower vases, sculptures, benches, arches and other creations in the garden, like other parts of it, make commensurate proportions in order not to oppress the main building. In the regular garden, such simple geometric forms of highlighting plants as spheres, cones have been chosen, but the whole garden is

covered by rectangular planting of white cedars (*Thuja occidentalis L.*). To highlight the depth, expression of form and sculpturs, arborvitaes (*Thuja occidentalis L.*) have been planted in geometric ornaments in parallel to the symmetric axis of the garden, ensuring successfully the vertical accent and helping to highlight the symmetry and proportions of the planning. Parallelly, in both sides of the geometric garden daylilies (*Hemerocallis fulva L.*) have been planted. To fully enjoy the view on the garden or separate details of it, it is the best to look at it from the up – the upper floor of the building, terrace or some other high point (Fig. 12). The popular scientist of Renaissance architects Leon Battiste Alberti (1404–1472) by describing a Renaissance landscape has said: 'There (in the Garden) you may sit and enjoy clear brilliant days and beautiful prospects over wooded hills and sunlit plains, and listen to the murmuring fountains among the tufted grass' [1]. Also in the evening's twilight the Renaissance garden of the Manor sends out feelings, rich with emotions. During the Renaissance festival, romantic white wooden benches and white wooden arches are placed in the territory, and the geometric garden is decorated with burning torches and outdoor candles, but the facades of the Manor are enlighted in various tones by creating an additional play of lights and harmony also in the dark. The garden of the Manor reflects magical feelings, making people to come back again and again.

Along the eastern facade of the Manor, Eastern arborvitaes (*Thuja occidentalis L.*) have been planted, separate from which, in the parallel lane uncountable sorts of peonies (*Paeonia lactiflora Pall.*) with white, red and pink flowers are growing.

Near to the parallel plantation of peonies and arborvitaes, the so-called rose stairs are leading down, started with pergola, twined with sweat pees (*Lathyrus odoratus L.*). On both sides of the stairs, plantation of different sorts of roses (*Rosa L.*) may be seen. A landscapic meadow on the shore of the River Iecava may be seen over the brightly flowering roses with a countryside sauna near ponds of landscapic forms (Fig. 14). A bridge with a platform of cross form leads to the sauna over the biggest pond. On the banks of the pond, natural meadow plants are growing, but near the sauna – quite a big chestnut (*Aesculus hippocastanum L.*). In the landscape of the river valley, the sauna may be seen also from the gravel road, leading to the Manor. Harmony in the park is brought by the landscape of the River Iecava's naturally winding banks that meanders along the southern-northern side by crossing the gravel road Brukna-Baltiņi-Bārbele, leading to the Manor. In summers, the gravel road dries up and is very dusty which creates

Fig. 13. Parallel plantation along the eastern facade of the Manor [Source: photo by author Linda Balode's personal archive, 2013].

Fig. 14. In the landscapic meadow of the sauna near the River Ievaca [Source: photo by author Linda Balode's personal archive, 2013].

Fig. 15. The pergola of the Manor's fruit garden [Source: photo by author Linda Balode's personal archive, 2013].

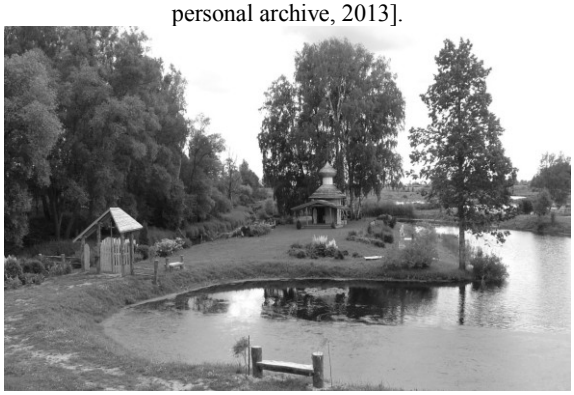

Fig. 16. A small island with praying chapel of the Christ's revelation around the water landscape [Source: photo by author Linda Balode's personal archive, 2013].

discomfort to the inhabitants of the Manor. It is planned to reconstruct and improve it. It would not be recommendable to plant the road tightly with lanes of plantation for protection, as therefore the beautiful panorama views, seen from the southern facade of the Manor over swampy ponds and landscapic fields, would be lost. On the southern side of the Manor complex, on the other side of the road, there is a new garden of fruit and berries. A pergola with a lane of grapes (*Vitis vinifera L.*) (Fig. 15), more than 10 m long, has been created that continues the common feature of the garden's axis and leads down to a swampy lake.

There is a small swamp garden, consisting of two beds with cranberries (*Vaccinium macrocarpon Ait.*), with quite big berries. To create a positive environment for the cranberries, plantation of new pines (*Pinus sylvestris L.*) has been created near. The fruit garden is supplemented by lanes of new apples (*Malus domestica L.*), blackcurrants (*Ribes nigrum L.*), redcurrants (*Ribes rubrum L.*) and European gooseberries (*Ribes uva-crispa L.*) in rhythmic plantation in southern-western direction apple trees are of half height, basically – winter and autumn's, some – summer's. There are also Latvian sour cherries (*Prunus cerasuss L.*). In eastern direction from the fruit garden, near the swampy water landscape, there is a place of a hearth where people from Latvia and other countries gather for common dinner of spiritual festivals during them. That is communication between people and in harmony with the nature. The majority of events take place in the natural environment.

In the southern-eastern furthest side of the Manor's park, around the bridge of the River Iecava, praying chapel of the Christ's revelation is located (Fig. 16).

Between the river and the pond of landscapic form, a small island shapes where you may sit and enjoy the peace of nature by listening to the murmur of the flowing river. The banks of the River Iecava have widely open landscapes and views of bank water. The entrance to the chapel's island is enclosed by interesting wooden gates, along which the newly-planted mountain-ash (*Sorbus aucuparia 'Pendula'*) shows off. More close to the bank, near the gates, newly-planted Norway maple (*Acer platanoides L.*) grows. The opposite bank is decorated by white willows (*Salix alba L.*), but the chapel is displayed on the background of white silver birches (*Betula alba L.*). Around the chapel, flower beds, of landscapic curving lines, with different sorts of conifers and witergrees, such as Siberian iris (*Iris sibirica L.*), orange daylilies (*Hemerocallis fulva L.*), goatsbeards (*Aruncus dioicus L.*), meadow cranesbills (*Geranium pratense L.*), fanals (*Astilbe x arendsii L.*), spotted deadnettles (*Lamium maculatum L.*), hostas (*Hosta L.*) etc. have been planted. The banks of the pond are decorated by some rhododendron bushes (*Rhododendron L.*), supplemented by shrubby cinquefoils (*Potentilla fruticosa L.*), Japanese spiraeas (*Spiraea japonica L.*), lemoines (*Weigela praecox L.*) and natural reeds on the bank. On the bank of the pond a new oak (*Quercus robur L.*) casts a shadow in summertime days. Trees have been mentioned in Herbert W. Schroeder's studies on aesthetics and relaxation as having psychological value. Trees, bushes, the united views on a landscape affects our mood, emotions, joy. Schroeder believes that it roots from the beginning of human evolution. Undoubtedly the reception of the joint landscape and harmony in which open viewing line, further places of view, grassy, ground plane and sparse trees, reducing as landscapic park are important moments. It serves as an ideal place to find a shelter mentally and feel comfortable in [22].

The are not only landscapes, rich of waters, Renaissance geometric garden of vegetables and fruit in the Manor's complex, but also meadows with biological variety, used for driving the castle to pasture. The community is based on the grounds of natural economy. People of the community take care of the animals, including horses, pigs, hen and other. For pollination of the fruit garden, several bee-hives have been set near the swampy pond. Some time ago also helixes were grown here. Communication and care of animals also is some kind of rehabilitation, amassing of knowledge and a way of gaining positive energy for people of the community. The household territory is located successfully closer to the agricultural lands from the southern-eastern part of the Manor. The plantation of root-crops and herbs in Renaissance style in the northern side of the Manor are supplemented by the plantation of decorative conifers, leaf-bearing trees and wintergreens in a garden in free English style in the western part of the Manor, supplemented by different sculptural works. There is a pergola for relaxation (Fig. 17), just like near the sauna, as well as a playground of groundsel and bell stand, characteristic to manors, near to which there are herb bed with mints (*Mentha x piperita L.*), catmints (*Nepeta cataria L.*), balms or melissas (*Melissa officinalis L.*), oreganoes (*Origanum vulgare L.*) and other odorant herbs. Features of Baroque may be seen in the park. In Portugese the Baroque is known as pearls of irregular form; it is the way the graphic of garden's elements may be described, reflecting in the images of fountains, flower vases and praying angels from gyps with wings, turned up. In the western side of the Renaissance regular garden, row of old Norway spruces (*Picea abies L.*) is partly preserved, windbroken tree to western winds (Fig. 17). After the powerful winds of 2014, only 3 of the old spruces have left. Not far from the row of

Fig. 17. Historic row of Norway spruces. In the foreground – landscapic garden's pergola for relaxation [Source: photo by author Linda Balode's personal archive, 2013].

Fig. 18. The artificial grotto with the small garden pool and greenery [Source: photo by author Linda Balode's personal archive, 2013].

Fig. 19. The landscapic flower bed with the sculpture – praying angel. From the distance the construction of the new church may be seen [Source: photo by author Linda Balode's personal archive, 2013].

these trees, there is a potter's limekiln where the potter Evalds Vasiļevskis teaches and shares practical knowledge of pot creation.

A grotto with a small garden pool for waterlilies (*Nymphaea candida L.*), garden of stones for Siberian irises (*Iris sibirica L.*), Asiatic lilies (*Lilium asiaticum L.*) and summer flowers (Fig. 18) are made at the very end of the old trees' row, in the corner of the park. Also the grotto's niche of the Brukna Manor is decorated by the image of St. Maria, similarly like from 1918 to 1921 in the territory owned by Latvia – the Palanga Manor's grotto of Lurda, near the River Raza. The grottos, made of stones and grout, and the chapels of the manor park's have always witnessed about the religious standing of the manor owners [12]. The grotto is supplemented by wide collection of peonies (*Paeonia lactiflora* Pall.) and a new cultivation unit of pines (*Pinus sylvestris L.*). Next to the grotto, a quite big maple (*Acer platanoides L.*) grows. This emotional expressiveness in park creation next to Classicism manors may be compared to Romanticism, flourishing in the end of the 18th century and the beginning of the 19th century that expressed in small architectural forms – monuments, grottos, etc. [34].

A unique project of the sacral architecture and art is being implemented in furthest side to the west in the territory of the Brukna Manor. Works on the chapel construction that will have a classic shape of a medieval Armenian church are taking place (Fig. 19). An avenue, consisting of 14 apostles will lead around the St. Apostles chapel. The sculptor, designing them, is Sandis Aispurs who together with the artist Brigita Zelče-Aispure is the author of the interior's project for the future Brukna St. Apostles chapel.

The landscape of the Brukna Manor complex in its essence is a bright example of eclecticism. But it does not create disharmony in the landscape, just the opposite – a successful mixture of garden art styles of different times may be seen in the landscape. Every element in the Manor complex has a strictly functional and practical significance, and each of them supplements one another.

The quality of an environment, promoting rehabilitation process has a significant role that is evaluated by almost everyone who has visited the Brukna Manor. This harmonic environment radiates presence of rational and irrational peace. By summarizing the facts about the factors of the mutual harmony of The Brukna Manor territory's garden and park, building architecture, and priorities according to the functional transformation, it may be concluded that the Manor building and interior have preserved the initial features and harmony of Classicism. The architecture, supplemented by Renaissance garden, creates a balanced environment,

corresponding to rehabilitation tasks. The newly erected buildings, supplementing the complex in the 21st century, introduce stylistic variety. Despite the fact that all the Brukna Manor complex is not in one academically clear style, there is a strong organizing and linking factor for its garden, architecture and interiors – central symmetry axes, maintaining harmony despite the challenge of functional transformation. The human factor has to be mentioned as the second factor, linking indoor and outdoor premises in creation of monolithic environment, as all the work since the beginning of the Brukna Manor's reconstruction has been run successfully by the dean Andrejs Mediņš for many years. Vertical as the central symmetry axis of mental dimension is irreplaceable report system in creation of harmonic environment.

**Conclusions**

- The building of the Brukna Manor, due to the fact it has been renovated according to the stylistic feature of Classicism in architecture, may be considered as standard for harmony.
- The new interiors of the Brukna Manor building create a unique synthesis of ancient heritage and contemporary art. The coloristic, emotional and functional variety, rich saturation in details is in Classicism principles. This method has created an environment that quite successfully links the majestic character of the Manor's premises with everyday cosiness. The environment as a living organism by changing continuously has been created for living, not for the sterile needs of a museum. The inner premises, currently unfinished, still witness about seeking for harmony.
- The Brukna Manor's garden and park after the functional building and landscape's transformation of the 21st century has regained their esthetic and architectonic looks that postulates in theirselves through mental dimensions, feelings and attitude to things. Despite the totality of socioeconomic conditions, consciousness of values of heritage value and attitude towards the long-term use of ecologically high-valued cultural landscape in raising the cultural level in society are reflected in the landscape of the Manor's complex. By ensuring a regular management of the park's landscape and its helpful use in social life, a useful basis relating to the history of civilization is being created, on the basis of which awareness of the identity for local inhabitants and people, living further, especially for the new generation is being ensured.
- The Brukna Manor complex is a harmonic environment for the needs of a rehabilitation centre, linking values of material harmony and mental harmony. The building and interior of the Brukna Manor corresponds to one architectonic style – Classicism that is perfectly supplemented by a garden in Italian Renaissance style. Due to the newly erected buildings in the 21st century, the whole Brukna Manor complex has become various in stylistic sense. However, there is a strong organizing and linking factor for the garden, the architecture and interiors of the Manor's building – central symmetry axes, maintaining harmony despite the challenge of functional transformation. The human factor has to be mentioned as the second factor, linking indoor and outdoor premises in creation of monolithic environment, as all the work since the beginning of the Brukna Manor's reconstruction has been run successfully for many years by the dean Andrejs Mediņš. Vertical as the central symmetry axis of mental dimension is irreplaceable report system in creation of harmonic environment.

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**Kopsavilkums**. Pētījumā apkopots un analizēts 18. gs. klasicisma stilā celtais Bruknas muižas komplekss, kas padomju gados ticis teju iznīcināts un izmantots lopu turēšanai, bet 21. gs. atjaunots un funkcionāli transformēts rehabilitācijas centra vajadzībām. Šajā kompleksā ar lielu pietāti pret pagātni tikusi restaurēta muižas ēka tai raksturīgajā klasicisma stilā, kas atspoguļojas arī interjeros, meklējot harmoniju starp arhitektūras stilu, mūsdienu funkcionālajām vajadzībām un praktiskām iespējām. Šodien Bruknas muižas komplekss ar tai piegulošo teritoriju, neraugoties uz savu stilistisko daudzveidību, veido harmonisku vidi rehabilitācijas centra vajadzībām, kas apvieno gan materiālās, gan garīgās harmonijas vērtības. Veidotā vienotā rehabilitācijas dārza, arhitektūras un interjera savstarpējā harmonija ļauj cilvēkam vieglāk sakārtot domas, komunicēt vienam ar otru un iesaistīties savas dzīves veidošanā. Bruknas muižas komplekss un to ieskaujošā kultūrainava ir Latvijas nacionālās identitātes daļa, kas caur pagātni veido garīgo vērtību pārmantošanu no paaudzes paaudzē. Dārzam, muižas ēkas arhitektūrai un interjeram piemīt kāds spēcīgs organizējošs un vienojošs faktors - centrālās simetrijas asis, kas saglabā harmoniju neraugoties uz funkcionālās transformācijas radīto izaicinājumu.

# Natural Elements and Phenomena of the Atmospherescape as a Material for Public Art

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**Abstract. The landscape, a system with its elements and processes, is the material for creativity of the landscape architect. This study was designed to increase the knowledge in the field, where the landscape architect works as a landscape artist with natural elements and phenomena of the atmospherescape as an artistic material. The aim of this paper is to identify whether and how natural elements and phenomena in the course of the year in the atmospherescape are used as a material in public art. In this paper the public art works were selected for case study instead of the works of landscape architecture due to their small scale, short duration or temporality, experiments and pioneer processes in the landscape. The research was organised into two parts. In the first part, a conceptual study in the course of the year in the atmospherescape was conducted. In the second part, the case study of public art was performed. As a result of the conceptual study, climate, weather, seasons, diurnal rhythms and time were identified as the thematic components for the atmospherescape. The water, air and light were extracted as the principal elements of the atmospherescape. The visual natural elements and phenomena in the course of the year in atmospherescape were systematized in the context of landscape architecture theory. In the case study the examples of contemporary public art were sought by classified visual natural elements and phenomena. Thirty-two examples of public art have been selected and studied further. The case study demonstrated that both authentic and artificial nature elements and phenomena in the course of the year in the atmospherescape were used as a material in public art. Hypothetical assumption that atmospherescape is 100 % authentic and that it is not possible to make changes for phenomenon in the course of the year in the atmospherescape was overturned. Surprisingly, artists had found a way to imitate natural elements and phenomena of the atmospherescape by use of the modern technologies. It is concluded that characteristics of natural elements and phenomena in the course of the year in the atmospherescape have been successfully highlighted by artists that transform them to the art form. The artistic creativity in art works in public space as proved by this case study could highlight taken-for-granted natural elements and phenomena in the course of the year in atmospherescape on artistic stage, and thus they became sublime and festive from taken-for-granted and everydayness. This study extends the landscape architecture theory, and it can be applicable as a tool for practice in landscape planning, protection, conservation, management and design, as well as deepening the knowledge of the landscape as a material for public art.**

**Keywords: course of the landscape year, atmospherescape, public art, natural elements and phenomena.**

## Introduction

One of the objects of enquiry in the landscape architecture theory is the landscape, its definition and landscape elements, morphology and syntax. An understanding of landscape forms the grounds for landscape planning, protection, conservation, management and design. The landscape or outdoor, in contrast to indoor, has its own characteristic materials and system' principles. The landscape is spatially open to the flux in the course of the year, subject to physical and visual seasonal weather, circadian rhythms and ephemeras. Catherine Dee [16] identifies three components of the landscape design: Art, nature and utility. Thus, the profession of landscape architect unites in the creation of landscape as art and planning utility or functionality of landscape. The scope for this paper is to explore landscape as art. An artist's material varies upon artistic fields: Clay, glass, paint, man (in dance) and the like. The landscape – a system with its elements and processes – is the material for creativity of the landscape architect. This study was designed to increase the knowledge in the field, where the landscape architect works as a landscape artist.

In 1969, Ian McHarg developed the idea of 'Design with Nature' [35]. The continuity of this idea was reflected in the ideas of the New Urbanism, Landscape Urbanism and Ecological Urbanism [40, 65]. The essence of these ideas is the transfer and adaption of principles and the wisdom of aesthetics in nature and the qualities of nature as a system in shaping the human-planned environment – landscape, outdoor, urban environment, rural environment or human habitat, regardless of the meaning put in each of these concepts by researchers or practitioners. Thus, the research question of this paper becomes: Can nature elements and phenomena in the course of the year in the atmospherescape be designed, and if so, how? Humanity`s progress in science and culture has changed people's lifestyle in perception and in use of landscape within the memory of civilisation, nation, family or even within a lifetime, while the the course of the landscape year has remained unchanged nearly permanently in the time scale of

civilisation. Like any paradigm, it is necessary to revise the existing archetypes as to how to use the landscape in the course of the year.

This paper is a part of on-going research in the course of the landscape year. The object of enquiry of this paper is on the course of the year in the atmospherescape in the context of landscape architecture. The course of the year in the landscape is one of the 'taken-for-granted aspects of life' [45], for which everyone has both the experience and opinion. Surprisingly, however, this theme is included in the landscape architectural theory and practice as only too simplistic, with the inadequate level of knowledge and cultural experience. During the research period and while generating an insight into the object of enquiry, we faced some confusion among the experts of architecture and landscape architecture: Is it worth exploring materials that are not able to be designed or are not convertible, and something for which the conclusions about this topic has already been determined? With an understanding of the depth and capabilities of the object of enquiry, we sought answers outside the experts of architecture and landscape architecture. The theme is examined in-depth by painters, photographers, tourists, geographers and the people with the conscious recreation and contemplation experience in the course of the year. General reviews confirmed that a considerable body of knowledge is amassed in the course of the year in other scientific disciplines. However, the objectives of the research differed from the theory frame of landscape architecture make it necessary to adapt this knowledge and to integrate it into the landscape architecture theory and to proceed with complementary research for the missing subjects. M. Elen Deming and Simon Swaffield [17] argue that 'landscape knowledge is thus actively constructed rather than found or discovered, and it must always be interpreted in its context' [17].

Landscape is the largest public space. In the Preamble of the European Landscape Convention, the parties agree in 'believing that the landscape is a key element of individual and social well-being...' [15]. Public space is an important place for manifestation of creativity of landscape architects and artists. The visual works of art in the public space is used for artists` creativity and variety of materials and their use as a form of expression. In this paper, the 'public art' is understood as contemporary visual art; for example, installations, three-dimensional objects, actions and performances, which are erected in public space; that is, outside the interiors and museum spaces. Artists are viewed as pioneers whose experiments are able to highlight certain materials. Public art in the dimension of time includes both monumental and temporary works of art where the latter empower experiments. The feature of public art is a relatively small scale compared to the works of landscape architecture. Thus, the pioneer process, the small scale, the short duration or temporality and the experiments are the criteria governing the choice of public art works for case studies.

Like Ian McHarg's term 'Design with Nature', this study has sought the use of the nature as a material for creativity. The aim of this paper is to identify whether and how natural elements and phenomena in the course of the year in the atmospherescape are used as a material in public art. For this research, the atmospherescape means the space that is above the surface level of the landscape and runs through the airscape to the infinity of the skyscape and the universescape.

To achieve the aim of the paper, the research was organised into two parts. In the first part, in order to systemise and clarify all aspects of the object of enquiry and to compile the criteria for further research, a conceptual study in the course of the year in the atmospherescape was conducted. The conceptual study is defined also as a thematic analysis [23] and like any other qualitative research, it is performed to the point of saturation. Ian Thompson [61] describes it as 'more akin to analytical philosophy' [61]. In the second part of the research, the case study of art in the public space was performed.

The part of the results from this research study was presented on PECSRL 24th Session 'Living in Landscape: Knowledge, Practice, Imagination' held in Riga and Liepaja, Latvia in 2010 [52], ECLAS Conference Sheffield 2011 – Ethics/ Aesthetics held in Sheffield, England in 2011 [53], ECLAS Conference 'The Power of Landscape' held in Warsaw, Poland in 2012 [1] and UNISCAPE International Conference 'Landscape and Imagination: Towards a New Baseline for Education in a Changing World' held in Paris, France in 2013 [2].

## The conceptual study

*The course of the year in the atmospherescape*

The Earth's revolutions around the sun and around the Earth's axis, the Earth axial tilt and the time are the cause for the landscape change in the course of the year. The holistic system in the course of the year in the landscape could be divided into four conceptual components – (1) the atmosphere, (2) the Earth's surface, (3) the hydrosphere and the cryosphere and (4) the biosphere – that can be formulated in the language of landscape architecture as: (1) The airscape, the skyscape and the universescape, (2) the terrestrial landscape,

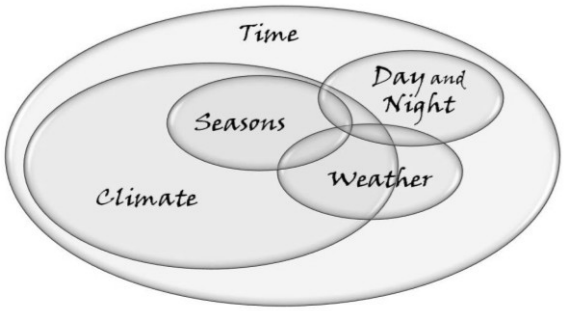



Fig. 1. Players in the course of the year in the atmospherescape theatre
[Source: construction by author].

