Generative Transformation of Latvian Urban Space: “Blue” and “Green” Structures in the Planning and Landscapes of Cities’ Historical Centres

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Introduction

Structures built in the natural environment by people and the network of ancient streets created over many generations and centuries determine the urban space and artistic expression of historical centres in Latvian cities, whose functional and economic potential has changed in the course of time. These are landscapes that characterized by people’s preceptions today, as well as landscapes which have already disappeared. However, there are landscapes of the imagination, memory landscapes. These are, also every person’s individual feelings, notions, thoughts, memories, and knowledge. The landscape has three cultural dimensions: the landscape’s character determines how the particular territory is preserved by an individual or the community, the landscape provides evidence of former and existing relationships between individuals and their environment, and the landscape helps to create local culture, options, habits, beliefs and traditions. The cultural landscape is not just the condition of some landscape of buildings and its look, but rather the interweaving of various relationships realized over time with human input. The mutual connection between the concepts used, “landscape” and “cultural landscape”, is quite strong, except for those cases when only the aesthetic qualities of a place are being highlighted by the word “landscape”, or it is being used in the sense of the background surrounding some individual object. A slightly different view of urban landscape is developing in the heritage context. Landscape is revealed in two dimensions. One – as the result of a long-term creation process, namely, today’s landscape as a territorial representation. The second is the time dimension, which is more difficult to perceive, it is not based on particular year dates, but on the course of history and events, which, in one way or another, influenced the process of the town development, leaving behind its signs. Therefore, visible and also invisible landscape reflects time, the lives of people over many generations [13]. A completely different social environment and artistic values have been created, and historic centers of cities are being reconstructed. In the urban transformation process, in order to preserve old urban structures created in the natural environment, new natural and decorative elements are included in space of cities’ historical centers. A creative and generative approach allows the preservation of the identity of the historical environment, even complemented by “blue” and “green” structures.
1. The first urban structures and men-made greenery in Latvian natural environment

In Europe of the 12th century, German merchants started to monitor traffic on important waterways in rivers and seas and earth highways. The Germans expanded the impact in the Baltic Sea region to spread Christianity under the leadership of the Pope of Rome and the Holy Roman Emperor. Around 1200, merchants arrived at the local people Liivs-inhabited Baltic Sea coast to monitor the highway of the Daugava River. On hills covered by water barriers, conquerors began to build stone castles to subordinate the Balts and their inhabited lands. In economically active places, where earth roads crossed important waterways, crossings were established and economic activity on rivers’ banks promoted the establishment of marketplaces and the functional use of waterfronts. In the vicinity of fortresses, merchants and craftsmen established settlements which later gained city privileges. Around the marketplace created a city center building and street network. In the 14th century, on the territory of Latvia the first towns were founded by the Knights of the Teutonic Order, and the urban space won landscape characterized the interaction of people and nature at places and in time.

In Courland, where the Cours’ settlement on the left bank of the Venta River existed at least fifty years before the German wooden fortress construction, in the late 13th century, a stone four-unit Goldingen (Latvian: Kuldīga) Castle of regular planning replaced former wooden fortifications, and Goldingen Commandry’s Centre was formed. A new territory in 1355 allocated for the Cours’ settlement promoted the development of the medieval agglomeration in Goldingen that consisted of the Castle–hamlet (Latvian: Pilsmiests), the Hill-hamlet (Latvian: Kalnamiests, German: Bergflecken) and the settlement on road’s (now Kalna Street) both sides. Under the Castle–hamlet jurisdiction, there was also the castle-front or the “town behind the hill” (German: Stadt up dem Berge) from which the road (now Jelgava Street) along the left bank of the Venta took to Mitau. The inhabited place with the custom-house, the marketplace and St. Catherine’s Church had an irregular layout and was surrounded by a circular street (now Baznīcas Street) [5]. Settlement obtained the city law statutes. In 1361, the New Town of Goldingen was mentioned in the records.

The Livonian War (1558–1582) destroyed the confederation of Livonian States, and on 5 March 1562, the Duchy of Courland and Semigallia (Latin: Ducatus Curlandiae et Semigalliae) (Fig. 1), subjugated to Poland, was founded. The last Master of Livonia Godthartt Kettler (1517–1587) became the first duke of the new state. Lutheranism in the newly founded state was announced as legal religion, and on 28 February 1567, the Courland Landtag made a decision about churches, schools, hospitals and “other useful things”. Implementing this decision, in Courland and Semigallia several sacral buildings, a few residences, numerous public and residential houses and warehouses were built.
During the late 16th century—the first half of the 17th century, acquisition of the new, constructive ideas of the military and civil building and adoption of the architectonic and decorative forms was going on. New ideas came in with the German, Swedish, Dutch and Polish building and art samples. In Courland, the simplicity and reticence of the external building forms of small Lutheran churches was compensated by luxurious interiors and ceiling, made by the stellar-network vault covering and the rich plastic woodcarving adornments of inside equipment objects (altars, pulpits, gentlemen’s pews).

Many fortresses were destroyed during the Livonian War. Knights became landlords and started to build dwellings on their land. The building of manor centres began to develop in the late 16th century. New landlords needed gardens to grow vegetables, herbs, and medicinal plants. Such gardens surrounded by a ditch and a hedge of thorny shrubs were also desirable to have a hedge maze, pens for different animals, bird cages and a fish pond. Garden buildings, recreation areas and sundials were surrounded by vineyards and rose bushes. The central path that led to a grove or woods was decorated with glamorous greenery. The Goldingen Castle inventory descriptions of 1699 mention that a fruit and amusement garden (German: *Baum und Lustgarten*) was located “at the castle”. In German “*Lustgarten*” was used to design not only a garden with entertainment or amusement facilities but also a place with some shrubs, trees and a flower bed for a meditative relaxation (Fig. 2). On the steep slope, the Castle Garden (Fig. 3) grew from the Venta coast to the Piepevalka (formerly called the stream between the first houses on Dīķu Street) valley, and root crops and fruits, especially apples and cherries there were cultivated for the needs of the Duke's court. A road that leads from the garden gates through an allée of lime-trees was an innovation in the Dutchy. A gazebo (Loewe) was set up in the garden, and all paths—five of them longways (*Lange gaenge*) and six sideways (*Quer gaenge*)—were for strolls. Plantings were arranged in boskets. Angular (*Eckigte*) fields for kitchen produce were located all around the garden. A small leisure garden with five ponds was on the other side of the amusement garden. One bosket was planted with gooseberry bushes, and the rest with currant bushes [8].

![Fig. 1 Map of the western part of the Duchy of Courland and Semigallia. 1747](image.png)

[State Archives of Latvia, Fund 6828, Description 2, Case 9, File 2]

![Fig. 2 Walfried Fromhold-Treu (1886–1964). An attempted reconstruction of the Goldingen Castle and the surrounding gardens in 1680. 1934.](image.png)

[5]

![Fig. 3 The planning of the oldest part of Goldingen with the castle-site and the Castle Garden in 1680. 1844](image.png)

[Brieling A. Plan von der Kreisstadt Goldingen. Mitau:
Hunting gardens containing pens with cages and sheds for animals and a shooting area were common in Medieval Europe. Several duke manors in Courland and Semigallia had deer parks. Nearby the Goldingen Castle a ferry raft and Birds manor located, and the Deer Park (Fig. 4) created by Duke (1682–1698) Friedrich II Kasimir Kettler (1650–1698) was the pride of Courland. The Duchess of Courland (1711–1730) Anna (Russian: Анна Иоанновна Романова; 1693–1740), later empress of Russia, in 1720 ordered to transfer deers to St. Petersburg and transformed the garden into a public recreation space [8]. South of the fortress in the protective wall (against Dīķu Street), through an iron gate, it was possible get to on a wooden bridge, which led across the moat, from which the road led to the Duke’s orchards. When the Swedes destroyed the castle, the garden also disappeared.