(3) the waterscape and the icescape and (4) the living landscape – the landscape of flora, fauna and human. Each of these four landscape groups differs in system composition, behaviour and materials. At the same time, it should be further noted that the studies based on the assumption 'that systems are not self-evident objects, but are human … mental constructs that help us understand the world' in its totality [22]. Thus, this research is narrowed to the atmospherescape. For this research, the atmospherescape means the space that is above the surface level of the land and runs through the airscape to the infinity of the skyscape and the univesrescape. Landscape architecture is anthropocentric discipline with a research scope defined by perception of human. Man in landscape meets the macro dimension in the course of the year. Thus by scale, the object of enquiry is a cross-section of the landscape's macro dimensional effects on human's micro dimensional perception.

The course of the year in atmospherescape includes several themes – climate, weather, seasons, diurnal rhythms and time (Fig. 1). The rotation of the Earth around the sun and around the Earth's axis, the Earth axial tilt and the rotation of the moon around the Earth result in diurnal rhythms of the landscape. Diurnal rhythms are inherent in a cyclical nature of time, and at the same time, they can have ephemeral character.

The weather is defined as the state of the air and atmosphere at a particular time and place [36]. In terms of time scale, the weather sets a momentary ephemeral landscape. Phenomenologist Gernot Böhme [7] contemplated on the analogy of weather and landscape. According to these authors' of book 'Arium', the 'weather and architecture' set ontology and possible interrelations between architecture and weather.

The Earth's axial tilt is the reason for the seasons in landscape. Due to the Earth's revolutions around the Sun and the Earth axial tilt, the landscapes situated away from the equator experience seasonality to an increasing degree. Also topography, altitude and microclimatic conditions are reasons for the seasonal variety in landscape. Researchers of the book, 'Seasonal landscapes', [45] defined seasonality as a mixture of natural phenomena and human constructs. The object of enquiry for this paper is narrowed to the natural phenomena of the seasonality. Michael Jones [27] introduced cyclicality as a distinguishing character for the seasonality. That certainly is a characteristic feature of the seasonal time, but especially within the context of landscape architecture theory, the definition should be complemented by Paul Brassley, [8] who actualised ephemerality of landscape. Thus, the seasonality is both cyclical and ephemeral phenomenon of natural processes and humans in landscape.

Climate, in a narrow sense, is usually defined as the 'average weather', over a long period, which is a cyclical character of time. Gernot Böhme [7] defines climate as landscape. From phenomenological point of view Julien Knebusch [30] stated that 'climate refers to a large meteorological time such as seasons' and that 'seasons refer to human scale of climate'. Also climate is landscape component set for European landscape classification purposes [41]. The climatic character of landscape is a component of regional and a place's landscape identity. These cognitions on climate as the landscape and weather as the landscape stimulated to extend the enquiry in the course of the year in atmospherescape and its nature elements and phenomena as a material and creative form of expression in public art.

The passage of time can be treated as a flux of moments. The European Landscape Convention [15] in the definition landscape combines an understanding of an area that is result of interaction between nature and / or human with perception of human or mental landscape. Humans 'do not perceive time as such, but changes or events in time' [34]. Thus, the mental course of the landscape year is flux of ephemeral and cyclical (recurring) moments in landscape.

*Visual nature elements and phenomena in the course of the year in atmospherescape*

Unequivocal is the range of human sensual grasps of the landscape [9, 10] due to change in the course of the year and their individual and interrelated aesthetic values. However, in this paper, it was considered to expand the research in visual aesthetics, and it was summarised in Fig. 2 shows nature elements and phenomena of the course of the year in atmospherescape that are visually perceivable to human. As a result of bibliographical and conceptual exploration, the water, air and light were extracted as the principal elements of atmospherescape. 'Air' is label for gaseous atmospherescape space spanning from the surface of land through the airscape to the infinity of the universescape. The label is selected because the air

is in close proximity to the place of human perception. Furthermore, it was sought for the natural elements and phenomena in the course of the year in atmospherescape in the frame of the three principal elements from indicated 'players in the course of the year in the atmospherescape theatre', as reflected in Fig. 1. The analysis showed that the atmospherescape groups 'climate' and 'seasons' are human conceptualised set of conditions and therefore did not fulfil the criterion to be an element or phenomenon. Accordingly, the use the climate and the seasons in works of art in public space could be examined in an individual study. The groups 'day and night' and 'weather' fulfilled the criterion to be composed of natural elements or phenomena, and were analysed by their components. The group 'time' is part of natural phenomena because it is inherently a process. In this paper, the division of the visual natural elements and phenomena in the course of the year in atmospherescape, as reflected in Fig. 2, is selected in the form and degree of detail that are adaptable to theory of landscape architecture and corresponds to the aim of the study.

In Fig. 2, the water phenomena and elements were sorted according to groups of water cycle: Evaporation, condensation, precipitation, freezing and melting, which are natural phenomena and which have the process character in the time scale and that characterise the physical states of water in nature – liquid, gaseous and ice formations and their transition states from one another. The characteristic feature for water in its diversity of natural elements and phenomena is its location in space from the ground. For example, condensation of water vapour results in either a cloud which is distant from the earth and the human as perceiver of landscape or a fog, which is the same cloud only close to ground. The 'ether', having an ancient and religious origin, as a label is used for characterisation of the spatial visual emptiness of the 'air' that has a significant role in theory of landscape architecture. The group 'particulate matter' in addition to dust and floral pollen also contains water, but it is detailed in the group of the principal element 'water'. 'Wind' in landscape is energy or a movement that is visually observable indirectly through the manifestation in matter.

The diversity of visual natural elements and phenomena in the course of the year in atmospherescape contained in the Fig. 2 is related to singularity of the regional landscape and lived experiences of people inhabited the landscape and the language which the experience is shaped by describing the state, processes and texture of nature elements and phenomena. Meto J. Vroom noted that language of landscape 'indicates the existence of a phenomenological and mythological relationship between man and his environment' [64, *180*]. Hans-Georg Gadamer developed the idea on the role the language plays in bringing experience to understanding [23, *388*]. Norman Pressman noted that in Inuktitut language there are twenty-nine words for 'ice' and twenty for 'snow'[49]. Benita Laumane [33] has summarised the research results of the natural phenomena in Latvian linguistics in the book 'Golden rain was falling gently: Names of natural phenomena in the Latvian language'. The findings characterise landscape perception as reflected in Latvian language. All of the above argue that the theme is a part of regional and place's landscape identity.

**Water**

I. Evaporation
- water vapour

II. Condensation
- clouds
  - position: high, low, middle, vertical
  - form: cirrus, cumulus, stratus
- fog, mist

III. Precipitation
- liquid
  - drizzle
  - rain
- freezing, melting
- frozen
  - snow
  - hail

IV. Freezing and melting
- rime
- ice

**Air**

I. Ether

II. Particulate matter
- dust
- floral pollen

III. Air temperature
- below zero
- freezing
- above zero

IV. Atmospheric pressure
- low
- high

V. Atmospheric perspective

VI. Wind
- direction: N, E, S, W
- speed
  - calm
  - breeze
  - gale
  - storm
- rhythm and flux pattern

**Light**

I. Celestial bodies
- the sun
- the moon
- stars

II. Orbit caused phenomena
- path
- rise
- set
- twilight
- light
- dark
- shadow
- moon phases: new, full
- white nights
- polar day, night

III. Luminous phenomena
- lightening
- rainbow
- Arctic lights
- mirage

Fig. 2. Visual natural elements and phenomena in the course of the year in atmospherescape [Source: construction by author].

*Course of the landscape year in the context of aesthetic theory*

The attitudes and values held by landscape architects for their profession are presented in research led by Ian H. Thompson. The research concludes 'that there is a 'trivalent' approach to landscape architectural practice which optimises values across all three areas' [61, *81*]: Ecology, community and delight. The 'delight' that summarises aesthetical values with 'artistic expression' as one of them where landscape architects 'aspire to produce landscapes which could be regarded as works of art' [61, *86*].

In recent publications, many authors have observed that the aesthetic theories are in the transition to the new phase of the new understanding of aesthetics. Anna Jorgensen indicates that 'the definition and scope of landscape aesthetics is of course closely connected with the physiological and psychological processes that underlie landscape aesthetic evaluation and produce aesthetic experience'. [28] Edmunds Valdemārs Bunkše [9, 10] explores aesthetics of sensory experiences in landscapes by all the senses – touch, smell, hearing, sight and proprioception and actualises the term 'sensescapes'.

In the context of ecological practices, Mohsen Mostafavi notes that we miss out on opportunities to delight in the aesthetics of necessities [40] Anna Jorgensen drafts the future directions in landscape aesthetics research with conclusion that ongoing competition between scenic or ecological aesthetics will be replaced by wider and more comprehensive frames of reference [28].

Mark Francis indicates that 'there is critical need for case studies of more modest, everyday landscapes…' [22] Yuriko Saito explores the concept of everyday aesthetics with examples from Japan [55]. Rebecca Krinke [31] complements landscape research with the theme of contemplation, which has a significant role in the perception of landscape change in the course of the year.

Michelle Ogundehin, characterised the genesis of true trends: 'True trends… are visual manifestation of cultural conclusions' [42]. Similar is the cognition of phenomenologists Alfred Schütz and Thomas Luckmann in 1973 that society functions in conjunction with the existing comprehensions that are constantly interpreted and reinterpreted by man [24]. The archetypical use may be revised by creativity and revaluation in compliance with contemporary cultural conclusions and the taken for granted impermanence in the course of the landscape year revealed again.

Among these opinions, the proposed approach is existential aesthetics - aesthetics of life and actuality within the impermanence in the course of the landscape year. In our current society, these increase the value of human life. There is actual notion that we live in the '24 hour 365 days' model. That focuses on aesthetics of every day – aesthetics of the sublime and the everydayness. The aesthetics of every day in landscape has close relation with the course of the landscape year – the taken for granted everyday landscape in the impermanence in the course of the year. The set value of every day states the need to reconsider values for landscape planning, protection, conservation, management and design. Aesthetics should be understood also as utility, thus emphasising its importance in public welfare and well-being.

*Nature as a material for the public art*

The landscape has been viewed for centuries from the point of view of the art world as a source of inspiration and material; for example, in painting and garden art. Nowadays both landscape architects and artists are working with ecology-related issues, natural and urban structures, the permanence, and the ephemeral. Katie Kingery-Page [29] marks three content areas for the overlap between contemporary art practice and landscape architecture: (1) Art and embodied landscape – trends centered on the human body experience; (2) art, time, perception and landscape – development related to phenomenological ideas of time and perception; and (3) landscape as change, art as resistance – interest around issues of urban decay and reinvestment.

Artists tend to offer new forms of human and nature coexistence by reviewing the human relationship with nature. Many artists work with naturally occurring materials and use the natural processes. This contributes to relationships with nature and its processes, as seen, for instance in Land Art, Eco-Art, Bio Art and other types of art that operates with materials from the nature [3, 59, 62]. Artists use the flux of nature materials in the course of the year in the works of art. The materials and the duration of works of art based on ecological aesthetics affect weather processes and elements (temperature changes, precipitation, wind, and sun), as well as processes of entropy and ecological succession, for instance, moss. These processes may cause rusting, rotting, melting, decay or overgrowing. Nature aesthetics and understanding and transmission of nature as system in creating works of art are used in arts similarly in theories of Landscapes Urbanism and the Ecological Urbanism.

The issues involve assessment of delight and taste, as well as art as experience. Contemporary culture so far has lacked appreciation of aesthetics in everyday life, and it was placed in a museum as static 'art'. There have been attempts to diminish the strict line between life and art in many artistic

directions that extend the understanding of everyday aesthetics. For example, Fluxus tried to focus people`s attention on small everyday topics. Beginning with Futurism, Dada, Fluxus, performances or happenings, as well as the Situationist movement, the emphasis is put on the work of art as experience, not an object. Through the study of social sculpture in the fine arts, the emphasis is switched from the product and the object to the quality of relational aesthetics in the context of the architecture. Thus, the architecture has been involved in everyday life.

**The case study**

*Materials and methods*

In order to identify whether and how natural elements and phenomena in the course of the year in the atmospherescape are used as a material in public art, classified visual natural elements and phenomena regarding Fig. 2 were quested by examples of contemporary public art. Selected examples were analysed by four groups of criteria.

First criteria: Method of the landscape reading by the landscape visual measures, for more expressive characterisation of examples. Visual measures affect the perception of a work of art from the landscape architecture and visual aesthetic point of view. The following landscape visual measures used in theory of landscape architecture and photography with the addition of compiled visual measures by Indra Purs [51] are selected for cases study, which are arranged in alphabetical order:

- altitude;
- angle;
- brightness;
- choreographic pattern;
- colour temperature;
- colouration;
- colourfulness;
- contrast;
- darkness;
- density;
- depth;
- distance;
- duration;
- enclosure;
- lightness;
- mat;
- motion;
- orientation;
- prediction;
- proportions;
- reflection;
- rhythm;
- scattering;
- shadowing;
- shape;
- size;
- speed
- texture
- time-specific;
- transparency;
- vibrancy;
- visibility;
- weather-specific.

Second criteria. Characteristic in the course of the year is continuum or fluidity in time of the landscape and its nature elements and phenomena. It defined the selection of criteria based on whether dimension of time is used as artistic quality in public art. It was analysed whether nature elements or phenomena in the works of art are (a) flux in time, or (b) static in time in the examples.

Third criteria. It was analysed whether (a) the natural elements and phenomena have unlimited duration in a work of art, or (b) the nature elements and phenomena are fixed term in a work of art.

Fourth criteria. Hypothetically, atmospherescape is 100 % authentic, and it is not possible to make changes for phenomenon in the course of the year in the atmospherescape. It defined the selection of criteria based on whether (a) authentic, or (b) artificial nature elements and phenomena is included in public art.

*Nature elements and phenomena in the course of the year in atmospherescape in the cases of public art*

Thirty-two examples of public art have been selected and analysed in the case study. Examples have been grouped according to identified natural elements and phenomena of the course of the year in the atmospherescape in Fig. 2. Examples are organised according to three identified principal elements in the course of the year in the atmospherescape in separate tables: ‘Water’ in the Table 1, ‘air’ in the Table 2, ‘light’ in the Table 3. Selected examples were included into particular subgroups according to nature elements and phenomena in Fig. 2.

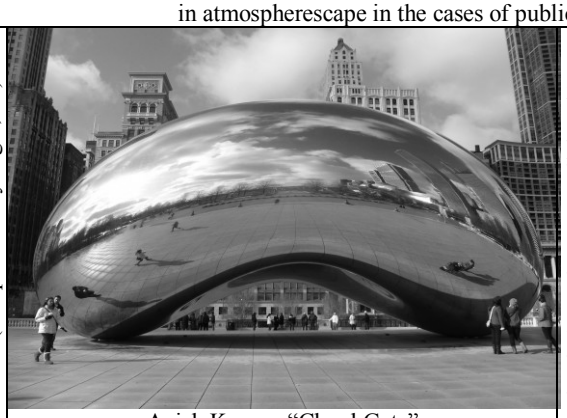
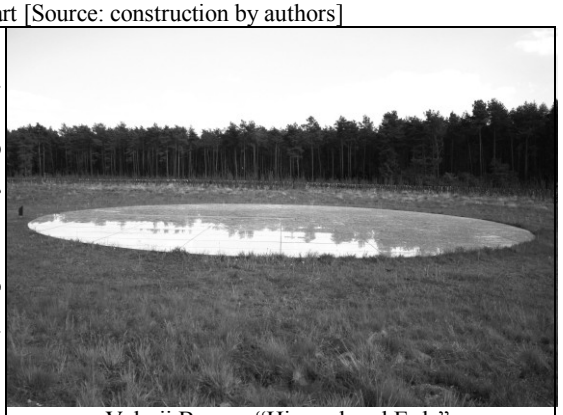
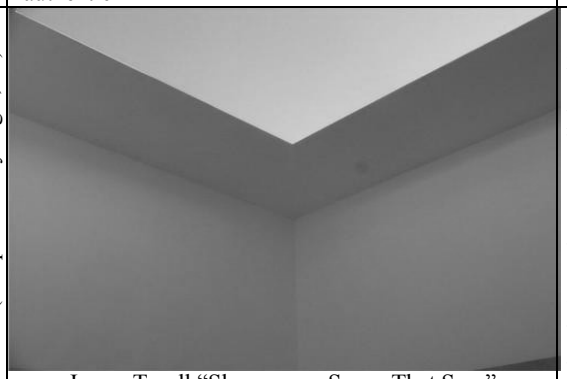
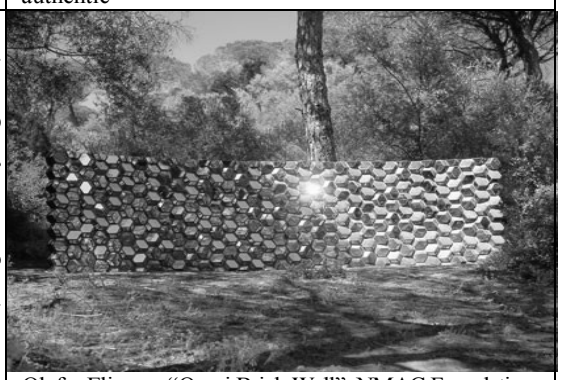
In the group ‘water’, five subgroups are revealed: ‘Clouds’, ‘fog’, ‘rain’, ‘snow’ and ‘ice’. During the selection of examples, more broad degree of detail and possible subgroups as artistic material were not found. Degree of detail of the subgroups – the transition from gaseous to a frozen condition as artistic material was used in generalised terms. For example, ‘clouds’ or ‘rain’ was used in the works of art, but it was not highlighted in more detailed diversity of visual qualities that are already merged in crucial ones in Fig. 2.

In the group ‘air’, three subgroups are revealed: ‘Atmospheric perspective’, ‘wind: direction and speed’ and ‘wind: speed’. During the selection of examples, the following subgroups such as ‘ether’, ‘particulate matter’, ‘air temperature’, ‘atmospheric pressure’ and ‘wind: rhythm and flux pattern’ were not found. A full range of ‘wind’ characteristics or a complete degree of detail was applied in the ‘wind direction’ and ‘wind speed’ subgroups.

In the group ‘light’, five subgroups are revealed: ‘The light of celestial bodies’, ‘the sun, sunrise and sunset’, ‘the stars’, ‘lightening’ and ‘rainbow’. During the selection of examples, the following subgroups as artistic material for public art such as ‘the moon’, ‘path’, ‘twilight’, ‘light’, ‘dark’, ‘shadow’, ‘moon phases: new, full’, ‘white nights’, ‘polar day, night’, ‘arctic lights’ and ‘mirage’ were not found. Created phenomenon in ‘Double Sunset’ by artist Olafur Eliasson [19] represents a natural phenomenon in comparison with Luminous phenomena of ‘light’ phenomena, which uses the term, ‘sun dogs’ in English or ‘atsaule’ in Latvian folklore [33].

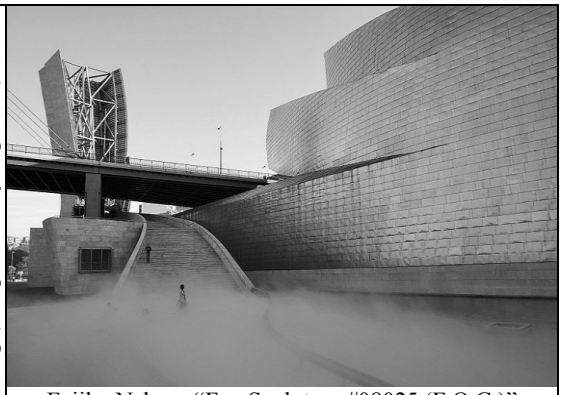
TABLE 1

The use of 'water' as natural element and phenomena in the course of the year in atmospherescape in the cases of public art [Source: construction by authors]

| | | | |
|---|---|---|---|
| Clouds (complementary: light, air) |  Anish Kapoor "Cloud Gate", Millennium Park, Chicago, Illinois, 2006 [37] | Clouds (complementary: light, air) |  Valerij Bugrov "Himmel und Erde", Kunstverein Springhornho, Germany, 1991/2000 [25] |
| 1 | choreographic pattern, depth, motion, scattering, sky reflection, texture | 1 | choreographic pattern, motion, scattering, sky reflection, texture |
| 2 | flux | 2 | flux |
| 3 | unlimited duration | 3 | unlimited duration |
| 4 | authentic | 4 | authentic |
| Clouds (complementary: light, air) |  James Turell "Skyspaces - Space That Sees", Israel Museum, Jerusalem, Israel, 1992 [57] | Clouds (complementary: light, air) |  Olafur Eliasson "Quasi Brick Wall", NMAC Foundation, Vejer de la Frontera, Cadiz, Spain, 2002 [54] |
| 1 | choreographic pattern, depth, distance, enclosure, motion, speed | 1 | brightness, reflection of celestial body, scattering, weather-specific |
| 2 | flux | 2 | flux |
| 3 | unlimited duration | 3 | unlimited duration |
| 4 | authentic | 4 | authentic |
| Clouds (complementary: light, air) |  Air & Water Show, Chicago, USA, 2010 [6] | Clouds (complementary: light, air) |  Tetsuo Kondo Architects and Transsolar "Cloudscapes", Museum of Contemporary Art Tokyo, Tokyo, Japan, December, 2011 to March, 2012 [48] |
| 1 | altitude,choreographic pattern, depth, distance, duration, motion, shape, size, speed | 1 | choreographic pattern, duration, density, mat, texture |
| 2 | flux | 2 | flux |
| 3 | fixed term | 3 | fixed term |
| 4 | artificial | 4 | artificial |

1 – the landscape visual measurement; 2 – flux/ static; 3 – unlimited duration/ fixed term; 4 – authentic/ artificial.

CONTINUATION OF TABLE 1

| | | | |
|---|---|---|---|
| Fog (complementary: light, air) |  Fujiko Nakaya and Ojars Feldbergs "Stone. Fog", the Open-Air Art Museum at Pedvale, Latvia, 2011 [44] | Fog (complementary: light, air) |  Fujiko Nakaya "Fog Sculpture #08025 (F.O.G.)", Guggenheim Museum Bilbao, Spain, 1998 [21] |
| 1 | density, mat, texture | 1 | density, mat, texture |
| 2 | flux | 2 | flux |
| 3 | fixed term | 3 | fixed term |
| 4 | artificial | 4 | artificial |
| Fog (complementary: light, air) |  Andris Kronbergs, Mikus Lejnieks, Inta Berga, Janis Gagainis "Sun Boats" fountain, Jaunpilsetas Square, Ventspils, Latvia, 2000 [Source: photo by E. Alle, 2009] | Fog (complementary: light, air) |  Cai Guo-Qiang "Fetus Movement II: Project for Extraterrestrials No. 9, 1992" Explosion Event, The Kassel International Art Exhibition, a military base, Hann, Münden, Germany, 1992 [39] |
| 1 | colouration, colorfulness, density, mat, texture | 1 | choreographic pattern, density, mat, texture |
| 2 | flux | 2 | flux |
| 3 | unlimited duration | 3 | fixed term |
| 4 | artificial | 4 | artificial |
| Fog (complementary: light, air) |  Olafur Eliasson "Yellow Fog", Vienna, Austria, 2008 [43] | Fog (complementary: light, air) |  Usman Haque "Primal Source", Glow Festival, Santa Monica, California, 2008 [50] |
| 1 | colouration, colorfulness, density, mat, texture | 1 | choreographic pattern, colouration, colorfulness, density, duration, mat, vibrancy |
| 2 | flux | 2 | flux |
| 3 | unlimited duration | 3 | fixed term |
| 4 | artificial | 4 | artificial |

1 – the landscape visual measurement; 2 – flux/ static; 3 – unlimited duration/ fixed term; 4 – authentic/ artificial.