![Fig. 4 The Goldingen Castle and the Deer Park](image)

On the Long island made by the Lielupe River and its by-pass Driksa, the wooden fortress of Mitau (1265–1266) in 1272 became the military base for the conquest of Semigallia, Lithuania and Courland. Under Livonian Master (1328–1340) Eberhard von Monheim’s (Latin: Everhardus a Monheim) guidance, the Mitau Castle of boulders, dolomite and bricks was built. Beside the castle, craftsmen and merchants made an urban settlement (Hakelwerk Mitau) by compact building of household houses, warehouses and dwellings. Lithuanians under Grand Duke (1345–1377) Algirdas’ leadership in 1345 burnt the castle-front [21]. Merchants and craftsmen’s settlement Jelgab, whose name could be explained as the “city on water”, in the 15th century started to emerge on the left bank of the Driksa, opposite the castle [4]. In 1522, a small wooden church (destroyed in 1627) located nearby the marketplace. In Jelgab, a new building of the Latin School founded in 1567 was built near a Market Square adjoined the intersection of roads and the waterway. Construction of the Holy Trinity Church (around 1573–1615) for the German Lutheran parish was started next to the old wooden church. In 1573, settlement obtained the city statutes, municipality and the coat of arms and became the duchy’s capital city Mitau, where the duke’s family arrived. They started to rebuild (1573–1586) the fortress as the main residence of Duke of Courland [6]. Earth ramparts for the defence of the castle building complex were made. In 1578, there were several streets in Mitau, the Market Square and 175 buildings, mostly single-storey wooden houses covered by thatched or shingle roofs.

During the Polish-Swedish War (1600–1629) different epidemics took much more human lives than war, so the pharmacist Johann David (?–1657) founded (around 1600) a pharmacy beside the Market Square in Mitau. David owned a house and two gardens for the cultivation of officially recognized medicinal herbs. Since 6 September 1606, in Mitau the law „Die Mitaushe Stadt-Policei-Ordnung“ governed public life [16]. However, on 17 August 1607, fire destroyed lot of buildings. The pharmacy burned down in 1607 but was restored. Albert Kronberger I founded the Lion’s Pharmacy (around 1606). During the reign (1587–1642) of Duke Friedrich Kettler (1569–1642) the city experienced rapid growth: the building restored after the devastating fire received a regular layout. On 5 July 1615, the borders of the city of Mitava officially approved for the first time. The Swedes in 1621 occupied Mitau and
robbed the church. In 1625, fire destroyed the capital city. Duke (1642–1682) Jakob von Kettler (also Jacobus) started his endeavour to make trade in Courland independent from Riga. In 1648, solving important defense issues, Duke proceeded to create for the city a common system of fortifications with protective bastions and deepened moats. Tobiass von Krauss, Duke’s court surveyor, drew (1652) a plan of Mitau (Fig. 5).

Fig. 5 Duke’s court surveyor Tobiass Krauss. A fragment of Mitau rural district’s boundary plan with the amusement garden "Ihr F. Gn. Lustgarten" (His Majesty’s amusement garden). 1652 [National History Museum of Latvia].

The building had a regular planning: single-storey residential wooden houses, covered with gabled roofs and facing the street with the end façade, were placed along the perimeter of square blocks. (Fig. 6) In the middle of the block, there were a barn, inn, stable, bathhouse, threshing barn, resting place and garden, but the Town Hall was in the centre of the Market Square, surrounded by the most important buildings along the perimeter. On the embankment of Driksa, there was a tavern of burghermeister Heinrich Dunkel and a visiting yard. Mitau became an important economic center which was developing rapidly.

Fig. 6 Painter Friedrich Julius Döring (1818–1898). Mitau and the "Lustgarten" plan of 1652 created in accordance with Mitau rural district’s boundary plan drawn by Tobiass Krauss. 1891 [Stadt Mitau. 1652. Nach Tobiass Krausens Karte bearbeitet von Julius Döring 1891. Mitau: Photo-Lith. von S. F. Steffenhagen & Sohn, 1891]

Fig. 7 Plan of Mitau. 1690 [State Archives of Latvia, Fund 640, Description 2, Case 262, File 84]

During the Little Northern War (1655–1660), the capital city Mitau and Duke’s residence were destroyed. The plague epidemic (1657–1661) decreased
the number of people living in Courland. Duke Jacob set the main tasks to strengthen defence systems and provide inhabitants with a better drinking water. Mitau in 1659 was surrounded by fortifications (Fig. 7) [6]. After the war, streets formed in accordance with directions of communication lines, started from the city’s centre and led to the Water or Sea (Porta aquatica), Dobele (Porta Doblensis), Small (Porta parva) and Lithuanian (Porta Lituanica) Gates. Gardens and meadows were outside the town. The Town Hall situated at Catholic Street, in 1663 was moved to Great Street, alongside which a four-verst long Jacob’s Canal was dug (around 1665) [9], in order to link the Svēte River with the Driksa. Goods from ships to warehouses and trading places were transported along Jacob’s Canal, made perpendicularly to the Lielupe waterway. The main traffic highway marked in the layout of the fortified town the principal compositional axis westwards the dukes’ residence and the bridge across the Driksa. In almost symmetrical plan of the capital city, the complex of the duke’s residence, the Market Square, Jacob’s Canal and three churches were essential. In the town’s centre, buildings for administrative, trade, medical, educational and manufacturing function provision were arranged. Great Street branched at St. Anna’s Church: on the right the road took to Dobele Gate, but on the left – to the Small Gate. Catholic (German: Katholische Straße) Street along the south side of the Market Square provided traffic between Water and Lithuanian Gates.

In the capital city and its outskirts manufactures worked: saltpetre saltern, limekiln, kiln of bricks, steel, copper and others, as well as a glazier workshop, iron and copper forgery. The water level of the canal was regulated by two water-gates: miller Augustin Richter made the watermill at the Driksa water-gate in 1670, but the mill at the other water-gate was operated by horses. The windmill was built near the marketplace. In 1688, building of the high tower of the Holy Trinity Church, covered with a low pyramidal four-sided roof, under building master Martin Knoch’s guidance, was completed, and it was crested with a small weathervane flag and the year engraved on it [19]. A multi-functional centre started to develop [22]. Around 1700, the capital city Mitau of the Duchy of Courland and Semigallia surrounded by the defence canal and fortification system with fifteen bastions (Fig. 8) was created whose typology can be found among the samples of the Renaissance ideal cities.

At the Platone River a large amusement garden was created in the south of the Dutchy's capital city Mitau. In the south-east of the St. Trinity Church near the castle a small garden was located which produced goods for kitchen, as well as herbs, flowers, and fruits. Different quarters of this garden were lined up to one another and separated by paths, whose layout was not consistent with the overall design of the garden. A description of this garden was created after the Great Northern War in 1722 [1]. Instead of a fortress, the castle was built in two periods (1738–1740 and 1762–1772) and changes also took place on the
embankment of the Driksa (Fig. 9).

On the Doblen Hillfort, instead of the destroyed Semigallians’ wooden fortifications the two-storey block of irregular square planning Doblen (Latvian: Dobele) stone castle (1335–1347) was built for Livonian Master’s residence (Fig. 10), which in October 1869 and September 1870 was thoroughly studied by painter Friedrich Julius Döring (1818–1898) [20]. Under cover of the residence of trapezoidal layout, in the southwest corner of the wide castle-front, there was a gate-tower and the balance-bridge [3]. In the west part of the protective wall, the entrance gate was next to the rectangular layout tower. Craftsmen and merchants established a settlement near the fortress [20]. On the left bank of the Bērze River, in the 15th century existing urban settlement’s marketplace at the side opposite the residence, a single-nave rectangular longitudinal church [2] from boulders was built. Widow of Duke Friedrich Elisabeth Magdalena of Pomerania (German: Elisabeth Magdalena von Pommern; 1580–1649) with a foster-son, later Duke of Jacob, from 1643 till 1649 lived in the Doblen Castle (Fig. 10). A Duchess consort of Courland had acquired knowledge of horticulture, and on the castle mound, she established a large garden of medicinal plant [9]. Dukes of Courland followed the “flower” fashion [1].

According to the bull issued by Pope (1261–1264) Urbanus IV in 1264, the Latgalian lands (Fig. 11) came under German rule. They also included Rositten, where wooden fortifications of the local inhabitants existed around the 13th century. When between 1264 and 1324, on the right bank of the Rēzekne River, strangers erected a stone fortress on Latgalian mound, the fortification and settlement of the local people became impossible. German equal partners in Rositten were local and Russian merchants [14].

On the eastern side of irregularly designed castrum Rositten (Fig. 12) there was a outpost of polygonal planning, from which the road led to the entrance gate to the fortress [14]. Fortifications were originally guarded by a square gate tower and two round towers on the west and south walls [3]. The Rositten Castle in the 15th century – in the first half of the 16th century was one of the most important fortifications of the Livonian eastern border.