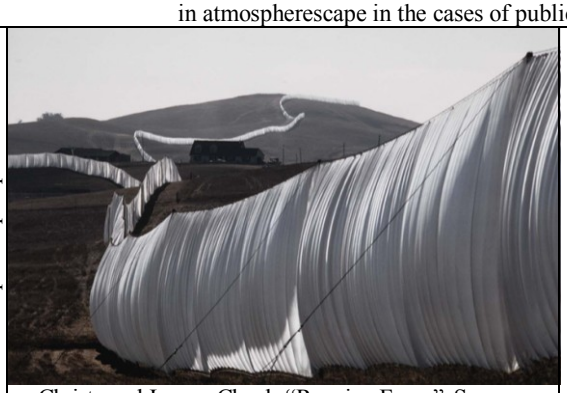
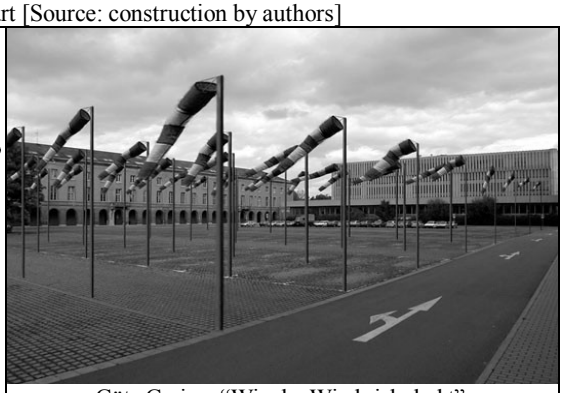
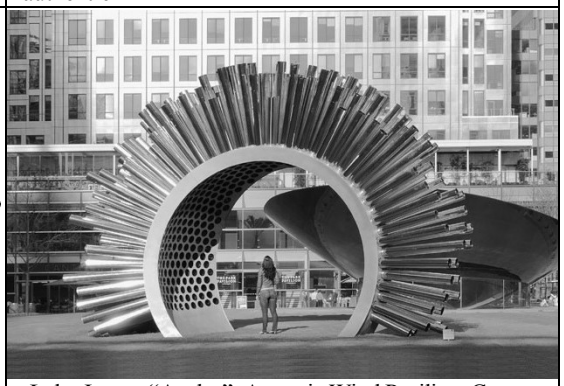
END OF TABLE 1

| | | | |
|---|---|---|---|
| Rain (complementary: light) |  <br>Janis Petersons and Raimonds Tiguls "One Moment with Light Fountains", The festival of light "Staro Riga", Riga, Latvia, 2011 [Source: photo by E.Alle, 2011] | Rain (complementary: light) |  <br>Mary Miss, a temporary installation, a grove of pine trees with a series of long wood framed troughs that collect rainwater and reflect the trees, Jyvaskyla, Finland, 1994 [38] |
| 1 | choreographic pattern, colouration, colorfulness, darkness, density, duration, mat, texture | 1 | sky reflection, texture |
| 2 | flux | 2 | static |
| 3 | fixed term | 3 | fixed term |
| 4 | artificial | 4 | authentic |
| Snow |  <br>Simon Beck, St. Jacques Bowl, painting snow art with feet, France, 2013 [4] | Snow |  <br>Andy Goldsworthy "Giant Snowball" (13 pieces), London, United Kingdom, June, 2000 [12] |
| 1 | distance, duration, size, texture, time-specific | 1 | duration, texture, time-specific |
| 2 | static | 2 | flux |
| 3 | fixed term | 3 | fixed term |
| 4 | authentic | 4 | authentic |
| Ice (complementary: light) |  <br>13th International Ice Sculpture Festival, Uzvaras park, Jelgava, Latvia, 2009 [Source: photo by L. Zeltiņa, 2009] | Ice (complementary: light) |  <br>Olafur Eliasson "Ice Pavilion", Reykjavik Art Museum, Reykjavik, Iceland, 1998 [26] |
| 1 | duration, proportions, shape, size, texture, transparency | 1 | duration, shape, size, texture, transparency |
| 2 | static | 2 | flux |
| 3 | fixed term | 3 | fixed term |
| 4 | artificial | 4 | authentic |

1 – the landscape visual measurement; 2 – flux/ static; 3 – unlimited duration/ fixed term; 4 – authentic/ artificial.

TABLE 2

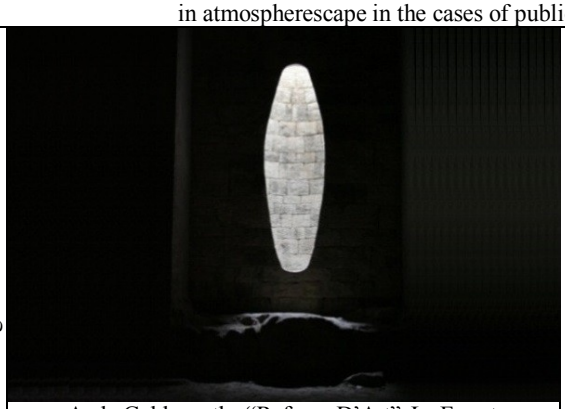
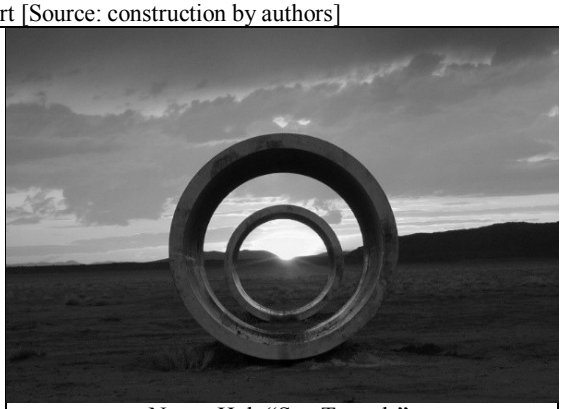
The use of 'air' as natural element and phenomena in the course of the year in atmospherescape in the cases of public art [Source: construction by authors]

| | | | |
|---|---|---|---|
| Atmospheric perspective |  Christo and Jeanne-Claude "Running Fence", Sonoma and Marin Counties, California, USA, 1972/76 [63] | Wind: direction and speed |  Götz Greiner "Wie der Wind sich dreht", the "Gauforum", Weimar, Germany, 2001 [66] |
| 1 | angle, duration, motion, orientation, prediction, rhythm, speed | 1 | angle, choreographic pattern, duration, motion, orientation, prediction |
| 2 | flux | 2 | flux |
| 3 | fixed term | 3 | fixed term |
| 4 | authentic | 4 | authentic |
| Wind: speed |  Sabina Lang and Daniel Baumann "Comfort #4", Nuit Blanche, Ecole Elementaire de Belleville, Paris, France, 2010 [13] | Wind: speed |  Mark Nixon "Chimecco" an interactive instrument and kinetic sculpture, Sculpture by the Sea, Aarhus, Denmark, 2011 [14] |
| 1 | choreographic pattern, duration, motion, orientation, prediction, speed | 1 | angle, choreographic pattern, duration, motion, orientation, prediction, rhythm, speed |
| 2 | flux | 2 | flux |
| 3 | fixed term | 3 | fixed term |
| 4 | artificial | 4 | authentic |
| Wind: speed |  Pinuccio Sciola, "sound stones" open-air museum in San Sperate, Sardinia, Italy [11] | Wind: speed |  Luke Jerram "Aeolus", Acoustic Wind Pavilion, Canary Wharf, London, United Kingdom, March to May 2012 [58] |
| 1 | angle, choreographic pattern, duration, motion, orientation, prediction, rhythm, speed | 1 | angle, choreographic pattern, duration, motion, orientation, prediction, rhythm, speed |
| 2 | flux | 2 | flux |
| 3 | unlimited duration | 3 | fixed term |
| 4 | authentic | 4 | authentic |

1 – the landscape visual measurement; 2 – flux/ static; 3 – unlimited duration/ fixed term; 4 – authentic/ artificial.

TABLE 3

The use of 'light' as natural element and phenomena in the course of the year in atmospherescape in the cases of public art [Source: construction by authors]

| | | | |
|---|---|---|---|
| The light of celestial bodies |  Andy Goldsworthy "Refuges D'Art", La Forest, Haute-Provence Geological Nature Reserve, France, 2009 [Source: photo by E. Alle, 2010] | The sun, sunrise and sunset |  Nancy Holt "Sun Tunnels", the Great Basin Desert, Lucin, Utah, USA 1976 [56] |
| 1 | brightness, choreographic pattern, contrast, duration, enclosure, orientation, shadowing, time-specific | 1 | brightness, choreographic pattern, duration, orientation, time-specific |
| 2 | flux | 2 | flux |
| 3 | unlimited duration | 3 | unlimited duration |
| 4 | authentic | 4 | authentic |
| The sun, sunrise and sunset |  Olafur Eliasson "Double Sunset", panorama, Utrecht, Netherlands, 1999 [19] | The sun, sunrise and sunset |  Stu Phillips, The Millennium Fountain, River Walk, Enfield, United Kingdom, 2000 [47] |
| 1 | altitude, angle, brightness, choreographic pattern, distance, duration, orientation, reflection, time-specific | 1 | duration, orientation, shadowing, time-specific |
| 2 | flux | 2 | flux |
| 3 | unlimited duration | 3 | unlimited duration |
| 4 | authentic | 4 | authentic |
| Stars (complementary: air , water) |  Chris Drury "Star Chamber", Vanderbilt Dyer Observatory, Tennessee, USA, 2006 [20] | Lightening (complementary: air) |  Walter De Maria "The Lightning Field", Western New Mexico, USA, 1977 [18] |
| 1 | angle, brightness, diurnal rhythm, enclosure, reflection, time and weather-specific | 1 | choreographic pattern, contrast, darkness, duration, lightness, motion, prediction, texture, vibrancy |
| 2 | flux | 2 | flux |
| 3 | unlimited duration | 3 | unlimited duration |
| 4 | authentic | 4 | artificial |

1 – the landscape visual measurement; 2 – flux/ static; 3 – unlimited duration/ fixed term; 4 – authentic/ artificial.

END OF TABLE 3

| | | | |
|---|---|---|---|
| Rainbow (complementary: air) |  Opening festival of „Riga 2014" European Capital of Culture, Riga, Latvia, 2014 [Source: photo by E. Alle, 2014] | Rainbow (complementary: air) |  Cai Guo-Qiang "Black Ceremony – Rainbow" Explosion Event, Doha, Qatar, 2011 [67] |
| 1 | brightness, choreographic pattern, colouration, colorfulness, contrast, darkness, duration, lightness, motion, prediction, rhythm, speed, texture, vibrancy | 1 | choreographic pattern, colouration, colorfulness, density, duration, mat, texture |
| 2 | flux | 2 | flux |
| 3 | fixed term | 3 | fixed term |
| 4 | artificial | 4 | artificial |

1 – the landscape visual measurement; 2 – flux/ static; 3 – unlimited duration/ fixed term; 4 – authentic/ artificial.

Selection of examples required sufficient effort because on the topic of research – nature elements and phenomena in the course of the year in the atmospherescape as a material for public art – there are no precedent exemplary studies so far. Therefore, there is no comprehensive summary from which to carry out the selection of examples. A large range of examples for case study was found in some groups. Materials that have already been identified intensely enough for creating public art, are revealed. Frequently, one element is highlighted and becomes popular and used in a similar artistic expression in art world; for example, it appears in ice sculpture festivals, fireworks, or other events of fireworks and airplane air shows. Each selected example reflects one or more natural elements and phenomena in the course of the year in the atmospherescape that are designed, used purposefully or unintended as additional components. Frequently, 'water' and 'light' elements are interrelated and combined. 'Air' element appears as an additional and unintended element in both groups, 'water' and 'light'. In turn, elements of 'wind' subgroup are not combined with other elements.

*Time and visual aspects of natural elements and phenomena in the course of the year in the atmospherescape used in the cases of public art*

The results show that the selected examples cover wide range and variety of the landscape visual measures by applying the landscape reading method according to the landscape visual measures in the case study (First criteria). Most frequently, the following the landscape visual measurements were used: Choreographic pattern, colouration, density, duration, sky reflection, texture, time and weather-specific. Traditional landscape measures can be used for space in the course of the year in the atmospherescape visual characterisation. New landscape visual measures can be supplemented from other sphere such as physics, optics, meteorology, climatology, photography and art.

Case studies show that the majority of works of art included dimension of time – fluidity in time of the landscape and its nature elements and phenomena (Second criteria). It appears in certain processes of nature phenomena such as melting and evaporation. Characteristic feature of nature processes is flux and short duration or ephemeral landscape depending on the course of the year and the weather. Inclusion of nature processes in works of art is relatively sophisticated. Examples are extremely rare where the process-based elements and phenomena of atmosphere are used such as rain, snow and evaporation. For authentic processes of raining and snowing, which are expressive phenomenon of the atmospherescape flux, examples were not found during current research.

During the investigation, either the nature elements and phenomena has unlimited duration or fixed term in a work of art (Third criteria), and thus it can be concluded that this was determined based on the scheduled duration of a work of art regarding the aim of work of art – either erected temporary or permanent. Part of works of art, which was developed to be temporal, could be permanently erected and naturally weathered. Surprisingly, that 'wind', which has unlimited duration as a nature phenomenon, was used in fixed term in works of art while 'lightening', which is short-term nature phenomenon, was settled in permanent work of art.

*Authentic and artificial natural elements and phenomena in the course of the year in atmospherescape in the cases of public art*

Both authentic and artificial nature elements and phenomena in the course of the year in the atmospherescape reflect selected examples (Fourth criteria). The following results were achieved through analysis of criteria by each group. In the subgroup 'clouds', both authentic and artificial criteria was found. Authentic 'clouds' directly are included or its reflection has been used in public art. In the subgroup 'fog', artificial criteria were found in all case studies. An example of authentic 'rain' in the process was not found. All examples with 'snow' are authentic, but an example of authentic 'snow' in the process was not found. Therefore, examples for 'rain' and 'snow' have been chosen approximate to the ground – pouring down rain and fallen snow. In the subgroup 'ice', both authentic and artificial criteria were found. In the case of Celestial bodies, 'the sun' and 'the stars' are used authentically, but luminous phenomena, 'lightening' and 'rainbow' are used artificially. In the subgroup 'wind', both authentic and artificial criteria were found. Colouring and illumination with coloured lights were used as attractive artistic technique for an artificial 'fog' and 'rain'.

The case study argued that either authentic natural elements and phenomena of the atmospherescape becomes a work of art itself or the work of art is activated by it. Everyday and authentic nature elements and phenomena of the atmospherescape are highlighted by many works of art. This corresponds to the ideas of the existential aesthetics and everyday aesthetic. It is concluded that direct natural elements and phenomena in the course of the year in the atmospherescape such as sun, wind and clouds are used notably seldom in public art, but they are adapted to situation of the site. Natural elements and phenomena of the atmospherescape as a material for public art more frequently used, but separately from the current landscape in the selected examples.

Hypothetical assumption that atmospherescape is 100 % authentic and that it is not possible to make changes for phenomenon in the course of the year in the atmospherescape, determined the case study by these criteria. Surprisingly, artists had found a way to imitate natural elements and phenomena of the atmospherescape in selected examples. This overturns the assumption that only authentic natural elements and phenomena of the atmospherescape may be included in public art and justifies the possibility that natural elements and phenomena of the atmospherescape can be artificially designed which becomes a part of the public art. If it works in public art, then it can also be applied to work of landscape architecture.

It was observed that natural elements and phenomena of the atmospherescape can be created similar to the authentic ones artificially with the help of technologies. This is reflected by the use of 'fog', 'wind' and 'light', to name a few. These are artificially created and introduced into the environment, imitating authentic material. At the same time, applicable technological potentials may change appearance of authentic material – artificial natural elements and phenomena are moving away from authentic ones in its resemblance. These alter human perception and at the same time, the authors of this paper their ability to recognise artificially natural elements and phenomena of the atmospherescape in public art and those selected for the case study. The midsummer bonfire or *Līgo* bonfire as reproduction of the sun, and particularly bonfire lifted on a pole, was Latvian historical example of public art that imitates element of the atmospherescape. This example indicates usefulness for historical research of this topic.

*Integration in theory of Landscape Architecture*

Artistic and craftsmanship work of landscape architect is to identify what is currently existing in the landscape and to make the necessary changes. A person with his or her subjective perception, choice and needs is the user of work by landscape architect. At the same time, a person can have a fragmented perception, and he or she chooses what to see and what not in the landscape. Landscape architect with creative and artistic means can both direct the user's attention and choice and highlight the course of the year in the atmospherescape in the context of the overall landscape. In order for natural elements and phenomena to creatively involve in landscape architecture projects, landscape architects need to cooperate with artists who have demonstrated successful integration of natural elements and phenomena in the course of the year in the atmospherescape in works of art.

In landscape architecture design, natural elements and phenomena in the course of the year in the atmospherescape can be used as a technique to create accent or culmination, background, separate face, space, environment, or the process such as an event or performance. Integration of natural elements and phenomena of the atmospherescape as a material for public art in landscape architecture can be arranged into two options. On the one hand, it is option for specific site: Regional or site specific nature elements and phenomena of the atmospherescape are highlighted in a creative way, which contribute to the place-making. Thus, particular natural elements or phenomena are highlighted; for example, 'sunset', 'sunrise' or 'rainbow'. This option can make people to see the

existing natural elements or phenomenon in a different way or form. On the other hand, it is new or issue-specific contribution carried into the site: these are foreign natural elements and phenomena introduced into an existing site. This option can be adapted or remain contrast to the site.

**Conclusions**

Climate, seasons, weather and diurnal rhythms in the continuum of time forms a system in the course of the year in atmospherescape and characterise accumulated experience and understandings of this phenomenon by humans. The continuum of time or the course of the year brings in the atmospherescape set of nature elements and phenomena and/or their transitions and change. The atmospherescape in the course of the year is infinite in time, and at the same time, its impermanence creates momentary ephemeral landscapes.

Viewing landscape as an artwork in the course of the year in atmospherescape brings in diversity of nature elements and phenomena and change or flux of landscape moments that form definite aesthetical landscape and create atmosphere or ambience of landscape.

In this study, nature elements and phenomena in the course of the year in the atmospherescape are systematised and summarised in three groups such as 'water', 'air' and 'light'. In response to the question of this paper, natural elements and phenomena in the course of the year in the atmospherescape are used as a material for public art. In the study, the division of the visual natural elements and phenomena in the course of the year in atmospherescape as artistic material was used in generalised terms. The following natural elements and phenomena have been identified from all the visual natural elements and phenomena in the course of the year in atmospherescape which is summarised in this research: 'clouds', 'fog', 'rain', 'snow', 'ice', 'atmospheric perspective', 'direction and speed of wind', 'the light of celestial bodies', 'the sun'; 'the stars', 'sunrise and sunset', 'lightening' and 'rainbow'.

Segmented range of natural elements and phenomena in the course of the year and its varied usage in public art was found during the selection of examples. For certain groups of natural elements and phenomena, a large number of examples is detected. The groups who have not yet reached the saturation point are open to active artist's experiments and their search for creative expressions.

It is concluded that characteristics of natural elements and phenomena in the course of the year in the atmospherescape have been successfully highlighted by artists that transform them to the art form and contribute to everyday aesthetics. A wide range and variety of visual means of expression of natural elements and phenomena is included in public art. Frequently, the dimension of time is included in public art – it is a process of natural elements and phenomena in the course of the year as artistic material for public art.

Both authentic and artificially natural elements and phenomena in the course of the year are used as a material for public art. Authentic natural elements and phenomena require a more thorough investigation and even more acute involvement in public art and adjustment to the site. Results of this study were surprising because of the fact that there is a high proportion of artificially natural elements and phenomena used in public art. With the modern technologies, both permanent works of art which include artificially natural element or phenomena can be designed in the public space, and artificially natural element or phenomena as a material for public art may take a place regardless during the course of the year. Therefore, in the context of technological development, it is necessary to review the idea archetype as to how the landscape is used in the course of the year.

This study extends the landscape architecture theory, and it can be applicable as a tool for practice in landscape planning, protection, conservation, management and design, as well as deepening the knowledge of the landscape as a material for public art.

The atmospherescape change in the course of the year is taken for granted, and at the same time, it embodies both sublime and everydayness. The artistic creativity in art works in public space as proved by this case study could highlight taken-for-granted natural elements and phenomena in the course of the year in atmospherescape on artistic stage, and thus they became sublime and festive from taken-for-granted and everydayness.

**Note**

All images have been used only for educational and illustrative purposes.

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**Kopsavilkums.** Ainavas mainība gada ritumā pieder pašsaprotamo fenomenu grupai, tomēr ainavu arhitektūras teorijā un praksē tēma pārsteidzošā kārtā ietverta pārlieku vienkāršoti un neatbilstoši uzkrātās pieredzes un zināšanu apjomam. Cilvēces sasniegumi zinātnē un kultūrā ir mainījuši cilvēku dzīvesveidu, ainavas uztveri un lietojumu civilizācijas, nācijas, dzimtas pieredzes vai atmiņas un pat cilvēka dzīves mērvienībā, bet gada rituma fenomens cilvēka laika uztveres mērvienībā ir palicis nemainīgs bezgalīgi. Līdzīgi kā ikvienu paradigmu, ir nepieciešams pārskatīt arī izveidojušos arhetipus, kā tiek lietota ainava tās gada rituma mainībā.

Ainavu arhitekta radošuma izpausmes materiāls ir ainava – sistēma ar tās elementiem un procesiem. Ainava ir lielākā sabiedriskā ārtelpa. Šis pētījums veidots, lai paplašinātu zināšanas jomā, kur ainavu arhitekts darbojas kā ainavu mākslinieks. Pētījuma mērķis ir noskaidrot, vai un kā mākslas darbos sabiedriskajā ārtelpā tiek izmantoti atmosfēras ainavas gada rituma dabas parādības un elementi kā materiāls. Ar atmosfēras ainavu tiek saprasta ainava virs zemes virsmas līmeņa, kas cauri gaisa ainavai tiecas uz bezgalību debess un visuma ainavā. Mākslas darbu sabiedriskajā ārtelpā izvēli piemēru izpētei noteica to relatīvi mazais mērogs, īslaicīgums, eksperimentālais un pionierraksturs salīdzinājumā ar ainavu arhitektūras darbiem.

Pētījums veikts divās daļās. Pirmajā pētījuma daļā veikta ainavas gada rituma konceptuālā izpēte, lai noskaidrotu un sistematizētu visus izpētes objekta aspektus un apkopotu kritērijus turpmākā pētījuma veikšanai. Pētījuma otrajā daļā veikta mākslas darbu sabiedriskajā ārtelpā piemēru izpēte. Konceptuālas izpētes rezultātā klimats, gadalaiki, laikapstākļi un diennakts ritmi laika plūdumā identificēti kā gada rituma atmosfēras ainavas sistēmas tematiskās grupas un raksturo cilvēku uzkrāto pieredzi un sapratni par šo fenomenu. Ūdens, gaiss un gaisma izdalīti kā gada rituma pamatelementi atmosfēras ainavā. Ainavu arhitektūras teorijas kontekstā tika sistematizētas gada rituma vizuālās dabas parādības un elementi atmosfēras ainavā un tika meklēts to lietojums mākslas darbos sabiedriskajā ārtelpā. Trīsdesmit mākslas darbi sabiedriskajā ārtelpā tika atlasīti piemēru izpētei. Tie ietvēra gan autentiskas, gan mākslīgi radītas atmosfēras ainavas gada rituma dabas parādības un elementus. Izpēte apgāza hipotētisko pieņēmumu, ka atmosfēras ainava ir 100 % autentiska un gada rituma fenomenam atmosfēras ainavā nav iespējams veikt izmaiņas. Pārsteidzoši, ka izvēlētajos piemēros mākslinieki bija atraduši veidu kā atdarināt atmosfēras ainavas dabas parādības un elementus, izmantojot mūsdienu tehnoloģiskās iespējas.

Ainavu arhitekts ar radošiem un mākslinieciskiem paņēmieniem var virzīt ainavas lietotāja uzmanību un izvēli un izcelt gada rituma atmosfēras ainavu kopējās ainavas kontekstā. Pētījums pierādīja mākslinieku veiksmīgu spēju integrēt atmosfēras ainavas dabas parādības un elementus mākslas darbos. Tas liecina par iespēju ainavu arhitektūras projektos iekļaut mākslinieku uzkrāto pieredzi. Pētījums padziļina zināšanas par ainavas kā mākslas darba radīšanu. Skatot ainavu kā mākslas darbu – gada ritums atmosfēras ainavā ienes dabas parādību un elementu daudzveidību un mainību jeb ainavas mirkļu plūdumu, kas veido noteiktu estētisko ainavu un rada mainīgu ainavas gaisotni. Piemēru izpēte liecināja, ka mākslinieku radošā pieeja izceļ pašsaprotamos ikdienas ainavas elementus mākslas darbos sabiedriskajā ārtelpā jaunā mākslinieciskā kvalitātē, tiem kļūstot no ikdienas un pašsaprotamiem uz diženiem un goda elementiem.