Fig. 10 Artist Oļgers Krūmiņš. Panorama of the Doblen Castle. 1661 [Academic Library of the University of Latvia, Library of Misins]

Fig. 11 Map fragment with Rositten (on the bottom right of the picture). 1798 [National Library of Latvia, the cartography material Kt I1-1-89]
By the end of the 17th century, the natural landscape was complemented by monumental complexes of buildings, in whose surroundings river banks were economically active.

2. Nature elements and green structures in Latvian urban landscape formation

During the Russian Empire, installing parks in suburban estates, gained experience, which was useful, to create in the city natural environment that was appropriate for recreation, entertainment and healing. Castle mounds with ruins started to be turned into gardens, parks and riverside recreation places. In the oldest part of Goldingen, where a German fortress situated, in the 1860s, the City Garden (Fig. 13) with well-stocked plantations and historically valuable architectural elements began to form. The City Garden further developed into a popular recreation area for inhabitants and city guest. Since the end of the 19th century, slopes of the City Garden in winter was able to ride a sled, but on the pond there was a skating rink in place of the former ditches. Students of the German Gymnasium provided the order and the opportunity to drink hot tea. The skating rink was used by gymnasts and adults. In good weather it was possible during weekend to skate accompanied by music. In the early 20th century, a small, round pavilion was erected on the hill above the fortress ruins, and the view opened to the Venta Rapid that is the widest waterfall in Europe. A fabulous arched bridge, that was a favorite meeting place for lovers, led from both hills across the ravine. The second garden with beautiful fruit trees opposite the German gymnasium was converted into pasture in the 19th century.
In Mitau, man-made green structures were located outside city’s ramparts (Fig. 14). At major traffic highways gardens were installed and buildings for farm and recreation were built. The area of the Castle Island enclosed by ramparts between the Lielupe and the Driksa, in 1817 began to be transformed into Governor’s Island. A Palace Garden around the Mitau Palace was created, and it also included former fortifications of the earth’s ramparts and bastions. Later the Palace park was created, and from zigzag walks (Fig. 15) wide perspectives on the surrounding landscape opened. The park from road bordered alleés (Fig. 16). They also included walking paths along banks of the Lielupe and the Driksa (Fig. 17), and of them the view opened on the expanses of water and park landscaping. There were some noble trees growing in the Palace Park – two horse chestnuts, pyramidal oak, gray aspen or *Populus tremula*, and romantic canals, bridges, pavilions were created. South of the park, on the right side of Riga Road near Driksa, a theater house in 1912 was built (destroyed after World War II), and the areas of greenery decreased.

Fig. 15 Greenery of the Palace Park near the Mitau Palace. The early 20th century.  
[Mitau. Partie aus dem Schloßgarten III. Mitau: Verlag Nicolai Hubner]

Fig. 16 Alleé of the Palace Park. The early 20th century.  

Fig. 17 The Mitau Palace and greenery of the Palace Park: a concert pavilion in the foreground. The early 20th century.  

The building of Bach Street (later – Upes Street, modern boulevard of Jānis Čakste) decorated by linden alleé formed
elegant stone houses. Bach Street along the Drksa coast (Fig. 18) led to the governor's residence and the Castle Park, where the pavilion and concert hall located.

Dobele differently than usual. The houses were adorned with maids, wreaths and even flags. More and more riders and pedestrians in festive clothing appeared on the streets. They all went to the church for the first Courland Song Festival Opening Concert. In the evening, participants went to the Doblen Castle ruins (Fig. 21) [12].

Linden-tree avenues emphasized the main traffic routes in Mitau, but in the early 20th century linked green structures into a single greenery system (Fig. 19), which significantly improved the quality of the urban environment and the landscape. The riverside was created as an environment for recreation.