# Contemporary Art in Cultural Landscape: Experience and Opinions

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**Abstract. In this paper, research results are presented to understand the experience and opinions of experts from both landscape and art fields about art in public space in Latvia, exploring options to develop the cultural landscape with the help of art in public space. The research is based on in-depth interviews with Latvian and international experts using the "snowball" sampling method. The paper identifies references and thesis of respondents emerging from the analysis of interview transcripts and outlines them in three broad themes. Thus, the subjects and directions dominating in the cultural landscape of contemporary art have been clarified, correlating similarities and differences on the theoretical level, as well as on the local and international level.**

**Key words: contemporary art, public space, in-depth interviews.**

## Introduction

The general mission of urban design is to improve the quality of human life [4]. Art in public space can be an instrument to create dynamics at the site and to ensure community interaction. The impact of art emerging in public space can be characterised by urban regeneration, public space revival, enchanting or attracting people, creation of the sense of a place and contributing to the preservation of cultural heritage values, added value to the place, to mention just a few [9, 20]. In research literature, several claims have been proposed, in regards to the role of art in public space [10; 12; 15; 16; 17; 20; 21]:

- Physically aesthetic requirements, which include the improvement of aesthetic quality [11, 18, 20];
- Economic requirements, which include the improvement of economic activities [6, 7, 14];
- Social requirements, which include the facilitation of the community and social interactions [3, 5];
- Cultural and symbolic requirements, which include the creation of a symbolic value [13, 15, 19].

Thus, art in public space gives rise to a diverse range of effects in socio-political, economic, and cultural fields.

The topicality of this research is conditioned by the relatively broad and intensive engagement of contemporary art in the urban environment that has become especially relevant in the cultural area both on a global scale and in Latvia. Whereas the situation in Latvia indicates that the potential and resources of contemporary art are not fully exploited. In Latvia, at the local planning level, when accepting and integrating art projects for the improvement of urban environment, frequently a lack of general understanding of the role, utilisation and different manifestations of art in public space is evident. Wherewith, proposed a series of research questions: What ideas and directions of interaction between the cultural landscape and contemporary art are used in the Latvian cultural landscape? Are opinions similar of experts from both landscape and art fields about art in public space in Latvia?

The paper aims to clarify the opportunities for contemporary visual art used in the creation of the cultural landscape, as well as to identify how the various agents (persons who are endowed with the authority and influence) understand the trends of the interaction between the cultural landscape and contemporary art in Latvia and their usage in landscape creation from a theoretical and practical perspective.

This research is a part of PhD thesis "Contemporary Art in Latvian Cultural Landscape" carried out in Latvia University of Agriculture in 2013 [1].

## Research Methods

This research was carried out between 2011 and 2012 with an aim to find out the most characteristic features for contextualising visual works of art in public space in Latvia. The research method included the use of qualitative data using the in-depth interviews. The present enquiry was targeted to obtaining the opinions of specialists; therefore, it does not include the opinions of the general public.

*Respondents*

For the analysis of expert opinions, semi-structured interviews were conducted with respondents who are related to practical and theoretical landscape science and/or visual art field. The in-depth interviews have been grounded on two levels of respondents:

- The group of informants (providers of reference) – those respondents, who have noticed something and as "creators", developers and concept providers, convey it for the assessment and perception of the general public (1st level). The respondents of the 1st level are divided in two groups – reference agents

(curators and artists) and decision makers (representatives of municipalities and planners, namely, landscape creators);

- The group of experts (reference recipients and evaluators) – those, who perceive, assess and distinguish outcomes, trends and opportunities ($2^{nd}$ level). The respondents of the $2^{nd}$ level can be divided into experts, whose professional area of operation is related to the landscape science or art fields. Some respondents in various stages of their lives can be included in both categories.

Several modes were chosen for the selection of respondents: Firstly, getting acquainted with the Latvian Centre for Contemporary Art in Riga, which can be characterised as one of the key developers of contemporary art in Latvia. Further respondents were sought out, using the "snowball" sampling method [2; 8]. Accordingly, the current respondents informed not only about the research topic, but also the use of this sampling approach determined the range of other potential research participants. In this way, each respondent provided the name of the next individual, who might be familiar with the subject of the research. However, in the interest of diversity, and when one cannot follow the proposed direction advanced by one contact person, cross-references from several research resources were used. Therefore, theoreticians, architects and a community worker were also included in the pool of respondents. Respondents were chosen depending on their area of operation with a goal to obtain as broad perspective on the current use of the connections between the contemporary art and the cultural landscape in Latvia as possible. Thus, the number of respondents initially was not strictly fixed, and it was changed and supplemented during the research process.

In total, 14 in-depth interviews were conducted with both Latvian and international respondents, out of which, five were reference agents, four were decision makers and planners and five were experts and observers. Among the respondents, there were representatives of various occupations, professors, and representatives of municipalities, a geographer, architects and artists, who had worked or were working at the local municipalities at the time of the interviews. Serial interviews facilitated deeper rapports with the selected respondents during the research.

In general, the number of respondents related and unrelated to the art field is equal. Most of the selected respondents live in Riga, Latvia or in the vicinity of Riga. The majority of the respondents live and/or work in Latvia, however two respondents have lived and worked abroad longer than five years. Two respondents are foreign experts, who do not live and work continuously in Latvia, as well as one foreign expert, who lives and works in Latvia. The majority of the respondents are in the age range from 30 to 60 years.

Each empirical study raises the question of credibility, whether the selected number and range of respondents have identified the observed processes in relation to the cultural landscapes. In the framework of this research in a small number of interviews, it was observed that certain aspects in the answers become similar with an opportunity to identify the differences of opinion, thus reaching the point of saturation [8].

*Methods applied in interviews*

Interviews were based on ethnographic approach. Thus, approaching the opinion of respondents was performed, where the researcher was involved in a longer conversation on the subject, encouraging the respondent to explain and expand his or her opinion in his or her own words [2]. To ensure its success, the interviews in the research were semi-structured. Questions have been arranged in a manner to establish a conversational format, attempting to obtain the respondent's story and leaving space for the description of the respondent and provision of valuable examples.

The interviews have been carried out on the basis of previously provided groups of questions, which were correspondingly divided according to the levels of respondents. For the interviews with the representatives of the reference agents (curators and artists), individual questions were developed. The goal of interviewing this group was to clarify how the representatives of the group perceive the landscape, what their relationship to the landscape is, whether they use the narratives of the place and what the most essential component in their work settings is. The questions have been grouped into three groups:

(1) the meaning of landscape and usability in the working process;
(2) understanding of Latvian landscape and formation of the landscape in the context of political power, touching upon changes after the restoration of Latvian independence, namely since 1991. The goal of the questions is to find out how respondents see the State of Latvia as the creator of the "story" of a contemporary landscape through its values and human relations, as well as to study the usability of landscape as an archive in contemporary art practice; and
(3) inclusion of public in the creation of works of art and observations of human activities and actions beside contemporary works of art.

The second part of interviews with decision makers and planners, as well as the group of experts and observers or evaluators, formed the greatest part of respondents. Interviews have been structured in such a manner to find out the theoretical understanding of respondents, attitude towards the contemporary landscape and art strategy and preferences and motivation, understanding of Latvian landscape and development in the context of contemporary art and public actions. The structure of interviews ensured that the respondents spoke about the projects or individual cases from their own or other practice, which they regard successful, representable or unsuccessful. The questions have been grouped in four groups:

(1) indications on how the experts understand the latest conceptions, trends and practical usability of the interaction between the landscape and contemporary art nowadays. Factors affecting the understanding of the usability of contemporary art in the creation of the cultural landscape are studied, as well as the synchronisation of the approaches is sought;
(2) introduction of contemporary art in the landscape and contextuality, clarifying the actions and opinion of respondents regarding the relations between the cultural landscape and the work of art;
(3) understanding and formation of Latvian landscape in the context of political power, touching upon changes after the restoration of Latvian independence;
(4) observations of human activities and actions beside contemporary works of art.

In order to assess the scope of interview questions, several pilot interviews were initially carried out, during which inaccuracies in questions were identified. After these pilot interviews and after the clarification of the questions was conducted, certain questions were modified, depending on the professional expertise and specific circumstances of each respondent.

Only by summarising the results of all interviews, it was possible to determine a complete scope and direction of the research topic. Among these, 12 interviews were organised in person, two respondents were interviewed with the help of the Internet (by means of a video conversation (Skype)), three respondents interviews were carried out in writing by means of e-mail correspondence. In order to broaden the subject of the research, six interviews were repeated. The reasons for these repeated interviews were determined by: (1) the role of the individual respondent in the study of the research object and (2) the revelation obtained in the initial interview required expansion and further explanation. The duration of each interview was from one to two hours in length. The interviews relied heavily on the cooperation of the respondents and the scope of the information range.

*The data analysis*

The aim of the research was to correlate similarities and differences so as to characterise the understanding and usage of contemporary works of art in the cultural landscape and in order to determine the main commonalities and features based on the transcripts of the respondents. Not surprisingly, there was no consistent perspective in the opinions of the experts. Categorisation and determination of the main themes have been applied for the data analysis. The empirical material has been analysed using the following principles:

- what common topics emerge;
- what interesting stories are offered by respondents;
- whether any of the selected examples and topics indicate any necessity to obtain additional data.

The analysis of the understanding and usability of the interaction between the existing contemporary works of art and the cultural landscape was an on-going process, during which new topics and conclusions have emerged, supplementing the initial interview questions. Some interviews branched into various directions of opinions and professional interests, resulting in uneven development of the topics expressed in the interviews and in their degree of depth.

**Results and Discussion**

In the framework of this section, the references and theses used by the respondents have been systematised by drawing parallels between similarities and differences in terms of opinions and understanding. The results of interviews provide evidence that several significant themes have crystallised, yet some of them have not reached the saturation point.

After listening to a series of interviews, re-reading the notes and transcripts of the respondents, conceptualisation of the applied references and theses was carried out. Close attention was paid to a number of the ideas mentioned, which were repeated or supplement each other. After the identification of references and main theses, the broad themes which reflect mutual correlations have been established. Similarities among several ideas have been identified and they have been grouped into sub-themes.

Furthermore, three broad themes have been identified:

- "Process" – references and theses that reveal the active processes in the landscape, strategies and methods, as well as reflecting the ways the works of art are integrated in the landscape;
- "Result" – references and theses that express and characterise the influence of the works of art on the landscape, the public opinion and the assessment of this influence;

- "Continuation" – references and theses that reveal the purpose and intention; that is, future-orientated perspective, trends, development perspectives. On-going processes, modes of expression and the avoidable aspects have been proposed.

The broad theme "process" reveals the positive directions that respondents have mentioned in relation to the integration of contemporary work of art in the landscape, as well as entailing the distinction of approaches based on the object and methodology. In total 17 sub-themes have been identified, as illustrated in Table 1.

The broad theme "result" emphasises the impact to nature, mostly analysing the features of the object, as well as the context of the landscape, methodology and society. In total 14 sub-themes have been defined, as illustrated in Table 2.

The broad theme "continuation" reveals the desirable movement, development in future or the crucial aspects that must be taken into consideration when creating a qualitative cultural landscape to integrate contemporary works of art. In total 12 sub-themes have been distinguished, as illustrated in Table 3.

TABLE 1

The broad theme identified in interviews – "process" [Source: construction by author]

| No | Sub-theme | References and theses of respondents |
|---|---|---|
| 1. | Decision-making | ▪ Policy holding outside the processes<br>▪ Democracy depreciates the value<br>▪ Decision-making among experts<br>▪ "Everything [..] is determined by politicians" |
| 2. | Respect for landscape and impact of individual | ▪ "Game" and theatre<br>▪ Need for the spectator<br>▪ The individual –artist impact<br>▪ Respect for history and culture |
| 3. | New place creation | ▪ Community participation in guidance development<br>▪ Creation of new stories, "to sell a legend like a contemporary story"<br>▪ Required creation of events, naming places and interventions<br>▪ Building strong landmarks |
| 4. | Highlighting of place | ▪ "When someone works, it becomes useful"<br>▪ "Bringing forth"<br>▪ "Digging under the surface"<br>▪ Local character |
| 5. | Manner and time of viewing | ▪ Landscape affects our subconsciousness and way of being<br>▪ Sometimes there is no responsibility for this period of time in contemporary works of art |
| 6. | Use of narrative | ▪ The main aspect is "how" rather than "what" is represented in sculpture |
| 7. | Ensuring harmonious relationships with the site | ▪ Search for the appropriate site<br>▪ Implementation of work of art for the particular location and situation<br>▪ Discrepancy with the site gives rise to pollution |
| 8. | Latvian landscape elements as a value | ▪ Nature, its elements; urban structure elements; characteristics of perception and lifestyle<br>▪ Urban dimension, scale, proportion, material; landmarks; natural factors; parks; wooden buildings in the historical centres of city; heritage of the Soviet Union<br>▪ "National Romanticism" |
| 9. | Inhabitation of the cultural heritage | ▪ The museum as a workshop, where "something is going on continuously"<br>▪ Thinking about the past is an obstacle for creativeness |
| 10. | Arts and cultural processes | ▪ Distinction between municipalities and private initiatives<br>▪ The driving force of individual initiative |
| 11. | Role of new media art | ▪ Advancement of new media art |
| 12. | Self-reflection | ▪ Use of language that "does not tell in an intrusive way"<br>▪ Sending a clear message through particular instruments |
| 13. | The "language" of an individual genre of art | ▪ Use of multiple levels of the message<br>▪ Use of informative posters |
| 14. | Connection of community with the place | ▪ "People should be closely related to the site"<br>▪ Awareness that "this connection may be established" |
| 15. | Process of creation | ▪ Creation of a work of art as a means of meditation |
| 16. | Artist's sense of the landscape and the landscape as a source of inspiration | ▪ Artist's relationship with the place and landscape<br>▪ "Landscape fascinates"<br>▪ "I feel being in the landscape"<br>▪ A work of art does not emerge by chance |
| 17. | Limitations of the community engagement | ▪ Threats – the community is not involved at all<br>▪ "Living environment"<br>▪ Formation of common sites<br>▪ "Strategy of seduction" |

TABLE 2

The broad theme identified in interviews – "result" [Source: construction by author]

| No | Sub-theme | References and theses of respondents |
|---|---|---|
| 1. | Statics and stagnation of today | ▪ Inability to abstraction and creation of symbols<br>▪ Nature (mentality) should be national<br>▪ Lack of ambition of contemporary art<br>▪ Few samples of modern trends |
| 2. | Duration of realisation | ▪ Actions express city creativity<br>▪ Activation of issue and "going further"<br>▪ Maintenance of people thinking process<br>▪ Temporary artworks refresh urban environment |
| 3. | "Other view" and creation of appropriate language for generations | ▪ A different perspective on things<br>▪ Permanent art is so lifeless and solid<br>▪ Use of generation "adequate language"<br>▪ Attracting of attention |
| 4. | Acceptance or rejection of unknown | ▪ Distancing factor<br>▪ Prejudice towards contemporary works<br>▪ Capacity and the ability of art elements to change<br>▪ Education and information |
| 5. | Interconnection between a landscape and a work of art | ▪ "Coordination with the environment"<br>▪ "Walking is like a work of art in the landscape"<br>▪ "If the initiative comes from the inhabitants of the place, they accept the idea." |
| 6. | Confrontation and reconciliation with the setting | ▪ The need for explicit motivation and ideas<br>▪ Challenge and provocation<br>▪ Effect of the unexpected and plump<br>▪ Adaptation of the implemented work of art into the landscape |
| 7. | Role of the theme | ▪ Theme parks<br>▪ Presentation of "the creator's" target |
| 8. | High-quality art in public space – outside the museum environment | ▪ Great opportunity for viewing art outside the museum space<br>▪ We "should to take into consideration that nothing emerges in an empty space" |
| 9. | Art as part of a community | ▪ "An important part of the city"<br>▪ "Power" of interventions at the moment |
| 10. | A work of art as a mediator | ▪ Intermediate stage between the real and the unreal world<br>▪ Ability of description |
| 11. | Change of the artist's vision | ▪ A different perspective after a distance in time |
| 12. | Stories – part of the urban landscape | ▪ Urbanism as a holistic work of art<br>▪ Problem of communication<br>▪ Public space "that advances the story about the city"<br>▪ Conservation of the "signs of time" |
| 13. | Code of conduct and security | ▪ Deliberate demolition<br>▪ Prevention of threats to users, promotion of maintenance<br>▪ "It is pleasant that people take pictures of the work of art" |
| 14. | Response and inhabitation of a place | ▪ Retrospective perspective at something that so far has not been there<br>▪ The successive stage – inhabitation |

TABLE 3

The broad theme identified in interviews – "continuation" [Source: construction by author]

| No | Sub-theme | References and theses of respondents |
|---|---|---|
| 1. | Landscape transformation and rehabilitating of the environment | ▪ Art as an instrument to enhance the quality of the landscape<br>▪ The creative process – the landscape is constantly modified<br>▪ Established limits<br>▪ The "variable" character of landscape |
| 2. | Long-term settings and impact on the private space | ▪ People are affected by what appears in the public space<br>▪ Experience transmission and adaptation<br>▪ Marketing emphasis<br>▪ Complexity of continuity |
| 3. | (Political) power to set the action | ▪ Need for cooperation between architect, artist and landscape architect<br>▪ Non-sequential action<br>▪ Lack of view on the future<br>▪ Reliance on cultural politics |
| 4. | Borders of the understanding | ▪ "Gap" between the contemporary thinking and discourse of the Soviet era<br>▪ Conversations with the people and explanation<br>▪ Running through the culture, but not going at depth<br>▪ "Quality Projects" |

END OF TABLE 3

| No | Sub-theme | References and theses of respondents |
|---|---|---|
| 5. | Potential of the peripheral territory of the city | ▪ Increased ability of the city periphery<br>▪ Creation of an alternative lifestyle |
| 6. | Pluralism | ▪ Multiple identities and features of society |
| 7. | "United orchestra" | ▪ Creation of environment is collective work<br>▪ By connecting multiple layers "the arrangement obtains a pretty good audio effect" |
| 8. | Political process of forming the landscape | ▪ National commitment and elaboration of the "bottom-up" initiative |
| 9. | Risk of urban environment | ▪ Contemporary art at risk of becoming a phenomenon of urban life |
| 10. | Planning perspective | ▪ Lack of planning of temporary activities and decorative sculptures<br>▪ Advantage of thoroughly considered decisions<br>▪ Lack of sustainable projects |
| 11. | Use of space and interaction with objects | ▪ Repetition of the intervention for several times<br>▪ Place-making<br>▪ Interaction between inhabitants and installations<br>▪ Mutual trust in communication |
| 12. | Creative landscape, economic context | ▪ "Creativity" as one of the major powers<br>▪ Creativity is freedom and liberation |

Curators tend to discuss art and landscape theories more, but artists are more inclined to interpret the landscape as a source of inspiration, focusing on the artistic idea and conception. Thus, two approaches can be distinguished. There are those specialists, who use their artistic ideas and later directly or adaptively apply them in the landscape, and those, who create their own work on the basis of the "sense" of deeper cognitive layers of the landscape. On the other hand, representatives of municipalities focus their opinion on the overall image of the cityscape and building a single open space, as well as to certain restrictions of political power and the decision-making processes. The majority of the respondents recognise the need for active promotion of public engagement; however, a little practical action can be observed. The tendency to refer to urban interventions and site-specific art in the light of local conditions is recognised in the expert group.

Respondents' understanding of the interaction between the cultural landscape and contemporary art can be summarised as follows:

- landscape – at the beginning of the interview, each respondent had to agree and clarify individually what is understood by the term "cultural landscape" because of its extensive and multi-dimensional meaning. Two types of the "landscape" concept in relation to the reception of the work of art can be distinguished. First, it is as a background. Second, it is as a field of activity or a material, studio, canvas that is used and manipulated with constantly on-going events. The second type consists of those respondents who work and are in direct process to affect the landscape. All respondents are most keen to understand the landscape in a broad sense, including both rural and urban setting. The landscape is assessed in a wide range, while the sculptures in Latvian "landscape" are understood more stereotypically by sculpture symposia related to the placement of sculptures in the landscape. In the majority of interviews, respondents recognised the uniqueness of Latvian landscape, the importance of preserving "clean" rural landscape and its inherent rhythm, while more attention was paid to natural (geographical context) and anthropologically established values such as rivers, parks, architecture, and landmarks in urban landscapes;
- contemporary art – respondents in this category focused more on various expressions of visual works of art, used materials, ideas, creative process. Both temporary and permanent work of art has its own expression, aim, efficiency, duration in the landscape and other characteristic parameters. A work of art is viewed also as a mediator. Therefore, the need for the use of "adequate, normal language" to be understood by a new generation is necessary, as it would strengthen the connection between generations. A group of artists, who relate their works to the context of landscape, emphasise the sense of landscape and need for creativity;
- contemporary art in the cultural landscape – one-third of the respondents is able to evaluate the cultural landscape and contemporary art in mutual interaction, irrespective of the analogy of field represented by the respondents. It indicates that the connection between the cultural landscape and contemporary art. It is expected that it is related to respondents' experiences in contact with the landscape and/or the work of art. The respondents of the 2nd level are more focused on the interaction

between the landscape and the work of art, rather than as separate units. A small part of respondents mentioned the careful attitude towards the landscape in order not to "harm" the landscape by placing works of art. The saturation level of space and environmental "pollution" conditions resulting from the exhibited works of art have to be evaluated according to the individual character of the landscape.

Public engagement in the implementation processes of art in public space is controversially viewed, revealing both democratic and non-democratic approaches, and a willingness to reduce bureaucracy, in order to provide more opportunities to the public. In several interviews, support for both democratic and non-democratic approaches to implement art in public space was expressed. This is based on the representative and unrepresentative division of public space, thereby establishing formal or elitist and informal public spaces. These preconditions have been the first to be allowed to determine the possible manner of interaction between the landscape and the work of art.

## Conclusion

From the analysis of interviews, it can be concluded that the data saturation has been reached in most of the identified themes. However, there are topics that require further research. In the future, broader research can be carried out in several directions such as assessing the role of the landscape architect as a mediator and investigating strategies of public engagement through art in public space.

Diverse understanding of the cultural landscape and contemporary art has been revealed that influences the improvement of connections between the cultural landscape and contemporary art in the future. The themes that require more balanced cooperation among the specialists of the cultural landscape and contemporary visual art and elaboration of more explicit landscape planning and designing strategies have been identified in this research project.

Nevertheless, the level of theoretical understanding of art in public space is not sufficient among the specialists of the cultural landscape and contemporary art. In the process of establishing cultural landscape, cooperation among certain field specialists is not yet ensured. Thus, this is an area of cultural landscape that warrants further research and investigation.

## Acknowledgements

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**Kopsavilkums.** Raksts atklāj skatījumu uz Latvijā notiekošiem mākslas publiskajā ārtelpā procesiem, kas palīdz izzināt kultūrainavas veidošanas iespējas ar mākslas publiskajā ārtelpā palīdzību. Pētījums balstīts uz intervijām ar Latvijas un starptautiskiem ekspertiem, izmantojot "sniega bumbas" principu. Respektīvi esošais respondents informē ne tikai par izpētes tematu, bet arī par citiem potenciālajiem pētījuma dalībniekiem.

Intervijās noskaidrotas kultūrainavas veidošanā izmantotās mūsdienu mākslas iespējas un kā dažādie sociālie aģenti (personas, kuras apveltītas ar autoritāti un ietekmi) saprot ainavas un mūsdienu mākslas mijiedarbības tendences Latvijas kultūrainavā un lietojumu ainavu veidošanā teorētiskā un praktiskā skatījumā. Pētījuma ietvaros meklēts kopīgais un atšķirīgais pieejās un izpratnē. Līdz ar to sistematizētas respondentu biežāk lietotās atsauces un tēzes, kas izriet no interviju transkriptu analīzes. Izpētes gaitā tika identificētas trīs plašākas virstēmas: "process", "rezultāts" un "turpinājums".