The inhabitants of Dobele cultivated gardens near one-storey residential buildings (Fig. 20), and the town had lot of green areas (Fig. 22). The morning of 26 June 1870 started in

Fig. 18 Linden-tree allée and greenery on the embankment of the Drikša. The late 19th century. [Mitau. Schlittschuhbahn. Dresden: Kunstverlag Karl Grobe]

Fig. 19 Mitau map with its gardens and parks. 1907 [National Library of Latvia, the cartography material Ktl1-3-164]

Fig. 20 Greenery on the embankment of the Bērze River. The early 20th century. [Dobele Museum of Local History]

Fig. 21 Mitau County Auditor C. G. Raetsch. The Doblen Castle ruins and the Bērze River in the early 19th century [Abbildungen der Livländischen Burgen im Album des Marquis Paulucci]
On the Latgale highland’s northern slope, the settlement near the fortress on the Rēzekne (also Kovšu) Lake’s vicinity the town rights in 1773 acquired. Rositten in the early 19th century was a small town at the castle mound’s foot, and two thirds of its population were Jews, who according to the laws of that time were allowed to live only in cities. A. Mozalovsky, the surveyor of the Vitebsk Governorate Board, in 1835 drafted a Master Plan for Rositten approved by the government on 24 April 1836. In the north of Rositten, on both sides of St. Petersburg–Warsaw highway (now Atrīvošanas (Liberation) Avenue) opened in 1836, regular rectangular quarters for Christian dwellings were planned, but in the Upper Town’s centre, public buildings and an Orthodox church (1840) were built. Captain Komarovsky drew up the new Master Plan for the city and the detailing layout for building around the central square. A public garden was planned in the area between castle ruins and the river (Fig. 23). In November 1847, the government approved the new plan. St. Petersburg-Warsaw railway, opened in 1860, contributed to economic activity in the city. The Master Plan lost its importance, and since 1872, in a public garden area, it was allowed to build residential buildings. Since the second half of the 19th century, in urban space of cities in Western Russia, the most important streets for traffic were highlighted by Dutch linden-tree or horse chestnut alleés involved in the formation of the city’s greenery system. Alleés in planning structure became the main compositional green element that connected functionally important territories. In Rēzekne, the most luxurious houses were built on Nicolai Street (now Liberation Alley), and the significance of urban construction was emphasized by tree plantations. The new building gradually and spontaneously began to expand beyond the boundaries indicated in the Master Plan. In 1901, the Land surveyor Svirskis drew up a new Master Plan, extending the building range and maintaining the regular rectangular planning system of the Upper Town. After the opening of Ventspils-Ribinsk railway in 1904, Rēzekne became an important railway junction with two stations. The construction of the city was expanded.

3. Transformation of natural elements in Latvian urban environment under the influence of the domestic policy during the interwar period and political ideology after World War II
In the Republic of Latvia, the construction of cheap housing became a topical issue in the new political situation. On 16 September 1920, the Constitutional Assembly adopted a resolution "On Agrarian Reform in the Republic of Latvia", and new land was given to urban development. The structure of the economy changed, new administrative centres and traffic hubs were created, cities were reconstructed. During the Republic of Latvia, in the City Garden of Kuldīga (former Goldingen), a cafe with open terraces (Fig. 24) and a stage was built. City dwellers every Saturday and Sunday came here to play music. Kuldīga residents also had the opportunity to attend outdoor theater shows and sports competitions. The park was surrounded by a tall courtyard and tables were set up for ticket sales at the entrances during the event.

After World War II, in Kuldīga, the Sculpture Garden near Venta was established, and 22 stone and bronze sculptures and groups (Fig. 25) placed here are one of the greatest contributions of Kuldīga Honorary Citizen (since 1978), sculptor Līvija Rezevska (1926–2004).

In the Republic of Latvia, Jelgava (formerly Mitau) (Fig. 26) became the centre of the county. On the island, the palace was restored under the direction of architect Eižens Laube, and in 1937, a western block was added to it. During the World War II, the city was destroyed, and the reconstruction of the centre of Jelgava was influenced by Soviet ideology, therefore the construction concept was changed (Fig. 27) [17].

Fig. 24 A cafe with open terraces. 2009 [Photo by Silvija Ozola]

Fig. 25 Sculptor Līvija Rezevska (1926–2004). Sculpture “Suitu sievas” in Kuldīga Sculpture Garden near Venta. 2017 [Photo by Silvija Ozola]
Dobele that was destroyed during World War II needed a change in the building concept of the city centre (Fig. 28, 29) [15]. Near the Dobele Castle mound, on which ruins are located, a school and a sports ground were arranged. The historic site acquired a new function (Fig. 30).