Izpētes rezultātā atklāta kultūrainavas un mūsdienu mākslas daudzveidīgā izpratne, kas ietekmē kultūrainavas un mākslas saskares vietu pilnveidošanu nākotnē. Konstatētas vairākas tēmas, kuras izkristalizējušās kā nozīmīgas, bet dažas no tām nav sasniegušas piesātinājuma punktu. Pētījumā atklātas tās tēmas, kas prasa sabalansētāku nozaru speciālistu sadarbību un pilnīgāku ainavas plānošanas un veidošanas stratēģiju izveidi. Turpmāk padziļināts pētījums veicams vairākos virzienos, ietverot ainavu arhitektūras kontekstu un izvērtējot ainavu arhitekta kā mediatora lomu un ainavu plānošanas procesu, kā arī sociālās iesaistes stratēģijas. Līdzšinējais teorētiskais izpratnes un savstarpējais kultūrainavas un mūsdienu mākslas mijiedarbes līmenis nav pietiekams speciālistu vidū. Kultūrainavas veidošanas procesā nav nodrošināta atsevišķu nepieciešamo nozaru speciālistu sadarbība.

# Energy efficiency in the development of landscape space

Anna Gančorova, *Latvia University of Agriculture*

**Abstract. The topicality of the subject stems from a lack of energy resources and dependence of many countries, including the countries of the European Union, on energy imports and the need of the limitation of climate changes. With the introduction of energy efficiency measures, the economic situation of the countries improves, environmental pollution reduces. Consequently, when drawing up development plans at various levels – the regional, national, local levels, a major focus is laid on energy efficiency. In the strategy of the European Union's sustainable development "Europe 2020", increasing of energy efficiency has been approved as one of its fundamental objectives, which includes saving 20 % of the EU primary energy consumption up to 2020, compared to the forecast. With the introduction of energy efficiency measures for the development of local governments, transformation of the landscape occurs, which is reflected in the aesthetic quality of the landscape space and it puts focus on the aspects of the development of the local territorial planning.**

**Keywords: rural and urban landscape space, energy efficiency.**

## Introduction

The Latvian authorities pay great attention to sustainable development, which depends on the state of the economic, ecological and social environment, which is linked to the energy efficiency indicators. Within this framework, energy efficiency measures are viewed that visually affect both the rural landscape space and the urban environment.

The study involves several measures of energy efficiency:

- the production of renewable energy, using solar panels and collectors, wind generators and bio-energy plants;
- saving, organizing the urban infrastructure, improving energy efficiency in buildings and switching to LED lighting;
- activation of the existing resources, by introducing rainwater collection systems in the cities for further use in the household and waste sorting and recycling.

*The aim* of the study: to evaluate the types of energy efficiency measures, the opportunities of their utilization in the development of the urban or rural landscape space.

A number of *assignments* are moved forward:

- Study the world examples that successfully implement energy efficiency measures for the development of local governments.
- Evaluate the impact of the energy efficiency technology, equipment, measures on the urban space from the visual aspect of the landscape.

The *hypothesis* of the study - the utilization of energy efficiency measures in the local planning, so improving the urban (rural environment) visual design and sustainable development of the territory.

## Materials and Methods

The study is based on using several methods:

- the analysis of the scientific literature and the implemented projects;
- the study and analysis of the international legislation and legislation of the Republic of Latvia in force;
- survey in nature, photo fixation, evaluation of viewing lines, silhouettes;
- the study and analysis of foreign experience.

The study of energy efficiency includes a number of cross-industry trends – engineering-technological solutions in construction, territorial planning, environmental management and the evaluation of landscape space to find successful solutions for sustainable planning in regionally different local governments.

## Discussion

According to the definition, energy efficiency is efficient utilization of energy and it has an important role in the modern trend of the industrial development to decrease the likelihood of natural disasters. The aim of energy efficiency is to lower consumption of non-renewable and partly renewable resources and improve environmental quality.

In the past 10 years, primary energy consumption is increasing yearly, on average by 2.6 %, in 2012 it accounted for 1.8 %, indicating a slowdown in growth [1]. Throughout the world, significant attention is paid to energy consumption and the reduction of its negative consequences. Various types of energy generation and consumption have an impact on the environment and ecology. For instance, energy generated from renewable natural resources, such as the sun and the wind, is more environmentally friendly than that from fossil fuels.

Throughout the world, in different regions and at all levels - the international, regional, national, municipal, sustainable development strategies, directives, regulations, legislation are being developed, which largely focus on energy efficiency:

Development strategy "Europe 2020" which aims to promote growth and employment in the EU as a whole and for each Member State separately. For the strategy "Europe 2020"– one of the key objectives is to increase energy efficiency to 20 % by 2020 in the European Union [2];

Each European country has drawn up its "National Renewable Energy Action Plan", which sets concrete goals and tools for their achieving in the sphere of generation of renewable energy [3];

Directive 2011 "*Energy Performance of Buildings"* requests for 2020 to achieve near-zero energy consumption for all new and rebuilt buildings [4].

In the field of efficiency, the above documents are primarily based on two objectives:

- the increase in energy generation from renewable resources;
- energy saving measures.

In 2012, in Europe and Asia, consumption of energy from renewable resources, excluding hydropower, totals to 4.7 %, and this result is increasing rapidly each year [1].

In designing sustainable development plans, local governments stop at the principle that three dimensions must be balanced: the economy, ecology and social environment (Fig. 1) [5].

The balance of the economy, ecology and social environment is basis for sustainability, but there is still one important dimension - aesthetics. A healthy ecological state of the environment is clearly aesthetically high, thanks to the biological diversity, the environmental cleanliness and the health of plants. Following on from that, the three-dimensional scheme can be extended up to four dimensions, creating balance and harmony.

It is impossible to create a universal sustainable development plan for a local territory, because each of them has a unique geographical location, the climatic conditions, the economic situation, the size of the territory, the number of population and cultural environment.

When planning the landscape space, it is important to ensure the comfort of the development of the society: without using the road transport to faster get to the office, school, sport complex, etc., reducing environmental pollution and leaving a positive impact on the human health. These requirements are generally easy to get for small, compact cities. If the city is characterized by the development of the centre, then the population density increases, property prices are rising and this contributes to the building of a suburban area.

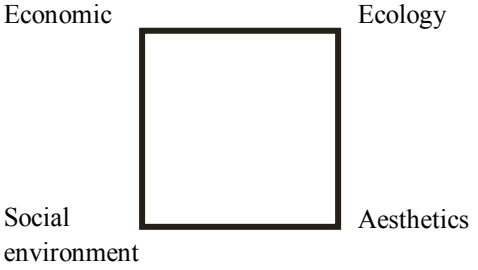


Fig. 1. A four-dimensional model of a successful development of the local government [Source: construction by author, 2013].

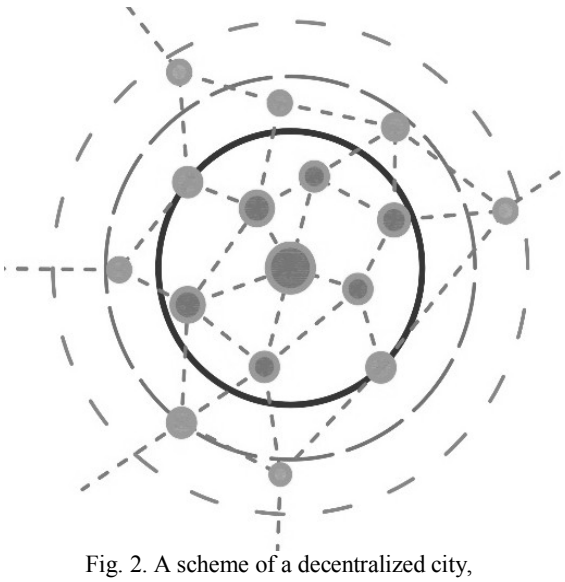

Fig. 2. A scheme of a decentralized city, with small centers in the city, in the suburbs and in the rural area, connected by green corridors [Source: construction by author, 2014].

The subsidiarity or a new building of the satellite type, in a high degree of comfort must ensure citizens with the necessary distance of institutions from the place of residence and with sound infrastructure, with green corridors between them, which positively affect the urban microclimate [6].

Cities should aspire to independence: the generated energy must exceed consumption of energy; production must be developed and it should be moved to non-waste production, which minimizes the ecological footprint.

A sustainable development of the local government requires the support of several resource types: physical, social, economic, biological, organizational, cultural, historical and aesthetic resources. The city's sustainable development requires a comprehensive and diversified development [5].

A new approach to urban planning includes seven categories:

- *Strategic territorial planning area.* Its essence is to choose the direction of the local government/city development, define the goals and principles of the development that would ensure balance in all four dimensions.

- *Integrated spatial planning.* The goal is to replace the traditional territorial planning and spatial planning. It is based on the principle of subsidiarity and the desire to integrate public outdoor space functions with the individual, user needs.
- *Control and management of the land.* Based on an informal approach to spatial planning.
- *Process for participation and partnership.* Based on the public participation in the planning process.
- *The solution of the problem of the city's industries with an approach and experience of an international agency.* Directed to the solution of important problems of the urban environment through the experience of other cities and cooperation with other cities in problem solving.
- *New forms of general planning.* Based on the existing urban replanning and democratic solution to the problem.
- *Planning with the objective of creating new spatial shapes.* Based on the creation of a friendly environment with mixed functions, spacious public areas, pedestrian-friendly infrastructure [7].

Energy efficiency measures have an impact on four dimensions of a successful and sustainable development of the local government:

- economy - new jobs in the energy sector, the population survival charge reduces, local governments become less dependent on energy imports, and, if the development is successful, may even export energy;
- ecology – consumption of non-renewable resources and environmental pollution are reduced, which results in improving the urban microclimate;
- social environment – with new jobs and decreasing of the costs of living, the standard of living of the inhabitants increases, which positively affects the comfort of the local population;
- aesthetic – energy efficiency measures affect the visual image of the municipality and the city. The scale of the impact is varied, starting with the landscape space of a single yard and finally to the city scale. Energy efficiency measures tend to transform the city's skyline and the type of the landscape. It would be feasible if the degree of impact of each individual measure of energy efficiency is studied and proposals for their implementation are developed.

One of the indicators of the aesthetic and economic quality of the urban space is installation of *LED lighting*. The design of light fixtures, artificial light intensity and illumination angle – in the evening hours accent the character and silhouette of the building, giving a romantic mood to the urban space. It is one of the compositional techniques, which visually enriches the city's expression. With the development of LED decoration technology, in winter conditions it is possible to dress the tree branches in light garlands, making up the urban environment in a new form of expression.

By fitting the lights in the façades of buildings, the architectural expressiveness of the building is intensified. In turn, during the daytime, the placement of lighting fixtures is not noticeable, but their design, shape and coloring are readable.

One of the most important ecological indicators of the urban space is the increase of the number of *bike paths* and the removal of heavy road transport load from the building of the city's central part. As a model for the development of bicycle transport in Latvian cities serve the cities in Scandinavia: Copenhagen and Malmö, where the climate is similar to Latvia. In Copenhagen, 37 % of the employees and students in the city use bicycle transport on a daily basis, so creating a new structure of the urban space.

Fig. 3. LED decorations on boulevard J. Čakste in Jelgava [Source: photo by author, 2013].

Fig. 4. A bike path with the difference of the carriageway, bike path and sidewalk levels in Copenhagen [Source: photo by author, 2013].

Fig. 5. The red color of a bike path. Jūrmala [Source: photo by author, 2013].

Fig. 6. The green roof is visible within the distance of 500 meters in Stockholm [Source: photo by author, 2012].

*The carriageway, bike path, sidewalk* – this type of road structure is applied in narrow city building sites that do not have the opportunity to create a green buffer zone.

For safety, the level difference is created between all the three motion belts.

*Separation of the carriageway from the bike path and pavement by a green plantation zone.* Such a structure is safer, protects cyclists and pedestrians from the road transport. Visually, it is more varied and enjoyable, and it narrows part of the carriageway and extends the comfort zone for pedestrians. The buffer zone is not created only by green plantings, but also by the additional function - parking lots. For preservation of the visual effect, it is important not to turn the buffer zone only into a parking lot, but it has to harmoniously merge with the green plantings.

*The carriageway and bike path are separated from the sidewalk by a green buffer zone.* This street structure is maximum safe for pedestrians. Visually, it makes the road passage wider, narrowing the safe pedestrian part of the street. In turn, from the ecological point of view, cyclists must be in the zone of the flue gas corridor. Therefore, in the urban space, special attention should be paid to the possibility of creating the green planting belts densely along the transportation zone.

*The transport, cyclist and pedestrian movement belts are separated by the green planting.* This structure is applicable to new housing estates, forming a type of Mežaparks /Forest Park/ building, consequently, it is rare. In turn, you get safety and ecology both for cyclists and pedestrians. Visually, it is diverse and more natural than the aforementioned cross-profile structures of the street.

In the territories of the largest Latvian local governments, the development of the bicycle transport areas is becoming more and more intense. It is brightly visible in Riga, Jurmala, Olaine, Jelgava, Liepaja, Daugavpils.

For the city of Riga, which is named a European Capital of Culture this year, the Bicycle Transport Development Program is developed, the purpose of which is to include the bicycle transport in the joint Riga transport system as a sustainable, equivalent with other means of transport, reliable and environmentally friendly means of transport [8]. Gradually, in Riga bicycle transport is becoming more and more popular, and the city becomes increasingly friendly with bicycle transport, and it is suitable for use of bicycle transport, thanks to the small size of the city, since most residential areas are within 10 km in radius from the centre, which is easily doable distance by bicycle.

The creation of the bike path network in the cities of Latvia is unambiguously a measure of energy efficiency due to a reduction in the use of the road transport that is not only an energy-saving measure, but also environmentally friendly. Unfortunately, in the Latvian climatic and natural conditions, bicycle transport is extensively used only for six months – during the summer time.

The aesthetic expression of the bike path and the bicycle parking lot is determined by the structure of the pavement cover, color, separation with green plantings, tree rows and by individual rest areas for the cyclers. Coloring, structure, rhythmic composition or individual form creation game are the main elements that enrich not only the cyclists' zone, but also the urban (rural environment's) landscape space.

In the urban planning, it is particularly important to get a network of bike paths, which run through the city's green plantings. In other words, the section of the buffer planting zone must be looked for in the transport intensity zones.

The main criterion for the rating of *energy efficiency* of *buildings* is heat and electricity consumption per $m^2$ of the building/year. In Scandinavia and the northeast of Europe, including the Baltic countries, an energy efficient building consumes 30–35 kWh/$m^2$/year. But due to the seasonal variation and temperature fluctuation, this indicator is difficult to achieve [9].

The energy efficiency of buildings is divided into three categories:

- increasing of the energy efficiency level of the existing buildings in the reconstruction process;
- construction of new energy efficient buildings;
- green roof installation.

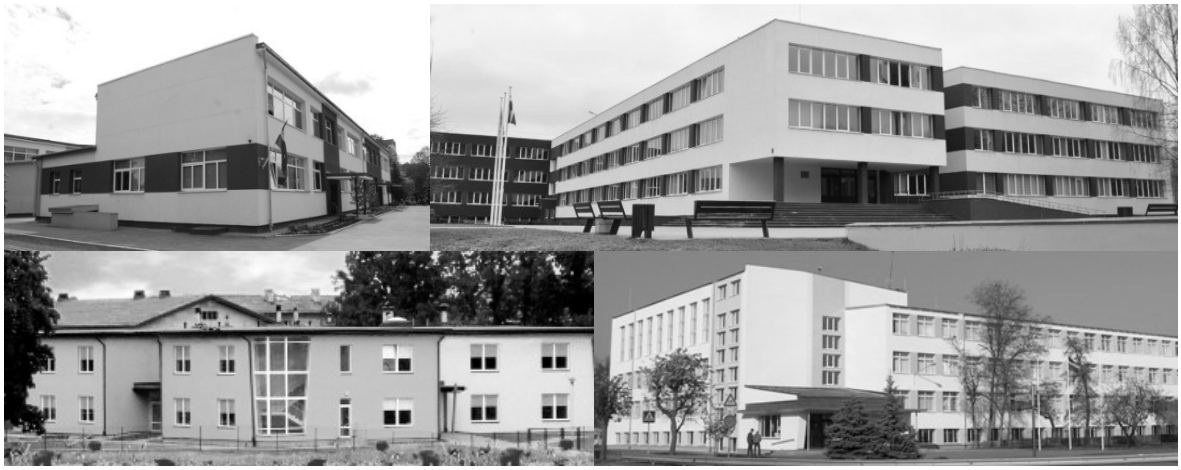

Fig. 7. Insulated buildings in Olaine with finishing in different colors [Source: from the Olaines municipality webpage: http://www.olaine.lv/izglitiba].

Fig. 8. "The Sun Stone" as a vertical accent, Riga [Source: from the Panoramio webpage: http://www.panoramio.com/photo/13277254].

Fig. 9. "Citadele", Riga [Source: from the *Arčers webpage:* http://www.arcers.lv/lv/aktualitates/get/nid/66].

Fig. 10. A plant container on Thomson Terrace, in Riga [Source: photo by author, 2010].

Fig. 11. A wide view of the landscape of Riga from Thomson Terrace [Source: photo by author, 2010].

Fig. 12. Wind generators in the Grobiņas parish in the distance of 1.5 km visually transform the landscape [Source: photo by author, 2013].

The measures of reconstruction of buildings improve both the indicators of energy efficiency and the visual appearance of the buildings - coloring, glazing, roofing material, etc. As technology evolves, energy efficiency is obtained by using the facade glazing, which enriches the urban expressiveness. This is attributable not only to public buildings, but also to high-rise residential buildings. Thanks to the transparency and reflection effect, glazing brings elegance, laconism and diversity of forms in the building, without competing with the historic building, but rather reflecting it. Very effectively it is also applicable to urban plantings, visually making the city greener with trees and lawn areas.

In the city space with a dense building, the *Green roofs* acquire greater importance**,** which positively affects the urban microclimate and the quality of life of the building, with plants producing oxygen and purifying the air. Increasing the density of the building, large green areas of cities are raised at roof level of the buildings.

Unfortunately, the intensive building increasingly pushed out the tree line, alleys or plantation groups, which are particularly expressive in different times of the year (the flowering chestnut trees and rhododendrons in spring, the colors of maple foliage in autumn, etc.). Thus, in the urban planning, it is important to strike a balance between building density, the place of tree-shrub plantings, lawn areas. Green roofs have a regulatory effect of both moisture and sound blocking, reducing the environmental noise. Functionally, the green roofs serve as recreational and vegetable growing areas, psychologically positively affecting the human health and well-being. Due to the climatic conditions and high costs, the green roofs in Latvia are not common, but several of the implemented projects are very popular, such as Thomson Terrace, White Wind, Gallery Riga in Riga, new elite apartment buildings in Jurmala and Riga.

In the view lines up to 100 m, the green roofs create the expressiveness of the silhouette of the street or an individual block of houses.

***The renewable energy*** or energy from renewable resources is energy from sources that in modern society are inexhaustible, such as solar radiation energy, the wind, water, geothermal energy and biomass.

In 2011, in the world, from all the energy consumption, 78.2 % accounted for fossil fuels, 2.8 % for nuclear power and 19 % for renewable energy. In Latvia, based on data from 2013, 49.4 % electricity is generated in hydropower stations, 48.6 % in cogeneration stations. The remaining 2 % is due to the energy generated by the wind farms [10].

Generation and utilization of the renewable energy affect all the four dimensions of a sustainable local government building. In 2012, *wind energy* potential in the world formed 2.6 – 3 % of the global electricity consumption. During the same period, the European Union was able to generate as much wind energy to provide 7 % of all the electricity consumed in the European countries. Wind energy is the most widely utilized form of renewable energy – 59 %, not including hydropower. In Latvia, at the end of the year 2013, wind energy totaled to 2 % of all the energy produced in Latvia. The highest wind speed is in the western coast of the Baltic Sea and the Gulf of Riga, in its northern part. The impact of the wind generators on the landscape is a very important aspect in the process of energy efficient city planning [1].

The scale of the effect of the wind generator depends on the *visibility* of the objects and *the area to be occupied.*

Medium-size and large wind generators already 8 km away are highly visible, but they have a minimum influence on the landscape. They are part of the panorama, converging on a common background and not expressive. In the view line, which is less than 2 km, wind generators dominate in the landscape, they are perceived as large scale objects, and they transform the landscape.

The low power wind generators have a medium level of visibility. In the view line with a length of 4 km they are converging on a common background and visually do not have an impact on the landscape. Low power wind generators are used for power supply of separate units. Following on from that, it may be concluded that *the scale of the impact of low power wind farms on the landscape has a visually more lenient effect on the landscape space and it does not modify the overall visual image of the city.* They are usually found in areas of private houses and with the spread of low power wind generators, groups of generators will be formed in such areas and the impact on the landscape will be increased.

Visibility of large and medium-sized wind generators due to the height is reduced, thanks to the white or light gray color, and interpenetrating with the heaven. This type of wind generators is placed in groups, so creating wind parks. *Due to the large areas and the spectacular scale, they leave an impression of the visual quality on the common image of the urban or rural landscape space and the city skyline.* With the evaluation of the aesthetic quality of wind generators on the landscape, a number of landscapes with different types of wind generators are surveyed and analyzed:

The wind generator park in Copenhagen – the sea high power wind generators are located in the city, close to the beach.

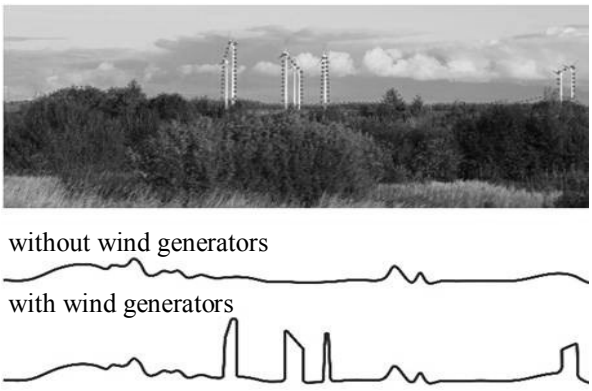


Fig. 13. Landscape silhouettes without and with wind generators [Source: photo by author, 2013].

Fig. 14. In the industrial zone, wind generators do not stand out, the scenery is harmonious [Source: photo by author, 2013].

Fig. 15. A transparent solar battery [Source: from the Nijs J., Belgium: Photovoltaic NV. 113 p.].

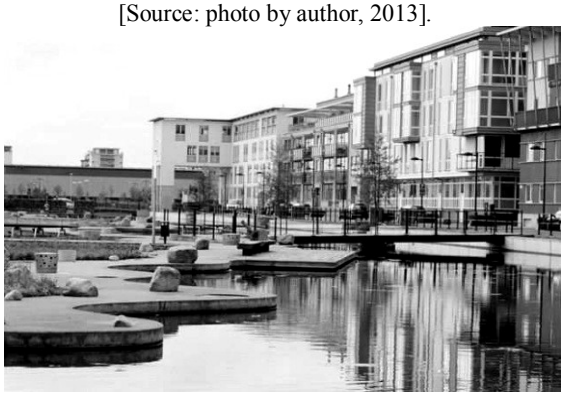

Fig. 16. A shallow pool - the inside block of residential houses, Malmö, Sweden [Source: photo from K. Siļķe private archive].

Fig. 17. A concreted pool with aquatic plants accumulates rain water during the rain, Malmö, Sweden [Source: photo from K. Siļķe private archive].

Fig. 18. An open watercourse, Malmö [Source: photo from K. Siļķe private archive].

Fig. 19. An artificial pond installation in Copenhagen [Source: photo by author, 2013].

A medium-sized wind generator park in Grobiņas parish, near the city of Liepaja;

Wind generators diversify landscape, medium-sized and large wind generators bring the character of an industrial area in the landscape. In the narrow and limited landscape space, due to the expressed dominance of the wind generators, the landscape tends to become disharmonious and unsafe. Being located in the industrial zone, wind generators merge with the character of the production buildings, creating an industrially laconic landscape. The location of a low power wind generator at the farmhouse creates a view line with an expressed dominant.