The urban development of Rēzekne (until 1893 German: Rositten, before the Revolution Russian: Рѣжица, until 1917 and 1944–1945 Russian: Режица), the seventh largest city in Latvia, that was formed on seven hills, very clearly demonstrates consistency and continuity in the implementation of solutions (Fig. 31), preserving the planning structure of the central part created in the 19th century [11]. In 1927,
the area of Rezekne city was expanded. The municipal government of each city had to take care of the development of a Master Plan and functional zoning. Soviet-era building drastically changed the city plan (Fig. 32) created over many centuries on the banks of the Rēzekne River and Lake.

**Fig. 31 Planning of Rēzekne. 1933 [State Archives of Latvia, Fund 6828, Description 2, Case 564]**

**Fig. 32 A fragment of map of Rēzekne. 1978 [Митюк В. И. Резекне на 1 лист (0-35-127). Секретно. Составлено в 1973 г. Издано с оригинала ГУГК при СМ СССР. Генеральный штаб, 1978]**

4. Generative transformation of “blue” and “green” structures of the urban environment to improve the artistic expression of a cultural landscape in historical cities of Latvia

After Latvia regained its independence, urban planning and recreation areas were expanded. In Kuldīga, the landscape was improved and the park area was cleared of trees and shrubs that prevented the greenery from being perceived as a whole or obscured recreational areas. Bridges, ditches and ponds were restored in historic or functionally necessary locations. Water exchange and level design for the planned water body system will be provided by the Pipevalka stream and the River Alekšupīte. Banks of the ditch and the pond were fixed with boulders and plants typical of wet areas to give the environment a natural look. Thanks to wooden bridges and footbridges on several levels, this part of the park gained new viewpoints. The brightest highlight in the southeastern part of the park is the illuminated fountain in the pond (Fig. 33). The water supply was not restored in the southwestern ditch, but a "flower river" was designed, with plants suitable for low, wet areas. The lighting effect is enhanced by the use of ground-mounted spotlights. The "Flower River" is visible outside the park - from the main entrance to the north-western part, where the viewing area is located not only for the park, but also for viewing the Old Town landscape. A video infrastructure was established to provide high quality outdoor cinema events. In summer, residents of the park visit open-air cinemas on the mound serving spectator seats. The special atmosphere of the park is created by the multi-level viewpoints provided by the exquisite relief of the former Livonian Order castle, the careful planning of trees and plant groups and the well-balanced arrangement of amenities. The architect's task was to transform the site so that it became an attractive magnet in the most picturesque location of the Old Town of Kuldīga, which adjoins the Venta river bank between waterfall and the historic brick bridge.

Fig. 33 The brightest highlight in the southeastern part of the park is the illuminated fountain in the pond. 2015 [Photo by Jānis Brencis]

In Jelgava, the embankment of the Drikša River needed visual transformations, because previously this territory (Fig. 34) was not formed as a recreational area for inhabitants of Jelgava and guest. In the beginning of the 21st century, this territory was still not fully utilized, in turn, it was left as a natural landscape space in the urban environment, where frequently occurred multiple destructive processes, such as pollution, which diminished the willingness to spend any time in this territory. The majority of the citizens of Jelgava used to avoid this territory. As a result, because of the project initiated in 2011, this territory has now gained new sights, recreational areas, territories for family walks. The transformation processes of the embankment of the Drikša River in the urban environment can be evaluated as successful, and they distinguish new tendencies in the development of the city of Jelgava (Fig. 35) [7]. There is a well-equipped picnic area and a wooden observation tower on the Castle Island for watching two rivers, the city panorama and wild horses in the Lielupe floodplain meadows, which are protected nature areas.

Fig. 34 Māris Kalējs. A fragment of map of Jelgava. 1993 [Kalējs M. Jelgavas shēma. 1993]

Fig. 35 The Drikša River promenade in Jelgava [https://www.redzet.lv/images/large/7/44/V-889-14.jpg]

In Dobele, under the guidance of architect Pēteris Blūms, in 2002 was restored the restoration of castle ruins. On the right bank, there is the promenade of the Dobele castle ruins, while on the left bank there is a unique walking area with
paths, wooden footbridges and a viewing platform to the Dobele castle ruins. For many years, there was a small sand path, which every year went worse and worse because of the underground springs – it turned into a marshland. Finally, this small way was reconstructed, the promenade (Fig. 36) near Dobele castle ruins and the Bērze River was built and new benches and lights were made. Now it is nice walking place.