*The sun* is the largest source of the renewable energy. In 2012, the solar energy consumption accounted for less than 1 % of all types of energy consumption. The utilization of the world solar energy reaches the threshold of 5%: in Italy – 5.6 % and in Germany 5 %. In the last 5 years, the utilization of the solar energy is growing rapidly: in 2009, the solar energy potential is 24 GW, but in 2012 – already 102.5 GW, forming 21.3 % of the renewable energy, excluding hydropower [1].

But in the European countries, this figure is 33 %. In Latvia, the annual average solar radiation on the horizontal plate creates 1100 kWh/$m^2$ , but 60 % of those are eligible for the summer months. During the winter period, the generation of energy from the solar radiation is ineffective, but in the summer period by positioning a storage device, energy can be saved [1].

Due to the low efficiency and high costs, in the territory of Latvia solar batteries are not appropriate for utilization. The most suitable area for utilization of the solar energy is the coast of Baltic Sea, where the sunshine duration is 1900 hours per year, in the district of Riga – 1800 hours, but in the rest of the territory of Latvia only 1700 hours per year. Consequently, the visual impact of the solar collectors on the landscape space does not exist in urban or rural settlements. When placing the solar collectors and the batteries, the shadow should not be allowed to fall on them [11].

It is applicable for tree planting sites, which often prevent this technological equipment from normal functionality. This requires a careful balance of the green planting sites, the dendrology characteristics of trees, the architectural characteristics of buildings, the readability of the sky direction and the building silhouette in the main view lines.

Due to the relatively low sunshine index, the solar energy is typically used as a means of heat generation and only in a few cases as a means of electricity generation.

The solar panels and collectors for supplying separate units with electricity or heat are located in the areas of the suburban mansions, but due to the small height of the buildings the landscape is not changed. Today, they are found rarely, but with increasing requirements of energy efficiency, the landscape will become more uniform and the roofs of houses in the southern side will become alike. The solar panels and collectors frequently do not cover all roof surface and on various buildings they are located in different places, with different angles, which creates chaos and disharmony.

The utilization of *bio-energy* is very diverse, it is used in construction, industrial, heating and transport areas. The most significant benefit of bio-energy is that its incineration process does not affect climate changes. About a third of the electricity generated in Latvia is generated in cogeneration stations [12].

The areas of bio-energy stations are dependent on the volumes of the biomass processing. The area of a small station is approximately 3 ha, which is noticeable at the scale of a small city, but it is a factor of little influence. The buildings of bio-energy generation are usually colored in green, which reduces visibility and the degree of expression. In the open landscape, a bio-energy station clearly marks the production zone. The height of separate units may reach 10 m. The stations are located in the suburban or industrial zone of the city, and, in this case, the scale of impact is local. By locating the bio-energy generation station near major infrastructure units or marking it in the city's historic skyline among the church spires, the total visual image of the city is muffled. Vecauce Castle is one such unfortunate example and merging of the view lines of the biogas plant from the Lielauce road as well.

The location of bio-energy stations depends on several indicators: the economic, ecological and aesthetic ones. For bio-energy station to operate economically, it should be located:

Within a radius of less than 15 km from the available biomass resources;

The station should be located as close as possible to the place of consumption of the generated energy;

Not far from the main roads, economically more profitable is to locate near a road, but aesthetically it will have a negative impact on the landscape.

*The activating measures of the existing resources include*: rainwater collection and utilization; waste sorting and recycling.

In urban areas, there is the rain sewer infrastructure that collects rainwater and leads to treatment plants along with the utilized household water or to the closest water bodies, such as rivers.

Nowadays, the rain water systems are developing and they are upgraded. Rain water reservoirs are not just a water regulatory tool in the city landscape, but also a recreation element in populated areas.

There are several types of rainwater storage:

Artificial ponds - water from roads and rooftops of buildings is collected in the pool, overgrown with local plant species it is an attractive recreation element, in the content and form it is close to a pond and visually is perceived as a natural element. It is typically found in parks or residential backyards.

A pool with the ground cover – the rain water is collected in the pool from the road and rooftops of buildings. Rainwater pools are often shallow and they are installed in city squares, parks or residential neighborhoods. The pool shape and visual design can be very varied and depends on the designer view.

Open shallow watercourses – a shallow canal that collects rainwater and creates an open watercourse to the water reervoir, for instance, the pool, water collector or sewerage runoff point. Visually very diverse and attractive.

Overgrown ditches – along the streets with local moisture-loving plants. This system protects the streets from flooding, increases and varies the urban green area. All the water reservoirs collect water from a lower level, compared with the surrounding ground surfaces. In general, they create the rain water collection infrastructure that manifests itself in the city's area as the "blue finger", which allows you to save fresh water, increase the city's biological diversity, improve the city's microclimate and diversify the city's landscape.

Rain water reservoirs are built from small, narrow and clear creeks, almost invisible in the landscape, and, finally, with large ponds and pools or long watercourses, which are remarkable landscape-forming elements. If open watercourses are detected in the water reservoir, then the unit is dynamic, but if water penetrates into the substrate and the reservoir is overgrown, it is static and dynamism may be demonstrated only during in windy weather, through the moving of plants.

The collection of rain water in the water reservoirs affects the city's landscape, bringing more water elements, but it is varied. Water is a soothing element and a masterfully framed in the designer created pools, ponds, canals – harmonizes the landscape. If there is the level difference in the water reservoir that creates artificial cascades, it leads to a pleasant and soothing sound of falling water. If the water reservoirs are overgrown, they tend to cause specific, pleasant herbal scent.

## Conclusion

The energy efficiency measures affect the city's visual aesthetic quality. The scale of the impact on the urban landscape, mainly, has to do with the visibility of an energy-efficient object. If the object is visible only in close proximity, the scale of the impact is local in nature (a bike path in the context of the landscape of the street). In turn, for the large-scale construction volumes (wind parks, CHP, etc.), the impact level is much more impressive.

The new residential blocks with energy-efficient buildings and green roofs, a developed road infrastructure with bike paths and rainwater collection systems in the backyard areas bring high visual aesthetic quality in the urban landscape space.

In turn, wind generators, solar collectors and biogas stations vary the landscape, but bring industrial shades in it, so their location must be carefully assessed. This is attributable to the municipal development plans for the territory, focusing on the preservation and improvement of the aesthetic quality of the environment. This question requires an interdisciplinary teamwork.

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**Kopsavilkums.** Tēmas aktualitāte izriet no energoresursu trūkuma un daudzu valstu, tajā skaitā Eiropas Savienības valstu, atkarības no enerģijas importa, kā arī no klimata pārmaiņu ierobežojuma nepieciešamības. Ieviešot energoefektivitātes pasākumus, uzlabojas valstu ekonomiskais stāvoklis, samazinās apkartējas vides piesārņojums. Līdz ar to sastādot attīstības plānus dažādos līmeņos – reģionālā, valsts, pašvaldības līmeņos, liela uzmanība vēsta energoefektivitātei. Eiropas Savienības ilgtspējīgas attīstības stratēģijā „Eiropa 2020" energoefektivitātes palielināšana ir apstiprināta kā viena no pamatmērķiem, kas ietver līdz 2020. gadam ietaupīt 20 % no ES primārās enerģijas patēriņa, salīdzinot to ar prognozēto. Ieviešot energoefektivitātes pasākumus pašvaldību attīstībā notiek ainavas transformācija, kas atspoguļojas ainavtelpas estētiskajā kvalitātē un tas liek vērst uzmanību uz pašvaldību teritorijas plānojuma izstrādes aspektiem.

Daudzi no energoefektivitātes pasākumiem ievērojami ietekmē ainavtelpu. Latvijas pašvaldības lielu uzmanību pievērš ilgtspējīgai attīstībai, kas ir atkarīgs no ekonomiska, ekoloģiska un sociālas vides stāvokļa, kas ir saistīts ar energoefektivitātes rādītājiem. Tā ietvaros tiek apskatīti energoefektivitātes pasākumi, kas vizuāli ietekmē gan lauku ainavtelpu, gan pilsētvidi. Pētījums ir saistīts ar vairākiem energoefektivitātes pasākumiem:

- atjaunojamas enerģijas ieguve, izmantojot saules baterijas un kolektorus, vēja ģeneratorus un bioenerģijas ražotnes;
- taupīšana, sakārtojot pilsētas infrastruktūru, uzlabojot ēku energoefektivitāti un pārejot uz LED apgaismojumu;
- esošo resursu aktivizēšana, ieviešot pilsētās lietus ūdens savākšanas sistēmas, turpmākai izmantošanai saimniecībā un atkritumu šķirošanu un pārstrādi.

Pētījuma mērķis: izvērtēt energoefektivitātes pasākumu veidus, to pielietojuma iespējas pilsētas vai lauku ainavtelpas attīstībā. Pētījumā apskatīti pašvaldību ilgtspējīgas attīstības pamatprincipi. Izpētīta Latvijas Republikas likumdošana energoefektivitātes jomā.

# Transformation of the landscape space in the post-war years Jelgava example

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**Abstract. The study clearly demonstrates once again that the political developments in the country very powerfully influence the urban planning processes, and bring corrections in the character of the cultural - historical development. This is attributable both to the devastations of the war and construction trends brought during the peacetime, so creating a historical layering of the urban space. Until 1944, the southeastern part of Jelgava - Katoļu, Dīķu, Pasta, Jāņa street development was a typical German small trader 2-3 storey wooden development. In turn, Akadēmijas and Palīdzības streets marked the character of the multi-storey tenement houses and public development that emerged seamlessly nearby the railway station.**

**With the transformation of the structure and scale of the urban development, changing not only the height contours, density and form creation, but also the intensity of the green areas. With the increase in the density of development, tree plantations get a new compositional arrangement. This applies to backyards and some green recreation spaces, and on the plantations in straight lines on the streets. It is particularly important to evaluate the study findings in developing the modern spatial plan, trying to find a synthesis between the historical and the 21st century trends in construction. Attention should be paid to the possible renewal (reconstruction) of the building burned down during the war, so through the search of the synthesis recovering the city's cultural-historical values.**

**Key words: urban structure, urban landscape, green structure, visual aesthetic and quality, contextualism, harmony, spatial transformation.**

## Introduction

One hundred years have passed this year from the time when World War I devastated a large part of the town and manors in Zemgale. This time is applicable also to Jelgava and its neighborhood, so the study collects materials where in the span of the last hundred years vivid historical buildings have been built in the city. The period marks trends of several construction periods that are associated with the construction manners of both the German and the Russian governorate, and the Latvian independence, the post-socialist and the second period of independence in construction.

Jelgava has been burnt down in both world wars, bringing to destruction enormous values of the historical-cultural heritage. The characterization of Jelgava by art scholar I. Lancmanis "*the city's brilliance and misery"* is a vivid characteristic of the tragedy of the city and its inhabitants. This is attributable not only to the devastations of the war, but also to the second half of the 20th century, where under the influences of the political power, a strange building structure has been created, the city loses its historical street network and the architectural- artistic values.

*The aim of the study* is to make a comparison and evaluation of the structural changes in the urban construction space over the last hundred years.

*The assignments of the study* are associated with the collection of the historic documents of the city's development, featuring a small southeastern part of Jelgava along the left bank of the river Lielupe from the 19th century up to the end of the 20th century. The study materials and maps provide an opportunity to define transformation of the city's development.

## Material and methods

Importance of Jelgava started to grow rapidly since the 1560s. In 1573, Jelgava received the privileges of town. Besides St. Annas church of latvian congregation, construction of the germany St. Trinity church was started in 1574, but the school building in 1577 [1].

After 370 years during World War II, when the historical buildings of Jelgava were destroyed on July 31, 1944, the ruins were leveled or cleared, the bricks being sorted and used for the construction of new buildings. In the middle of the 20th century, the new power creates an architectural style glorifying its policy, at the same time even changing the historic street network. The study is based on the materials taken from archives and museums, documentarily accompanying them by memory records of the contemporaries. By gathering and organizing the information, it is graphically transferred to the old city plans and photo materials. The comparative method is used in the study, summarizing the area of Jelgava in the southern part from the floodplain of the river Platone and the river Vircava to the historic ramparts of the city line, which includes the landscape space of the nearest

churches. The study material of the comparative method in chronological order deals with transformation processes of the urban space that are based on the city's economic boom time (the end of the 19th century up to the 30s of the 20th century), and the war and the post-war periods.

The study material summarizes three landscape spaces of the southeastern part (Jelgava example).

- Inclusive of the suburban green areas (the forest, forest parks, gardens).
- Characteristics of the road network, which leads into the green veins from the suburban areas.
- The city's green areas (squares and parks) and linking them with the street plantations (the green veins).
- The green area of backyards in high-rise residential areas.
- The material includes the main street view lines and height contour changes, and the significance of the natural ground peculiarities, which in the 200 years report have provided the city's historic functionality.

In comparing the study materials, it is possible to evaluate changes in the urban construction space, which have been brought by the devastations of both World Wars. This is especially true for the wooden building.

**Results and Discussion**

The suburban area of the southeastern part of Jelgava between the right bank of the river Platone and the left bank of the river Vircava – historically forms a small floodplain between the entries of two rivers (the distance of 1.5 km) into the river Lielupe. From the mid-19th century, old farmsteads have been built in the rural area, with the land being separated from Viskaļi Manor, Siermuiža Manor, Vecsvirlaukas fiefs. They have been united by the old Bauska road with roadside taverns (Rudzu Tavern, Kalna Tavern, Bērzu Tavern, etc.). The manor land distribution in the second half of the 19th century started in this location to outline the nature of the building of the suburban area, which was about 2–4 km away from the dismantled rampart line of the city.

During the times of the Duchy, from the 18th century, Bauska road served as the shortest way connecting the winter residence in Jelgava with the summer palace in Rundāle. It went up along the left bank of the river Lielupe and at the end of the 19th century it was a popular carriage road, along which on Sundays a larger portion of rural products were taken to the city market. Starting from Bērzu Tavern, the most fertile land with clay soil fields and pastures was found on the left bank of the river Lielupe. Bauska road as an important transportation node of the southern part of Jelgava lead across the floodplain of the river Platone where

Fig. 1. The historical roadbed with an old wooden bridge over the river Platone [Source: photo by author, 2014].

Fig. 2. Bauska road. The floodplain of the right bank of the river Platone, behind it – a forest and the areas of the city's cemeteries [Source: photo by author, 2014].

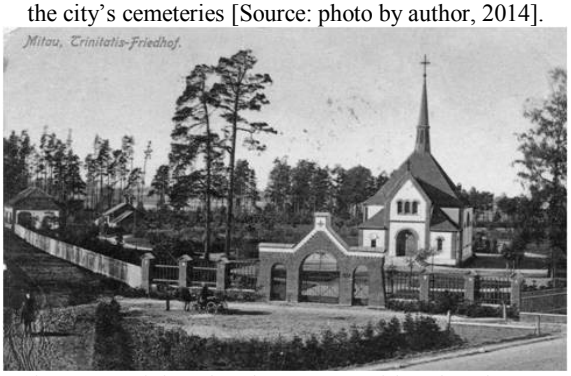


Fig. 3. St. Trinity Church cemetery with a chapel, 1870 [Source: Museum of History and Art Jelgava].


Fig. 4. The Gate of Anna, coming from Bauska. Jelgava, 1845–1855 [Source: Museum of History and Art Jelgava].

in the first half of the 20th century the road was built as a dam with a wooden bridge across the river. With the development of the railway traffic in the mid-19th century and with the increase of its international status, the old entry of Bauska road to the city gradually faded, and already in the end of the19th century, it was routed along the Orthodox Church with a connection to Eleja road. Until the mid- 19th century, Bauska road led into the city through the rampart, the so-called Gate of Anna.

Until the 60s of the 19th century, Bauska road maintained its roadbed, connecting with Akadēmijas (Aleksandra) street, the road taking a parallel with the bank of the river Lielupe and connecting with the center of the city – the Market Square or the City Hall Square. The road marked a clear north-south axis in the urban construction space, which continuing its parallel with the river Lielupe, led in the direction of the sea. Before the demolition of the ramparts, during the times of the Duchy the area up to the railroad existed as a suburban recreation area or known as *Lustgarten* (the pleasure garden). With the construction of the railway line, the green area of the river Platone was cut off from the rest of the city.

In the second half of the 19th century, this suburban part along the road began to produce a new functional significance, driven by the growth of Jelgava as an industrial center and the crossroad of trade roads. With the development of the city, its population was growing. This created a need for a new cemetery in the suburban area. Suburban areas not useful for construction were chosen for the cemeteries. At the end of the 19th century, approximately 600 m away from the right bank of the river Platone along Bauska road, burial sites were created, where each of them belonged to a particular church congregation. Together with each other, burial areas of 4 congregations found their place – the Catholic, Lutheran, Orthodox, and Jewish cemeteries. The cemetery of St. Trinity Evangelical – Lutheran Church or the German cemetery with a small church built as a shrine and the caretaker's house. The area was surrounded by a plank fence and an arched stone entrance. Approximately 200 m away, the Nikolaja cemetery found its place that belonged to the Congregation of St. Nicholas. The constructed cemetery chapel in the shape and proportions is similar to the church in Jelgava.

Just nearby, the Jewish cemetery was established, which belonged to the synagogue in Jelgava. Closer to railroad tracks – the Orthodox cemetery with the present Orthodox Church. In the suburban area of Jelgava, between the riverbeds of the rivers Vircava and Platone, on the 2–3 km wide strip of land, the building of Viskaļi Manor, Sieramuiža Manor are located. In the post-war years, the cultural-historical

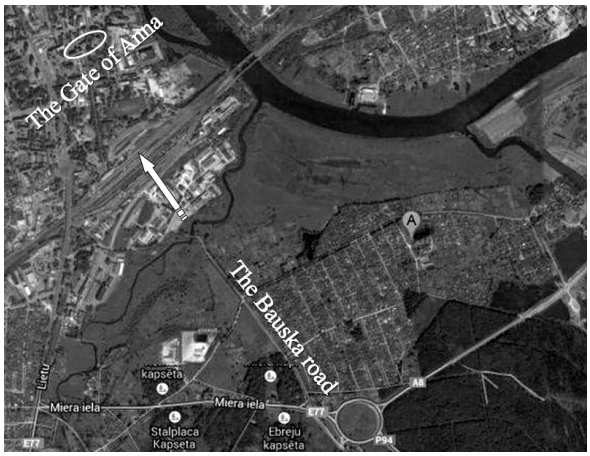

Fig. 5. The railroad crosses Bauskas and Akadēmijas streets
[Source: aerial photo from https://www.google.lv/maps]

Fig. 6. Jelgava railway station. The view from Aleksandra Street, in the 30s of the 20th century
[Source: Museum of History and Art Jelgava].

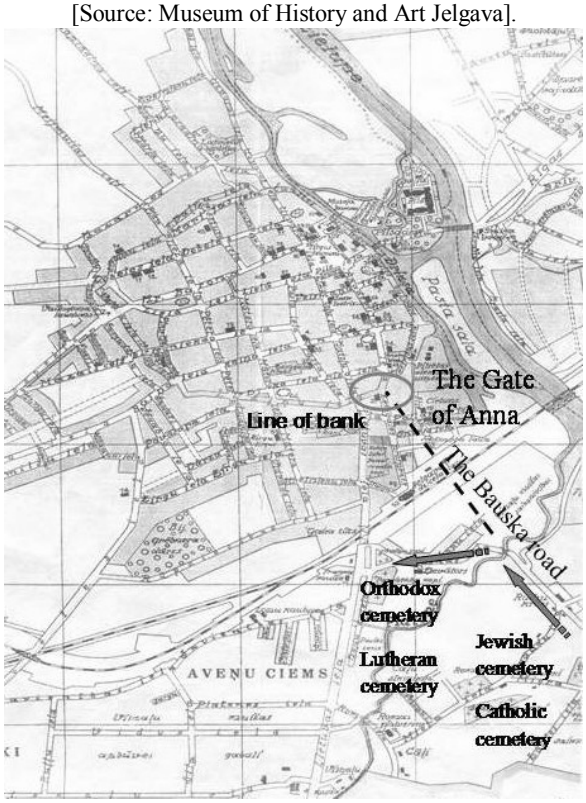

Fig. 7. The city's southeastern area. The Bauska road and cemetery areas
[Source: Museum of History and Art Jelgava].

area is transformed, the building of both manors has disappeared. This was facilitated by the creation of extensive areas of allotments, which in the south are surrounded by a forest. The loss of the historic area has contributed to the development of a new infrastructure. This is true for the transit road Riga-Liepaja, built in the 80s of the 20th century, which crosses the old Bauska road.

This suburban area is most affected by the anthropogenic load. This is especially true for the last half a century, which has changed not only the cultural landscape, but also the historical natural base between the riverbeds of the rivers Platone and Vircava – by the development of production in the 70s of the 20th century, several clay and sand mining pits are excavated. For a non-knower, it creates a false impression that the southeastern part of the city is rich in lakes. In turn, that has contributed to creating the flood-land between the rivers Platone and Vircava, before the entry into the river Lielupe as an ornithological reserve area, which today gives the city some uniqueness.

The beginning of the Jelgava railway line construction dates back to the 60s of the 19th century, which has brought new strategically important contributions to the city's growth. It is also attributable to the nature of the urban constructed space, when the main road network is changing. In the 50s–60s of the 20th century, the railway node is extended up to 32 railroad tracks in the direction of the river Platone, taking up around a 150 m wide area with a warehouse belt next to it. The sheer scale of the infrastructure near the historical part of the city broke through not only the north-south access road to the city, but also distanced the city from the green floodplain areas. It is brightly readable today, searching new solutions to the city's spatial planning.

The historical Bauska road of the 90s of the 19th century as a south-north axis of the city – from the bridge of the river Platone, it began to lose its importance in the urban space and got a character of a bypass road. It was contributed by the new crossing, linking the road to Eleja road. With the changes to the roadbed, a new road dominant was created – the Orthodox Church with a small burial area. In the 20s of the 20th century, in the distance of 100 m from the church, a grain collection point was built that gave the suburban area a new importance of industrial development. It was built alongside the road to Bauska, which supplied grain from the fertile fields of the upstream of the river Lielupe. With the development of grain processing, in the 30s of the 20th century, a grain elevator was built, the building capacity of which was very huge adjacent to the existing Orthodox Church. In the 70s and 90s of the 20th century, with the expansion of elevators, the huge grain silos delimited both the meadows of

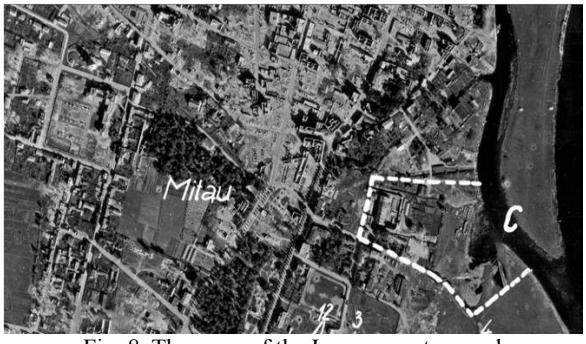


Fig. 8. The areas of the Large cemetery and Jāņa cemetery. The burnt down Jelgava, August 1944. In the center of the photo – the green plantations of both cemeteries [Source: Museum of History and Art Jelgava].

Fig. 9. St.John's Church and Palīdzības street. Today the church is hided by a supermarket [Source: photo by author, 2014].

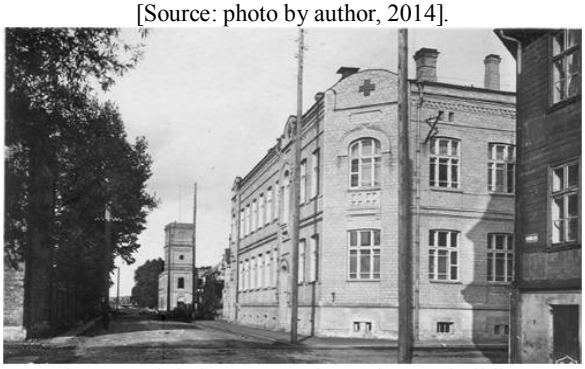

Fig. 10. Palīdzības street. The Red Cross building, the 30s and 40s of the 20th century [Source: Museum of History and Art Jelgava].

Fig. 11. Palīdzības street. The prison building, the beginning of the 20th century [Source: Museum of History and Art Jelgava].

the river Platone and the expressiveness of the church. Similar to the railroad line, the grain elevator area delimited the urban space from the green areas.

In 1945, at the end of the war, along Bauska road near the railroad, the so-called barracks were built, where the first post-war immigrants from Russia were housed who were employed in both removing the ruins and construction of new buildings. Little by little, the barrack-type residential building was created with backyards and small fenced vegetable gardens at the blue painted window frames. It brought a strange identity to the city of the German style, building scale and the style of the buildings in the vicinity of the railroad.

By losing its historical place and meaning, Bauska road has lost the attraction of the meadows of the rivers Lielupe, Platone and Vircava to the city. One of the modern revitalization projects of the landscape space includes the creation of a new elevated car road (the offer of architect A. Beļikovs), so recovering the meaning of the roadbed of Bauska road.

At the end of the 19th century, the station building was built, it meant closing of Aleksandra street (Zemgale prosp.), highlighting the symbolic for the city's southern part *Gate of Anna* on the same street– in the distance of 200 m to the south of its historic site. Of course, the expression of the "gate" was pioneered by a wide front square of the station building. Aleksandra street was connected to it, which already in the 90s of the 19th century created a boulevard building type with lines of tree plantations and sidewalks from the Station Square to the Market Square.

Until 1804, in the southern part, the city boundary line was marked by the city's rampart with a guard channel. The city grew, in the mid-19th century the Catholic (Large) cemetery was created between the demolished rampart and the station. It originated in the 18th century, when next to the poor peoples church (St. John's) appeared burials outside the city's rampart. The cemetery existed there until 1945, which in the post-war years was leveled and created as a park.

The area of the Catholic or the Large cemetery merged with the burial area of Jāņa cemetery (up to 1945), which was supplemented by the vertical accent of the tower bell of St. John's Church built in the Neo-Gothic style. Both cemetery areas formed a broad arc of the city's green zone. Jāņa cemetery marked the city's old rampart line, and the Large cemetery – the south-north axis or Bauska road to the old Gate of Anna.

1849 began a new project Jelgava detailed plan, but did not confirm the Russian government. There was a strong argument that the old streets are narrower than the 10 axle (about 21.3 m).

Fig. 12. John's Church with a cemetery.
The view from Katoļu street
[Source: Museum of History and Art Jelgava].

Fig. 13. St. John's Church from Katoļu street
[Source: Museum of History and Art Jelgava].

This significant statesman of his time were many progressive transformations initiator., But also insisted on the ancient cultural traditions and artistic value of conservation [3].

Opposite to Jāņa church and the Large cemetery – between Aleksandra street and the left bank of the river Driksa, in a 350 m wide strip of land, the city's brick house building started to develop in the 90s of the 19th century. As one of the first examples to be mentioned was a block of houses around Palīdzības street where the Red Cross building, a prison and a shelter were located. The axis of Palīdzības street formed links with the longitudinal axis of Jāņa Church, so giving both visually and emotionally strong link with the hospital, prison, church and burial area. In the view line from the river Driksa – Palīdzības street, the building created one of the most expressive places in the city.

The Red Cross hospital was built in the vicinity of the railroad and the river Lielupe, ensuring a faster access to it in all seasons. In winter, when the river was frozen, it served as a traditional sledge path, which was particularly useful during the war, carrying the wounded soldiers from the front. The proximity of the river ensured sanitation. At the end of the 19th century, a prison was built opposite the hospital – a 3 storey building with a stone fence.

60 m from the Red Cross hospital – at the intersection of Palīdzības street and Aleksandra street, the Reyer shelter was established. The design of the building consisted of the central construction volume with the main entrance, where the same construction volumes were connected to it symmetrically on both sides. On the opposite side of Palīdzības street – a 5-storied tenement house.

In the view lines from the east, the final dominant of the street was closed by the volume of St. John's Church, which was nicely readable up to the 50s of the 20th century. While the city was recovering from the ravages of war, a ring-like, high-rise building was slowly created around the church hiding it. In the east from Palīdzības street, in the 60s of the 20th century, the view lines were hidden by a supermarket. In turn, from the southern side, the church was hidden by a grand culture house (the 50s of the 20th century) and 3-storied office buildings. On the northern side, the church was hidden by a 5-storey residential building block (the 70s of the 20th century). In the western part, leaving the large trees, a new street bed was built (the 50s of the 20th century). Hence, the expressiveness of the church was dampened.

Parallel to Akadēmijas (Aleksandra) street, in its western side, Katoļu street is located. At the city's street level, both streets are located close to each other (100 m), and each of them creates its own character of the urban space, marking parallels in the

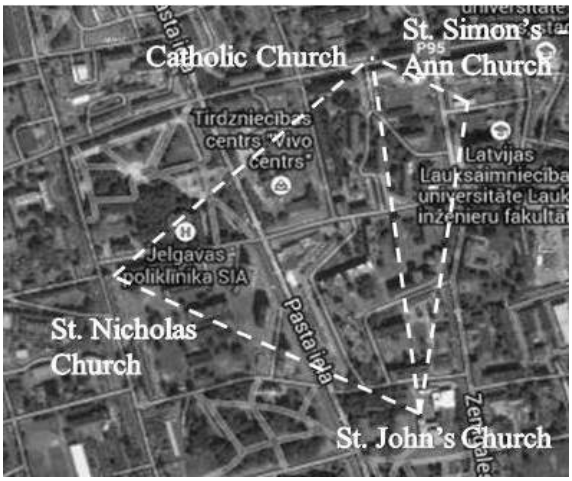


Fig. 14. Between the Catholic, St. Nicholas and St. John's Churches, in the airline, a triangle can be drawn with approximately equal sides – 420 m [Source: author drawing on aerial photo from https://www.google.lv/maps

Fig. 15. Katoļu street building. In the distance St. John's Church. The beginning of the 20th century [Source: Museum of History and Art Jelgava].

Fig. 16. St. Nicholas Church. A view from Dīķa street, the 30s of the 20th century [Source: Museum of History and Art Jelgava].

urban planning of the north-south direction. Akadēmijas street links the eastern edge of the Market Square with the railroad, while the western edge of Katoļu street – the Market Square with the road to Lithuania. As already mentioned, it is the main drafter road to the market.

Katoļu street as the city's main transit vein led through the Market Square (Town Hall) in the direction of the sea. In the southern part, the street united both mentioned cemeteries (Jāņa and Large cemeteries), which were located in the distance of 525 m from each other. Katoļu street was characterized by a continuous 2-3 storey wooden building.

By July 1944 it was a city that could be called the pearl of wooden architecture [2]. With burning down of the wooden building in the length of 900 m on both sides, in the post-war years the historic street bed was not restored. A wide and long urban space was freed that prompted the new power to change the urban planning. In the northern part, the axis of Katoļu street 150 m in length was shifted about 50 m to the west, if the Catholic Church and the former Latvian Society building are taken as the point of reference.

In the section from Driksas street to Raiņa street (220 m) only some masonry tenement houses have been preserved (9 Katoļu street and 10 Katoļu street). They are the only reference points from which to apprehend the old street bed.

In the midsection of Katoļu street from Raiņa street to Dīķa street (220 m), creating a postwar building, the building foundations are withheld in parallel, close to the devastated building. The historic street line can be only graphically drawn between the house in 19 Katoļu street and the altar part of St. John's Church.

The southern section of the street (300 m) was removed in the 70s of the 20th century by the construction of a new residential block of houses (150 x 260 m) with backyards, and placing the residential buildings perpendicular to the axis of the old street, so hiding the skyline of St. John's Church on the northern side. The outer walls of the residential building block are offset from the historical baseline of the building to avoid compaction of the structural wall seams. The post-war building along Dīķa (S. Edžus) street is organized in such a way as to hide the historical high-rise tenement houses at 4 Valņu street, 26 Valņu street and 28 Valņu street. The historical Katoļu street with the length of 900 m (between Lielā street and St. John's Church) has maintained only a 218 m long section of the street.

Until the war, none of these streets had tree plantations. The postwar years brought a different understanding of the street building scale and character. Removing ruins, lines of trees and

Fig. 17. St. Nicholas Church Street with the building of Mātera street. In the distance – the Catholic Church and St. Trinity Church, the 30s of the 20th century [Source: Museum of History and Art Jelgava].

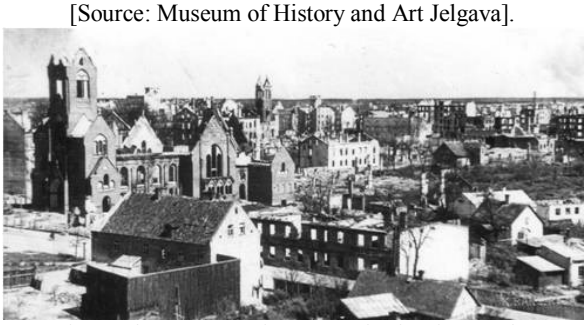

Fig. 18. he summer of 1944. In the forefront – the devastated St Nicholas Church [Source: Museum of History and Art Jelgava].


Fig. 19. The reconstruction of Akadēmijas and Katoļu streets in the 40s of the 20th century [Source: author drawing on aerial photo from https://www.google.lv/maps

sidewalks on both sides of Katoļu street were created in the 50s of the 20th century, but the new 4-storey residential building from the street was separated by lawn bands (from S. Edžus street to Lielā Street). In the section between the Catholic Church and Driksas street, a wedge-type green plantation widening was created, so clearly marking the bed of the old street.

In the 50s and 60s of the 20th century, street plantings were created by the city's horticultural trust (agronomist K. Liepiņš) and linden trees were chosen for greening. As the nurseries had no trees, they were brought from Madliena, digging up trees growing free in nature. A large volume of the planting stock was needed, because almost all of the streets of the historic centre were greened. After digging up, the small trees were taken to the nursery and planted and grown there 3 to 4 years to branch. Only then they were taken to be planted in the city.

The many church towers are witnessing ethnically and denominational speckled urban content, as it formed the Duchy of Courland and the Russian Empire during the protectorate before the first World War [4]. Dīķa street, crossing Katoļu street – in the western part leads to St. Nicholas Church. The church was built next to the old city ramparts. Among 3 churches – Catholic Church, St. Nicholas Church and St. John's Church – in the airline of the city building plan, a triangle can be drawn with the sides being equal (420 m). Evangelic-Lutheran St. Nicholas Church was the youngest of all the shrines of the city (1905), built of bricks in the Neo-Gothic style. Only the roof was destroyed during the war and it was possible to restore it. But in the 50s of the 20th century, the new power decided to level it to the ground and build instead a high-rise residential blocks of houses (250 x 220 m).

90 m away from the Catholic Church, the other triangle can be drawn between St. Simon's – Ann Church and Academia Petrina. These vertical accents of the urban space are united by the axis of Raiņa street, so recording a smaller scale in the urban space.

The rapid development of the city building in Jelgava in the 60s and 70s of the 20th century changed the street network and building structure beyond recognition.

The areas of the Large cemetery and Jāņa cemetery – at the end of the 40s of the 20th century after the dismantling and leveling were created as park areas, extending Parka street along the western part of St. John's Church, so passing through the historic burial area (110 m). The access to the church was carried over from the east side on Katoļu street to the west side (from Pasta street).

By burning down the perimeter building of the Market Square, a 2.5 ha large area was obtained in the southern part between Katoļu street and Akadēmijas street, allowing a free passage into the new building. Here, the prisoners of war built the first four-storey residential block of houses (1946–1949), which was enclosed by Katoļu, Akadēmijas, Veismaņa (Driksas) and Lielā streets. With the construction of the block of houses, the small Poruka street that was parallel to Lielā street was removed. They are the only residential buildings in the city, which are built after the war with a wide and comfortable design and ceiling height of 3.0 m. Only after sixty years, the inhabitants of Jelgava receive the next residential buildings with a comfortable individual planning.

The above mentioned 4-storey residential block of houses between Katoļu and Akadēmijas street has an expressed symmetric composition with the southern edge toward Driksas street is left without the building, so giving the sun at the backyard. Two backyard transverse axes are highlighted by fountains, separate recreation areas and tree plantings. In order the city recovers quickly from the devastation, very many aspen trees are planted, which are fast growing, but the spring brings a huge amount of catkin pollen. In turn, on windy days brittle branches of aspen trees are found on the streets and yards.

The second high-rise residential building block was built on the opposite side of Katoļu street with the so-called. Hruščovka/Hruschev/- type building that stretched from Lielā street to the Catholic Church. Human dignity degrading small flats with architecturally poor quality were built instead of the burnt down wooden houses.

In the 50s of the 20th century, the post-war building plan of Katoļu street as mentioned earlier, was intended to eliminate its southern part, and the extension of Pasta street was built, which was connected by a road to Eleja. The tomb monuments were dismantled, the burial sites leveled, so yielding an urban parkland. Thus ended not only the functional importance of Katoļu street, but also the visual belonging of St. John's Church to the urban space and it turned a new page for the cultural-historic environment.

Pasta street as an important south-northern transit vein brought in a new building scale in the 80s of the 20th century. Massive 9-storey residential buildings were built next to St. John's Church, which inhibited the expression of the church. Consequently, Pasta street gained other dominants.

The towns historic centre as a monument of the urban construction protection contains areas of a number of old housing blocks, where only a few buildings survived as the town burned down during the war. Losing huge building areas, each of the old buildings that has escaped from falling to pieces, today is of a particular importance [5].

## Conclusion

The study material indicates that the recovery of the historical part of the city today is very challenging and difficult. Trying to find solutions for the urban constructed space of the 21st century, the building structure, scale and harmony are carefully examined in the spatial planning to absorb the post-war disharmony in the building character of the city.

There are still places 70 years after the city was burnt down that are still empty, it witnesses the enormous devastation. Unfortunately, the free building sites are conquered by supermarkets, multifunctional centers and parking lots of grandiose scale which looks strange near the historical churches and the restored tenement houses. It is also attributable to the green areas and the plantations in the backyards.

The feeling of the war devastations is receding very slowly in Jelgava. It is based on a lack of funding that requires impressive amounts of money for the renewal of the city. Consequently, the municipality is glad of the arrival of each entrepreneur in the city. In turn, this contributes to the municipal concession to the potential taxpayer whose business development is not easy to subordinate with the city's building structure. The city has experienced a double devastation during the last century. If the war years brought a physical disappearance of buildings, then the post-war period is characterized by the appearance of a strange scale of the urban space and exaggerated standard residential construction volumes. Their location has been chosen deliberately close to the old building, so hiding the view of the main line.

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**Kopsavilkums.** Šogad aprit simts gadu kopš laika, kad Pirmais pasaules karš izpostīja lielu daļu Zemgales pilsētas un muižas. Pētījums vēlreiz skaidri pierāda to, ka politiskās norises valstī ir spēcīgi ietekmējušas pilsētplānošanas procesus, ienesot korekcijas kultūrvēsturiskās apbūves raksturā. Tas ir attiecināms arī uz Jelgavu un tās apkaimi, tāpēc pētījums apkopo materiālus, kur pēdējo simts gadu ritējumā ir veidojusies spilgtākā pilsētas vēsturiskā apbūve. Laika posms iezīmē vairāku būvniecības periodu tendences, kas saistāmas gan ar vāciskās būvniecības manierēm, gan Krievijas guberņas laiku, gan Latvijas brīvvalsts, postsociālisma un otrās brīvvalsts laiku būvniecībā.

Pilsēta ir piedzīvojusi dubultīgu postījumu pēdējā gadsimta laikā. Ja kara gadi nesa fizisku ēku izzušanu, tad pēckara laiks ir raksturojams ar svešāda pilsēttelpas mēroga un zemas kvalitātes tipveida dzīvojamo ēku ienākšanu. To novietojums parasti tika izvēlēts apzināti cieši līdzās vecajai apbūvei, tā aizklājot galvenās skatu līnijas uz vērtīgu kultūrvēsturisko apbūvi.

Jelgavas dienvidaustrumu daļai-Katoļu, Dīķu, Pasta, Jāņu ielu apbūvei līdz 1944. g.bija tipiska vācu sīktirgotāju 2–3 stāvu koka apbūve. Savukārt, Akadēmijas un Palīdzības ielas 20. gs. sākumā iezīmēja daudzstāvu mūra īres namu un sabiedriskās apbūves raksturu, kas veidojās vienlaidus netālu no stacijas.

Transformējoties pilsētas apbūves struktūrai un mērogam, mainās ne tikai apbūves augstums, blīvums un formveide, bet arī zaļo teritoriju intensitāte. Pieaugot apbūves intensitātei, koku stādījumi iegūst jaunu to kompozicionālo izvietojumu. Tas ir attiecināms gan uz iekšpagalmiem, gan uz atsevišķām zaļās rekreācijas telpām, gan uz ielu rindveida stādījumiem. Īpaši svarīgi pētījumu atziņas ir ievērtēt mūsdienu teritorijas plānojuma izstrādē, meklējot sintēzi starp vēsturisko un 21. gs. tendencēm būvniecībā. Vērība ir jāpievērš kara gados nodedzinātās apbūves iespējamai atjaunošanai vai daļējai rekonstrukcijai, tā sintēzes meklējumu ceļā fragmentāri atgūstot pilsētas kultūrvēsturiskās vērtības.

# Burtnieki Rectory - a symbol of the cultural-historical environment unaltered through time

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**Abstract. The fabulous Burtnieki Lake, the Lutheran Church, old cemeteries with chapels and gates, a rectory - the cultural-historical environment rich in evidence of antiquity and so intact has survived in rare places of Latvia. A special atmosphere is created here and it seems that today the value of the heritage left by the gone generations has begun to get a true evaluation. But still not long ago - in the Soviet period, anyone could visit the Church of Burtnieki through the broken door and do what the heart wants, but the barn and the stable ruins of the rectory seemed to hopelessly spend their last days. The indoors of the rectory were vandalized and abandoned as well.**

**Keywords: architectural heritage, manor and sacral architecture, monument protection.**

## Rectory and its owners

From ancient times, Burtnieki Rectory has been located near the church. In 1600, seven peasant houses belonged to the manor house, which paid dues in kind and in the form of bondage. Without this income, the pastor received financial support from the Crown Estates and private manor houses. The household also brought in some profits. In 1669, in the inventory records it was mentioned that the rectory had a leaky roof and unsafe walls, which had to be supported by struts. Only one room and two chambers were habitable, but the pastor repaired some rooms at his own expense. This selfless congregation shepherd was Andreas Friedrich Buchmann (*A. F. Buchmann*), who served there from 1674 to 1697. Supposedly, later he managed to renovate the house and build other structures, since in the visitation protocols of the congregation in 1688, the following buildings were mentioned: a wooden rectory with a red tiled roof and three rooms - the front room, the pastor's office or the study room and the parish room, four chambers, a hallway, a kitchen, two toilets, and two stone masonry cellars, a fireplace chimney and a bread oven. The building was complemented by a wooden farmhouse (*ērberģis*) with a shingle roof, an old barn, a new barn for the storage of cereals, a horse stable, a wooden bathhouse with a straw roof, a brewery, a stock-yard with a u-shaped plan, a threshing barn and some other buildings. It is interesting to read indoor descriptions in archives. In the front room, there was a furnace, constructed from different tiles- the bottom cornice from black ones, the top two from green tiles, in the study there was a furnace from brown tiles, the parish room was warmed by a fireplace from black tiles [10].

The assignment of the study is to evaluate the landscape space of Burtnieki Lake, the Church of Burtnieki and the overall compositional unity of the rectory, which in the modern restoration process plays an important role in the preservation of authenticity of the cultural -historical values.

During the Great Northern War (1700–1721), Vidzeme was cruelly devastated. There is no reason to think that the rectory would be the exception. Using the archive materials - descriptions, engravings, maps and photo-fixations, with the comparative method, it is possible to carry out the transformation and progress processes and the cultural-historical landscape space up to the moment of carrying out the modern restoration works.

During the Great Northern War, Jakob Benjamin Fischer (*J. B. Fischer*) worked as a pastor at Burtnieki. He was an energetic man who revived the congregation and strengthened faith. With persistence, he began to restore the rectory building, quite often, exploiting his people too much. The old residential building was repaired and renovated, but he lacked the resources to complete the works. In 1738, the residential building of the rectory was built anew. *The Burtnieki masons Laute and Gertzen participated in the construction works. ... three new furnaces were built. The glazer Kober made windows for the new building. The carpenter Keisler and the blacksmith Libert Wilcke also participated in the construction works* [10]. In 1739, in the inventory documents [13] – the new pastor's house was mentioned, which was built in 1737, the threshing barn was built in 1737, a stable for 14 horses and the coach - house were built in 1735. During this time, two cattle-sheds were in a good technical state, the third - repairable. In addition, the building was complemented by a barn, an old

brewery and other buildings. In 1746, the new rectory perished in the fire along with the documents and church books. Pastor J. B. Fischer did not experience the affliction anymore, because in 1744 he died in Riga. The restoration of the building started in the coming years and many craftsmen, among them the building master Lembke, a Russian carpenter, a potter from Valmiera, and other people took part in the construction works. In the 60s of the 18th century, the restored building was repaired several times, but during the period of time from 1774 to 1775, it was built again anew [18]. This rectory was also made of wood. Pastor Paul Berent writes in the commemorative edition dedicated to the congregation of Burtnieki that the logs were rough-hewn by the German carpenters, but when the new house was built, the Russian carpenters put them together [2].

Pastor J. B. Fischer was replaced by Michael Klembken (*M. Klembken*), before that a vicar in Cesvaine, later a pastor in Liezere, Lazdona and Valmiera. *In 1704, the Russians captured him and sent to Tobolsk, where he had to spend 18 years because nobody redeemed him. When in 1722 he returned in Valmiera, he found another pastor taking his position. He died in 1741, leaving his assistant and son-in-law Matthew (Matthias) Vorhoff (M. Vorhoff) in his place* [2].

*It seems that the Burtnieki congregation has been a very profitable place for priests. In the 17th century, the income of a pastor at Burtnieki rated at 364 thalers and 53 ¼ groats. The rectory was the best maintained building in the castle district of Burtnieki. At the manor, there was even an orchard, which in the 17th century was a great rarity. In 1782, the Burtnieki pastorate owned 3 ¼ plough land with 7 farmsteads and 108 peasants* [8].

Around 1769, Pastor Johann Heinrich Guleck (*J. H. Guleck,* 1740–1816) took care of the congregation. His period of activity was bustling - the Annals of the congregation was written [8], the acquisition of an organ and church utensils was supported, the new cemetery was consecrated, because by the order of Empress Catherine in 1772, it was forbidden to bury in churches. According to the pastor's design, the cemetery chapel was built, which originally was intended for burying people belonging to the family of the owners of the castle manor of Burtnieki [7]. In 1791, the rectory was expanded through participation of a number of Latvian craftsmen. During the period of J. H. Guleck, in 1798 the church and the rectory buildings were depicted by Ernst Marcus Ulprecht (*E. M. Ulprecht*). J. K. Brotze placed the drawings in his collection [5]. At the foot of the church, several buildings and only one with a red tiled roof, supposedly, the rectory can be seen in this drawing. In that year, the church and the building of the rectory were depicted by J. K. Brotze himself [6]. In this drawing, it is easier to talk about the building of the rectory. In total, nine larger or smaller buildings are depicted. One of them – the rectory with a fackwerk pediment. In the left corner, a threshing barn is depicted, opposite the church, supposedly, the confirmant and the servants' house. The building is surrounded by a wooden fence. The rectory was renewed after the damages of the storm in 1795 and after the fire around 1803, and also later on when the roof was repaired and other works were carried out.

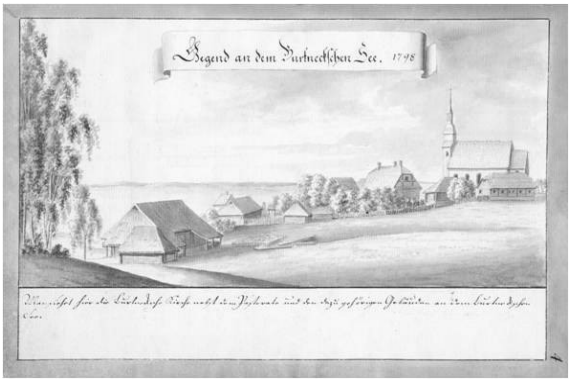

Fig. 1. The Burtnieki pastorate
[Source: Johann Christoph Brotze. Drawings and descriptions. - Riga, Science, 2002, p. 411].