Fig. 36 Panorama of Dobele castle ruins promenade [Online 14.09.2019, source: http://www.dobele.lv/sites/default/files/tourism_object_images/dji_0180.jpg]

In the restored Republic of Latvia, local governments must be actively involved in regional planning. Rēzekne became involved in project „Cities of Change“ for the development of Eastern European cities and on 23 November 2000, started to develop economic strategy of Rēzekne city. In the long-term for 12 years, the “Spatial Plan of Rēzekne City 2007–2019” was developed (Fig. 37), and a competition was announced for evolving of Rēzekne urban space and founding of a creative services center for municipalities in Eastern Latvia in order to create an innovative solution in the city center that would attract young people and to start a new era in architecture of Latgale. The best proposal was the CARAN d’ACHE proposed by architects of the SAALS office Rasa Kalniņa and Māris Krūmiņš. The imagination was inspired by the landscape – a medieval castle mound with ruins (Fig. 39), but the victory secured a gentle approach to a complex historic site and lighting solutions [18].

Fig. 37 A fragment of Rezekne City Spatial Plan with 2007–2019 years’ modifications in the city’s centre. 2012 [http://www.rezekne.lv/uploads/media/planota_im_grozijumi.pdf]

Fig. 38 Panoramic view on the Latgalian mound with castle ruins from Livonian times and the Eastern Latvian Centre of Creative Services “Zeimuls”. 2015 [Online 14.09.2019, source: https://static1.squarespace.com/static/5393686de4b0abeff7807940/53938584e4b0f c045667476/542b0e29e4b008ddfd37af c/1423748106610/?format=1000w]

In Rēzekne, construction of the Eastern Latvia Regional Multifunctional Center – a complex of cultural buildings with two acoustic concert halls was started in September 2010, but works
were continued until May 2013. The Latgale Embassy GORS was created. In the building’s site, peculiarities of the natural environment as the Rēzekne River valley’s landscape (Fig. 39) and the surrounding terrain took into account for the forming of common urban space with a house for cultural events. On the opposite bank of the river valley, walking paths created a functional link between buildings.

One of the most important elements in the city’s visual image is the Rēzekne River that has a great potential for further development. The walking promenade, created in 2012 along the river, has become a popular for both locals and visitors. During different city’s festivals, there are various activities taking place throughout it as a pleasant place for leisure filled with content. In order to make this part of the city more attractive to visitors in the future, from 15 February to 1 April 2019, a competition «Design of an environmental object in the walking promenade along the Rēzekne River» was organized. The work "Water Pot" by Valdis Majevskis, respecting the city environment and at the same time creating an original object corresponding to the image of Rēzekne, is a reference in modern stylistics to the heritage of Latgale ceramics. It is a large symbolic "Water Pot" – the most popular pottery in Latgale, which is supplemented with a running water element. The jury evaluated the work's connection with the cultural and historical heritage of the city and the region. In Rēzekne, there is a very strong pottery tradition with ancient roots. Latgale pottery is peculiar and different from clay products of other regions – it is recognizable and Latgale business card.

Conclusions

1. The city center formed around the castles, provided administrative, economic and cultural functions. Over time, the fortresses lost their original meaning and the use of the surrounding area changed. The natural environment near the waters began to be used for recreation. Riverfronts began to improve, and artistically aesthetic requirements became significant. Nowadays, the generative approach helps to find interesting architectural solutions for the environment.

2. Since the 19th century, parks have been established in castle mounds, and social activities and cultural events have been organized in the landscaped neighborhood. In Goldingen, the City Park was created near the Venta River, but in Mitau, Castle Island between the Diksa and the Lielupe was transformed into Governor's Island, where buildings for recreation and entertainment were built, and walkways were formed. At the foot of the Doblen fortress, on banks of the Bērze River, there were places for recreation, but on the Rositten castle mound near the Rēzekne River, a park began to be arranged.

3. Nowadays, walking promenades are established along river banks, and in
many cases they are linked around the historic center of the city. In order to adapt footpaths to local conditions and the originality of the terrain, as well as to incorporate it into the surrounding landscape, architecturally interesting solutions of the natural material as wood, used for the covering, are created.

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