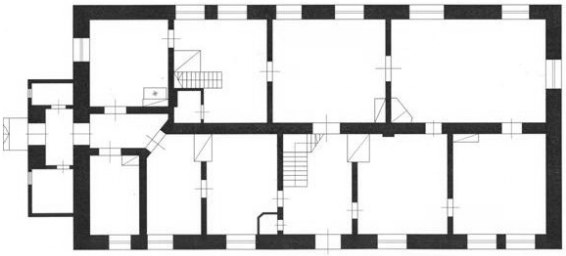

Fig. 2. The first floor plan of the rectory
[Source: drawing by architect M. Zilgalvis].

Fig. 3. V. F. Parrot's epitaph in the congregation room of the Burtnieki Lutheran congregation
[Source: photo by author, 2013].

In 1817, J. H. Guleck was replaced by Pastor Wilhelm Friedrich Parrot (1790–1872), (*W. F. Parrot*), a German scholar, the first Rector of the University of Dorpat and the son of academician Georg Friedrich Parrot (1767–1852) of the St. Petersburg Academy of Sciences [19], who upon taking office was only 27 years old. During the period of his activity from 1820 to 1821, a new stone rectory was built, which has survived to this day. Its builders were master mason Colding, carpenter Meyer and carpenter Lange. In the memory of V. F. Parrot, there is an epitaph in the congregation room of the church. He served there from 1817 to 1860.

In 1863, a *training chamber* was built near the ērberģis (farmhouse). The event was initiated by the next Pastor Theodor Leonhard Girgensohn (*T. L. Girgensohn*) at Burtnieki, the pastor's son of the Lutheran congregation at Vecgulbene and a husband of daughter of V. F. Parrot who began work at Burtnieki in 1857 [17]. In 1817, the mentioned ērberģis (farmhouse) had been brought to order by V. F. Parrot and lived there until the new stone rectory was built [3]. At his own expense, in 1864, T. L. Girgensohn built a tenant house and later leased out the rectory. T. L. Girgensohn and his wife's remembrance was immortalized in the epitaph in the congregation room of the church. In the middle of an ornate frame it is written, "*Theodor Leonhard Girgensohn, Pastor zu Burtneck von 1857–1894. geb 11. Marz 1826, Schwanenburg Pastorat, gest 30. Oct. 1894. Burtneck Pastorat. Wilhelmine Girgensohn, geb von Parrot, geb. 1837. zu Burtneck Pastorat gest. 5. Sept. 1884."* In 1828, in the kitchen side of the rectory, an extension was built. In 1911, four rooms were built in the attic floor.

The repair work was also carried out in the pastorate in later times, for instance, in 1930. During the Soviet era, a veterinary station and flats were located in the rectory. It was not properly repaired, and the building slowly went to rack and ruin. An essential documentary role is played by the photo-fixation in 1981 and in 1982 [20]. In the photos, a house and completely collapsed outbuildings can be seen. In 1988, the situation changed. Thanks to the care of the stud-farm *Burtnieki*, a historical and artistic study was carried out which was followed by restoration in the 1990s, the stable and the barn were regenerated in their historical appearance.

Today, a one-storey building, covered with a steep gabled ridged roof, the ends of which are semi – tapered, gladden us with their grooming, the ancient unwieldy form, the historically accurate restoration of details. The building, built during the period of Classicism, is similar to its sisters – the

Fig. 4. The rectory [Source: State Inspection for Heritage Protection Republic of Latvia, Monument Documentation Centre, 1978].

Fig. 5. The rectory from the backyard side [Source: photo by author, 2013].

Fig. 6. The rectory from the lake side [Source: photo by author, 2008].

rectory in Dobele (*Doblen*), Limbaži (*Lemsal*), Āraiši (*Arrasch*), Ēvele (*Wohlfahrt*) and many other places. The main entrance door leaf stands out with a high artistic performance (around 1820). The leaf is divided into two panels. The upper surface is decorated with a diamond-shaped decor, the bottom – a grooved surface. Both corners of the panels are accented by a square element – a joinery decor characteristic of the period of Classicism. Also, the space between the two panels is

highlighted with a diamond accent. The window frame over the door is also diamond-shaped. The front door leaf lock is also an interesting historical testimony, which, together with the box lock dates back to the 18th century. This beautiful door leaves were restored in 2007 (restorer Inese Andersone). In the 1970s, the door leaves were hidden by a wooden porch with Neo-Renaissance style shaped windows, which probably was built in the second half of the 19th century, but later was demolished. This porch can be seen in in several photographs dating back to 1929 and in the illustrative materials of a later time in 1978 [20].

**The cultural - historical values of the interior of the rectory**

The staircase with silhouette-carved railing has survived in the entrance hall, which is built in 1843. A dark brown coloured glazed furnace with profiled eaves and plinth can also be seen there. In many places in Riga, it can be attributed to *Celms and Bēms /Zelm&Boehm/*. From the hall to the left, renovated two–panel door leaves lead to the pastor's office with an interesting furnace dating back to the end of the 18th century when the pots are painted. They have survived in the design of the eaves and the bottom of the furnace. Antique vases are depicted on a white background in a blue tone, but eaves – also with fancy motifs. In the middle of the furnace, the original tiles have been lost over time and replaced by white-glazed tiles. It is possible that these furnace tiles come from the old, wooden rectory, since on June 20, 1819, a meeting of the Convent decides that from the old rectory only furnaces will be used [15]. In front of the hall, there is a small room, in the corner of which a furnace has survived with a profiled eave and a niche in the middle. From this room, a door to the right leads into a larger prayer room, which also has an altar. This room is heated by a corner furnace with pilasters and a richly profiled eave (the mid-19th century). The other staircase can be seen in the kitchen end and the railing is with Baroque silhouette-carvings. Just as the mentioned staircase, it is made in 1843. At the foot of the staircase, a massive simple furnace is built, the bottom of which is extended. Interesting testimonies have also remained in the guest room behind the secretariat. On the end wall, once there were two built-in cabinets, built over in the course of time. During restoration of the building, they are recovered and now they serve as a niche with bookshelves. A furnace with profiled eaves and a distinctly elongated niche in the middle are located in this room.

Fig. 7. The main entrance door leaves of the rectory [Source: photo by author, 2013].

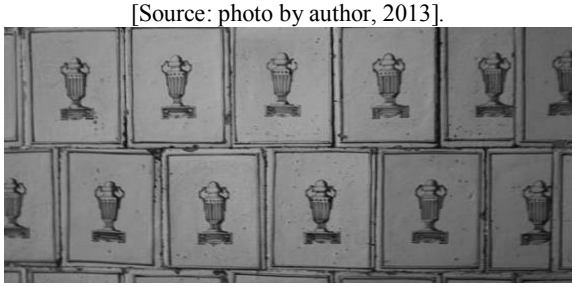

Fig.8. A tile fragment of the furnace in the office [Source: photo by author, 2013].

Fig. 9. A furnace in the hall [Source: photo by author, 2013].

**The building of the rectory**

As already mentioned, in the 1990s, revives not only the rectory, but also the stable and the barn. It is known about the stable that in 1714 logs are allotted for its building [1]. In the course of time, it is worn, and in 1790 it is decided to build a new stable from boulders, covered with a tiled roof. After four years – in 1794, the works are completed, but the roofing is of straw [20]. In the following years, the stable is repeatedly repaired. Over time it gets a very bad technical condition and as already mentioned, it is renovated during the rebirth of the pastorate. Today, the outer wall of the building bears renderings, the gabled ridged roof with semi-tapered ends is covered with chips, the main facade consists of a porch arcade: three arches with the middle one being wider.

The barn is situated next to the stable, which is believed to be built at the end of the 18th century or at the beginning of the 19th century. This stone building is also covered with a steep gabled ridged roof, the ends of which are semi-tapered. The main facade consists of a porch arcade - three arches of an equal width. The building's facade is not in stucco, the brick walls with tiny chipping imprints in mortar are exposed there. Initially, around the window openings and in the arcade, the red brick is hidden behind stucco bands, as shown in the photo-fixation of 1929 [20]. During the Soviet era, the building gradually goes to rack and ruin and what is left – can be seen in the photos of 1989 [21]. They are only the load-bearing walls, because the rest is dismantled as hopelessly worn out. During the restoration of the building, around the window openings, the plaster styled bands have survived, but the arcade yet exposes the red brick. Strange that the two buildings – the stable and the barn are located close to each other, as if the manor is in lack of space.

Closer to the lake, the tenant's house has survived – a log house covered with a steep gabled ridged roof with semi-tapered ends. It is now privately owned. Next to it, there is a little building - the former laundry house of the rectory.

**Plans of the historical and the present situation**

The pastorate Burtnieki, as one place around a lake in a broad reflection of the environment can be seen in a plan redrawn by J. K. Brotze, redrawn no earlier than at the end of the 17th century [4]. Of course, it is impossible to judge about the appearance of the building of this material, but the church, the pastorate and also the school are located in the present place. It is possible to compare the road network with the earlier and later plans of the situation. One of them is the plan of

Fig. 10. The barn and the stable
[Source: photo by A. Biedriņš, 1989].

Fig. 11. The barn
[Source: State Inspection for Heritage Protection, Monuments Documentation Centre, 1967].

Fig. 12. The barn and the stable
[Source: photo by author, 2013].

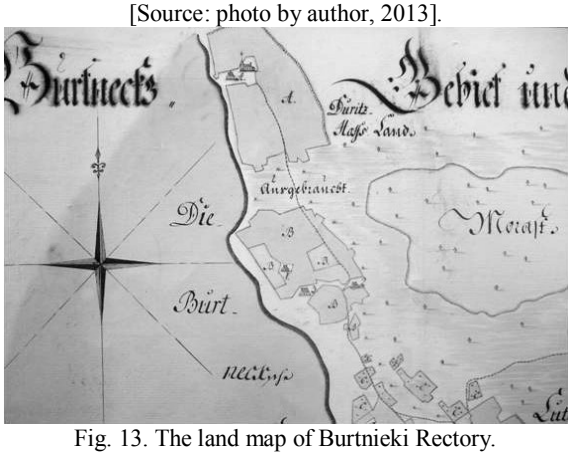


Fig. 13. The land map of Burtnieki Rectory.
1681., 1784 [Source: LVVA 7404., f., 1. apr., 496. l.].

Burtnieki Rectory and the land division plan of 1784 [16], the second one is the plan of the division of the land of the rectory during the Latvian agrarian reform [14], of a later time situation suggests the topographic plan of the 1970s and the 1: 200000 scale map of the Latvian roads from 1940 [12].

**Pastor burials in the old cemetery of Burtnieki**

A number of the congregation pastors are resting in the old cemetery of Burtnieki. One of them - the above mentioned J. H. Guleck with his wife, Jacobine Guleck (1752–1827). Their monument is a granite cross on a pedestal. A number of grave slabs can also be seen in the area enclosed by a metal fence.

A number of graves tell us about the relatives of the Parrot family. The inscription on the metal cross shows that V. F. Parrot is buried here –the already mentioned congregation shepherd, next to him – a metal cross can be seen, which, unfortunately, is no longer rising to the sky, because it is lying on the ground and it belongs to Minna Girgensohn, born Minna Parrot (1837–1884). Also nearby, the above mentioned Pastor T. L. Girgensohn is buried and it is indicated by a metal cross. In the context of the cultural-historical study of the congregation of Burtnieki, a teacher and organist Jānis Kaktiņš (1827–1901) should be mentioned, who carried out his duties from 1861 to 1901. His tomb is marked by a black granite cross on a pedestal.

**Church**

On the bank of Burtnieki Lake, near the rectory house, the Lutheran Church of Burtnieki is located, the origin of which dates back to the 13th century, and, supposedly, it is built simultaneously with the castle of the order at Burtnieki during the period from 1283 to 1287. *The belonging of the building to the middle ages is represented by less than two meters thick walls of the congregation room. The oldest construction element is the Gothic window of the eastern wall of the altar part with four lancet arches* [11]. In 1654, the church is burnt down, and only the walls remain. The renovation of the building lasts longer due to the Russian-Polish war. The church with a tower in front of the main entrance is restored in the period from 1666 to 1669. In the period from 1683 to 1684, the renovation works of the building are carried out under the supervision of masonry master Michels Jungnikel from Riga.

In 1863, due to the lightning, the church tower falls and bursts into flames. By the means of the owner Johann Friedrich von Schröder of the palace manor of Burtnieki – in the period from 1864 to 1866 it is restored by building master H. Meier from Limbaži. In the reconstruction of the church also participated – building master Clement Wiegandt-restored the roof, painting master Kort Meyer – gilded the spike's trigger [11]. The planningstructure

Fig. 14. The land division plan of Burtnieki Rectory [Source: LVVA 1679.f., 172. apr., 1841. l.].

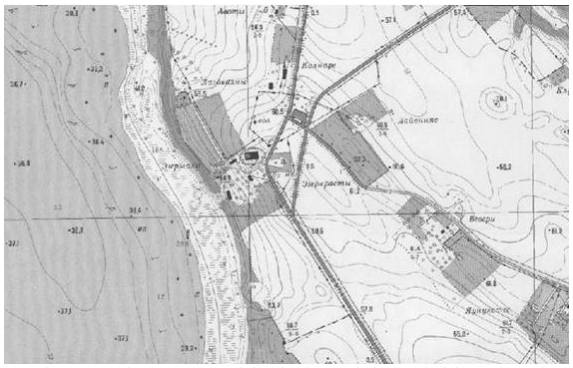
Fig. 15. The topographical plan of the neighbourhood of the Church of Burtnieki, the 1970s [Source: material from State Inspection for Heritage Protection Republic of Latvia].


Fig. 16. The burials of the relatives belonging to the Parrot family in the old cemetery of Burtnieki [Source: photo by author, 2013].

and design of the facade of the ancient church is distinctly Gothic, but Baroque-style effects are shown by the tower's spike, finishing of the interior and the equipment as well. In 1962, the church was alienated to the congregation with the idea of having a concert hall there, but it was abandoned to the mercy of fate. Then, the equipment was vandalized, the interior partially perished. In 1981, the Church of Burtnieki initiated research work and from 1988 to 1993 it was followed by restoration works.

But let's look back to the history of the equipment, described in the edition dedicated to the Church of Burtnieki and the rectory [9]. In 1691, a new altar is made with an altarpiece in the centre of the rentable, painted by the Riga painter Karl August Poorten that is a copy of the painting *Christ on the cross* ("Le coup de lance"), painted by Peter Paul Rubens. On the predella, there was a painting *the Last Communion* – the author is unknown, but on the second floor of the rentable, there was the painting *the Resurrection*. During the years of the Soviet repressions, the paintings disappeared, but individual items of the equipment were taken to the Rundale Palace Museum. In 1991, the items of the equipment returned to the church. The altar was partly renovated and in 2007 new altarpieces were painted being copies of the historical altarpieces (the painter Andris Začests). Still God's punishment awaits those who for selfish reasons abused the previous and original artistic values, but maybe they have already been punished. A very important part of the church equipment is the pulpit, made in 1684 and it is decorated with paintings of the images of five evangelists. In the paintings of the staircase panels and the pulpit door, there are used scenes from the Old Testament. The pulpit is renovated in the period from 1991 to 2001 (restorers Inese Andersone and Andrejs Plešaunieks).

Fig. 17. The Lutheran Church of Burtnieki [Source: photo by author, 2013].

Fig. 18. The congregation room of the Lutheran Church of Burtnieki [Source: photo by author, 2013].

There is also a sad story about the church organ. It found its place there in 1770. Over time, it was worn and in 1867, the organ builder Friedrich Ladegast installed a new pipe organ in the church, which was made in Germany. This organ was cruelly devastated in the Soviet years, when the power blinded folks no longer measured their brutal actions. Today, in the church, in front of the ruined instrument, there is placed a new organ made in 1971 and given as a gift in 1998.

**Conclusions**

The environment of the pastorate of Burtnieki, created together with the church, has kept its authenticity in a much greater degree than other similar places in Latvia. It is an interconnection of the emotional perception of the landscape, residential environment, building, planning and the place that over time is not tainted with extraneous objects. The building of the pastorate with the church is uniquely intact in the wider environmental context as well – with the picturesque bluffs of Burtnieki Lake, the old cemetery with its chapels, the road network, the landscape. Largely authentic is also the rectory, the design of which has changed over time, it has remained intact in its external appearance and in the architectural artistic solution of the facades. These are favoured and protected values.

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In 1979, **Jānis Zilgalvis** graduated from the Faculty of Architecture of the Riga Technical University. In 1990, he defended his doctoral thesis on the subject of the manor architecture of the second half of the 19th century – the start of the 20th century. Since 1995, he is the Head of the Architecture Department of the State Inspection for Cultural Monument Protection and since 2001 – an associate professor of the Faculty of Architecture and Urban Planning at the Riga Technical University. Since 2012 – a full member of the Latvian Academy of Sciences. Over 170 scientific and popular scientific publications and 17 books (some co-authored). The main lines of research – the manor architecture and cultural history, sacral architecture, cultural heritage protection.

**Kopsavilkums.** Burtnieku mācītājmuiža jau no seniem laikiem ir atradusies pie baznīcas. Ziemeļu kara laikā (1700–1721) Vidzeme tika nežēlīgi izpostīta. Nav pamata domāt, ka mācītājmuiža būtu izņēmums. Šajos grūtajos laikos par Burtnieku mācītāju tika iecelts J. B. Fišers. 1738. gadā pastorāta dzīvojamā ēka tiek uzcelta no jauna. 1746. gadā tā gāja bojā ugunsgrēkā. Ēkas atjaunošana sākusies tuvākajos gados. Atjaunotā ēka vairākkārt remontēta 18. gs. 60. gados, bet laika posmā no 1774. līdz 1775. gadam celta atkal no jauna. Arī šī mācītājmāja bijusi koka. Ap 1769. gadu draudzes dzīvi vadīja mācītājs J. H. Guleke. Rosīgs bija viņa darbības laiks – uzrakstīta draudzes hronika, atbalstīta ērģeļu un baznīcas trauku iegāde, iesvētīta jauna kapsēta. J. H. Gulekes laikā baznīcu un mācītājmuižas ēkas 1798. gadā attēlojis E. M. Ulprehts. Viņa zīmējumu savā krājumā ievietojis J. K. Broce. Minētajā gadā baznīcu un mācītājmuižas apbūvi attēlojis arī pats J. K. Broce. Šajā zīmējumā par mācītājmuižas apbūvi var spriest daudz labāk. Kopumā attēlotas deviņas lielākas vai mazākas ēkas. Viena no tām – mācītājmāja ar pildrežģa zelmini. Kreisajā stūrī atainota rija, iepretim baznīcai, domājams, konfirmantu un kalpu māja. Apbūvi ieskauj koka žogs.

J. H. Guleki 1817. gadā darbā nomainīja mācītājs V. F. Parots, Tērbatas universitātes pirmā rektora un Pēterburgas Zinātņu akadēmijas akadēmiķa G. F. Parota dēls. Viņa darbības laikā no 1820. gada līdz 1821. gadam uzcelta jauna mūra mācītājmāja, kura saglabājusies vēl šodien. Nākošais Burtnieku mācītājs bija T. L. Girgensons. 1828. gadā mācītājmājas virtuves galā tiek uzcelta piebūve. 1911. gadā izbūvētas četras istabas bēniņu stāvā. Padomju laikā mācītājmājā atradās veterinārais iecirknis un dzīvokļi. Tā netika pienācīgi remontēta, un ēka pamazām gāja bojā. 1988. gadā stāvoklis mainījās. Pateicoties zirgaudzētavas Burtnieki gādībai norisinājās mācītājmājas vēsturiskā un mākslinieciskā izpēte, kurai 1990. gados sekoja restaurācija, vēsturiskā izskatā atdzima stallis un klēts.

Vēsturiskām liecībām bagātas ir mācītājmuižas iekštelpas. Ieejas hallē saglabājušās kāpnes ar siluetgriezumu margām (1843). Turpat redzama arī tumši brūnā tonī glazētu podiņu krāsns ar profilētu dzegu un cokolu. No halles pa kreisi restaurētas divu pildiņu durvju vērtnes ved mācītāja kabinetā, kurā saglabājusies interesanta krāsns no 18. gs. beigām, kuras podiņi ir apgleznoti. Hallei iepretim atrodas neliela telpa, kuras stūrī saglabājusies krāsns ar profilētu dzegu un nišu vidusdaļā.

1990. gados atdzima ne tikai mācītājmāja, bet arī stallis un klēts. Padomju laikā ēkas pamazām gāja bojā un palikuši tikai bija nesošo sienu mūri, jo pārējais bija jādemontē kā bezcerīgi nolietojies.

Burtnieku pastorāta situācijas plānu redzam J. K. Broces pārzīmētajā zīmējumā, kas tapis ne agrāk par 17. gs. beigām. Ceļu tīklu iespējams salīdzināt ar agrākiem un vēlākiem situācijas plāniem. Viens no tiem ir

1784. gada Burtnieku mācītājmuižas un zemju sadalīšanas plāns, otrs - Latvijas agrārreformas laikā tapušais mācītājmuižas zemes sadalīšanas plāns, bet par vēlāka laika situāciju liecina 1970. gadu topogrāfiskais plāns un 1:200000 mērogā tapusi Latvijas ceļu karte no 1940. gada.

Burtnieku ezera krastā, blakus mācītājmājai, atrodas Burtnieku luterāņu baznīca, kuras pirmsākumi meklējami 13. gs. beigās, un domājams, ka tā celta vienlaicīgi ar ordeņa pili Burtniekos laika posmā no 1283. līdz 1287. gadam. 1654. gadā dievnams izdega, un no tā atlika tikai mūri. Ēkas atjaunošana ieilga krievu - poļu karadarbības dēļ. Baznīca ar torni galvenās ieejas fasādes priekšā atjaunota no 1666. gada līdz 1669. gadā. 1683.–1684. gadā tiek veikti ēkas atjaunošanas darbi. Senā dievnama plāna struktūra un fasāžu izveidojums ir izteikti gotisks, bet par baroka stila ietekmi liecina torņa smaile un interjera apdare, kā arī iekārta. 1962. gadā baznīcu draudzei atsavināja ar domu tur ierīkot koncertzāli, taču tā tika pamesta likteņa varā. Pēc tam izdemolēta iekārta, daļēji gāja bojā interjers. 1981. gadā Burtnieku baznīcā uzsākti izpētes darbi, kuriem no 1988.–1993. gadam sekoja restaurācija.

Padomju gados altāra gleznas pazudušas, bet atsevišķi iekārtas priekšmeti aizvesti uz Rundāles pils muzeju. 1991. gadā iekārtas priekšmeti atgriezās dievnamā. Altāris daļēji ir restaurēts un 2007. gadā izgatavotas jaunas altārgleznas, vēsturisko kopijas (mākslinieks A. Začests). Ļoti nozīmīga baznīcas iekārtas daļa ir kancele, kas izgatavota 1684. gadā un to rotā piecu evaņģēlistu tēlu gleznojumi. Kāpņu un kanceles durvju pildinos gleznojumos izmantoti sižeti no Vecās Derības. Kancele restaurēta 1991.–2001. gados.

Burtnieku pastorāta, kopā ar baznīcu veidotā vide ir saglabājusi savu autentiskumu daudz lielākā mērā nekā citas tamlīdzīgas vietas Latvijā. Tā ir ainavas, sadzīviskās vides, apbūves, plānojuma un vietas emocionālās uztveres kopskanība, kas laikam ritot nav sabojāta ar neiederīgiem objektiem. Mācītājmuižas apbūve ar baznīcu ir unikāli neskarta arī plašākā vides kontekstā – ar Burtnieku ezera gleznainajiem stāvkrastiem, veco kapsētu ar tās kapličām, ceļu tīklu, ainavu. Lielā mērā autentiska ir arī mācītājmāja, kuras plānojums laika gaitā nav mainījies, tāpat neskarts saglabājies tās ārējais veidols un fasāžu arhitektoniski mākslinieciskais risinājums. Tās ir saudzējamas un aizsargājamas vērtības.